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中国西部地区传染性非典型肺炎与传染病防治能力建设项目总结与回顾

北京大学医学出版社

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卫生部国外贷款办公室
亚洲开发银行

主编　段明月
主审　朱宝铎
宋思年
蔡纪明

Combating Severe Acute Respiratory Syndrome in the Western Region of P.R.China Summary and Review

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前　言

2002 年11 月，我国在广东省发现第一例传染性非典型肺炎患者，此后短短5 个月内，该病先后扩散到北京、上海、广州等26 个省、自治区、直辖市以及香港、台湾地区，基本形成了在全国范围内的流行。面对当时传染性非典型肺炎疫情的威胁，中国政府做出了快速反应，积极筹集各类资金，投入了大量人力、物力。为了控制该病扩散和蔓延的可能，中国财政部和卫生部于2003 年4 月紧急申请亚洲开发银行技术援助赠款，实施中国西部地区加强传染性非典型肺炎防治能力建设项目，用以支援中国西部地区部分省和自治区的传染性非典型肺炎的防治工作。该申请得到了亚洲开发银行方面的大力支持，亚洲开发银行迅速成立了一个专家项目小组。在亚洲开发银行、中国卫生部国外贷款办公室（在本项目中作为中国方面指定的项目执行机构）和财政部国际司三方面的顺利沟通与合作下，中国西部地区抗击传染性非典型肺炎紧急援助项目（TA 4118-PRC 项目）于2003 年5 月22 日获得亚洲开发银行批准。这是迄今为止，亚洲开发银行技术援助项目中准备最快的项目（从政府向亚洲开发银行提出申请到最后获得批准，总计不到一个月的时间）。

传染性非典型肺炎的威胁使得我国的公共卫生工作面临着巨大的挑战。随着事态的发展，在不断的对话和需求评估的基础上，该技术援助项目的重点逐渐转向强调更广泛意义上的传染性疾病对公共卫生领域的威胁，特别是在农村贫困地区可能导致的威胁。这种转变一方面得益于项目设计的灵活性，另一方面也得益于卫生部国外贷款办公室、亚洲开发银行和各项目省工作人员的精诚合作及共同努力。

该项目在我国云南、青海、宁夏和新疆省（自治区）实施3 年，于2006 年6 月30 日圆满结束。该项目将对我国尤其是西部地区的公共卫生系统建设、传染病防治工作产生持续而深远的影响和作用。本书谨从项目基本情况、项目设计、项目管理与监督、项目的实施与产出、项目外部评估结果以及政策建议等方面总结和回顾该项目在中国准备和实施的过程，同时辅以亲身经历过该项目的各方面人员的心得体会，使得该项目得以全面展示给读者，希望本书中的内容能够为卫生领域同仁今后开展类似项目提供借鉴。

本书编写的全过程是在卫生部国外贷款办公室的领导下，由中央和各项目省（云南、青海、宁夏和新疆）的管理人员、疾病预防控制方面的专家和基层的工作人员共同努力而完成的，同时还得到了亚洲开发银行项目经理和项目协调员的大力支持，在此一并表示感谢。

亚洲开发银行技术援助项目
《中国西部地区传染性非典型肺炎与传染病防治能力建设项目总结与回顾》
编写组
2006 年9 月15 日

目　　录

中文部分

项目摘要

一、项目背景

2002 年11 月，广东省发现首例传染性非典型肺炎（以下简称非典型肺炎或“非典”）患者（由回顾性调查确认）。“非典”传染性较强，初期缺乏对该病的病原学、流行病学、临床诊治等方面的认识，而且我国针对突发公共卫生事件的应急机制不够健全，人口众多、流动性大，因此“非典”疫情很难得到及时控制，出现了不断蔓延的趋势。为了有效控制“非典”的进一步传播，中国政府采取了一系列措施，包括成立国家级防治“非典”指挥部、将“非典”列入法定传染病管理、落实综合防治“非典”专项资金、针对疫情较严重的地区采取严格的隔离措施等。

2003 年4 月，亚洲开发银行（以下简称亚行）成立了由其高级管理层直接领导的“非典”专责小组，以推进亚洲区域的抗击“非典”行动。同年4 月23 日，中国政府申请亚行提供紧急技术援助，以支援西部地区若干个省份和自治区（以下统称省）的“非典”防治工作。为了响应中国政府的申请，亚行迅速成立了项目专家小组，负责与中国卫生部国外贷款办公室（以下简称卫生部贷款办）以及财政部沟通协调，5 月22 日，《中国西部地区抗击“非典”紧急援助计划》（TA 4118 - PRC）获得批准，并在云南、青海、宁夏和新疆四个项目省开始项目活动。随着人们对在“非典”暴发事件中反映出来的公共卫生体系建设中问题认识的逐渐增强，在不断的对话和需求评估的基础上，该技术援助项目的重点逐渐转向强调更广泛意义上传染性疾病对公共卫生领域的威胁，特别是在农村贫困地区可能导致的威胁。这种转变一方面得益于项目设计的灵活性，另一方面也得益于卫生部贷款办、亚行和各项目省工作人员的精诚合作及共同努力。

二、项目的主要内容

本项目是一个针对中国西部地区非典型肺炎和传染病防治的技术援助项目，项目总投资为200 万美元，原计划执行周期为1 年，后来根据项目执行的情况和项目省的具体需求，为了更好实现项目提高“非典”与传染病防治能力的目标，

将项目执行周期延长为3 年。项目主要在中国西部的云南、青海、宁夏、新疆四个项目省(自治区)执行。项目目标是通过加强项目地区在“非典”预防、监测、管理以及减轻影响等方面的能力，从而防止非典型肺炎在该地区的流行，该项目还特别关注建立快速反应机制以保护一线医务人员、贫困及高危人群；以灵活的原则应对非典所带来的威胁；并帮助项目省建立长期的公共卫生应对机制。项目的重点活动领域包括：(1) 帮助项目省制定适宜的省级“非典”防治方案；(2) 加强“非典”和其他传染病的流行病学监测系统；(3) 提高疾病预防控制系统对突发公共卫生事件的应急能力；(4) 通过多种形式的健康教育活动提高公众的非典型肺炎与传染病防治意识及自我保护能力。

在项目活动的设计和实施方面充分考虑到各省能力上的不足，从基层“非典”和传染病防治的实际需求出发，按照项目的总体目标，采取灵活设计项目内容的原则，逐步展开技术援助和培训工作；同时在项目执行过程中，通过与项目省多渠道的对话与沟通，及时了解项目省基层对技术援助培训活动的反馈信息，及时调整培训的内容和重点，从而使项目活动更具有针对性；同时注重与有关国际、国内组织和机构的合作。

通过快速评估和与各项目省广泛交流，确定了各项目省在开展“非典”及传染病防治工作中的实际需求，在需求评估基础上开展了一系列的技术援助活动，包括(1) 帮助各省进一步完善“非典”与传染病防治的规划；(2) 开展多层次、多方位的针对基层卫生人员的传染病防治实用技能培训；(3) 提高各省传染病防治健康教育能力，并为重点人群开发和发放传染病防治的健康教育材料。

三、项目取得的成效

1. 支持项目省非典型肺炎与传染病防治规划的制定和完善

帮助建立和完善了项目省防治“非典”和其他传染性疾病的应急机制。各项目省建立了省-市-县-乡应急工作体系，加大了对公共卫生特别是疾病控制领域的投入。

2. 加强项目省基层传染病防治人员的传染病防治能力

项目从两方面加强基层卫生人员传染病防治能力，一是提供《常见传染病与急性中毒预防和控制手册》等手册供基层卫生人员自学和日常工作参考；二是向部分基层卫生人员提供实用的、参与式培训课程。

2.1 《常见传染病与急性中毒预防和控制手册》及《常见传染病与性病图谱》的编写及发放

《常见传染病与急性中毒预防和控制手册》(简称《传染病防控手册》) 共印

刷3.5 万册，分别下发到4 个项目省、市、县级疾病预防控制中心（以下简称疾控中心）和乡镇卫生院，每个基层卫生单位约分发6～8 册。反馈信息显示，该手册深受基层卫生人员的欢迎，其内容简明、实用，具有很好的参考价值和指导作用。同时考虑到少数民族地区（特别是维吾尔族）的语言问题，项目组又组织有关专家将手册翻译成维吾尔语，印刷5 000 册，下发到新疆维吾尔族地区相关专业机构。此外，还编写了《常见传染病与性病图谱》（简称《图谱》），共印刷2 万册，每个机构约4～6 册。后来，对这两本书进行了第二次印刷（各印刷2.2 万册），分发到西部其他省的县级疾控中心和乡镇卫生院以指导基层的传染病防治工作。为了指导基层卫生人员传染病的诊断和鉴别诊断，项目组织国家级和省级专家编制了《基层医务人员急性传染病诊断思路与处理流程图》（简称《急性传染病诊断思路流程图》），共印刷30 万份，并发往全国的县、乡级医院和疾病防治机构。

2.2 针对基层卫生人员的传染病防治培训

项目分别对省级卫生人员和县乡级卫生人员进行了专业培训。

省级师资培训：在2004 年5～7 月及2005 年5～7 月进行了两轮培训，分别举办6 个培训班，培训师资180 余人，重点向学员介绍了参与式培训方法。

县乡级师资培训：首先每个项目省选择一个地区由接受国家级师资培训的省地级师资负责组织并开展了针对县级疾控中心和乡镇卫生人员的试点培训，取得了良好的效果，此后开始了正式培训。第一批培训共涉及4 个项目省的14 个地州，约900 名县乡级卫生人员接受了该培训。第二批和第三批扩展培训，共设计62 个培训班，培训覆盖了所有的项目地州，每个县都有1～2 名专业人员接受培训。试点及三期扩展培训共组织针对县乡级传染病防治人员的培训84 期，共培训县乡级传染病防治人员4 000 余人。

为了配合师资培训和扩展培训，项目组织国家级专家制作了《基层卫生人员传染病与急性中毒防治参与式培训教案》（简称《基层卫生人员参与式培训教案》）和《基层卫生人员传染病与急性中毒防治师资培训参与式教学方法演示光盘》（简称《基层卫生人员参与式培训教案光盘》）（CD－ROM），第一版光盘已经发给各省地级师资，并用于指导扩展培训。修改后的《基层卫生人员参与式培训教案》和《基层卫生人员参与式培训教案光盘》由北京大学医学出版社正式出版并下发给各项目省用于指导基层未来的培训。

2.3 针对省地级疾病预防控制人员的实用现场流行病学培训

2004 年10 月10 日在北京组织开展了针对省、市级疾病控制人员的实用现场流行病学培训。培训班共有20 名学员参加，每个项目省5 名（省级2 名，地级3 名），都是来自省地级疾控中心从事传染病或突发公共卫生事件处理的技术人员。

培训(2004.10～2005.10) 包括一个月的集中授课，内容涉及高级现场流行病学理论及课堂实习，课题的设计，调查表的设计，资料的收集、录入、分析、汇总，报告的撰写和一年的现场实习及集中论文汇报与交流。

3. 传染病防治健康教育

3.1 健康教育材料的制作

项目开发、制作了《中小学校教师传染病预防与突发公共卫生事件应对手册》(简称《教师手册》) 及《学生手册-青少年带头用良好的卫生习惯战胜传染病》(简称《学生手册》) 2 套健康教育材料，分别印刷14 万册和15 万册。《学生手册》下发到各项目省贫困县的小学4～6 年级及初中，《教师手册》下发给项目省所有的国家级扶贫开发工作重点县小学及全部初中，按照各省提供的学生数量，约每10 个学生有一本《学生手册》，每个学校有4～5 本《教师手册》。项目还组织有关专家将《学生手册》翻译成蒙语，印刷6 000 册，发给内蒙古部分地区小学。

3.2 传染病与突发公共卫生事件健康教育培训班

为了提高各省健康教育人员和传染病控制人员在制定健康教育策略方面的能力，项目组织4 个项目省的省级健康教育和传染病及突发公共卫生事件的专业人员就传染病防治的健康教育策略问题进行了培训和研讨，通过国家级专家的引导和参加培训学员的认真讨论，初步形成了一个省级应对传染病和突发公共卫生事件开展健康教育的策略框架和应急预案，为各省下一步应对传染病和突发公共卫生事件开展健康教育提供了重要的策略框架。

4. 部分设备与材料的购置与配发

项目共为项目省配备尼桑越野车4 辆，笔记本电脑48 台，多媒体投影仪48 台，数码照相机20 架，数码摄像机4 架，高压消毒锅9 个，N95 口罩9 712 个，普通防护服426 套，红外体温探测仪40 个，护目镜2 000 个，一次性手套4 000 副。

项目除了直接购买设备以外，还投入经费编写和印刷了《传染病防控手册》、《常见传染病与性病图谱》、《传染病诊断思路流程图》、《教师手册》和《学生手册》等资料，并下发给基层有关人员。

四、政策启示

1. 加强机构建设，建立有效机制

1.1 加强政府对疾病预防控制工作的领导，完善政府适宜的投入机制

20 年来我国政府对卫生公共产品投资的长期缺位，导致了疾控中心的公共

职能的缺失。所以，在政府重视的前提下，能否扭转疾病预防控制公共职能缺位，取决在于政府能否承担起相应的筹资职能，形成对疾控中心的适宜投入。

1.2 增加政府财政投入的稳定性和投入的效率

政府对疾病预防控制工作的筹资职能，首先表现在投入的适宜性和稳定性，其次表现为投入的效率。而目前政府对疾病预防控制工作的投入在下述几个方面均存在一些问题，致使效率低下，主要包括：①投入总量不足；②投入随意性大；③投入方式单一，缺乏激励；④在人员能力建设方面的投入比例偏低。

1.3 建立稳定、适宜的投入机制

在解决了财政投入总量不足问题的基础上，需要建立长期稳定的投入机制，形成适宜投入的制度保障，以消除投入的随意性，如：与财政支出增长水平同步。这一机制和制度保障，在现实中始终未见形成。

2. 改善疾病控制机构人力资源状况，提高基层卫生人员传染病防治能力

2.1 改革劳动人事制度，稳定和吸引高素质人才

在职能明确、编制标准确定和机构效率提高的前提下，重点满足疾控中心工作人员的合理待遇，通过竞争性工资和福利制度等措施，营造留住人才、吸引人才的氛围，以提高疾病预防控制人员的素质。竞聘上岗，严格控制非专业人员进入疾控中心。

2.2 加强在职人员培训工作

重点提高基层卫生人员的传染病现场处理能力。加强省地级传染病防治骨干人员的现场流行病学培训，为各省培训出更多的传染病现场流行病学调查和处理业务骨干，从而适应各地传染病现场控制工作的需求。在培训内容上要强调实用性和针对性，培训方法上要强调参与性和现场教学，从而保证培训效果。

3. 加强农村地区的卫生工作，特别是疾病预防工作

农村地区人口看病难、看病贵的问题始终是农村人口所面临的巨大的卫生问题。一方面国家要采取各种机制，建立适宜的农村合作医疗制度，帮助农民解决看病难、看病贵的问题，同时又要加强农村地区的传染病和各种常见病的预防工作，提高农村人口的防病意识，这样也可以从根本上减少农村人口所面临的疾病负担。

4. 加强流动人口中的传染病控制工作

随着全国流动人口数量的不断增加，流动人口中的传染病控制问题越来越需要得到各方面的重视，非典型肺炎、结核、艾滋病的流行都提示我们，如果没有

有效地投入和管理机制，如果忽视了流动人口中各类传染病的预防与控制问题，就会给本地的传染病控制造成巨大的负面影响。需要建立有效的机制来应对流动人口中出现的传染病问题，包括有效的属地管理机制、合理有效的投入、与流动人口来源地疾控机构之间的密切联系等。

第一章　项目基本情况介绍

一、项目背景

2002 年11 月，广东省发现首例传染性非典型肺炎（以下简称非典型肺炎或“非典”）患者（由回顾性调查确认）。“非典”传染性较强，在初期缺乏对该病的病原学、流行病学、临床诊治等方面的认识，而且我国针对突发公共卫生事件的应急机制不够健全，以及因此人口众多、流动性大，因此“非典”疫情很难得到及时控制，出现了不断蔓延的趋势。卫生部的统计数字显示，截止到2003 年5 月1 日10 时，全国26 个省、自治区、直辖市和香港、台湾地区均已发现了“非典”患者，我国大陆地区“非典”患者已达3 638 例，死亡170 例（见附件1. 1）。为了有效控制“非典”的进一步传播，中国政府采取了一系列措施，包括成立国家级防治“非典”指挥部、将“非典”列入法定传染病管理、落实综合防治“非典”专项资金、针对疫情较严重的地区采取严格的隔离措施等。资金投入对于控制“非典”的蔓延至关重要，“非典”暴发后中国政府立即从各方面筹集防治“非典”经费，防治“非典”经费投入情况见附件1. 2。

在“非典”尚未在西部省份迅速蔓延的情况下，迫切需要利用国内其他疫情地区已积累的成功经验，帮助和扶持西部地区尽快建立起突发公共卫生事件的应急反应机制，加强流行病信息监测报告系统的功能，采取有效和正确的综合防治措施，提高防疫系统的防病能力，开展深入的健康教育活动，提高全民的防病意识，尽最大可能做到防患于未然。在当时国内资金尚不能满足全国防治“非典”全部需求的情况下，迫切需要国际组织的支持和援助，帮助中国度过面临的难关。

与此同时，2003 年4 月份，亚洲开发银行（简称亚行）成立了由其高级管理层直接领导的“非典”专责小组，以推进亚洲的抗击非典行动。

2003 年4 月23 日，中国政府请求亚行提供紧急技术援助，以支援西部地区若干个省份和自治区的“非典”防治工作。这些省份的经济和社会条件均相对落后，公共卫生和疾病预防体系薄弱，抗击“非典”的装备极其匮乏，尤其是针对其农村地区及贫困人口的公共卫生和疾病预防服务更加匮乏。响应中国政府的申

请，亚行迅速成立了一个由专家组成的项目小组[①]，通过与中国卫生部国外贷款办公室（简称卫生部贷款办，是中国方面指定的技术援助执行机构）以及中国财政部进行的及时沟通和良好合作，TA 4118-PRC 中国西部地区抗击“非典”紧急援助项目很快在2003 年5 月22 日获得批准。这是迄今为止，亚行技术援助项目中从受理立项到最终获得批准进行得最快的项目（从政府向亚行提出申请到最后获得批准总计不到一个月的时间）。实际上，亚行也将本项目的某些方面作为模型来设计同期的TA 6108-REG 项目（针对“非典”暴发的紧急区域支持项目），后者在次日也获得了批准。

二、项目规划

1. 项目覆盖范围

选择没有报告“非典”病例或只发现少量“非典”病例并且潜在流行风险的部分西部省份作为项目省，包括云南、青海、宁夏、新疆四个省、自治区（以下简称省），每一个项目省由各级疾病预防控制机构和健康教育机构等单位参与实施，项目省基本情况见附件1.3。

2. 项目目标

通过项目的实施，加强项目地区省级疾控机构对非典型肺炎的监测功能，提高应对突发公共卫生事件的应急能力，提高公众预防非典型肺炎的意识和能力。

3. 项目逻辑框架

非典型肺炎是一个新出现的、传染性极强的疾病，到目前为止，人们对它的认识还不全面，根据已经掌握的防治“非典”知识和经验，项目策略应该是控制传染源，切断可能的传播途径。在中国“非典”控制策略框架（见附件1.4）基础上，结合项目目标，制定了本项目的逻辑框架（见附件1.5）。

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① 亚行核心小组成员包括：宋思年博士（Dr. Chris Spohr，亚行项目经济官员、组长），安川隆子博士（Dr. Takako Yasukawa）（卫生专家），亚行东亚和中亚局社会处卫生项目经济官员卡里马·萨勒女士（Ms. Karima Saleh），以及亚行中国代表处的官员。另外，宋思年博士亦同时作为亚行东亚和中亚局“非典”专责小组的代表，确保亚行紧急区域援助的顺利沟通。

4. 项目活动安排

4.1 领域1：加强监测系统能力建设

为疾病监测部门配备必要的信息收集、处理、分析和反馈所需要的设备，建立监测、报告“非典”的机制和程序，对业务人员进行“非典”监测培训，提高疾病的监测能力和水平。

(1) 建立“非典”监测机制和程序：组织世界卫生组织、国家级和省级专家举办研讨会，编制本省“非典”监测规范并下发省内有关单位。预算1～1.5万美元。

(2) 人员培训：各省分别举办“非典”监测培训班1～2期，培训省级非典监测人员和地区（州、市）级“非典”监测人员。预算2～3.5万美元。

(3) 再培训：接受培训的地区级“非典”监测人员培训县级“非典”监测人员，并将“非典”监测规范发到每个县负责监测人员手中。预算2～3万美元。

(4) 世界卫生组织、国家级和省级专家根据实际情况进行技术指导和检查。预算1万美元。

(5) 购置设备：见设备清单（附件1.6）。

4.2 领域2：应急反应能力建设

通过举办医疗、疾控等方面的专业培训班、研讨会，请专家传授“非典”的诊断标准、治疗方法以及完善信息报告和反馈系统的措施，以提高业务人员的综合诊治水平。提供紧急需要的设备，提高应急反应能力。

(1) 建立控制“非典”应急方案：组织国家级和省级专家研讨会，编制本省控制“非典”应急方案并下发省内有关单位。预算1～1.5万美元。

(2) 人员培训：各省分别举办“非典”临床诊断与治疗、消毒隔离、病人管理等应急处理内容培训班2～3期，培训省、地区（州、市）级定点医院和发烧门诊业务骨干。预算2～3.5万美元。

(3) 再培训：接受培训的业务骨干培训本单位和其下级医院的医务人员并将培训资料发到每个基层接受培训人员手中。预算3～4万美元。

(4) 世界卫生组织、国家级和省级专家根据实际情况进行技术指导和检查。预算2～3万美元。

(5) 购置设备：见设备清单（附件1.6）。

4.3 领域3：加强健康教育和公众防护能力建设

制作并宣传通俗易懂的健康教育材料，有针对性地传授“非典”的预防知识，提高公众的自我防护意识和能力。

(1) 编制、印刷、发放防治“非典”宣传材料：组织健康教育人员编制符合本地区文化、语言习惯、通俗易懂、形象生动的健康教育材料，根据需求印刷发

放。预算2～3 万美元。

(2) 利用大众媒体开展防治“非典”活动：与当地覆盖面最广的电视台、电台、报社合作，制作有关的健康教育节目并反复播放。预算3～4 万美元。

(3) 定点播放防治“非典”宣传片：购买或制作 VCD 或录像带，在公共场所(车站、医院、商业中心)反复播放。预算1～2 万美元。

(4) 世界卫生组织、国家级和省级专家根据实际情况进行技术指导和检查。预算2～3 万美元。

(5) 购置设备：见设备清单(附件1.6)。

5. 经费预算及分配方案

5.1 经费预算

计划申请200 万美元赠款，用于西部4 省防治“非典”的能力建设，其中宁夏、青海各40 万美元，新疆、云南各60 万美元，资金分配情况见附件1.7。项目执行期为一年。

5.2 设备采购

计划设备采购的资金占赠款总额的50%，用于本项目支持的监测能力建设、提高应急反应能力和健康教育活动。设备采购清单见附件1.6。

6. 项目的组织与管理

6.1 项目组织管理

在财政部、卫生部的统一领导和组织下，由卫生部贷款办负责项目的立项、组织实施、设备采购、财务管理等具体的协调和管理工作。卫生部贷款办设专人负责本项目的组织实施，向亚行提交项目活动进展情况报告和完工报告；各项目省卫生厅设专人负责本省活动的组织、实施并向卫生部贷款办提交项目活动进展情况报告和完工报告。

6.2 财务管理

卫生部贷款办开设专用账户，管理本项目经费。采用“基于报告的支付方式”，向亚行提交有关报告和材料。根据项目进度向亚行申请款项，并及时拨付各项目省。各项目省应指定固定银行账户接收资金，各级项目单位和财政部门应为项目单独建账，独立核算，对有关开支进行详细记录，保存好所有财务凭证和记录，以便亚行或其指定的机构对该资金的使用进行审查或审计。

本项目的财务管理和会计核算参照国家财政部颁布的《财政部国际司管理的赠款项目财务管理办法》和《财政部国际司管理的赠款项目会计核算办法》(财际字[2001] 195 号)执行。

6.3 设备采购管理

按照亚行能够接受的最快方式，由卫生部贷款办或在卫生部贷款办指导下由各项目省自行采购。所有采购文件、发票单据必须完好保存，以备亚行审查。

6.4 项目进度安排

2003 年4 月底中国政府开始和亚行就上述领域提供援助的可能性进行了沟通。在卫生部贷款办、财政部国际司和亚行的充分交流和共同努力下，卫生部贷款办很快完成了技术援助项目框架的编写工作。2003 年5 月22 日，该技术援助项目建议书的最后版本（见附件2.1）通过了亚行内部的审批程序，5 月30 日中国政府与亚行正式签署了项目协议，随后《健康报》等媒体在头版的位置刊登了该项目启动的消息。项目具体的实施进度安排见附件1.8。

附件

附件1.1	全国非典型肺炎疫情统计表
附件1.2	中国防治非典型肺炎经费投入情况
附件1.3	项目省基本情况
附件1.4	中国非典型肺炎控制策略框架与资金测算（初稿）
附件1.5	项目逻辑框架
附件1.6	设备清单
附件1.7	预算及资金分配
附件1.8	实施进度计划

第二章　项目设计

一、总体设计情况

2003 年4～5 月，本项目在中国西部地区启动。它以及时有效地应对“非典”为指导原则，并鉴于“非典”疫情本质上的不确定性，采取了具有弹性的设计及实施安排。从其长期的、宏观的目标来看，本项目旨在有效遏制西部地区的“非典”疫情，防止跨区域传播，并提高对于传染性疾病的快速监测和应对能力。因此，以遏制项目省“非典”疫情为总体目标，加强各地在“非典”预防、监测、管理和减缓方面的能力建设为手段，本项目的设计特别强调了以下几个方面：(1) 保护一线医务工作者、贫困人群和其他易感人群；(2) 在与国际国内工作伙伴密切合作的工作框架内展开工作；(3) 收集并且广泛共享抗击“非典”的经验，以提升对话与理解，从而应对中国公共卫生系统面临的挑战，并提供新的抗击模型。

本项目包括四大模块，这四大模块重在实现以下任务：(1) 建立健全省级抗击“非典”方案；(2) 加强传染性疾病的监测系统建设；(3) 提高紧急应对能力；(4) 通过多种方式的信息发布和健康教育机制，提高公众对“非典”的认识和自我保护意识。

本项目初始设计的4 大部分介绍
第一部分：评估和计划。通过与世界卫生组织和其他相关机构进行对话，以及必要的现场评估，针对项目省，评估其“非典”疫情的现阶段情况，以及未来可能的传播动态（特别是在农村地区）。此评估结果将有助于项目省的政府进行以下各项的评估：(1) 省级和地方卫生系统应对“非典”的总体准备情况，确认主要问题；(2) 现有资源情况，包括人力资源、设备（例如，诊断、运输和废弃物资管理等方面的），以及基本物资供应情况；(3) 省级实施综合防治方案的能力，从监测到信息处理、发布及教育活动各方面。上述评估将最终有助于各省建立健全抗击“非典”方案，这些方案将(1) 建立在已有的战略基础上；(2) 既能满足当地实际情况的要求，又能符合防治“非典”领导机构、世界卫生组织和其他相关机构开发制定的框架要求；(3) 能够实行定期监测，具备随时便提升调整的能力，及时应对“非典”疫情的变化，并且搜集经验教训，为其他

省份健全传染性疾病的应对机制提供参考。

第二部分：传染性疾病监测。本项目将与各省级卫生厅、疾控机构合作，并借助中国卫生部、世界卫生组织以及其他国内外机构的技术支持，致力于加强目标省份的传染性疾病监测系统。基于评估所认定的监控系统的能力和局限性（例如，系统覆盖面、数据质量水平、设备、培训以及经费预算等方面），本项目将有助于（1）开发一套完善系统的框架，能随时应对必要的变动；（2）确认并采购急需设备；（3）设计并实施有针对性的专项培训，重点培训省、地、县各级的疾控人员，以及负责传染性疾病报告的现场医务人员和哨点人员。此工作框架，一方面旨在抗击“非典”的现时威胁，另一方面亦为综合监测系统的建设奠定基础，以应对未来的威胁。

第三部分：紧急应对系统。在制定省级抗击“非典”方案的同时，本项目还将协助受援对象编制有效的、综合的紧急应对方案，内容涉及（1）在政府内部各部门间需要磋商的关键领域进行协调（例如，各地边界被视为控制疾病流行的关键点）；（2）针对负责紧急疫情应对的疾控、地方诊所和医院三方面人员建立起快速识别、预警和协调的机制；（3）提供紧急医疗救治和治疗，包括医疗转送和隔离措施；（4）健全医院救治和病人管理（隔离、消毒、诊断、治疗和报告）机制；（5）实行“非典”接触者管理，包括保护各级卫生工作者；（6）实施住家庭、工作场所、医院的感染控制预防；（7）保证样本采集、传递以及最终处理的安全性；（8）展开全方位的系统管理、协调和监督能力建设。

第四部分：信息发布、教育与传播。本项目将协助项目省建立和实施信息发布、教育与传播策略，以有效地传播重要信息，如（1）“非典”临床症状、特点和危险因素；（2）个人、家庭、公共机构（例如，学校和工作场所）的“非典”预防；（3）现有“非典”预防控制机构及可利用的卫生服务；（4）公众接受免费治疗的权利；（5）社会责任；（6）为有可能接触到“非典”病人的人员（包括“非典”病人的家属）提供建议。上述信息传播工作都将与国家级举措相配合，并将以地方工作为基础，针对各省的具体情况解决具体问题。运用多渠道、多手段实施信息发布、教育和传播策略，将包括地方报纸及其他印刷材料、电视、广播，并将努力动员现有的社会机构（例如，村委会、学校等）参与其中。行动方案将把高风险人群和边缘人群（例如，少数民族）纳入目标人群。本项目将协助进行有关材料的开发、培训、社会动员，并提供主要设备，推进信息发布、教育和传播策略的实施。

以上各部分之间的工作衔接与均衡，以及同一部分内部各项工作之间的衔接与均衡，均依据前期工作中发现的问题以及各省提出的侧重点做了调整修改。另外，相对于国内外其他技术援助项目来说，通常认为亚行技术援助项目所体现的比较优势或者说可能的“增值”特性同样是兼而有之。例如，第一部分的各项活动旨在加强省级“非典”防治的制定计划的能力（如下文所述，在一个省完成快速评估之后，随即举办该省的“非典”防治能力现况研讨会），这些工作是本项目早期执行的重点。随着对话与评估的不断开展，本项目工作的重点逐渐转移到了能力建设上。同理，本项目的优点并不在于能够发展一个正式的、能够改进流行病监测系统的工作框架，实际上如同以后各节所述，第二部分中设计的工作任务更加着重于具体的能力建设。这种技能建设涉及从开展现场流行病学培训，直至提高县级疾控中心员工核心能力的各个方面；前者主要以省级疾控中心的流行病学工作者为培训对象，相应地配备了四轮驱动汽车和相关设备以利开展工作。后者在加强传染病防制能力建设的领域下开展。在本项目实施过程中，原先着重在紧急应对系统的机构建设。随着机构建设的逐步完成，工作重点转为要充分发挥亚行技术援助的优势，着重推进更加关键的紧急应对能力的培训。推进培训的途径，包括现场流行病学培训，以及主要针对省级疾控中心健康教育机构的培训计划。后者旨在实现信息发布、教育和传播的策略方案，以提高对公共卫生紧急事件的应对能力。随着本项目进程的推移，第四部分中还提出了一项扩大范围的重要举措，即开展以学校为对象的信息传播、教育和传播活动。上述措施的详细情况可见第四章。

为了确保本项目不但能够有效地应对现时的“非典”威胁，而且也能够长期应对公共卫生系统的突发情况，本项目在设计中特别强调了灵活性，包括以下几点：

(1) 保持亚行与中国卫生部贷款办、各地方卫生厅（局）和疾控中心之间的对话与磋商，反复地评估确定如何更好地利用有限的项目资源满足关键的需求。

(2) 通过共享信息和对话磋商，致力于在一个更加广阔的范围内寻求资金合作伙伴（例如，从国家到地方的各级政府部门、与政府有关联的机构、国际组织、地方性的和国际性的非政府组织等）以整合资源，避免重复，实现最大化的互补。

(3) 尽可能整合各方面有用的资源，建立起全面的或者说是一体化的，可以涵盖“硬件”和关键“软件”的操作方法，例如，以能力建设为目标的现场流

① 作为亚行常规技术援助的特例，在项目的设计阶段，该项目小组已获得亚行高级管理层的批准，同意其技术援助预算中所提及的，即提供600 000 美元设备资金，包括从急诊治疗、员工防护到其他加强传染病防治扩大能力建设直接有关的设备和材料。

行病学培训（见第四章）在开展过程中同时辅以向省级疾控中心提供车辆以及信息通信设备，这两方面的结合达到了切实增强当地调研和紧急应对能力的作用。

二、基本的实施安排

根据最终的项目建议书，卫生部贷款办是该项目的执行机构。本项目亦考虑到与中国财政部和其他部门保持必要的、定期的对话，以确保项目在开展过程中，能够顺利实现与其他国内、国外援助项目的合作与互补。如附件2.1 中的项目建议书所示，本项目的设计方案基于：

（1）一个以中国卫生部贷款办为基础的中央级项目执行单位，以协助评估这四个项目省的需求，并且确保定期向亚行提交基于这些需求的工作方案（包括技术援助资源的分配）。

（2）各省级项目执行单位向中央项目执行单位汇报的制度。四个项目省的卫生厅分别建立起省级项目执行单位，以监察日常执行情况，保证与其他地方部门的合作。例如，疾控中心以及隶属其他部门的省级单位，并促进信息共享以及省内和省间经验交流。

如第四章所提及的，上述安排在后来进行了一些变更，但是仍然保留协调工作的基本原则。本项目同时还特别出资聘请一位项目协调员（如后所述），以紧密配合卫生部贷款办和各省级合作单位，做好项目实施监督工作。第三章说明了本项目在启动时，其预计执行时间是从2003 年5 月到2004 年5 月，但是后来，因为项目的重点目标转变为建设较长期抗击能力，以应对更广泛意义上传染性疾病对公共卫生领域的威胁，遂被延期至2006 年6 月。

三、专家投入和设备采购框架

本项目在设计方案时亦考虑到有必要灵活地安排专家的投入（例如，技术顾问），以及解决物资和服务供给。即针对西部地区“非典”疫情演变的不确定性，以及国内、国外给予援助状况的不确定性，项目方案应具有必要的灵活性机制，以便根据定期分析评价的结果，按估定的需求适时地组织人财物的投入②。虽然

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② 例如，根据《传染病防控手册》第一版印刷材料分发后所获得的反馈，该项目小组立即与新疆方面合作，将手册的主体部分以维吾尔语版本印刷并分发，从而更加切实地提供给新疆境内偏远的、坐落在维吾尔族聚居区的乡镇级医院的业务人员使用。

在通常情况下，凡亚行项目均应严格遵守其项目管理的相关规定③，但是此次亚行项目设计小组获得了其高级管理层的许可，获准放松某些规定的执行，令其可以根据紧急技术援助的具体情况进行适当的调整。除上述原则之外，本项目还须制定一个整合的干预方案，专家、物质和服务的提供均需在中国政府和国际社会应对“非典”的统一框架内执行，以确保效率；可以针对各省的具体需求；策略的一致性（例如，各省与中央的行动方案之间的一致性）；以及合作伙伴之间的信息共享，快速的协同运作，和中国有限的人力资源最优化地运用。

为了支持卫生部贷款办执行整个项目，本项目聘用一位国内的顾问作为全职项目协调员。该项目协调员需要与各省级项目执行单位密切合作，同时向卫生部贷款办的中央项目执行单位汇报，其主要职责是促进本项目在省的执行，确保不同行政区域间、以及与其他积极参与的国际、国内机构间实现充分沟通以及互相契合的工作。项目协调员的其他重要职责还包括（1）联络其他的国内、国际的机构和组织；（2）协助各省识别并定期评估其需要的专家投入和物资供给，并制定行动方案以落实其首要需求，以及执行这些方案和措施；（3）向卫生部贷款办和亚行汇报执行进程，同时推动实现更广泛的信息共享；（4）帮助确定满足需求的专家，在项目活动中项目协调员需要承担小组领队的职能，并对辅助性技术顾问的甄选及其他专家资源的投入负全责④；同时监控和联络国内和/或国际组织以及特定的地方机构，共同展开工作。

从灵活性的角度来看，本项目的设计所规定的意向性的工作任务书是按照其所属任务的领域予以分类的（此处的任务领域系指上述本项目四大部分所阐述的任务），而没有像常规的亚行技术援助项目那样为事先预定的技术顾问职位规定详细的、个人化的工作任务要求（例如，规定人月等）。根据本项目的计划书，所有亚行聘用的技术顾问，均需要通过卫生部贷款办的认可，合格者以个人身份录用。本项目同时设计了灵活的采购计划，以便及时响应紧急的、不断变化的需求，包括采用直接采购的方式，以获取项目初期急需的全部设备和供应品。同时对以后低于100 000 美元的采购品目，亦规定可以直接采购。最后，本项目还规定，针对卫生部贷款办和（如果有必要）各省（拥有各自明确的银行账号）建立一套预付款机制，以保证资金及时到位，确保工作顺利执行，确保培训及其他现

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③ 这些相关管理规定包括：亚行《咨询专家聘用指南》、《采购指南》以及《技术援助赠款支付指南》。

④ 除了正式签约作为技术顾问的辅助性国际、国内专家之外，本项目还将重点放在利用地方的短期性的人力资源上，以通过地方单位来维持执行能力（例如，组织和支持地级疾控中心的业务人员成立培训队伍，以培训乡镇级疾控中心的业务人员），并且与国际组织如世界卫生组织和联合国儿童基金会非正式地共享专家。

场活动的开展，以及特定物资和服务的及时到位。

附件

附件2.1	中华人民共和国西部地区抗击“非典”技术援助项目建议书（TAR: PRC 37228)

第三章　项目管理与监督

本章概述了卫生部贷款办（项目执行机构）和亚行合作，协同管理的情况，以及与四个项目省的省级和省级以下有关单位的合作情况，还有与其他重要的资助机构之间的对话与合作。如前所述，灵活的项目设计使得项目能够顺利有效地执行。特别值得一提的是，虽然最终的项目建议书（见附件2.1）有一个干预和项目管理的框架（如第二章所述），但是该项目的设计在执行过程中不断地得以修正，即以前期活动中的发现和持续的监督与对话作为基础，不断进行需求的再评估。这些再评估的结果继而会在项目整体的工作框架范围内，对后来的各项工作予以指导。因此，本章比较详细地阐述了项目前期主要活动和全面进程。项目前期的工作为整个项目后续工作的实施建立了基础。随后的段落则比较简明地概述了项目管理和监督的角色、资金安排（亦可见第四章）、执行中对项目期限和项目范围的调整、主要合作伙伴之间的对话与合作，以及项目管理概述和经验教训。

一、前期工作总结

本项目在设计过程中已经认识到，在初始阶段进行需求与能力评估（随后将有定期评论，以及跨越整个项目期间的、持续的项目调查）具有关键性的意义，将体现在如下方面：(1) 形成省级行动方案；(2) 指导各方面的规划与实施工作，包括监测、紧急应对，以及信息发布、教育与沟通部分的工作；(3) 确保各项工作有的放矢，顺利进入项目中期阶段，达到逐步增强地方卫生部门及相关部门的总体行动能力。在项目刚刚获得通过、并特别聘请了一位项目协调员之后不久[①]，卫生部贷款办和亚行共同决定开展第一次快速评估，以便基本了解西部地区当时的“非典”态势，以及当地采用的应对机制，继而推出一个项目干预方案。

新疆和云南两省被选作这次快速评估的对象。一方面，因为他们分别地处中国与中亚的边界、中国与湄公河地区的边界；另一方面，因为从当时的条件和面

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① 在卫生部贷款办的推荐下，亚行正式聘用中国疾控中心的王立秋副研究员为技术援助协调员。

临的挑战来看，他们被视为另外两个项目省（青海和宁夏）的代表。此后，亚行和卫生部贷款办迅速地聘用了三位短期技术顾问。他们与项目协调员组成一个快速评估小组，在卫生部贷款办的领导下开展工作。由于受亚行规定限制，亚行项目官员不能到中国亲临快速评估现场，但仍然与卫生部贷款办密切合作，促成此项工作，同时与工作在基层的快速评估小组保持沟通。这次快速评估的结果可见附件3.1。

快速评估刚刚完成时，亚行的工作人员获得批准可以到中国出差。经与卫生部贷款办协调，亚行代表于2003年7月底抵达北京，(1) 听取快速评估小组的汇报；(2) 参加讲座和关于快速评估结果的多方讨论；(3) 规划下一阶段技术援助的行动方向。2003年7月29日，卫生部、财政部的代表，以及主要国际机构的代表们共聚一堂，在座谈会上聆听快速评估技术顾问陈述现场评估结果并展开讨论。这次快速评估的结果以及其后的讨论，对于在整个项目的框架内，构建以后的技术援助行动框架具有关键的作用。由于2004年秋冬“非典”没有复发，讨论决定，项目在继续以“非典”为关注重点的同时，亦将采取措施，优先应对公共卫生领域的一系列传染性疾病和其他威胁。因此，继第一批“非典”应急设备和物品采购之后，经讨论决定，用项目设备预算资金进行的采购需要优先考虑以下因素：(1) 既可用于应对“非典”，又可用于应对其他传染病的威胁；(2) 对于整个能力建设行动来说是不可或缺的，这方面可参考项目建议书的详细说明；(3) 价格合理，这一点以世界卫生组织所提供的、以及其他可用的且适用的资料为依据。卫生部贷款办和亚行代表还达成一致，在“非典”没有复发的期间内，继续就“非典”的威胁进行观察与评估，并考虑将项目延长到2004年以后，以加强地方能力建设方面的不足。快速评估结果和其他调查资料均显示了各地方在应对主要传染性疾病威胁能力上的不足。

通过第一次亚行代表来访期间及紧接其后的一系列讨论，确定了两项需要立即着手准备的事宜：

(1) 准备一个两阶段的系列研讨会，研讨省级防治“非典”方案，以及省级防治其他传染性疾病的方案（可见下文和第四章）。

(2) 加强传染病防治能力建设，通过研究、尝试新的方法，包括完善培训内容以及使用适当形式的培训，从而提高项目省份应对“非典”以及其他疾病的能力。更加具体地说，此项能力建设旨在加强基层疾病防治单位（各县级疾控中心

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② 这些努力主要包括获得亚行许可，从而使得咨询专家可以参加快速评估小组的现场工作。快速评估小组成员包括：两位卫生部贷款办官员，三位国内技术顾问，还有一位国际技术顾问。国际专家的甄选，是通过与世界卫生组织的沟通，并从世界卫生组织的国际“非典”专家数据库里获取的。

和乡卫生院) 的实战能力。

亚行项目官员于2003 年10 月下旬再度专程抵达中国，参加第一阶段省级方案工作小组研讨会，并参与讨论准备下一阶段的项目方案。该研讨会于2003 年11 月5～7 日在北京举行，由卫生部贷款办主持。

北京研讨会(2003 年11 月5～7 日) ——获得进一步支持的基础

2003 年11 月5～7 日，一个关于“非典”及其他传染性疾病的预防与控制问题 亚行及世界银行的援助省份研讨会在北京召开。该研讨会旨在帮助地方政府评估和改进以下方面的能力不足: (1) 省级及省级以下卫生系统的应对能力; (2) 人力、物力资源的可获得性; (3) 省级规划和实施综合方案的能力，从监测到信息、教育和传播活动再到告知和保护公众。一方面，本项目为此次研讨会提供了主要的支持，包括会议计划及基本费用，另一方面，世界银行亦为来自8 个世行项目省的与会者提供了资金，并为此次研讨会提供了其他宝贵的投入和帮助，从而支持了对话的进行，支持了省际经验共享 。

这次北京研讨会为与会者安排了一个论坛，讨论了“非典”紧急应对工作，以及应对其他传染性疾病的常规准备与能力，通过省际比较，并结合专家建议，形成了一系列讨论结果。与会者均一直亲身参与省级“非典”应对行动，他们是来自省级政府及其他部委辖厅，国家级以下的各级疾控中心以及地方临床专家。卫生部副部长王陇德为此次研讨会作了关键性发言，明确了此次会议的基调与目的，并强调大家要汲取过往的抗击“非典”的经验，继续热忱地投入工作，以应对更大范围的疾病威胁。响应王陇德副部长的讲话，亚行第二执行处副主席约瑟夫·艾森伯格(J. Eichenberger) 做了一段颇有见地的演说，来自世界银行的迈耶斯(R Meyers) 也做了发言。继而就技术分析与评论，来自各方的代表相继发表演讲，包括来自世界卫生组织的代表，来自美国疾控中心驻中国办公室的代表，还包括数位来自国内不同机构的高级专家，以及亚行顾问小组。会议除了五个正式的省级的报告演示外，其他一些小组会议也吸引了来自各省的与会代表。

作为一个重要的成果，小组讨论总结了“非典”中的主要经验，明确了主要的公共卫生事件、问题和挑战，并提出建议。随之，一份简明的会议纪要，在研讨会结束后被分发到与会各省的卫生厅、卫生部的中央级相关部门，以及其他国内、国际机构。纪要指出了应对疫情方面的重要经验教训，在应对准备

③ 包括西部地区六个省份，还有北京和广东，均有更加直接的抗战“非典”的经验。

方面存在的不足，现阶段主要工作重点以及中远期工作重点。该纪要同时亦为项目在四个项目省展开第二阶段的一系列工作（见第四章）打下了坚实的基础。项目第二阶段工作目标主要是将这次北京研讨会的讨论结果以及总结出来的首要问题引入更加集中的讨论，从而针对各个地方的具体情况，提炼各省应对“非典”及其他公共卫生威胁的方案。

亚行代表第二次来京，就项目开展一些尝试性工作进行了讨论，主要是想解决基层疾病防治单位在实战能力上的不足（例如，县级疾控中心以及乡卫生院）。也就是说，根据当时正在进行的需求评估和省级讨论的结果，加强传染病防治能力建设已被视为项目推进能力建设的核心内容。在青海进行的现场评估，进一步巩固了此项能力建设的方案设计工作。继青海评估之后，项目小组编制出一系列主要问题以供相关机构组织讨论。在起草加强传染病防治能力建设的核心资料过程中，中国疾控中心、美国疾控中心，以及世界卫生组织均给予了特别的、重要的支持，具体情况可见第四章。

根据正式项目备忘录的详细记载，亚行代表与有关的、多方面的伙伴之间的一系列谈话和沟通铺架出了项目的主要行动路线，有助于进一步提炼和巩固项目建议书所建立的援助框架。同时，这些谈话也为项目未来的工作奠定了更加坚实的基础，令项目能够继续顺利地开展下去，包括按照项目设计所考虑到的，实现灵活性的操作，以便继续重新评估需求和调整方法，同时还包括保持与多方合作伙伴（中央级的或者地方级的）协同一致地工作。

二、项目管理和监督

作为项目执行机构，卫生部贷款办为项目方案的设计提供了全方位的指导。卫生部贷款办有一个辛勤工作、热忱参与的核心小组，其中卫生部贷款办领导为此项目提供了强有力的支持与指导。在整个项目的大多数时间里，项目协调员在卫生部贷款办开展工作，协助各省明确主要需求，辅助中央项目执行单位编制工作方案，并向亚行提交符合项目综合支持计划的设备和消耗性物资的供给方案。

在亚行与卫生部贷款办的对话中，亚行项目官员对项目管理负有首要责任。从亚行方面来看，项目及其特殊性质所承载的重要性，决定了亚行项目官员需要在整个项目过程中扮演信息传递的角色，即在设计、评估、提炼核心措施和在联络国际组织方面，亚行项目官员均须保持与项目协调员及辅助顾问的紧密合作。

除了常规的电子邮件和电话往来，亚行项目官员频频专访或途经访问中国，以及该官员后来被调任到亚行驻中国代表处，均为亚行与卫生部贷款办和咨询专家提供了面对面讨论的机会，从而促进了合作对话。以下内容及第四章将深入阐述技术顾问投入（亚行聘请的技术顾问，以个人身份为项目提供咨询服务）、其他附加的人力资源以及项目实施过程中的设备和物资提供。

项目实施的监督与评估同时亦遵循一些比较松散的工作规定。在项目协调员的支持下，卫生部贷款办的首要责任是保持与各地方伙伴的对话，以确保各项行动能够顺利实施，并且针对各种已经被评估肯定的需求，能够确实予以响应和落实。亚行则通过以下手段实施监督，如与项目协调员和其他技术顾问保持紧密对话（包括就各种报告或补充材料进行讨论），以及根据工作预算方案跟踪支出情况。由于这个项目是卫生部贷款办第一次接触到亚行财会和清算程序和要求，有时在核对卫生部贷款办、亚行项目官员以及亚行财务部门提供的费用记录会出现些困难，但是这并没有造成很大的问题。项目效果监督包括内部监督与评估-例如，培训课程设置时都包括培训前后的测验以及对学员学习效果进行定性的评估；与地方项目实施单位保持沟通，在必要时进行现场督导，以及在项目结束前开展的一个正式的外部评估（见第五章）。不过由于主要能力建设方面的干预措施、培训材料开发等方面的设计实际上都是参与式的（比如，要求地方的专家直接参与培训课程的设置或对教材的适用性进行评估）并且在过程中被不断地改进（即，通常利用前期培训课程设计和教材开发的反馈意见来完善后面的设计），所以开展正式的监督和评估的需求就显得不是很重要了。

三、资金安排

除了咨询合同（亚行与咨询专家直接签署），亚行直接支付的项目的支出是基于协议的工作计划执行，覆盖整个项目过程中的主要活动，亦包括为一些灵活

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④ 包括六次正式访问，2003 年7 月下旬～8 月上旬（主要出席快速评估座谈会，并起草项目备忘录，以指导以后的工作）；2003 年11 月上旬（主要出席北京研讨会，计划省级研讨会，以及指导“加强传染病防治能力建设”的项目设计）；2004 年2 月下旬（包括出席在云南景洪市举行的第一次“加强传染病防治能力建设”的试点）；2004 年9 月中旬（出席在青海格尔木县进行的早期“加强传染病防治能力建设”培训，和指导以学校为对象的信息传播、教育和沟通活动——学校健教材料的开发准备），2005 年4 月下旬（出席在新疆乌鲁木齐举行的第二轮师资培训）；2006 年6 月（参观在云南曲靖市和新疆阿勒泰市举行的最后一轮“加强传染病防治能力建设”培训会）。另外在其他三次亚行项目官员专程或途经北京的访问中，尤其是其于2004 年8 月途经来访期间，亦安排了一些会议。

调整的、或者是临时增加的活动提供支持。资金使用流程采取三合一式的机制:(1) 预付款方式(可见下文),在该方式下亚行按照工作预算方案提供给卫生部贷款办预付款,从而支持方案中活动的开展;(2) 卫生部贷款办对协议活动或者物资供给的支付,采取报销原则;(3) 由亚行直接采购并支付。在项目执行之初,卫生部贷款办即为此项目建立了一个专门账户,以处理以上(1)(2)所述的资金往来。根据项目建议书,亚行于2003年8月为卫生部贷款办建立了预付款机制。尽管项目建议书允许各省建立自己的预付系统,但是后来的实践证明,比较可行的方式是以卫生部贷款办的账户作为唯一的亚行预付渠道,由卫生部贷款办负责对各省进行资金分配。亚行已经通过预付款方式向卫生部贷款办提供了六次预付资金:总共大约103万美元。虽然在某些情况下,为了加速项目实施的进程,卫生部贷款办是采用报销的方式付账的,但是亚行这些预付资金,还是满足了大部分活动经费的需求,比如能力建设方面的活动。

通过预付资金机制或者其他认可机制所发放的资金,均以卫生部贷款办和亚行项目官员联合制定的工作预算方案为依据。以上支付,以及卫生部贷款办的统一清算,均由项目协调员协助执行。值得一提的是,在跟踪支出方面,卫生部贷款办拥有非常周全的文件记录,令亚行驻马尼拉审计部在费用清算过程中没有出现重大的困难。由于上述情况,亚行得以通过预付机制交叠支付,以实现及时灵活的资助。

四、项目期的延长和项目范围的小幅调整

在项目建议书编审阶段,预计执行期间为2003年5月～2004年5月,并预计大量资金将直接用于迅速展开的活动与采购,以应对日益攀升的“非典”威胁。然而,项目建议书亦指出了无法预言“非典”的演变趋势,和重新考量这一意向性时间表(和全面的实施安排与方法)的必要性,以及考量途径,即通过经常性的检查以评估执行进程、评估“非典”和其他传染性疾病的威胁情况。在实践中,“非典”从来也没有在西部地区扎下根来,但是技术援助项目下的快速评估和其他早期工作(以及国内、国际与地方伙伴之间的多方对话)产生出一个明确的共识,即很多与“非典”疫情相关的危险因素的产生可归结于应对传染性疾病威胁基本能力的不足。

考虑到“非典”及其他传染性疾病的情况总在持续变化之中,卫生部贷款办和亚行一致同意,进一步采取措施,将技术援助项目的余额转移到更重要的疾病反应能力建设上。这一决定既与项目建议书所提供的灵活性的工作框架完全一致,亦与项目建议书所关注的重点(就目标而言)完全一致,即汲取“非典”应

对中的经验教训，推进对话，提出新模式，通过进行重要的、较长期应对能力建设（特别是在相对比较贫困的西部农村地区）处理中国公共卫生面临的挑战。经一致同意，新模式的发展必须注重其有效性，必须以全面理解地方情况为基础，具有实用性，具有更加广泛的参与性。如第四章所述，后者包括：

（1）请各地项目利益相关者加入进来，参加计划与培训材料的设计、修订与检验工作，以确保其实用性。

（2）培养地方伙伴的执行能力，以推进这些计划的实施（例如，在加强传染病防制能力的目标下，制定实施一套综合的师资培训计划）。

（3）确保在面对面的培训计划中，通过运用革新的、参与式的、积极学习方法，掌握应用知识和核心技能。加强传染病防治能力建设所采取的措施，包括书面材料学习，面对面培训，还有各种后续支持活动。

以上措施，以及建立广泛的伙伴关系的工作（见下一段落），较之常规手段时间成本更大，然而却被证明对于增强计划的有效性和保证更广泛的互补合作起到了关键的作用。

为了使项目干预活动的成果最大化，令项目的后期计划能够贡献于持续的、较长期的应对能力建设，卫生部贷款办和亚行一致决定，将项目执行期延长到2005 年6 月，继而又同意延长到2005 年12 月。为此，亚行对项目范围做了相应的小幅度的改动。根据项目干预活动所创造的显著成果，并响应来自于项目省和其他省的合作伙伴的热烈要求，亚行最后又决定将项目期延长至2006 年6 月30 日，并允许使用技术援助预算余额，以扩大加强传染病防治能力建设培训的范围，促进将项目的成果和禽流感以及长期的公共卫生威胁方面的疾病防治的工作联系起来的对话交流。

五、广泛对话与合作

在执行过程中，项目也十分重视与主要的国内、国际机构之间保持对话沟通。在确保与卫生部门的联络中，卫生部贷款办扮演主要角色。由于有数位技术顾问来自中国疾控中心，还有一些技术顾问是来自于北京大医院的临床医生，均具有丰富的实践经验，因此他们的加入有利于与一些应对“非典”和其他传染性疾病的国内组织的协调。如加强传染病防治能力建设（见第四章）所精确阐述的，为了确保能力建设和其他措施能够切实响应需求，为了确保在各项目省能够增强其地方疾控中心和临床工作者的合作，以上的协调是必要的、根本的。

在帮助中国应对“非典”和其他卫生问题的过程中，亚行积极地与相关国际组织进行协调。这些组织包括：

(1)　联合国机构，特别是世界卫生组织、联合国儿童基金会和联合国发展计划署。

(2)　世界银行。

(3)　重要的双边机构，包括美国疾控中心全球艾滋病规划署中国办公室、英国国际发展部、澳大利亚国际发展署和日本国际合作银行。

(4)　一切有可能的、相关的国际非政府组织，例如无国界医生组织。

始于项目设计阶段和早期执行阶段的对话在信息交换方面起到了重要的作用，帮助避免了重复工作，促进了合作，实现了国内、国际援助活动之间的互补。例如，快速评估结果座谈会(见上文)和以后的一些讨论，有助于明晰其他计划中的和正在进行中的各项举措之间的互补关系，有助于在灵活的项目框架内，为将来的项目工作指引方向。在北京的一次就快速评估实地考察结果及访谈记录进行提炼的大纲起草过程中，上述对话在快速评估技术顾问中达到了最热烈的讨论程度。这份由众多国内、国际伙伴共同拟定的大纲文件，提出了更加具体的建议，并明确了行动要点，随后被散发到了各个相关的、重要的国内和国际机构。第二个重要的例子是在2003年11月份召开的著名的北京研讨会，由亚行技术援助项目组与世界银行相关行动部门联合主办，与会者和发言人来自一系列相关的国际组织。技术援助小组与各国际机构之间进行的合作，还包括各种技术评论和其他富有价值的工作，例如，就加强传染病防治能力建设核心手册设计与世界卫生组织和美国疾控中心的合作；与联合国儿童基金会合作设计以学校为对象的信息、教育与传播活动材料；以及在后来增加的应对禽流感项目内容设计方面展开的与世界卫生组织的合作。如第四章所提及的，通过与地方青少年发展联合会的合作，开发了蒙古语版本的宣传教育材料，并分发到内蒙古地区。虽然许多讨论是非正式的，但与国际机构的合作还是有效的。

六、项目管理概述

如上所述，本项目的重要特点之一就是项目以灵活性作为设计前提，提供了一个清晰的、综合的工作框架，以确保实现定期的需求评估，并且确保能够及时地、适当地响应这些需求。无论如何，正是这种灵活性助成了卫生部贷款办、亚行和其他项目伙伴之间的顺利合作。维护这样的合作，正是确保项目得以成功实施的重要原则。就项目实施过程中的总体经验而谈，为了维护整个技术援助项目过程中的顺利合作，以下几点可以视为特别重要的事项：(1)　在项目协调员的帮助下，在各方成员的积极参与下，卫生部贷款办与亚行之间展开大量非正式的、紧密的、灵活的对话，以促进实现项目目标和落实项目省的需求；(2)　在上述对

话中，在亚行项目官员出使/访问中国期间，以及其迁职亚行驻中国代表处之后，进行经常性的面对面对话；(3) 双方项目工作者之间的、持续的、相对高层次的对话。

最后，在继续讨论项目实施情况之前，需要指出的是，要在确保项目评估的有效性、落实各个项目地区实际需求的过程中，应充分认识到反馈机制的重要性。从整个项目来讲，这包括定期收集地方伙伴的反馈意见，以及由项目小组成员不定期地进行执行进程与效果评估。又如下章所述，一些主要的项目措施（从加强传染病防治能力建设和师资培训，到以学校为对象的信息、教育与传播活动和材料的编写）在发展过程中，均须进行反复的试检，以确保他们符合最终受益者的需求⑤。尽管上述工作增加了执行计划和开发材料所用的时间，但是上述这些措施的目标人群仍然觉得反馈一直是保证效果的关键。

附件

附件3.1 新疆和云南“非典”防治快速评估报告概要

⑤ 这源于在一些其他项目中发现的共同问题，即由“专家”开发的计划和材料总是不能符合当地“实际情况”，或者从受益者有限的技术背景考虑，提供的计划和材料总是不适当的。

第四章　项目的实施、投入与产出

一、实施策略

为了加强各项目省非典型肺炎与传染病防治能力，项目组织有关方面的专家，在几个方面开展了一系列的技术援助活动，包括(1) 帮助各省进一步完善“非典”与传染病防治的规划；(2) 开展多层次、多方位的针对基层卫生人员的传染病防治培训；(3) 提高各省传染病防治健康教育能力，并为重点人群开发和发放传染病防治的健康教育材料。

二、实施效果

1. 支持项目省非典型肺炎与传染病防治规划的制定和完善

根据快速评估的发现，各项目省在非典型肺炎与传染病防治策略规划方面需要得到进一步的加强和完善。因此项目于2003 年底在北京和四个项目省分别组织了国家和省级非典型肺炎与传染病防治策略规划研讨会。通过会议的广泛交流与讨论，与会代表一致认为，在与非典型肺炎斗争的过程中所形成的传染病与突发公共卫生事件应急机制是全社会有效地抵御各种传染病和突发公共卫生事件的必要条件，需要进一步加强和完善；各级政府应加强对公共卫生特别是疾病控制领域的投入；县乡级基层卫生人员，特别是基层疾控人员的疾病预防控制工作存在着巨大的社会需求，同时也承受着很大的工作压力，在技术、能力、装备等方面亟待加强和提高。各项目省卫生厅及有关业务部门十分重视这项工作，积极组织力量讨论，并结合各省的实际情况进一步完善非典型肺炎和传染病防治方案，强化应对传染病和突发公共卫生事件的应急机制，强调要平战结合，即传染病防治工作中要形成一种机制和力量(包括人力和物资) 的储备，一旦出现传染病疫情的暴发或突发公共卫生事件，能够立即采取有效的措施将疫情控制在萌芽状态，防止大范围的播散而造成不良的社会影响。

2. 加强项目省基层传染病防治人员的传染病防治能力

快速评估及现场考察发现，项目省各级疾病防治人员特别是县乡级卫生人员

在传染病防治能力方面存在着严重不足，需要根据他们的需求通过不同的方式向他们提供必要的指导和培训，以提高他们处理传染病和突发公共卫生事件的能力。为此，项目从两个角度来加强基层传染病防治人员的能力，一是为他们提供一本常见传染病与急性中毒防治参考手册及配套的常见传染病图谱及诊断流程图，参考手册的提供具有快速、覆盖面广及长期使用的特点，可以适用于基层卫生人员自学和日常工作参考；二是向部分基层卫生人员提供面对面培训，面对面培训具有直接和效果显著的特点，但存在覆盖面有限的问题。

2.1 《常见传染病与急性中毒预防和控制手册》及《常见传染病与性病图谱》的编写及发放

在快速评估与现场考察过程中，通过与各级传染病防治专业人员的交流，国家级专家组发现基层卫生人员非常需要一本适合基层实际工作需求、操作性强的常见传染病和急性中毒预防控制技术指导手册。针对这种实际需求，项目组织国家和省级有关专家迅速编写了适用于基层卫生人员使用的《常见传染病与急性中毒预防和控制手册》，共印刷3.5万册，分别下发到四个项目省的县级疾控中心和乡镇卫生院，分发给每个基层卫生单位约6～8册。来自项目省卫生主管部门和基层卫生人员的反馈信息显示，此手册很受基层卫生人员的欢迎，非常适合基层人员在传染病防治实践中使用。手册内容简明、实用，对基层的传染病防治工作有很强的针对性，具有很好的参考价值和指导作用。为配合《常见传染病与急性中毒预防和控制手册》在基层卫生人员日常传染病防治工作中的使用，考虑到许多传染病和性病发病时有典型的皮肤和外观变化，项目组织国家级传染病防治的临床专业人员编写了《常见传染病与性病图谱》，使基层卫生人员在常见传染病处理过程中，更容易识别各类传染病，从而更好地为传染病的防治服务。此图谱共印刷2万册，分发给各项目省基层卫生机构，每个机构约得到4～6册。同时为了在更大范围内发挥作用，项目将这两本书二次印刷（印刷2.2万册），分发到西部其他省的县级疾控中心和乡镇卫生院以指导基层的传染病防治工作。为了配合基层卫生人员传染病的诊断和鉴别诊断，项目组织国家级专家和省级专家编制了《基层医务人员急性传染病诊断思路与处理流程图》，共印刷30万份，分发给全国的县、乡级医院和疾病防治机构。

2.2 针对基层卫生人员的传染病防治培训

评估发现基层卫生人员（县级疾控人员和乡镇卫生院临床和防保医生）在以往很少有机会接受培训，即使在“非典”防治过程中组织过一些培训，但由于传统的授课式培训通常一次培训很多学员，效果不理想；同时培训也多是采取逐级培训的方式进行，这样就不可避免地会出现信息逐级递减的问题；在培训内容的设计上往往也不是根据基层的需求，而是根据上级分配的任务来设计的，内容缺

乏针对性。因此需要打破以往灌输式、纯理论式、授课式的培训模式，培训的内容要强调实用性和可操作性。2004 年初在云南和新疆开展了针对基层卫生人员的传染病与急性中毒防治试点培训，试点培训根据成人教育的特点，利用参与式的教学方法，通过各类传染病和急性中毒突发事件的典型案例分析，积极引导学员思考和主动参与讨论，并由辅导老师引导对案例进行分析和总结，这样通过实际案例分析讨论，可以启发学员逐步形成解决此类问题的正确思路，并逐步掌握处理各类传染病和突发公共卫生事件的方法。培训班还根据学员的情况和需求，组织学员到县级疾控中心和乡镇卫生院进行了现场实习，通过现场实地参观和交流及对现场实际案例的分析与讨论进一步提高了学员的实战能力。这种培训方法得到了参加培训学员的广泛认同，认为这种参与式培训能够始终活跃学员的思维，并能够强化记忆，比传统的授课式培训有更好的效果。

要扩展针对基层卫生人员的传染病防治培训工作，需要在各项目省培养出一批优秀的师资队伍，同时为了提高将来培训的效果，需要这些师资更多地了解一些最新的培训方法，参与式教学方法就是此次师资培训的核心。正如试点培训所显示的效果那样，参与式培训能够适应成人教育的特点，能更好地促进学员的主动思考和积极参与，这种方式所学到的知识和技能更容易记住并应用到将来的实际工作中去。项目分别于2004 年5 ～7 月及2005 年5 ～7 月进行了两轮针对各项目省的师资培训，各举办了6 个培训班，培训师资180 余人，师资培训重点向受训的师资介绍了参与式培训的方法，如小讲课、角色扮演、现场模拟、老师引导的案例分析与讨论、小组讨论与分组汇报、老师点评等。同时为了加强理论技能与实际的结合，师资培训班还组织学员到县级疾控中心和乡镇卫生院现场实习，了解实际工作状况，并对现场实习单位过去一年中所遇到的一次典型的传染病或突发公共卫生事件的案例进行现场分析与讨论，从而加深学员的印象。这种参与式培训方法对大部分学员来讲都非常新颖，它打破了以往传统的讲课式培训方法，通过4 天的理论讲解、老师示教、讨论、参训学员的分组准备与课堂试讲及老师点评，参加培训的师资逐渐认识到这种参与式培训的优越性，并逐渐愿意尝试采用所学的各种参与式培训的方法。为了配合师资培训和扩展培训，项目组织国家级专家制作了《基层卫生人员参与式培训教案》和《基层卫生人员参与式培训教案光盘》，第一版已经发给各省地级师资，用于指导扩展培训。修改后的《基层卫生人员参与式培训教案》和《基层卫生人员参与式培训教案光盘》由北京大学医学出版社正式出版并下发各项目省用于指导基层未来的培训。

经过第一轮省地级师资培训后，按照项目的计划分别在四个项目省选择了一个地区，由接受国家级师资培训的省地级师资负责组织并开展了针对县级疾控中心和乡镇卫生人员的传染病与急性中毒试点培训，培训由40 名县乡级卫生人员

参加，其中包括10 名县疾控中心的业务人员和30 名乡镇卫生院从事传染病防治或临床的专业人员。从试点培训的效果来看，接受国家级师资培训的老师基本上掌握了参与式培训的要点，能够较好地利用4 天的培训时间组织参与式培训课堂教学和现场实习，从参加培训的学员对培训效果的反馈来看，这种参与式培训能够激发学员学习的积极性和主动性，比传统的讲课具有更好的效果，而且4 天的培训中，学员始终能够积极地参与，很少有缺课或旷课的现象。参加培训的教师也亲身体会了这种参与式教学的特点，对这种培训方式有了更深入的理解，从最初对培训效果没有把握和缺乏信心，到培训后总结经验，认为通过努力是可以达到较好的效果的，同时也感觉到参与式培训对教师在专业知识、组织能力、活跃课堂等方面的能力都有很高的要求。每个省经过一次试点培训后，锻炼了省地级部分师资，并基本上掌握了进一步扩展培训的方法和程序。在此基础上项目投入更多的经费开始了第一批针对县乡卫生人员的扩展培训。第一批扩展培训共涉及4 个项目省的14 个地州，约900 名县乡级卫生人员接受了亚行项目支持的第一轮传染病与急性中毒防治培训。

在两轮师资培训和第一批扩展培训的基础上，各省地级师资比较充分地掌握了参与式培训教学的技巧，然后项目在各地州展开了针对县乡级疾控和传染病防治临床专业人员的进一步（第二批和第三批）扩展培训，共设计84 个培训班，培训覆盖了所有的地州，其目标是每个县都要有1～2 名专业人员接受培训，每个县大部分的乡镇卫生院能有一名传染病防治人员接受培训，84 个扩展培训班共培训县乡级传染病防治人员4000 余人。来自项目省的反馈信息表明，基层卫生人员对这种切合基层实际需求的参与式教学培训非常欢迎，它提高了基层卫生人员的传染病现场处理技能，丰富了他们的传染病防治知识和经验。在培训班评估的期望一栏中，都希望今后能够组织更多这样的培训。

2.3 针对省地级疾病控制人员的现场流行病学培训

根据项目省地级疾病控制人员缺乏开展现场流行病学调查和应急处理能力的需求，亚行项目与2004 年10 月10 日～11 月10 日在北京组织开展了为期一个月的针对省地级疾病控制人员的现场流行病学培训。培训班共有20 名学员参加，每个项目省5 名，都是来自省地级疾控中心从事传染病或突发公共卫生事件处理的疾控人员，其中省级2 名，地级3 名。培训分两个阶段进行，第一阶段为期一个月，在北京进行集中授课，主要由项目聘请的国家级从事传染病流行病学、统计学、临床等有关方面的专家授课，讲授现场流行病学的基本理论和概念，同时授课过程中也安排了适当的课堂实习，分组进行了一个小课题的设计，调查表的设计，资料的整理（收集、录入、分析、汇总），报告的撰写等，使学员更进一步地理解了开展现场流行病学调查和处理的步骤和方法。培训的第二个阶段是现

场实习，学员完成在北京的集中授课后，回到各自的工作岗位上，在回去后的10～12 个月内独立或分组完成至少一次的现场突发传染病或突发公共卫生事件的处理工作、收集相应的资料、撰写报告，并于现场实习结束之后在北京汇报和交流现场实习情况及结果。培训的第三个阶段是在现场实习结束之后在北京集中汇报和交流现场实习情况及结果。通过这三个阶段系统的培训，学员进一步掌握了现场流行病学的基本理论和现场流行病学调查和现场疾病控制的思路，提高了开展现场流行病学调查和疾病控制的技能，来自项目省的辅导老师及各学员单位主管领导的信息显示，参加亚行实用现场流行病培训的学员能够将现场流行病学的理论与现场实际工作密切结合，现场调查和疾病控制的技能有了显著提高，同时学员也建议能够通过某种方式保持这种培训和交流机制，以进一步提高现场流调和处理能力。

3. 传染病防治健康教育

3.1 健康教育材料的制作

按照项目计划，将在部分重点人群中开展健康教育宣传，以提高重点人群的“非典”型肺炎及传染病防治意识。为此项目聘请健康教育领域的专家于2003 年初赴项目省，对项目省基层社区及学校的健康教育状况进行了快速评估，评估发现，项目省社区人口，特别是学校学生中普遍缺乏常见传染病防治的基本知识和技能。学校是一个人群集中的场所，特别是小学中各类常见传染病时有发生和报告，急需在小学生中开展针对性的传染病防治基本知识和技能的宣传。根据快速评估的这一发现，项目组织国家级专家针对小学教师和学生的特点编写了《中小学教师传染病预防与突发公共卫生事件应对手册》及《学生手册- 青少年用良好的卫生习惯战胜传染病》。针对学校传染病的特点及小学生正在形成行为和卫生习惯的特点，此手册告诉促进学校领导与老师在遇到传染病和突发公共卫生事件时应如何在第一时间处理现场，如何防止疫情进一步扩散，如何尽快报告有关部门，从而将传染病疫情控制在萌芽状态等知识；同时《学生手册》利用通俗易懂的语言和图画来增强知识性和趣味性，帮助小学生逐步形成健康的生活方式和卫生习惯，预防传染病。在老师和学生的预实验中这两个手册受到了普遍欢迎，大家一致认为这样的手册非常有利于他们对传染病的认识，有利于学校对传染病和突发公共卫生事件的控制。此两手册分别印刷14 万和15 万册，《学生手册》已经下发到各项目省贫困县的小学4～6 年级及初中，《教师手册》下发给贫困县小学及全部初中，按照各省提供的学生数量，约每10 个学生能有一本《学生手册》，每个学校能有4～5 本《教师手册》。

按照卫生部与教育部的共同计划，将在全国的中小学内开展传染病防治健康教育活动，卫生部组织有关方面的专家编写一本用于指导教师开展传染病防治健康教育的技术指导手册。此技术指导手册已经由有关专家组织编写，编写的内容在很大程度上借鉴了亚行项目前期编写的《中小学校教师传染病预防与突发公共卫生事件应对手册》，同时亚行项目有关专家也投入了技术力量协助该技术指导手册的编写。

3.2 传染病与突发公共卫生事件健康教育培训班

健康教育是传染病防治的一个重要环节，在传染病和突发公共卫生事件发生的时候，需要在开展现场流行病学调查的基础上迅速查明传染病和突发公共卫生事件发生的原因或可能的危险因素，并且要立即采取措施针对病因或可能的危险因素采取干预措施，那么作为传递重要干预信息的健康教育在控制传染病疫情的过程中无疑将发挥重要的作用。但是，目前的省级健康教育人员尚没有制定成形的应对传染病和突发公共卫生事件的健康教育应对策略。为了提高各省健康教育人员和传染病控制人员在制定健康教育策略方面的能力，亚行项目组织四个项目省的省级健康教育和传染病及突发公共卫生事件的专业人员就传染病防治的健康教育策略问题进行了培训和研讨，通过国家级专家引导和参加培训学员的认真和热烈讨论，初步形成了一个省级应对传染病和突发公共卫生事件开展健康教育的策略框架和应急预案，从而为各省下一步开展应对传染病和突发公共卫生事件的健康教育提供了重要的策略框架。

4. 部分设备与材料的购置与配发

针对西部项目省缺乏传染病防治基本设备的情况，特别是在“非典”防治期间缺乏基本防护用品的需求，项目很快组织了第一批防护用品的采购，包括防护服、口罩、防护眼镜、手套、红外体温探测仪、消毒锅炉六个品目，并很快发往项目省。根据各省传染病与突发公共卫生事件现场流行病学调查、监测与处理的特点及西部省份地域辽阔、山路崎岖需要越野交通工具的需求，项目于2004 年2 月份开始组织对越野车辆的采购，4 辆尼桑越野车已于2004 年6 月发送到各项目省省级疾控中心，用于今后的传染病和突发公共卫生事件的现场调查、监测和疫情控制工作，为了更好地配合现场流行病学调查，项目于2004 年12 月又为每省配备了一台笔记本电脑和一台数码摄像机，用于现场影像资料的收集及数据的收集、整理、分析和报告。同时，为了更好地开展针对基层的传染病防治培训工作，项目于2004 年8 ～12 月为部分先期开展基层卫生人员传染病防治培训工作的地区配备了笔记本电脑和多媒体投影仪；为配合省地级疾病控制人员的现场流行病学培训，于2004 年10 月份为参加培训的20 名学员购置了笔记本电脑和数

码相机。为了配合各省地州一级开展的针对县乡卫生人员的传染病防治扩展培训，项目又购置了第二批笔记本电脑和投影仪，从数量上讲，四个项目省的每一个地州都配备了一台笔记本电脑和一台多媒体投影仪（详见表4.2），以用于项目的扩展培训和日常的传染病防治培训工作，同时为配合现场流行病学调查资料的收集，项目为各省购买了一台数码摄像机和相机。项目中直接用于购买设备的费用约36 万美元，加上用于《常见传染病与急性中毒预防和控制手册》及《常见传染病与性病图谱》的两次印刷，《学生手册》和《教师手册》印刷与发放，《急性传染病诊断思路流程图》的印刷和发放等用于资料的费用（划入设备或材料购置，详见表4.2）约37 万美元，设备及资料的采购总费用支出约为73 万美元。

三、项目总结与交流

按照项目计划，本技术援助项目于2005 年12 月21 日在北京召开了项目总结交流会，来自财政部、卫生部、有关国际组织、四个项目省及西部省份广西的特约代表共28 人参加了项目总结会，总结会上报告了项目在两年半的时间中所开展的各项工作所取得的效果，四个项目省也从项目实施单位和受益者的角度汇报了项目执行的情况和项目对本省基层卫生人员进行培训后能力提高的效果，及对各地传染病防治工作的促进。来自财政部和卫生部有关司局及国际组织的代表高度评价了项目所取得的成果，认为项目所采取的灵活、务实的实施策略对于提高项目省基层卫生人员的传染病防治能力很有帮助，并希望亚行能够继续这样的支持，来帮助中国更多的地区提高基层传染病防治能力。

为了推广项目在传染病防治参与式培训方面所取得的经验，项目于2006 年6 月12～16 日在云南省曲靖市组织举办了一期针对基层传染病防治人员的联合培训班，培训班特邀来自广西和贵州省的传染病防治领域的省级和县乡级传染病防治人员各5 名，现场观摩了云南曲靖的培训班，从中学习参与式培训在基层传染病防治能力建设中的应用。这将为两省在今后的基层卫生人员传染病防治培训提供可借鉴的经验。

项目中所开发的《常见传染病与急性中毒预防和控制手册》，《常见传染病与性病图谱》受到了基层卫生人员的好评，他们认为这些参考书注重实际，通俗易懂，对于基层传染病防治具有很好的指导作用。为了更大程度地发挥此资料的作用，项目组织对该手册和图谱进行了二次印刷（2 万多册），并分发到西部其他8 个省的县级疾控中心和乡镇卫生院。同时，项目开发的《急性传染病诊断思路流程图》印刷30 万份，发往全国的县级疾控中心和乡镇卫生院。通过资料的扩大

发放，使项目中所开发的资料发挥了更大的作用。

总之，通过亚洲开发银行西部地区“非典”与传染病能力建设项目的实施，云南、青海、宁夏和新疆各项目省的各级传染病防治人员在接受亚行传染病与急性中毒防治培训的同时，逐步形成了省、地级传染病防治培训师资队伍和业务骨干，同时通过二级培训，提高了县乡级卫生人员传染病防治和突发公共卫生事件的处理能力。亚行项目传染病防治参与式培训模式已经通过其培训所建立的省、地级师资队伍，开始逐渐渗透到日常传染病防治培训活动之中，相信这种可持续发展的培训模式会为各省未来的传染病防治培训提供有价值的参考。

四、项目资金使用情况

表4.1 项目各领域资金使用情况

项目领域	资金数量（美元）
快速评估	16 526
能力建设与专家投入	1 203 761
设备及材料的制作与分发	733 284
合计	1 953 571

五、项目产出情况

表4.2 各项目省基本情况及接受培训和设备、资料汇总表

项目	云南	青海	宁夏	新疆	中央及非项目省	合计
项目省基本情况						
地、市、自治区	16	8	4	14		42
县、市、区	129	43	23	99		294
乡、镇、街道	1 582	424	343	1 004		3 353

续表4.2

项目	云南	青海	宁夏	新疆	中央及非项目省	合计
培训情况						
接受实用现场流行病学培训的省地级人员数	5	5	5	5		20
接受参与式教学方法师资培训的省地级师资人数	72	38	26	68		204
地州级传染病防治二级扩展培训班数	32	13	13	26		84
接受传染病防治二级扩展培训的县乡级学员数	1 620	625	580	1 310	10	4 145
设备分配情况						
省级现场流行病学调查用车辆数	1	1	1	1		4
省级现场流行病学调查用笔记本电脑数量	1	1	1	1		4
省级现场流行病学调查用多媒体投影仪数量	1	1	1	1		4
地州扩展培训用笔记本电脑数	16	8	5	15		44
地州扩展培训多媒体投影仪数量	16	8	5	15		44
现场流行病学培训现场用数码相机数量	5	5	5	5		20
现场流行病学调查用数码摄像机数量	1	1	1	1		4
高压消毒锅数量		5	4			9
№95 口罩数量	3 002	1 000	1 000	4 710		9 712
普通防护服数量	100	126	100	100		426
红外体温探测仪数量		10	15	15		40
护目镜数量	500	500	500	500		2000
一次性手套数量	1 000	1 000	1 000	1 000		4 000
资料发放情况						
《常见传染病与急性中毒预防和控制手册》	14 708	4 356	3 372	11 564	22 000	56 000
《常见传染病与急性中毒预防和控制手册（维语版）》				5 000		5 000

续表4.2

项目	云南	青海	宁夏	新疆	中央及非项目省	合计
《常见传染病与性病图谱》	8 437	2 290	1 702	6 571	22 000	41 000
《基层卫生人员参与式培训教案》	320	170	150	260	100	1 000
《基层卫生人员参与式培训教案(光盘)》	320	170	150	260	100	1 000
《学生手册》	110 000	12 400	14 600	11 000	2 000	150 000
《教师手册》	78 100	11 800	14 600	33 000	2 500	140 000
《学生手册(蒙语版)》					6 000	6 000
《教师手册(蒙语版)》					6 000	6 000
《急性传染病诊断思路流程图》	9 900	3 000	2 000	6 400	277 700	299 000

六、项目省完工总结报告

(一) 云南省

1. 基本情况

云南省辖16个州(市),129个县(市、区),1 574个乡镇,13 842个行政村,有国家级贫困县73个和省级贫困县7个。面积39.4万多平方公里,其中山区面积36万平方公里,占91.4%;边境线长达4 060公里,共有8个州(市)、25个县(市、区)与邻国接壤。2004年底全省总人口4 415.2万人,贫困人口777.7万人。全省共有52个民族,其中人口在5 000人以上的世居少数民族有25个,独有民族15个,跨境民族16个,少数民族人口数占全省总人口数的1/3。2004年预计全省国内生产总值为2 959.48亿元,人均国内生产总值约为6 703元,农民人均纯收入1 697元。

多年来,云南省对县乡级卫生防疫防病知识进行了不同渠道、不同层次、多种形式(包括以会代训)的专业培训。据不完全统计,年平均受训率约为50%。通过培训,使县乡级卫生防疫防病业务工作能力有了一定程度的提高,但由于缺乏专项培训经费和统一的培训教材,培训工作始终未能走上制度化、规范化管理

的轨道。因此，建立和完善县乡级培训体制，进一步提高我省县乡级卫生防疫防病人员的业务水平，改善其公共卫生基本知识和技术薄弱的状况，在我省实施县乡基层卫生人员防病培训项目是十分必要的。

2. 项目的组织与管理

2.1 组织管理

在财政部、卫生部的统一领导和组织下，由卫生部贷款办负责项目的立项、组织实施、设备采购、财务管理等具体的协调和管理工作，并向亚行提交项目活动进展情况报告和完工报告。各项目省卫生厅负责本省活动的组织、实施并向卫生部贷款办提交项目活动进展情况报告和完工报告。

2.2 财务管理

卫生部贷款办开设专用账户，管理本项目经费。根据项目进度向亚行申请款项，并及时拨付各项目省。各项目省卫生厅开设项目专用账户，对有关开支详细记录，保存好所有财务凭证和记录，以便亚洲开发银行或其指定的机构对该资金的使用进行审查或审计。

本项目的财务管理和会计核算参照国家财政部颁布的《财政部国际司管理的赠款项目财务管理办法》和《财政部国际司管理的赠款项目会计核算办法》(财际字[2001] 195 号) 执行。

2.3 设备采购管理

由卫生部贷款办统一采购分发。

3. 项目实施情况

3.1 项目快速评估

项目于2003 年5 月底启动后，卫生部贷款办迅速组织国内外专家于2003 年7 月对我省和新疆进行了快速评估，组织了包括卫生、铁路、交通、民航等多部门参加的座谈会，访问了省、地、县、乡级医院，疾病控制机构，铁路、民航、边境口岸等与非典型肺炎防治密切相关的机构和部门。通过查阅资料，座谈和个别访谈及实地考察等多种形式全面深入了解各级政府、有关部门及疾病防治机构在非典型肺炎与传染病诊断、治疗和预防控制方面的能力和实际需求，特别是对基层的传染病防治能力有了进一步的了解。通过评估发现: (1) 各项目省需要针对实际情况进一步完善非典型肺炎防治方案，并把这种机制扩展到其他传染病防治工作中; (2) 各项目省各级疾病防治人员特别是县、乡级卫生人员在传染病防治能力方面存在着严重不足，需要针对省、地、县各级卫生人员不同层次的需求开展有针对性的培训活动，以提高基层卫生人员对各类传染病及突发公共卫生事

件的诊断、报告和现场处理能力；(3) 需要提高专业人员开展健康教育和信息传播的能力，并向部分重点人群提供适当的传染病防治信息。

针对项目快速评估所发现的问题和“非典”及传染病防治工作的实际需求，卫生部贷款办迅速组织了一系列的后续活动：(1) 为项目省提供了《常见传染病与急性中毒预防和控制手册》及配套的《常见传染病与性病图谱》和《急性传染病诊断思路流程图》，便于基层卫生人员自学和日常工作参考；(2) 为基层培养出一批优秀的师资队伍，从而扩大培训的覆盖面，以便更好地向基层卫生人员提供面对面培训；(3) 开展省、地级疾控人员参加的高层次现场流行病学培训活动；(4) 组织针对各省健康教育专业人员的能力建设培训活动和健康教育材料的开发；(5) 针对西部项目省缺乏传染病防治基本设备的情况，特别是在“非典”防治期间缺乏基本防护用品的需求，项目提供了部分物资设备。

3.2 召开非典型肺炎与传染病防治策略规划研讨会

3.2.1 国家级非典型肺炎和传染病防治策略研讨会

2003 年11 月5～7 日，我省由卫生厅杜克琳副厅长带队、医政处段琪雄调研员、疾控处欧阳琳副处长、省疾控中心杨军副主任、昆医附一院传染科杨微波副主任一行5 人按要求赴北京参加了国家级非典型肺炎和传染病防治经验交流与防治策略研讨会。会上，卫生部王陇德副部长做了重要讲话，强调了在当前形势下广泛开展非典型肺炎防治的国际合作、经验交流和策略研讨的重要性。会议针对非典型肺炎与传染病防治的策略与经验进行了广泛的大会交流，同时还组织与会代表赴北京地坛医院和北京市疾控中心就非典型肺炎与传染病防治临床、疾病控制等领域进行现场考察。

通过会议的广泛交流与讨论，与会代表一致认为，在与非典型肺炎斗争的过程中所形成的传染病与突发公共卫生事件应急机制是全社会有效地抵御各种传染病和突发公共卫生事件的必要条件，需要进一步加强和完善；各级政府应加强对公共卫生特别是疾病控制领域的投入；县乡级基层卫生人员，特别是基层疾病控制人员的疾病预防控制工作存在着巨大的社会需求，同时也承受着很大的工作压力，在技术、能力、装备等方面亟待加强和提高。

3.2.2 省级非典型肺炎与传染病防治策略研讨会

在国家级研讨会就非典型肺炎和传染病防治经验与策略广泛交流与讨论的基础上，针对项目省需要进一步加强和完善“非典”与传染病防治策略规划的需求，于2003 年11 月～12 月国家级疾病控制和临床方面的专家在四个项目省开展了非典型肺炎与传染病防治现场考察和技术援助。12 月14～17 日，专家组对云南省疾控中心、昆医附一院、昆明市疾控中心、昆明市三院、昆明市延安医院、安宁县疾控中心、昆明铁路局、民航云南省管理局市等部门进行了现场实地考察

并与相关人员进行了座谈与交流，对发现的问题及时提出指导性建议，并在我省组织了由省级卫生、财政、计划、铁路、交通等政府多部门及卫生有关专业机构参加的省级非典型肺炎与传染病防治策略研讨会，省政府钱副秘书长出席了会议。通过研讨，进一步明确了我省在非典型肺炎与传染病防治方面的优势和存在的不足，并结合实际情况进一步完善非典型肺炎和传染病防治方案，强化应对传染病和突发公共卫生事件的应急机制，强调要平战结合，即传染病防治工作中要形成一种机制和力量（包括人力和物资）的储备，一旦出现传染病疫情的暴发或突发公共卫生事件，能够立即采取有效的措施将疫情控制在萌芽状态，防止大范围的播散而造成不良的社会影响。

3.3 项目资金到位及使用情况

每期培训班所需的经费均由卫生部贷款办直接拨付到各培训班承办单位，自项目启动以来共收到培训资金159.00 万元人民币，并已全部用于各培训班。

3.4 项目物资到位情况

所有的设备与培训和健教材料（详见表4-2）都已下发到相应的实施单位中。

3.5 培训工作完成情况

3.5.1 省外培训

2004 年10～11 月，为了进一步提高项目省在急性传染病预防控制方面的能力，卫生部贷款办按照项目要求，组织了国家级专家在北京开展了省、地级疾控人员的高层次现场流行病学培训活动。我省省疾控中心刘晓强、徐闻，昆明市疾控中心刘宏，玉溪市疾控中心吴强，曲靖市疾控中心何丽芳5 名疾病控制的专业人员参加了本次培训。

2005 年9 月26～28 日，卫生部贷款办在北京开展了亚行赠款项目省级传染病与突发公共卫生事件健康教育培训与经验交流活动，我省卫生厅及省疾控中心的田子颖、杨建斌和何继波参加了本次活动。

2005 年10 月9～13 日，卫生部贷款办在北京开展了亚行赠款项目省级、地级疾控人员现场流行病学集中交流培训活动，我省省疾控中心刘晓强、徐闻，昆明市疾控中心刘宏，玉溪市疾控中心吴强，曲靖市疾控中心何丽芳5 名疾病控制的专业人员参加了这次培训。

3.5.2 省内培训

自2004 年亚行赠款“非典”及其他传染病防治培训项目在云南省实施，至2006 年6 月，该项目已覆盖云南省的16 州（市），共举办师资培训班4 期、项目试点培训班1 期、扩展培训班试点1 期和二级扩展培训班20 期，后续扩展培训班10 期，累计培训县乡卫生人员1 476 人，现将两年的培训情况详述如下:

(1) 试点培训 卫生部贷款办于2004 年2 月，在我省西双版纳州举办了师资和基层卫生人员传染病防治技术试点培训班。为了活跃学员的思维，强化记忆，达到更好的授课效果，本次培训采用参与式的教学方法，即根据成人教育的特点，利用通过各类传染病和急性中毒突发事件的典型案例分析，积极引导学员思考与主动参与讨论，并由辅导老师引导对案例进行分析和总结，启发学员解决此类问题的正确思路，并逐步掌握处理各类传染病和突发公共卫生事件的方法。培训班还根据学员的需求，组织学员到景洪市疾控中心和橄榄坝乡镇卫生院进行了现场参观，通过现场实地参观和交流及对现场实际案例的分析与讨论，进一步提高了学员的实战能力。试点培训摸索出了一套成型的、适合基层传染病防治人员的成人培训模式和方法，并培养了一批省、地级师资。

(2) 师资培训 2004 年6～7 月，卫生部贷款办在我省的昆明市和曲靖市分别举办师资培训班1 期。培训对象为16 个州、市疾控中心和医院传染科从事传染病防治和突发公共卫生事件处置的专业骨干，以及从事传染病临床诊治、流行病学教学的教师，约64 人。

2005 年5 月16～22 日，卫生部贷款办在我省的玉溪澄江县举办了两期师资培训班。培训对象为参加过第一次师资培训班的学员及开展扩展培训中的核心师资，包括了16 个州、市疾控中心和医院传染科从事传染病防治和突发公共卫生事件处理的专业骨干，以及从事传染病临床诊治、流行病学教学的教师，约75 人。

(3) 扩展培训

① 扩展培训班试点 2004 年8 月24～29 日，在云南省玉溪市澄江县举办该项目的扩展试点培训班，由云南省疾控中心、昆医附一院，玉溪市疾控中心、思茅卫校联合组成的师资，对来自玉溪市8 个县(区) 疾控中心传染病控制科科长、部分乡镇卫生院防保组长共50 余人进行了培训。培训内容包括疫情暴发现场处理、霍乱防治、甲肝防治、结核病控制、麻疹、伤寒、副伤寒防治、疟疾防治等多项内容。培训期间，全体学员到澄江县疾控中心和龙街镇卫生院进行现场参观和讨论，把理论与实践较好地结合在一起，达到预期培训效果。

② 扩展培训班 2004 年10 月～2005 年11 月，在全省15 个州、市(西双版纳州除外)，共举办了20 期亚行项目扩展培训班。每次培训班师资均由省级和(或) 地州级师资组成，针对全省重点传染病及各地多发传染病，对924 名县乡级卫生人员进行了传染病防治知识的培训，并进行了现场参观。

③ 后续扩展培训班 按照亚行“非典”与传染病防治项目的安排，利用项目的部分剩余资金在四个项目省继续开展针对基层卫生人员县乡级的传染病与急性中毒防治参与式培训，其中云南10 期。

2006 年5 月～6 月15 日，在全省10 个州、市举办了10 期亚行项目后续扩展培训班，每次培训班均由参加过亚行师资培训的传染病防治与临床诊治方面的师资组成，针对各地州常见传染病与急性中毒发生情况，对552 名县乡级卫生人员进行了传染病防治知识的培训，并进行了现场参观。

4. 扩展培训班效果评估

截止到2006 年6 月，共举办了31 期扩展培训班，培训班覆盖了全省16 个州（市）的县级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员和县级医院从事传染病临床和防保工作的医务人员，以及部分乡镇卫生院人员。大部分学员认为，课程的设置安排合理，充分结合了各地的疾病流行态势和常见的传染病疫情报告与管理，在较短的时间内获取了较大的知识信息，同时也对一些新发传染病有了具体的认识，更新了知识。通过4 天的参与式教学及理论教学，全体学员均认为该次培训班极为成功，培训班组织管理规范，课堂纪律较好，课程安排基本合理，师资力量较强，教学方法新颖，较以往教学方式更容易接受，授课内容较适宜。学员在学习中参与讨论，调动了学员的积极性，加深了印象，培训效果较好。由省级师资直接来培训县、乡级医务人员，减少了以往授课的中间环节，避免了所授知识的逐级递减，培训效果明显，达到了预期效果。

参与式的教学方法打破传统的教学方式，使学员参与到课堂中，发表自己的观点、看法，达到学员与教师的互动，充分调动了学习积极性，提高了教学质量。

课堂讲座与现场参观相结合，使学员在进行理论学习的同时也能通过现场参观检验学习效果，交流工作经验。

5. 项目的投入与产出

该项目的执行和实施，在亚行的资助和卫生部贷款办的关心支持下，由云南省卫生厅疾控处牵头，省疾控中心合作项目办具体承办，并得到了各级卫生行政部门、疾控中心和省地级师资的大力支持和帮助，使得我省对基层卫生人员的培训取得了较大的进展和成效。

亚行对我省基层卫生人员的培训共投入了159 万元，培训了我省县乡级卫生人员1 476 人。

6. 存在的问题及建议

（1）由于时间及经费的不足使培训班不能完全覆盖全省从事基层卫生服务的乡级卫生工作人员。

(2) 每期培训班学习时间短且紧，致使在授课内容安排方面不能够完全满足学员学习必需知识的要求。

(3) 由于不同的教师及各地参加培训的学员之间沟通的差异，不同地区的培训效果存在一定差异。

(4) 建议今后能多组织此类培训，增加培训的频率和扩大培训范围。希望能组织学员到先进地区参观学习交流活动。

(二) 青海省

1. 项目管理与监督

在卫生部贷款办的安排下，经省卫生厅的统一部署和安排，由青海省疾控中心积极组织实施，各级卫生行政部门大力配合，于2004 年9 月～2006 年4 月分别举办了两期师资培训班、13 期县乡级培训班。在培训期间，亚行的官员、卫生部贷款办有关领导和协调员亲临部分培训班现场观察。每次项目培训班开始时，均由省卫生厅相关负责人员亲临督导，项目结束后由省卫生厅统一专门组织人员进行检查、评估。项目中的设备及技术指导手册等均由省卫生厅统一组织下发，并对落实情况进行了抽查。

2. 项目实施

2004 年9 月～2006 年4 月分别在我省各地举办了13 期培训班，共有西宁市、海东地区及六州54 个疾病预防控制机构和386 个乡(镇) 卫生院628 人参加了学习。学习班中采用参与式的教学方式，以亚行和卫生部贷款办共同开发的《基层卫生人员传染病与急性中毒防治参与式培训教案》为蓝本，《常见传染病与急性中毒预防和控制手册》、《常见传染病与性病图谱》为主要教材，我省自行开发编写的《疾病预防控制基础知识问答》、《常见传染病的预防与控制》为参考教材，通过常见传染病与急性中毒事件的典型案例分析、演示与操作、专题讲座等，积极引导学员思考与主动参与，启发学员形成解决此类问题的正确思路，掌握处理问题中的注意事项及基本方法。

每期授课的4 名老师均是由省卫生厅亲自选定的省级和地级工作经验丰富、教学能力较强的疾病控制、临床诊断方面的教师。每次培训班前教师们均事先作了充分而又认真的准备，在培训中他们毫无保留地把知识和经验教给大家，教学认真、深入而且到位，同时全程参与各个阶段的学习和讨论。

项目中下发的防护设备、计算机、多媒体投影仪、《传染病防控手册》、《教师手册》、《学生手册》及其他宣传材料等，均在省卫生厅统一要求下，由省疾控

中心组织分配，利用学习班等多种机会下发至基层。

3. 项目投入与产出

在项目中共举办2 期省级师资培训班、13 期县乡级培训班，共请国家级专家及省地级师资75 人次在培训班中授课，共培训青海省西宁市、海东地区及六州54 个疾病预防控制机构和386 个乡（镇）卫生院628 人。

在国家级资深专家的精心指导下，两期师资培训班的学员们掌握了参与式培训的组织、方法和技巧，提高了学员们组织本省、本地开展类似培训班的能力，经后期在县、乡级基层卫生人员培训班中的实践，这些师资水平更上了一个台阶。该项目帮助我省建立了一支由省地级疾病控制、临床诊断、医学教育等方面人员组成的师资队伍。

项目给我省配备了传染病防护用品、车辆、笔记本电脑、多媒体投影仪及数码摄像机、照相机等设备，使我省的培训工作顺利完成，同时对我省突发公共卫生事件应急处置等方面帮助很大。

项目统一下发了《基层卫生人员参与式培训教案》和《基层卫生人员参与式培训教案光盘》、《传染病防控手册》、《常见传染病与性病图谱》、《教师手册》、《学生手册》及《急性传染病诊断思路流程图》等资料，满足了基层卫生人员的实际需求，提高了学校预防传染病的意识。

4. 项目效果

（1）在卫生部贷款办、省卫生厅的大力支持下，本次项目取得了良好的效果。首先，我省充分利用项目经费，按项目要求圆满完成了省、地级师资培训工作和县乡级基层卫生人员常见传染病与急性中毒防治培训工作，对我省基层卫生人力资源建设、技术水平改进和培训能力提高等方面的工作有了很大的帮助，达到了亚行项目要求的培训计划目的和目标，为传染病与急性中毒的防治工作奠定了坚实的基础。

（2）通过项目加强了我省的卫生人力资源建设，巩固了我省的卫生软件。在项目中我省建立的一支由省地级疾病控制、临床诊断、医学教育等方面人员组成的38 人的师资队伍，对今后培训我省县、乡级传染病防治人员，提高基层人员对传染病的诊断、预防、控制的综合能力有很大的现实意义。我省在现场流行病培训项目中充分应用参与式培训的教学方式，取得了十分显著的效果，目前此类方法已在各类培训班中推广使用。

（3）通过项目培训，我省乡级卫生人员的传染病初步鉴别诊断能力和报告意识得到了提高，基层人员能够早期发现传染病疫情，并能够及时正确地向有关部

门报告，为早期控制传染病疫情赢得了时间。同时培训使基层人员具有简单的现场调查处置能力，能够按照规范要求填写和报告传染病报告卡。

(4) 项目中开发的技术指导资料非常适合我省基层卫生人员的需求，下发的《教师手册》及《学生手册》已发挥了作用，各学校更加重视了学校中传染病与急性中毒的防治工作，能够及时向有关部门上报学校内发生的传染病，传染病及急性中毒的报告意识较以前有了很大的提高。项目中下发的《传染病防控手册》和《常见传染病与性病图谱》已成为我省县、乡级基层卫生人员工作中必不可少的工具，在诊断、治疗传染病病人及现场疫情调查处理中发挥了重要作用。

5. 需求和建议

(1) 高级流行病学人员较少，不能满足当前各地的指导工作。

(2) 学校卫生工作中教师对传染病的知识掌握较少，亚行仅支持了贫困地区的中小学，我省尚有大部分的学校没有得到支持。

(3) 村级医务人员没有接受过类似的培训，同时也没有自学的教材。

(4) 现场处理的经验交流较少，对外省的交流也少。

(三) 宁夏回族自治区

1. 基本情况

宁夏回族自治区是我国五个少数民族自治区之一，也是全国贫困省区之一，位于我国西北地区东部，地处黄土高原，黄河中上游，与陕西省、甘肃省及内蒙古自治区相毗邻。自治区总面积为6.64 万平方公里，其中有56%的面积为干旱的山地及丘陵地带。全区共辖5 个市，22 个县(市、区)。其中，有国家级贫困县9 个。全区总人口580 万人，其中农村人口400 余万人，占总人口的69%。全区农民人均收入1 917 元。

全区县级以上疾控机构29 所，人员总数1 286 人。撤乡并镇后，全区辖5 个地级市、12 个县、2 个县级市、7 个市辖区、1 个县级移民开发区，188 个乡(镇)、39 个街道办事处、2 569 个行政村、435 个居民委员会。有乡级卫生院325 个，有村卫生室2 945 个，社区医疗点100 个，乡村医生3 498 人。

2. 项目实施取得的主要成效

2.1 县、乡级卫生人员传染病与急性中毒防治培训开展情况

从2004 年5 月～2006 年6 月期间，分别在银川市及其所属贺兰县、西夏区；吴忠市及其所属青铜峡市、红寺堡区、盐池县；石嘴山市及其所属惠农区、平罗

县；固原市及其所属原州区、西吉县；中卫市及其所属中宁县、海原县共举办“基层卫生人员传染病与急性中毒防治（试点或扩展）”培训班13 期，培训范围覆盖全区所有22 个县级疾控机构和332 个乡镇卫生机构，累计培训专业医务人员540 余人，培训效果显著，提高了基层传染病防治突发公共卫生事件的能力。

2.2 培训及宣传材料发放情况

项目提供的《常见传染病与急性中毒预防和控制手册》及配套的《常见传染病与性病图谱》、《基层医务人员急性传染病诊断思路与处理流程图》、《基层卫生人员传染病与急性中毒防治参与式培训教案》等资料，分别发放到全区1 个自治区级、5 个市级、22 个县级疾病预防控制机构和每个乡镇卫生院及部分医疗点，及时有效地为基层卫生人员提供了必要和急需的自学和日常工作参考，起到了很好的技术指导作用。在检查中，大部分乡镇卫生院能够将宣传画册张贴于医疗单位明显位置，规范了日常工作行为，宣传了传染病防治知识。

项目提供的《中小学教师传染病预防与突发公共卫生事件应对手册》及《学生手册-青少年用良好的卫生习惯战胜传染病》，为全区9 个贫困县的2 342 所小学的4～6 年级及初中学生共147 358 人发放了《学生手册》；《教师手册》下发给贫困县及非贫困县小学及全部初中2 537 所，其中中、小学教师分别有5 571 名和16 458 名得到宣传手册，使这些中小学生和教师得到了一次传染病防治知识的普及，也使当地群众增强了传染病防治的意识和改善不良卫生饮食习惯的自觉性。

2.3 国家级培训和督导情况

卫生部贷款办领导、亚行协调员及国家级专家多次亲临宁夏，组织师资培训并对我区项目执行情况进行督导。专家们渊博的知识底蕴，高超的教学水平，挥洒自如的教学风格给我们留下了深刻的印象。师资培训为我区的区、市级两级培训师资骨干20 名。我区还选拔推荐5 名区、市级疾病控制中心传染病或突发公共卫生事件处理专业技术骨干参加了为期一个月的国家级现场流行病学培训，通过集中授课和现场实习，理论联系实际，迅速提高了他们解决现场实际问题的能力，使他们具备了进一步拓展培训的技能；3 名省级师资还参加了全国健康教育人员非典型肺炎、传染病与突发公共卫生事件健康教育策略和经验交流培训班。项目为我区培养了一批优秀的公共卫生人才，这些学员近期参与了我区一些紧急疫情处理，在工作过程中他们运用所学的知识，结合我区实际提出了有价值的建议和办法。

自治区卫生厅、疾控中心、传染病医院等单位的领导5 人，参加了国家级非典型肺炎和传染病防治策略研讨会，提高了对在当前形势下广泛开展非典型肺炎防治的国际合作、经验交流和策略研讨的重要性的认识。通过学习、广泛深入的

讨论和现场考察，进一步认识到我区传染病与突发公共卫生事件应急机制需要加强和完善；明确了我区非典型肺炎与传染病防治策略和重点工作领域和目标；各级政府应加强对公共卫生特别是疾病控制领域的投入；基层疾病控制人员在技术、能力、装备等方面亟待加强和提高。

在国家级疾病控制和临床专家非典型肺炎与传染病防治现场考察和技术援助的支持下，组织了由自治区级卫生、财政、计划、铁路、交通等政府多部门及卫生有关专业机构参加的自治区级非典型肺炎与传染病防治策略研讨会，通过研讨进一步明确了我区在非典型肺炎与传染病防治方面存在的不足，提出了科学的改进意见。

2.4 设备分配管理情况

项目为我区配备了尼桑越野车、笔记本电脑、多媒体投影仪、数码相机、数码摄像机和防护用品（包括防护服、口罩、防护眼镜、手套、红外体温探测仪、消毒锅炉）。这些设备在传染病和突发公共卫生事件的现场调查、监测和疫情控制工作，现场影像资料及数据的收集、整理、分析和报告，培训等方面及时发挥了应有的作用。

3. 具体做法及体会

3.1 领导重视，精心组织，加强管理

项目启动后，根据项目要求确定由卫生厅疾病控制处负责该项目实施并固定一名工作人员，协调各级卫生行政部门和有关医疗单位，落实亚行项目布置的各项日常工作。在项目实施过程中得到了各地政府、各级卫生局及疾控中心（防疫站）、宁夏医学院、附属医院、市级医院的大力支持和积极合作。在亚行项目安排我区举办的13 个“县、乡级卫生人员传染病与急性中毒防治培训班”（包括试点和扩展培训）中省卫生厅疾控处领导出席了所有的开幕式，地市级卫生局主管领导出席11 个，当地县级主管领导出席9 人次，县卫生局主管领导、地县两级疾控中心领导出席了全部开幕式。

3.2 因地制宜，优化师资力量，提高培训水平

培训班根据亚行项目要求，结合各地实际情况确定举办地点、制订培训计划、确定主讲教师，由自治区卫生厅疾病控制处发通知，上报卫生部贷款办经批准后，由地市级卫生局分配名额，疾控中心组织实施，自治区卫生厅疾病控制处监督执行。为保证学习质量，13 个班的教师除当地市级疾控中心、市级医院经亚行项目培训过的师资外，还包括两名省级师资，乡级卫生人员能够直接聆听到省级教师的讲课，这在以往是很难实现的。

各地级市为了更好地促进当地的工作，选择学员时特定选派一些卫生院院长

参加学习（因卫生院长既是普通医生又是管理者，也主管传染病、计划免疫、妇幼保健等多职），有的县甚至将所有大乡卫生院院长全部请来学习（不包括撤并行政建制的卫生院），这对卫生院的传染病报告、处理起到了很好的促进与规范作用。

每个班都由2 名省级专家讲授主要课程，本地师资承担当地案例介绍任务。案例选择根据当地历年发生疫情灵活安排，比如：在出血热、鼠疫（鼠间鼠疫）流行的原州区，即邀请本区出血热专家、鼠防专家赴学习班讲授理论课程，市级疾控中心师资介绍案例，实习也选择出血热案例，使基层医务人员对当地流行的疾病高度重视，及时作出正确诊断；又如：在工厂、矿山集聚的惠农区选择本地区常见职业中毒的急救与处理案例；在乙脑流行区中卫市介绍分析乙脑案例；在银川市西夏区选择有机磷中毒案例，红寺堡开发区增加结核病防治课程等。

学习班在安排实习时，首先由县级疾控中心（防疫站）介绍自身概况、管理方式、曾发生疫情实例处理过程，参观有关科室、实验室；然后到乡卫生院或村进行参观、回顾性询问、调查；再回到课堂进行讨论。这样的方式不仅丰富了课堂内容，还增强了相互间的学习和交流。

3.3 培训形式新颖，质量高、效果好

亚行项目根据成人教育的特点，采用参与式的方法配合现场实习进行教学。通过各类传染病和急性中毒突发事件的典型案例分析，积极引导学员思考与主动参与讨论，并由辅导老师引导对案例进行分析和总结。这样可以启发学员逐步形成解决此类问题的正确思路，并逐步掌握处理各类传染病和突发公共卫生事件的方法；每个培训班均组织学员到县级疾控中心和乡镇卫生院进行现场实习，现场实地参观和交流及对现场实际案例的分析与讨论进一步提高了学员的实战能力。参加培训的学员普遍认为这种参与式培训能够始终活跃学员的思维，并能够强化记忆，比传统的授课式培训有更好的效果。主要表现在以下几方面：

（1）激发了学员的学习积极性。基层卫生人员尤其是乡镇卫生院的临床和防保医生，以往很少有机会接受培训；不多的培训也多是采取逐级培训的方式进行，存在信息的逐级递减；在培训内容的设计上往往也缺乏针对性。这种独特、新颖的会场布置，由省级专家与本地专家联合授课，打破了以往灌输式、纯理论式的授课式培训模式，采用参与式、讨论式并辅以现场实习的培训，对学员们来说都是第一次尝试。学习内容既有理论性又着重强调实用性和可操作性，省级教师担任新发传染病防治知识、流行病学等课程，本地专家介绍当地发生的案例，相互穿插进行。教师们语言精辟，知识渊博，深入浅出，既有理论又有实践，令学员们耳目一新。学员们反映：上课不敢溜号、不敢打瞌睡也没有时间想别的，随着教师的讲解回答问题，提出自己的见解，不知不觉一堂课就过去了。学员们

的学习积极性深深感染了授课教师。宁夏医学院附属医院的张栩主任（主任医师、教授）说："亚行项目学习班是他讲课秩序最好的，每个学员上课时眼睛都瞪得大大的，踊跃发言、气氛活跃，看着学员们求知的眼神，真是越讲越起劲"。在盐池县办班时有位学员因9 岁的侄子突然遭遇车祸生命垂危，她含着眼泪来请假说："这样好的学习机会太难得了，老师课讲的课这么好，我只听了一半太可惜了"。看到她恋恋不舍地离开课堂，大家都替她难过和惋惜。

（2）现场实习，加强交流，互相学习。学习班安排的现场实习课程，不仅丰富了课堂学习内容、加深了记忆、提高了学习效果，还为学员们提供了相互学习的宝贵机会。在实习过程中，学员们看到了实习单位的长处，指出了一些不足之处，介绍了自己的一些好的做法。如：凡看过平罗县宝丰乡的炭疽发生的学员都说这一辈子都忘不了，一旦再见到这种病人绝对不会误诊。在中卫市疾控中心实习时，学员发现该中心专业人员匮乏，有的学员积极出主意，介绍本单位解决这一问题的经验，当即就推荐了熟悉的应届毕业本科学生。后来，经过中卫市疾控考核被录用。海原县防疫站的学员参观中宁县城郊乡卫生院时，觉得该县乡卫生院设立的规范化计划免疫门诊，设计合理，实用性强。回去向领导作了详细的汇报并根据本县实际提出合理化建议，最近海原县也开始了创建乡级计划免疫规范化门诊工作，加快了这项工作的步伐。有的学员在参观时指出了参观单位实验室管理中的缺陷，介绍了自己所在疾控中心的好方法，有的乡卫生院院长对所参观的乡卫生院肠道门诊与儿科门诊设立在一间房内科室提出质疑。不久前，在盐池县王乐井乡参观时有的学员看到，该卫生院将亚行项目发放的《基层医务人员急性传染病诊断思路与处理流程图》贴在了宣传栏中，当即建议应贴在有关诊室和办公室。这不仅使这张实用的流程图可以尽量长久的发挥作用，也给还未张贴（因该图下发到各县只有20 几天）的单位提了醒。现场实习，给大家提供了良好的互相学习机会，看到了别人的长处与不足，明确了自己今后的努力方向，促进了各项工作的开展。

（3）培训效果显著。在试点培训前与培训后分别通过问卷进行了培训效果的评估，问卷中主要涉及传染病和突发公共卫生事件处理的基本概念和技能，包括传染病的临床鉴别和处理、个人防护原则及流行病学现场调查及社区控制等主要领域。培训后比培训前平均分高出三十多个百分点，显示出良好的培训效果。参加培训的很多学员在全区各地传染病与突发公共卫生事件现场调查与处理中发挥了积极作用。

自2005 年下半年至今，我们收集了一些参加亚行项目培训学员写的体会，访视并询问了一些学员。学员们一致肯定了亚行项目培训工作并给以高度评价。认为课堂形式不同于以往，连桌子、座位的摆放以前都没见过，并且安排有实习

课程，这种形式更适合有一定实践工作经验的在职人员培训；用案例讨论的方式授课容易接受，不懂就问便于当场把问题搞清楚；还能将以往工作中遇到的难题提出请教老师，供大家讨论，辩明事理，解决了疑问，明确了作法并且实用性强，对今后工作有很大帮助。在我区后来的现场流行病学培训班上也借鉴了这一培训方式。

最近，在海原县实习现场（西安乡卫生院）介绍情况的张大夫是2005 年扩展培训班的学员。学习后收获大、体会深，不仅提高了自己的业务水平，他还利用村医例会（每次预防接种前集中学习、领取疫苗、交前次接种报表）的机会，给村医讲课，把在亚行项目学习班所学的知识传授给村医。

（4）优秀师资骨干脱颖而出，为今后各种相关培训打下良好基础。全国两轮师资培训，锻炼了我区省地级师资，为我区迅速培养了一批优秀师资人才。参训师资在进一步的拓展培训工作中运用掌握的新的参与式教学培训方法，如小讲课、角色扮演、现场模拟、老师引导的案例分析与讨论，小组讨论与分组汇报、老师点评等，取得了良好的效果。宁夏医学院附属医院的张栩老师基本上担任了亚行项目所有学习班的传染病临床诊治与新发传染病防治的课程，通过他自己不断的学习和摸索，研究宁夏传染病的状况，收集了很多既实用，又有代表性的案例，讲课水平得到进一步提高。在讲好亚行项目课程的同时，还为原州区的卫生人员作“艾滋病防治进展讲座”，为自治区各级医院院长讲授传染病防治课程等，张栩主任多次承担了卫生系统的其他培训班传染病防治有关课程，在2005 年宁夏医学院讲课比赛中张栩主任技盖群芳，一举夺得第二名，他感慨地说：“这个名次的取得受益于亚行项目”。此外，自治区疾控中心的传染病防治科科长张银豪副主任医师担任了所有学习班的传染病流行病学、疫情报告等课程。学员们反映张科长讲课语言都带有磁性，将枯燥的课程变得十分生动，这两位省级教师得到学员和主办单位的普遍好评。目前，卫生厅有关单位和各市县有相关学习班都邀请这两位师资授课。

各市级疾控中心的师资负责组织本辖区的培训班具体组织安排，在工作中他们从报送计划、分配名额、邀请领导、联系食宿、布置会场、与省级授课教师商讨课程一直到学习班结束、上报总结和资料，工作环环相扣，井井有条，严格按照试点班模式进行教学。各县级防疫站承担的半天实习课程，也是认真反复筛选案例，确定报告人，安排车辆，组织乡级卫生院和曾发生疫情的现场群众，详细为学员讲解。通过培训项目的实施锻炼了这些参与工作的专业人员，为当地培养了一批疾病预防控制工作骨干，涌现出一些基层实际疾病控制工作优秀讲师。

（5）发挥专业骨干优势，理论与实际紧密联系，疫情处理规范有序。亚行项目为我区培养的5 名业务骨干和20 余名地、市级师资，各县区都十分重视发挥

受训专业人员在实际工作中的骨干作用。他们不仅在培训工作中发挥主力军作用，在疫情控制处理中也展示了才华。如在2005 年7 月平罗县宝丰乡因剥食病死牛发生皮肤炭疽15 例，被认定为暴发。县防疫站接到报告后，选派本站曾参加亚行培训项目2004 年学员姜兆丽主管处理疫情，她立即按照程序上报疫情，提出具体处理意见，绘制各种图表，会同各部门进行疫情和个案调查，建立临时病房就地隔离病人，作了大量的前期基础性工作，站长感慨地说这是我们站的专家。在处理该事件中亚行项目培训的5 名业务骨干全部参与了疫情调查、处理工作，并发挥了积极作用。在各级政府、行政部门的高度重视下，由于专业人员技术精湛，考虑全面，处理方法得当使这起疫情很快得到控制，同时受到区、市卫生部门的赞扬。另外，在中卫城区麻疹、兴庆区鼠间鼠疫、上前城禽流感、全区麻疹疫苗强化免疫等疫情和突发事件处置及全区各项大型疾病控制工作中，受亚行项目培训的学员也发挥了积极作用。这充分表明亚行项目为我区培训的业务骨干已经在宁夏的疾病预防控制领域崭露头角。

4. 今后的需求及建议

为巩固已经取得的成果，在此基础上应针对省、地级疾病控制人员进行高级现场流行病学培训，包括卫生统计软件的应用、数据库建立、资料的统计分析、资料利用、共享等；同时，还应继续扩展对基层卫生人员的培训工作，进一步扩大覆盖面和深度。进行优秀教师评选活动，表彰在亚行项目培训中表现突出的省、地（市）和县级（实习）优秀教师，增加传染病流程图发放数量，扩大张贴范围以规范诊断和报告程序。

最后，衷心感谢亚行项目对宁夏各方面的大力支持和帮助，感谢执行该项目的卫生部贷款办的各级领导和亚行项目协调员，感谢关心和参与该项目的各级政府、卫生行政部门、宁夏医学院、各级疾控中心领导，感谢各位授课教师。

（四）新疆维吾尔自治区

1. 基本情况

新疆是个地广人稀，经济不发达的地区，传染病一直是困扰新疆经济发展的主要公共卫生问题，是我区因病致贫、因病返贫的主要原因。近年来，随着社会发展，一些传统的传染病得到遏制，但一些新发传染病有流行的危险，既往控制传染病有抬头之势。而从近两年在应对“非典”、人禽流感等传染病时，暴露出基层卫生单位很多问题，特别是在急性传染病诊疗及现场流行病学处理上。在临床诊疗方面表现出误诊率高、用药不规范，在流行病学方面表现为组织调查不

当，流行病学信息收集不全，没有学会科学地分析利用资料，流行病学报告书写不规范。提高基层卫生单位急性传染病和中毒诊疗及流行病学处理能力成为当务之急的重要工作之一，为此利用亚行赠款中国西部地区传染性非典型肺炎与传染病防治能力建设项目，在新疆开展系列培训工作，现将项目情况总结如下。

2. 项目管理和监督

2.1 加强监督管理，确保培训按计划实施

自治区卫生厅疾控处是整个项目的协调管理部门，负责培训前的各种组织协调工作、项目执行中的督导检查。为了保障项目顺利进行，自治区卫生厅不定期派人到培训现场，参与培训、了解培训进展、及时解决培训过程中存在的问题。自治区疾控中心是项目执行部门，担负项目具体实施。为保障项目按时圆满完成任务，中心指定专人负责，在新疆医科大学附属第一医院、自治区人民医院支持下组成自治区级师资队伍，担负项目培训工作，为项目圆满完成奠定了坚实基础。

2.2 加强管理，做好培训前组织协调工作

为保障培训质量，我们在培训班开始前15 天，由卫生厅向各相关单位发文，使接受培训单位能事先按培训要求挑选受培业务人员接受培训，并事先通知相关教师按要求备课，通知主办地联系落实宾馆、现场教学实习地点，做到准备工作充分、组织协调到位，保障培训按时完成。

3. 项目实施

3.1 积极参与手册与培训教材编撰

积极参与《常见传染病与急性中毒临床处理和控制手册》的编撰。根据卫生部贷款办的统一部署，结合新疆常见传染病、中毒实际情况出发，新疆卫生厅在2003 年9～10 月组织新疆疾控中心、新疆医科大学第一附属医院、自治区维吾尔医院、自治区人民医院18 名医务人员担负手册相应内容编撰，并在同年12 月，派一人参加手册在北京的修改工作。

在培训班开班前准备阶段，按卫生部贷款办要求，以新疆发生过的常见传染病、中毒实际情况为教学案例背景，组织5 人参与《基层卫生人员传染病与急性中毒防治参与式培训教案》的编写，为日后开展扩展培训奠定基础。

3.2 做好试点培训，为扩展培训奠定基础

做好试点培训，总结适合教学方式、方法和内容，提高培训效果。根据卫生部贷款办统一安排，结合新疆实际于2004 年3 月在昌吉市举办我区第一期试点培训班。参加的人员有昌吉州、吐鲁番地区所辖各市县疾控中心流行病学工作人

员、乡级医院医生和防保人员共计86 人，通过试点培训班，掌握受训对象的需求，确定了培训内容、培训方法、编撰适合新疆自己的培训教材。

3.3 培训师资队伍，为扩展培训奠定基础

建立一支接受过良好训练，能担负起今后各地基层传染病及急性中毒处理培训的师资队伍，对提高新疆突发公共卫生事件医疗救治和疫情处理能力有着重大意义。2004 年5 月份在卫生部贷款办的总体安排下，自治区在乌鲁木齐、喀什举办了二期试点培训扩大培训范围，培训对象均是有过多年从事传染病、中毒治疗及流行病学处理经验、本科毕业、有教学能力的15 个地州市的临床、疾控中心医务人员，共计62 人。通过系统培训，使他们熟练掌握传染病急性中毒中参与式的教学方法，教学内容安排和教学组织，确保扩展培训顺利完成。同时为不断提高师资队伍的授课能力，2005 年5 月在乌鲁木齐又举办两期针对既往培训过的师资队伍提高及经验交流培训班，使师资队伍能力得到不断的提高。

3.4 精心准备，保障每次培训都能收到预期效果

(1) 精心选择师资：为更好地提高授课效果，每个老师都必须接受过亚行师资培训且表现出色；以自治区师资作为核心师资，同时还要兼顾当地师资，起到传帮带的作用，以提高当地师资培训能力，使今后当地能顺利开展培训工作。我们在培训班开始一周前，安排好课程表，把课程安排、授课要求发给每个师资，并在开班前3 天集中备课，使老师有充分时间准备和熟悉授课内容，保证授课效果。

(2) 每个培训班前，我们指定一个联系人负责联系相关事宜，尽量满足学员食宿要求，同时事先安排好参观实习地点和实习内容，保证课程顺利完成。

(3) 在师资配备上我们特地考虑到新疆是少数民族地区，方便少数民族地区学员学习以提高培训效果。因此在选择师资时，考虑使用少数民族师资，并在每次培训时同时开设汉语及少数民族语言授课，以方便不同语言学员学习，提高学员接受性。

(4) 课程设置：我们充分利用参与式培训方法，以提高实际解决问题能力为出发点，根据培训地区常见急性传染病、中毒的特点，安排培训理论授课和案例分析。培训前2 周安排当地参与授课的教师收集当地的案例作为教学案例，课程安排整体是以案例来引出，带动学员共同讨论、分析，最后由教师加以总结概括，对该部分讲授的理论知识进行概括性的提炼。案例分析安排有甲类、乙类急性传染病、中毒诊断及临床救治、现场流行病学处理原则和过程，每个案例安排上都涉及临床诊疗和流行病学调查处理，让学员掌握传染病临床诊疗原则和突发公共事件处理原则。案例涉及呼吸道传染病、消化道传染病、急性食物中毒等基层常见急性传染病和中毒，以扩大学员学习知识面，有时也在案例中安排一些错

误的内容，来引导学员找出错误，提高学员实际处理能力，并在课程中设置几次与传染病或中毒相关的讲座，增加学员的知识面。

(5) 授课：所有授课老师，均按要求采取参与式教学方法，在课堂上发挥主持人的作用，充分调动学员的主观能动性，提高学员的参与意识，课堂上注意观察学员的反应，注意了解每个学员的表现，把活跃和不活跃学员交替调动起来，时刻保持培训班的学员处于活跃气氛中。在方法上充分利用案例分析、头脑风暴、角色演练、小讲座等参与式教学手段和方法，提高学员参与的意识，让学员主动参加授课过程，调动学员从实际工作出发去理解掌握学习的内容，提高培训效果。

(6) 双语授课：针对新疆基层医务工作者中有60%是少数民族的特点，我们在教学上特地培养3 名自治区级少数民族双语师资，利用他们在少数民族地区既可以用民族语言教学，也可以用汉语教学的特点使一名教师发挥多种作用。在培训时也注意发挥地方少数民族地州级师资作用，以达到提高基层师资队伍水平，提高少数民族基层医务人员急性传染病和中毒应急处理的能力。

3.5 做好扩展培训，提高新疆基层突发公共卫生事件处置能力

根据卫生部贷款办项目实施指导精神，结合新疆实际情况，从2004 年～2006 年举办了一系列培训工作，在2004 年举办了2 期地州级师资培训班，2005 年对这两期师资培训班又进行了一次加强培训。2004 年通过举办了2 期试点培训班为下一阶段培训打好基础，从2004 年9 月～2006 年6 月共举办亚行基层传染病与急性中毒县乡级培训班19 期，其中6 期是民汉分语言举办，共培训了864 人，覆盖新疆南北疆15 个地州所有的县市。各县市都有接受过培训的基层医务人员，对提高基层突发公共卫生事件应急救治和流行病学处理能力有着重要现时意义。

4. 项目投入与产出及项目效果

4.1 投入

自治区卫生厅、自治区疾控中心、自治区人民医院、新疆医科大学附属第一医院，自2004 年～2006 年6 月，指定专人负责此项工作，累积投入560 人日为项目服务，各地州也投入大量人力服务于此项目，累积投入近600 人日。

4.2 产出

(1) 培养一批突发公共卫生事件处置培训师资：利用项目为15 个地州培养62 人的师资队伍，通过逐级培训，使这支队伍经历了传授突发公共卫生事件医疗救治和应急处理知识的实践锻炼，逐步培养成为有授课经验的师资队伍，为各地今后开展突发公共卫生事件、传染病和急性中毒培训工作奠定了基础。

(2) 翻译印刷下发《传染病防控手册》：新疆基层少数民族医务工作者占60%以上，而且基层很多医务工作者汉语水平不高，在阅读汉文手册时较为吃力。为方便基层医务工作者在学习和工作中查阅资料的方便，在请示亚行批准后，我们组织少数民族翻译人员圆满完成手册维文版的翻译和印刷，并下发到全区15 个地州市96 个县市疾控中心和乡级卫生员。从基层医务工作者的反映来看，普遍认为该书对指导具体工作的实用性非常大，是一本非常实用的工具书。

(3) 下发《常见传染病与急性中毒预防和控制手册》、《常见传染病与性病图谱》和学生传染病防治宣传材料。按亚行项目要求，将上述宣传材料及时发往新疆15 个地州96 个县市。

(4) 培训效果：通过每次培训前后做好评估调查，时刻掌握培训效果和学员反映，以便随时调整培训内容和方法，提高培训效果。19 个班课前问卷测试时平均答对率只有23.2%，培训后测试平均分78.2%；同时学员对培训班总体反应非常好，83%的人给培训班打5 分，4 分的占15.4%；94%的参加培训学员认为教学效果很好，认为此次培训班与既往培训班相比很好占86%，认为较好占13%；认为最为成功的地方是学生能积极参与到教学活动中的占到被调查者的77%；认为提高实际操作能力的占65%，23%参加培训的学员认为不成功的地方是内容少，时间短；67%的学员认为案例分析和讨论对提高解决实际问题有较大的帮助，希望把现场实习准备工作做的更扎实，授课时间次序排的更好，提高培训效果；绝大多数基层卫生人员希望举办更多的类似培训，以达到提高基层卫生人员的业务素质和实际操作能力。

(5) 及时发现既往存在的问题：通过在前一阶段培训工作中对基层情况的调查了解，发现基层卫生人员既往缺少系统培训，业务素质普遍较低，加强业务培训应成为提高基层传染病及中毒应急处理能力的重要手段。各地卫生行政部门应加强此方面工作，这样才能提高应急处置能力，同时在新疆这样的少数民族地区，特别是在少数民族占人口总数70%以上的南疆，必须培养一批少数民族师资，加强少数民族基层医务人员培训，才能真正提高应对急性传染病和中毒的能力，保护新疆各族群众的生命安全。

(6) 使基层培养师资工作更规范化：培训过程中，我们要求教师认真对待每一次讲课，做到事先准备好各种素材及课件，每一次培训后要不断总结，吸取好的经验，克服自己不足之处，不断提高授课技能，提高培训效果。

5. 今后的需求和建议

(1) 扩大培训覆盖面，目前培训只覆盖所有的县疾控中心和部分乡，乡一级覆盖率远没有达到需要覆盖率。

(2) 针对地州级疫情处理骨干开展高层次培训，提高地州级疾控机构疫情处

理总体能力。

(3)　筹建省级快速诊断实验室，满足今后突发公共卫生事件疫情处理需要。

(4)　加强其他传染病防治方面合作，如艾滋病、病毒性肝炎、新发及不明原因传染病的防治。

附件

附件4.1	云南亚行项目大事记
附件4.2	云南项目培训产出一览表
附件4.3	青海亚行项目大事记
附件4.4	宁夏亚行培训项目一览表
附件4.5	新疆亚行项目大事记
附件4.6	新疆项目产出文件一览表
附件4.7	各类人员对本项目的心得体会

第五章　项目外部评估报告

一、评估背景

2003 年4 月，面对“非典”所带来的严重威胁，中国政府与亚洲开发银行合作迅速组织设立和启动了针对中国西部地区“非典”和传染病防治的技术援助项目，项目总投资为200 万美元，执行周期3 年，于2006 年6 月结束。在中国西部的云南、青海、宁夏、新疆四个项目省（自治区）执行，覆盖42 个地区、294 个县，7 200 万人口。项目目标是提高中国西部地区项目省“非典”和其他传染病的防治能力，控制“非典”及其他传染病的跨边境传播。项目的重点活动领域包括：(1) 制定适当的省级“非典”防治方案；(2) 加强传染病流行病学监测系统；(3) 提高对突发公共卫生事件的应急能力；及(4) 通过多种形式的信息和健康教育机制来提高公众的“非典”与传染病防治意识及自我保护能力。卫生部贷款办与亚行协商时达成共识，决定于2006 年5～6 月对本项目进行外部评估。

在卫生部贷款办的领导支持下，在中央及各省项目办的积极配合下，顺利完成了评估工作，根据收集的信息和资料，完成中英文外部评估报告。在评估报告中，总结了项目取得的经验和成绩，分析了面临的困难与不足之处，提出了相应的改进建议。

二、评估目的

评估项目实施计划的适宜性、可行性，项目的执行情况，项目目标的实现情况，项目产生的效果，总结项目取得的经验，探讨面临的困难、存在的问题及改进建议，为中国传染病防治技术援助工作提供可借鉴的经验。

三、评估内容

1. 项目设计；
2. 项目管理；
3. 设备及防护用品管理；

4. 督导;
5. “非典”与传染病防治规划的制定与完善;
6. 教材的编写、分发与使用;
7. 基层卫生人员传染病防治培训;
8. 省地级疾控骨干人员现场流行病学培训;
9. 传染病防治健康教育。

四、评估方法

采用定量研究与定性研究相结合的方法进行评估。

1. 文献阅读：查阅了项目计划，中央及各省项目总结，专家及学员的体会，设备和防护用品采购计划、分发计划、签收记录，培训班的通知、日程安排、签到表、教案、评估表、总结，会议通知、通讯录、总结，教材和手册，《教师手册》和《学生手册》设计初稿、预试验记录、分发计划，中央级及云南省项目的档案资料。

2. 访谈：面对面访谈了亚行项目负责人、中方执行机构负责人、亚行项目协调员及专家5 人、省级项目负责人2 人、地市疾控中心领导2 人，电话访谈省级项目负责人4 人、传染病与突发公共卫生事件健康教育培训与经验交流会代表3 人，小组访谈省地级师资10 人、既往县乡级培训班学员10 人、县乡级培训班学员12 人、来自广西和贵州的培训班观察员9 人、教育部门工作人员7 人、学生20 人。

3. 问卷调查：调查对象包括现场流行病学培训班学员20 人，回收有效问卷19 份。

4. 现场观察：云南曲靖市培训班1 期、宁夏银川市兴庆区培训班1 期。

5. 现场考察：云南省、曲靖市、沾益县及银川市兴庆区疾控中心，沾益乡和掌政乡卫生院，银川市鼠疫监测基地。

五、时间安排

时间	内容安排
5 月23～26 日	查阅项目资料，制定评估方案
5 月27～31 日	查阅项目资料，确定评估指标、内容及收集资料清单，确定访谈对象和调查对象，制定个人访谈与小组访谈提纲、调查问卷

续表

时间	内容安排
6 月1～11 日	收集相关资料，访谈亚行项目负责人、中方执行机构负责人、亚行项目协调员及专家5 人，电话访谈省级项目负责人4 人、传染病与突发公共卫生事件健康教育培训与经验交流会代表3 人，问卷调查现场流行病学培训班学员20 人（回收19 份问卷）
6 月12～16 日	在云南省进行现场评估：现场考察云南省疾控中心、曲靖市疾控中心、沾益县疾控中心及沾益乡卫生院，访谈有关领导及培训班学员，查看项目档案资料；现场观察曲靖市县乡级卫生人员培训班举办情况；现场考察曲靖市第二小学，访谈教委和学校领导、校医及保健老师7 人，小组访谈4～5 年级学生20 人，了解《教师手册》和《学生手册》分发使用情况与效果；访谈2 名省级项目执行人员，小组访谈5 名省地级师资，小组访谈3 名既往县乡级培训班学员，小组访谈9 名来自广西和贵州的培训班观察员，小组访谈6 名县乡级卫生人员培训班学员
6 月27～30 日	在宁夏进行现场评估：现场观察县乡级卫生人员培训班举办情况；参观银川市兴庆区疾控中心、掌政乡卫生院及鼠疫监测基地；小组访谈5 名省地级师资；小组访谈7 名既往县乡级培训班学员；小组访谈6 名县乡级卫生人员培训班学员
6 月17～7 月5 日	资料整理、录入、分析，撰写中英文评估报告
7 月6～9 日	修改评估报告，提交评估报告

在卫生部贷款办的领导支持下，在中央及各省项目办的积极配合下，顺利完成了评估工作，根据收集的信息和资料，完成中英文外部评估报告。在评估报告中，总结了项目取得的经验和成绩，分析了面临的困难与不足之处，提出了相应的改进建议。

六、总体评估

1. 成绩

(1) 项目设计灵活，定位明确、恰当、具体，切合项目省实际，操作简单，实施过程深入、扎实，管理规范，项目成功实现了预期目标，领导、专家、学员对项目给予充分肯定。

(2) 项目通过研讨制定传染病防治规划，发放设备、防护用品，编写发放教

材及手册，实施省地级疾病控制骨干人员现场流行病学培训、省地级师资培训、县乡级卫生人员培训、省级健康教育培训，为各省建立了省、地、县、乡传染病防治和突发公共卫生事件应对网络及队伍，培训了一支强有力的师资队伍，探索了适合基层人员能力建设的方法、模式，提高了西部地区传染病防治能力和突发公共卫生事件应急能力，加强了传染病监测上报系统，增强了各级传染病监测、诊断、报告、处置能力，控制了传染病的跨边境传播。

(3)　项目将对我国尤其是西部地区的公共卫生系统建设、传染病防治工作产生持续的、深远的影响和作用。制定的传染病和突发公共卫生事件应对预案、建立的良好工作机制为各地随时应对做好准备，提供的设备和防护用品持续发挥作用，培养的师资队伍和各级骨干人员为各省提供人才队伍的长期储备，而且通过他们的辐射和带动作用将影响更多的人，得到使用者认可的教材、手册、流程图今后继续为基层传染病防治提供指导和参考，实践证明案例引导的参与式培训方法适用于基层卫生人员传染病防治能力建设培训，为基层的培训机制建设产生积极影响，值得借鉴和推广。通过规范、系统培训，规范了基层的培训工作及传染病诊断、报告和处理工作，提高传染病和突发公共卫生事件应对效率，减少疫情的扩散，降低了传染病和突发公共卫生事件的危害。

2.　面临的困难与不足之处

(1)　由于经费有限，云南、新疆扩展培训没有覆盖全部乡卫生院，各种教材、手册数量不能满足基层的需要。

(2)　部分培训人员的骨干作用没有充分发挥。

(3)　在传染病防治中除了疾控部门，其他部门的参与不够，包括健康教育部门。

(4)　项目结束后，培训的人员队伍的可持续性发展和后续支持面临挑战。

3.　建议

(1)　本项目在中国西部地区传染病能力建设的起步阶段发挥了很好作用，如果在此基础上，亚行或其他国际组织继续给予支持和援助，将进一步发挥项目的持续作用，取得更好的效果。

(2)　在更大范围总结推广项目的成功经验与成果，如加大教材、手册印量，扩大发放范围和数量，参与国际国内交流，推广案例引导的参与式培训方法，利用国家及省级参与式教学师资开展培训工作。

(3)　各省建立相应工作机制，为工作人员提供培训、学习及实践机会，激励工作人员加强自学和继续教育，继续发挥师资队伍及培训人员的骨干作用，维持

传染病防治队伍的整体水平。

(4) 各省继续利用项目建立的工作机制、制定的预案，发放的设备、用品、教材、手册，培养的人才队伍，让项目成果持续发挥作用。

(5) 动员倡导更多部门参与传染病防治工作，发挥健康教育的作用，提高公众的传染病防护意识及自我保护能力。

(6) 今后项目设计时，考虑各省的具体情况及差别，给各省一定的自主权，区别对待各省的差别。

访谈记录

朱宝铎：各省反馈项目对基层水平、能力提高效果不错，对项目效果给予充分肯定；省里反映很积极，培训覆盖面大，效果好；培训方式经过深思熟虑的设计，直接到基层，比逐级培训效果好。

宋思年：个人非常满意，亚行对过程和效果很满意；以需求为基础，每一步确保灵活性；个人非常希望继续合作。

王若涛：我所参加的最好的项目之一。

任学锋：项目针对基层的实际需求及当地重点传染病的疫情控制，针对学员的自身特点与需求，针对基层传染病预防控制中最薄弱的环境提供能力建设。

陈志海：项目非常好、非常有效，影响是潜移默化的。

庞燕杰：各方面很支持、很配合；档案资料很全，项目很实在，教材、手册、流程图反映很好，非常适用，老师特别棒，效果逐渐显现。

李凡：比较成功的项目，针对性强，注重具体能力与操作，定位明确、具体、恰当，解决实际问题、打开思路，强有力的人力、队伍长期储备，培训实用性特别好，对今后传染病疫情处理意义非常大，对基层系统建设很适用，探索适合基层人员能力建设方式、方法，在中西部地区基层推广意义很大。教材、流程图简单、适用、通俗易懂，设备都到了基层单位，防护用品作为储备。希望多做类似项目，针对基层需要做活动，在其他领域可借鉴。

王学文：在操作项目中最好的一个，操作简单、实用，实施灵活，设计灵活，以需求为线索；医疗与疾控部门合并培训，职责明确，协作好；对传染病防治能力影响很大，系统建立起来，整体疾病控制工作规范，调查报告、流程规范，工作思路明晰，对疑似病例处理和报告及时，基层诊断思路明确，误诊减少，开发适合本地的材料，传单、黑板报、讲座。参与式培训得到推广，学员接受程度好。

欧阳琳：培训的人员反映比较好，对培训机制建设有积极作用，培养师资骨干有积极作用；由于云南机构多、人员多，人员培养、队伍建设需求非常大，本项目资金有限，产生影响不大。

云南学员：项目比较切合基层实际。

云南曲靖市疾控中心张副主任：培训的人员考虑问题比较全面，处理问题工作思路清楚，知识面拓宽；网络直报虽然乡级仍有漏报，但比以前好、及时；疫情散发多，暴发少；重点疾病制定防治预案，如伤寒、肝炎、艾滋病、结核病、鼠疫、“非典”、禽流感。

七、各部分评估结果

1. 项目设计

2003 年项目方案设计时，技术援助的指导原则是及时有效的应对“非典”。项目实施后，中国的“非典”疫情发生变化，项目及时调整，转向传染病防治和突发公共卫生事件应对。后来根据快速评估的结果，从基层的实际需求出发，围绕基层传染病防治最薄弱的环节和能力，确定项目的具体工作内容。项目执行过程中通过督导、对话与交流，根据项目省传染病发生、发展情况，灵活调整、设计项目内容与执行方式，开发实用的教材及传播材料，提供必要的设备，针对不同层次、不同领域的需求开展培训。并及时发现存在的问题，及时调整工作重点和工作内容，增强了项目的针对性、可行性。

项目设计灵活、实用、可行、合理，为按计划、高质量实施项目提供了保证。

2. 项目管理

项目建立了管理体系，亚行和卫生部贷款办对项目进行统一部署和管理，项目协调员负责项目计划、组织、协调及经费管理，各省卫生厅专人负责本省活动的组织、实施及报告。项目管理规范有序，项目资料齐全，各项活动按计划进行。

项目经费管理采用“基于报告的支付方式”，卫生部贷款办设专用账户管理项目经费，各项目省指定固定银行账户接受资金，各项开支记录详细，各种财务凭证保存完好。严格执行财政部和亚行的有关财务制度，经费使用合理、拨付及时、直接到位。

各省卫生厅疾控处为项目负责单位，积极调动各种资源，按照项目计划和要求直接组织落实。各省疾控中心专人负责项目的具体实施。省、市、县领导高度重视，积极参加各项活动，如传染病防治规划研讨、制定，培训班等，每项活动都有领导参加。各级卫生部门大力支持配合，项目的运作非常顺畅，各项工作落实迅速、认真、到位，每项活动有记录、有评估、有总结，各项资料齐全、上报

及时。整个工作网络统一、协调，每个环节执行有力，保证了项目执行的整体进度、水平和质量。

中央级专家理论水平高，工作经验和教学经验丰富，案例准备充分、分析透彻，参与式教学方法应用自然、流畅。他们既分工负责策划实施各领域具体工作，又作为核心力量制定项目计划，组织编写教材，培训师资，直接到省地市进行现场督导，提供技术支持。他们在项目计划、实施、督导和技术服务等方面发挥了关键作用。各级项目工作人员和学员对他们的能力、水平和工作态度给予高度评价。

省级专家在项目实施中发挥了骨干带头作用，参与教材编写，负责培训班课程设置与安排、案例选择、考察现场的选择与安排。虽然他们工作繁忙，但他们挤时间参与项目工作，既作为骨干师资进行扩展培训，还督导地市级师资的教学，给予指导和帮助，如新疆李凡、青海王学文、云南刘晓强、宁夏张银豪和张栩几乎参加了各省全部的扩展培训班。项目负责人和学员充分肯定他们的辛勤劳动。

访谈记录

朱宝铎：与亚行、协调员合作良好；亚行管理模式好，资金预付制，资金在短时间内发挥作用，资金工作效率很高，不要求配套经费，减轻了基层压力。

宋思年：与卫生部门合作好，对话比较有效，目标完全一致，第一次与卫生部门大型合作，是亚行批准最快的项目；由于没有经验及现成的工作网络，客观上难度大，有些不可避免的障碍。

云南学员：项目管理非常顺畅，管理经费比较有保证，省卫生厅积极落实，省疾控中心落实到位，管理人员稳定、熟悉、沟通顺畅，卫生局、疾控中心、政府比较支持。

面临的困难与不足之处：(1) 受项目执行人员素质的影响，各省项目执行水平有差距；(2) 中央、省级专家对基层的具体指导需加强。

建议：今后有类似项目时，(1) 选择有传染病防治工作经验和教学经验的人负责省级项目执行工作；(2) 给省级一定的自主权，增强他们的主观能动性；(3) 加强对基层的具体指导。

3. 设备及防护用品管理

根据亚行的《采购指南》要求，项目采用灵活、快捷的采购方式，为各省(自治区)配备了尼桑越野车、笔记本电脑、多媒体投影仪、数码相机、数码摄像机和防护用品(包括防护服、口罩、防护眼镜、手套、红外体温探测仪、消毒

锅炉）等，各种设备和用品按照分发计划下发，并有每个接受单位或个人的签收记录。这些设备和防护用品下发及时，在禽流感、皮肤炭疽、鼠间鼠疫等传染病防治，意外氯气泄漏事故等突发公共卫生事件应对中，在各级培训工作中发挥了应有的作用。

4. 督导

卫生部贷款办领导、项目协调员和国家级专家曾到各省（自治区）进行现场督导20 多次（每省6 次以上），举办师资培训班和试点培训班，观察、督导扩展培训班举办情况，到省、地、市对现场流行病学培训班学员的现场实习进行现场指导，并经常通过电话、邮件对学员进行指导。与各级项目工作人员保持密切的联系，及时了解各地项目执行情况，存在的问题和障碍，给予及时有效的指导，及时调整项目策略和内容。

省级对每期县乡级培训班进行督导，并聘请固定的专业指导老师对现场流行病学培训班学员的现场实习进行跟踪指导，组织落实中央的督导建议，保证项目的顺畅运作。

面临的困难与不足之处：（1）虽然国家级多次对基层进行督导，但基层希望有更多机会得到国家级专家的直接指导；（2）由于督导后只有口头反馈，没有正式的书面反馈，导致有些整改意见没有落实。

建议：希望今后将省级对县乡级的指导列为常规性工作，给予经费保证，建立督导制度。

5. “非典”与传染病防治规划的制定与完善

2003 年底在北京和四个项目省分别举办了国家和省级“非典”与传染病防治策略规划研讨会，各省组织多个相关部门进行了研讨。云南省制定了27 种甲类、乙类传染病的应对预案及突发公共卫生事件的应对预案，制定了艾滋病、肺结核、性病的防治工作方案。其他省也结合当地的实际情况、按要求制定了相应的预案。各省的预案在应对传染病疫情和突发公共卫生事件中发挥了积极作用，如青海2005 年发生人间鼠疫时，银川2005 年发生鼠间鼠疫时，云南2005 年发生禽流感时，根据预案采取了迅速、有效的控制措施，提高了应对效率。

6. 教材的编写、分发与使用

根据快速评估的结果、参与式培训的需要、基层卫生人员传染病防治工作的需要，经过反复讨论、试用、修改，项目组织有经验的专家编写了《基层卫生人员参与式培训教案》和《基层卫生人员参与式培训教案光盘》、《传染病防控手

册》、《常见传染病与性病图谱》、《急性传染病诊断思路流程图》。编写过程规范，框架清晰，内容实用，是编写者理论知识和实践经验的总结。

《传染病防控手册》印刷5.7 万册、《常见传染病与性病图谱》4.2 万册、《基层卫生人员急性传染病诊断思路与处理流程图》30 万份。这些教材已按计划下发项目省的省、地、县疾控中心和乡镇卫生院。新疆已将《传染病防控手册》翻译成维语，印发5 000 册，方便维族工作人员使用。《传染病防控手册》、《常见传染病与性病图谱》分别加印2.2 万册，下发到西部其他8 省的县级疾控中心和乡镇卫生院。《基层卫生人员参与式培训教案》翻译成蒙语，印刷几千本，在内蒙试用。《急性传染病诊断思路流程图》发往全国的县、乡级医院和疾病防治机构。这样扩大了项目的外部影响，为其他省基层传染病防治工作发挥一定的指导作用。

使用者认为这些教材简单明了、内容实用，非常适合基层的需要，对基层传染病防治工作具有很好的指导作用，成为他们传染病防治日常工作中必备的参考书，他们随时翻阅，非常喜欢。

访谈记录

王学文：手册每个卫生院3 本，开发及时，反响很好；流程图每个卫生院4～5 张，贴在诊室，思路很清楚；图谱更好。

云南学员：教材写得好，平时自己看，给乡村医生讲，适合基层医生用。

宁夏学员：手册内容适合，平常翻看，有帮助，经常给乡级卫生人员讲手册内容；图谱非常不错；流程图挺好，引导思路。

面临的困难与不足之处：(1) 《急性传染病诊断思路流程图》没有使用说明，基层不清楚使用场所，导致有些地方张贴地点不对；(2) 个别地方《传染病防控手册》、《图谱》、《急性传染病诊断思路流程图》没有发到应发的使用单位；(3) 对教材的使用情况及效果跟踪、督导不够；(4) 由于经费有限，各种教材印量少，不能覆盖所有需要的机构和人员；(5) 《传染病防控手册》、《图谱》、《急性传染病诊断思路流程图》对村级非常适用，但没有覆盖村级。

建议：(1) 下发的教材和材料如果有配套的使用说明，将方便、规范基层的使用；(2) 今后下发教材或材料时，加强对基层发放和使用的跟踪与督导，保证按计划发放、有效使用；(3) 加大教材印量，将好的教材推广到村级、其他省市、其他卫生部门使用；(4) 扩大流程图的发放数量和张贴范围，以规范传染病诊断、报告程序；(5) 项目结束后，各级卫生部门督促各机构使用这些教材，继续发挥它们的作用。

7. 基层卫生人员传染病防治培训

7.1 省地级师资培训

2004 年5～7 月和2005 年5～7 月在四个项目省进行了两轮省地级师资培训，分别举办12 期培训班（宁夏、青海各2 期，新疆、云南各4 期），培训省地级师资204 人（云南72 名，青海38 名，宁夏26，新疆68 名），主要来自省地级疾控中心、医院、大专院校。主要内容包括参与式培训技能、县乡级培训班组织安排与课程设置、需求评估和效果评价等。

培训班评估结果显示，经过师资培训和试点培训，通过专家示范、学员实战练习、讨论交流、专家观摩点评，学员们基本理解了参与式培训方法，掌握了一些参与式培训的技能，基本掌握了培训的方法、程序、要求，理清传染病防治工作思路，提高了他们应对传染病和突发公共卫生事件的能力。学员们认为师资培训班的课程设置安排合理，国家级专家理论知识丰富，实际工作经验丰富，讲课方式新颖、水平高，参与式教学方法运用熟练、自然，选取的案例很有代表性，提供的知识新、实用，能够调动学员思考问题、分析问题，通过思考寻找解决疑难问题的方法，学员参与踊跃，课堂气氛活跃，学员们收获很大。领导、学员都对师资培训班给予充分肯定。

许多接受培训的师资在县乡级培训中积极探索适宜的培训方式，认真准备课件和案例，根据学员的特点和需要及时调整讲课内容与方式。如宁夏的张栩教授精心准备了10 多个课件，学员想听什么、需要听什么就讲什么。经过10 多次参与式培训的锻炼，通过不断摸索、总结、学习，讲课水平得到很大提高，在2005 年宁夏医学院讲课比赛中获奖。师资培训为各省培训了一支强有力的师资队伍，不仅为项目扩展培训提供了师资力量，也为各省其他培训工作如现场流行病学培训提供了较高水平的师资。

培训班将疾病控制工作人员与临床工作人员一起培训，打破治疗与预防的界线，明确彼此职责和分工，建立联系，促进沟通交流，有利于今后相互合作开展工作。

访谈记录

云南师资培训学员：陈志海、王若涛很有水平，以案例为引导的参与式培训经过互动增强了培训效果；培训后工作思路比较清晰，工作思路对同事产生影响，在工作中提出正确建议；项目非常好，对自己提升很大，把学到的东西应用到其他教学中，通过自己带动一帮人，对单位有影响，应对能力提高。

宁夏师资培训学员：陈志海、王若涛讲课很好，知识面广；培训后教学能力、现场处置能力明显提高，以前棘手的问题，现在能很好处理；引进参与式培训方法，教师、学员都受益；学员反映不错，整个队伍知识水平、能力提高，

为基层培养一批人，帮助基层医生建立工作思路，增强报告意识和能力。对传染病防治工作是潜移默化的影响，短时间显示不出来；目前培训密度够，但人员变动频繁，队伍的巩固、维持很难说。

面临的问题与不足之处：(1) 经过培训的师资能力和水平差别很大，有些人对参与式培训方法的理解和掌握有限；(2) 项目结束后，师资队伍的可持续性发展和后续支持将面临困难，如果缺少锻炼机会，师资队伍的水平将迅速下降。

建议：(1) 今后师资培训时严格按要求选择合适的人员参加培训；(2) 临床和疾控人员工作侧重点不同、需求不同，如果培训时有合有分，培训效果将更好；(3) 将有能力、表现突出的师资纳入各省的疾病控制师资队伍，提供锻炼机会，继续发挥他们的作用；(4) 开展优秀教师评选活动，激励老师积极参与教学活动，提高教学水平；(5) 各省对培训过的师资进行跟踪指导，提供后续培训或相关支持，强化培训效果，维持师资队伍的整体水平。

7.2 县乡级卫生人员培训

四个项目省共举办84 期试点及扩展培训班（云南32 期，青海13 期，新疆26 期，宁夏13 期），培训县乡级卫生人员4 145 人（云南1 620 人，青海625 人，宁夏580，新疆1 310 人），覆盖所有的县级以上疾病预防控制中心，宁夏、青海覆盖所有的乡镇卫生院（718 个），云南、新疆覆盖大部分乡镇卫生院。培训采用案例引导的参与式培训方法。培训的重点内容是传染病和急性中毒的早期识别、诊断、报告、疫情处理的方法与技能，并按照传染病与急性中毒的诊断思路及县乡级卫生机构传染病报告与处理流程进行案例教学。培训为各省建立了省、地、县、乡传染病防治和突发公共卫生事件应对专业队伍。尤其是提高了县乡级工作人员传染病诊断、报告、处理及应急能力，现场调查、资料分析、报告撰写能力，也提高了他们的培训能力。

培训班效果评估结果显示，培训后学员测试成绩显著提高，学员对培训班总体评价较高。学员们认为培训班组织管理规范，每个培训班有计划、通知、签到表、通讯录、效果评估及总结。培训班课前准备比较充分，省地级搭配的师资力量较强，课程安排基本合理，培训内容根据当地传染病和突发公共卫生事件发生情况灵活设计，案例选择当地有代表性的案例，学员比较熟悉，容易理解，结合现场考察和实习加深了学员的印象和认识。参与式培训方法调动学员参与，引导学员思考，激发了学员的学习积极性。学习气氛轻松愉快，课堂纪律较好，学员印象深刻，培训效果显著。通过讨论、交流，老师分析、综合，理清了工作思路，增强了传染病报告和管理的意识，消除错误认识和做法，学到有效经验和做法，知识条理化、操作规范化。培训班县乡级人员一起培训，明确县疾控中心、乡卫生院在传染病防治和突发公共卫生事件应对中的职责与分工，了解乡级如何

寻求支持帮助，县级如何提供支持帮助，如何协调配合开展工作，避免相互交叉或出现工作空档，各负其责，有利于建立有序的工作网络。培训班将临床诊断、治疗与流行病调查、处理相结合进行培训，扩展了学员的工作思路。许多学员深有感触，写下学习体会，并将他们所学的知识和技能应用到村医及其他人员培训中。

在疫情和突发事件处置、疾病预防控制工作中，培训的学员们发挥了主力军作用。2005 年7 月宁夏平罗县出现皮肤炭疽15 例，学员姜兆丽负责处理疫情，她立即上报疫情，迅速拿出应对方案，进行现场调查，隔离病人，为迅速控制疫情做好前期准备工作。

新疆根据基层卫生工作者60％是少数民族的特点，特地培养3 名区级少数民族双语师资，开展双语教学，方便少数民族学员学习，提高了基层少数民族工作人员的素质，也提高了新疆传染病防治与突发公共卫生事件应对的整体水平。

综合各培训班效果评估的结果及学员的反馈意见，以案例教学为主的参与式培训方法适用于基层卫生人员传染病防治能力建设培训，可以有效改善他们的传染病诊断、报告、处理技能以及突发疫情识别与应对能力，值得推广。但参与式培训对课程设置、教师素质、学员参与性要求比较高，课程设置要合理，课前准备要充分，教师不仅要具备丰富的理论知识与实践经验，还要具备较强的传授能力、调动学员能力、控制课堂的能力、总结归纳能力，学员有一定的求知欲望和参与意识，否则参与式培训的效果难以保证。

访谈记录

刘运国（卫生部贷款办副主任）：参与式培训满足“以战略为导向的培训”、“以岗位为导向的培训”、“以改变个人行为为导向的培训”的要求，是培训方式的创新。

陈志海：培训采用参与式方法较好；培训内容根据学员的需要和问题定，而不是教师需要；范围小，希望以后有更多的地区参与。

云南学员：学员管理比较严，参与式教学印象比较深；传染病上报有改善，责任心、意识增强；传染病疫情处理比较及时，控制快，散发病例为主，暴发少。

宁夏学员：工作17 年来参加过的最好的培训班，互动式教学印象深刻，积极性高，效果好，通过培训思路比较清楚；师资力量强，讲得都挺好；以前对工作职责、工作范围、工作程序不清楚，现在明确；回去之后起到一定辐射作用，但影响力有限；希望扩展培训覆盖面，对村级人员培训，纳入单位业务学习。

姜兆丽（宁夏石嘴山市平罗县疾控中心）：项目对基层工作很有帮助，老师非常好，讲课内容通俗易懂，方法不错，适合基层；监测上报大有改善，信息网

络建设、传染病诊断与识别有改善；参加过2 次培训，对建立传染病调查思路很有帮助，知道从哪里入手。

贵州代表：培训方式新颖，印象比较深，学得比较轻松，值得借鉴；有时讨论时间太长，老师控制不好，影响整个教学进程，有些内容交待不清楚，需要强化关键点与重点内容；师资培训很重要，培训技能要应用自如。

今后基层培训时需注意的问题：(1) 培训班设计者培训思路要清晰，合理设置培训课程，增强课程的逻辑性、连贯性；(2) 选择有教学能力、能熟练应用参与式培训方法的人担任培训师资；(3) 加强教师之间的相互配合；(4) 课前教师对学员的基本情况及需求要有所了解，更有效调动学员参与；(5) 培训要循序渐进，按规范、有效程序进行，开始时切入点要合适；(6) 加强对基层培训的督导；(7) 围绕学员的问题适时安排小讲课，为学员提供所需的知识、理论。

建议：(1) 将案例引导的参与式培训方法在基层卫生人员培训中推广应用；(2) 对培训过的县乡级卫生人员今后继续培训，在工作中充分发挥他们的作用；(3) 许多县乡级的临床大夫和村医传染病上报和防治意识淡薄，每年大量的新进人员需要接受岗位培训，希望为他们提供培训机会；(4) 参加一次培训对提高学员的能力和素质是远远不够的，需要学员在日常工作中不断学习、实践、摸索、积累，巩固、提高所学的知识、技能；(5) 希望有经费继续支持基层人员的培训，维持基层传染病防治队伍的整体水平。

8. 省、地级疾病控制骨干人员现场流行病学培训

为了提高各项目省疾病控制骨干人员的现场流行病学能力，2004 年10 月～2005 年10 月，实施了现场流行病学培训项目。采用单位推荐和统一筛选的方法，选取20 名学员，每省5 名，男生14 人，女生6 人，副高职称11 人，中级职称6 人，初级职称3 人。

培训分为三个阶段：(1) 北京集中理论培训1 个月，安排46 个单元、160 学时的授课内容，主要包括现场流行病学基础知识、现场调查和处理技术、常见突发公共卫生事件的调查和处理、案例分析、现场实习，曾光、杨维中、叶雷、Bob Fontaine 等28 名中外籍专家担任教师。(2) 在工作单位现场实习1 年，每个学员独立完成一次现场调查和处理工作，或流行病学专题调查，完成调查报告。有专门的指导老师对他们进行跟踪指导，国家指导组到各省进行督导。(3) 在北京举办项目总结会暨学员汇报会。

培训班老师、学员及单位领导对该项目的设计、组织、管理、效果给予高度评价。项目符合加强公共卫生系统建设的需要，符合西部地区人力资源建设的需要。项目借鉴了中国现场流行病学培训的成功经验，采用案例教学的方式，注重

培养学员实际工作能力，贯彻“学中干、干中学”的理念，项目设计科学、合理、可操作性强，课程安排紧凑合理，项目组织保障有力，培训老师理论知识、工作经验、教学经验丰富，指导老师对学员现场实习进行全程跟踪指导，保证了教学质量。

培训后18 名学员从事传染病防治或应急工作。学员们作为骨干力量多次参与各省的疫情和突发事件处理工作，如青海王学文负责全省传染病暴发及不明原因疾病疫情的调查处理工作，2005 年刚察县候鸟高致病性禽流感疫情的主动检测工作，云南刘晓强负责云南省突发公共卫生事件现场处置和传染病疫情管理工作，他们提出许多有价值的建议和应对办法，发挥了示范带头作用，促进了基层传染病和突发公共卫生事件应对的规范化。2004 年12 月曲靖市大新责任有限公司发生砷化氢中毒，2005 年4 月曲靖市应用技术学校发生氯气泄漏事故，云南5 名学员参与调查处理，他们迅速提出合理的应对方案，组织工作人员分工协作、积极应对，很快控制局面。

现场流行病学是现场调查者的基本功，通过现场调查研究，找到流行病学病因，采取针对性的控制措施。培训结束后，各省的学员还作为组织者和师资举办了现场流行病学培训班，培训省、地、县级流行病学专业人员，将他们所学的知识和技能传授给更多的人，为本省现场流行病学网络和人员队伍建设做出应有的贡献。14 名学员作为各省的骨干参加了师资培训，16 名学员担任县乡级培训的师资，不仅承担讲课任务，还成为培训班设计、组织、管理、协调的关键人物，如王学文、刘晓强、米吉提、张越明等。

在现场实习中，他们合作或独立完成17 份调查报告，现场调查报告获得15.2 的平均分（满分20 分，最高分18.5 分）。学员已发表论文或调查报告18 篇，吴强参与的项目《玉溪市维持无脊髓灰质炎可持续性研究》获得2006 年玉溪市政府科技成果一等奖。米加提参与向新疆科技厅申报“新疆维族艾滋病病毒基因序列研究”项目的工作。多名学员参与《基层卫生人员传染病与急性中毒防治参与式培训教案》、《常见传染病与急性中毒预防和控制手册》的编写工作。

参加现场流行病学培训班、疫情和突发公共卫生事件应对处理工作，全面提升了学员的组织协调能力、项目设计和管理实施能力、分析和决策能力、现场调查和处置能力、统计分析能力、报告撰写能力、教学能力，增加了学员与外界交流机会，使学员开阔了视野，得到更多锻炼机会，获得更大的发展空间。

访谈记录
宋思年：现场流行病学培训是“最好的专家给最好的人培训”，所以效果很好。 余宏杰：原项目方案中没有这项工作，我建议增加此项内容；培训效果不

错，学员知识技能方面有质的飞跃，项目执行能力提高，项目管理人员、学员认可培训，主要是案例教学、实际操作培训，包括评价、总结、分析，日常常见病调查，疫情爆发现场调查，疾病监测，现场调查案例分析，统计分析，实验室检测方法、结果判断分析。

李群：培训现场工作思路，规范现场工作。

面临的困难与不足之处：培训结束后个别学员参与疫情和突发事件调查处置的机会少，缺少锻炼，骨干作用没有充分发挥。

建议：(1) 各地选派人员时，应保证参加人员培训后继续在传染病防治岗位发挥骨干作用，避免培训资源浪费；(2) 继续为学员们提供交流机会和信息服务；(3) 希望各省为学员们提供发挥作用的空间和机会，最大化发挥他们的骨干作用。

9. 传染病防治健康教育

9.1 《教师手册》与《学生手册》的设计、制作、分发、使用

《教师手册》和《学生手册》的设计制作程序科学、规范，以中小学校教师和学生的需求为基础，经过预试验和反复修改、审核，保证了信息的科学性、准确性，内容和形式的实用性和适宜性。

《教师手册》印刷14 万册，下发到各省全部初中和贫困县的小学，每校4～5本。《学生手册》印刷15 万册，发给贫困县小学4～6 年级学生和初中生，约10名学生1 本。《教师手册》和《学生手册》翻成蒙语，印发4 万册。发放过程中得到教育部门的大力支持。教育部借鉴《教师手册》为全国中小学开展传染病防治健康教育活动统一编制了教师用书，已印刷下发至全国各省。

学校领导和老师很高兴有这样的参考资料，他们认为手册内容实用、全面、简单、通俗易懂，很适合老师和学生。学校组织传阅了《教师手册》和《学生手册》，学校传染病与急性中毒报告意识增强，能够及时向有关部门上报学校内发生的传染病与急性中毒，有些学校利用手册开展了宣传活动，如办黑板报、广播。他们建议：(1) 在“学校传染病病例发现与报告流程(建议)”中增加“上报教育局”，以便教育部门配合卫生部门做好应对工作；(2) 教育部门将“学校传染病病例发现与报告流程”作为重要内容培训学校领导和校医及保健老师；(3) 希望加大手册印量，覆盖项目省所有的初中、小学，并推广到其他省市。

访谈记录

王学文：《学生手册》专业人员认为非常简单、实用。

云南曲靖第二小学教师：《教师手册》非常好，全面实用，对老师进行培训，老师在课程教学中应用。

20 名参加小组讨论的四、五年级学生认为图文并茂的《学生手册》很好，他们很喜欢，内容基本能够理解，他们不仅自己看，还给同学看、家长看、朋友看，认为手册对他们和家人预防传染病很有帮助。对于《学生手册》，他们提出如下意见：(1) 印刷用纸反光，容易产生双影，导致观看时图片模糊，纸太光滑，写不上字，没法将问题的答案写在手册上；(2) 没有目录，手册的内容不清楚；(3) 封面不吸引人；(4) 每页重点内容不够醒目、突出；(5) 内容如果编成顺口溜，更容易记忆；(6) 增加一些真实例子，如不讲卫生得传染病；(7) 第2 页的细菌图让人看了不舒服，建议改为真实图片，第3 页的图太夸张，第4 页图中洗水果眼睛没看，杯子像扑克，第11 页图看不懂，第16 页图与文字内容不相符，第17 页建议画其他的可疑污染物品或动物，第19 页“说一说：刚才列出的每项工作由谁负责?”其中的“每项工作”不清楚；(8) 生僻的字加拼音，方便低年级学生阅读。他们建议利用手册开展多种形式的宣传活动，如在班主任会、班会、少先队会、读书会上宣讲、讨论，编成广播稿、儿歌、黑板报、传单、网页、科学漫画报，手册复印后让学生传阅，带回家让家长看，学生讲给家长听，写日记、写作文，举办知识竞赛等。

9.2 省级传染病与突发公共卫生事件健康教育培训与经验交流会

2005 年9 月在北京举办了省级传染病与突发公共卫生事件健康教育培训与经验交流会，8 个省共50 多名代表参加，其中四个项目省13 名代表参加会议，包括10 名传染病防治专业人员，3 名健康教育专业人员（来自青海、新疆）。

学员认为培训很有必要，老师讲课水平很高，采用参与式教学方法比较好，培训的知识、方法、理念对开展传染病防治健康教育工作很有指导作用。通过培训、参观、交流、讨论，增强了制定应对传染病与突发公共卫生事件健康教育预案的能力，制定健康教育计划和策略的能力，开发健康教育材料的能力，开展健康教育工作的能力，与媒体沟通、交流的能力。会上各组讨论、制定了应对传染病与突发公共卫生事件健康教育预案的框架和雏形，会后各省制定了具体预案，如青海省制定了“青海省突发公共卫生事件健康信息传播预案”、“预防鼠疫健康教育工作预案”、“预防禽流感健康教育工作预案”，与媒体建立了合作关系，开展了大众媒体宣传活动，突破以往发传单等单一的宣传形式，利用现代传媒手段，采用座谈、讲座等目标人群愿意接受的多种形式开展健康教育工作，健康教育融入传染病防治和应对工作中，不仅平常开展宣传教育工作，发生疫情时健康教育作为重要控制策略参与应对工作，对控制传染病疫情发挥重要作用。

访谈记录

姜兆丽（宁夏石嘴山市平罗县疾控中心）：李希光、王若涛、王立秋等讲课挺好，挺有意义，使用方法挺多；通过培训，对健康教育理论及应对有所帮助；行为干预、评价方法技巧方面有些改进；高血压健康教育以前比较简单，发传

单，现在进行讲座、座谈，采用病人能接受的方法进行干预；与电视等媒体配合好，播放字幕、专访等节目。

姚晓群（青海省健康教育所）：第一次参加亚行培训班，收益较大，培训很有必要，很有指导作用。班的形式、内容比较好，在计划制定、传播技巧、知识结构、理论方面有收获。李希光“如何与媒体沟通”的讲座作用相当大，各位老师讲课比较好，参与式教学方法好，有借鉴作用，在工作中能应用所学的新方法、理念。健康教育预案的框架挺好，开拓思路，有指导作用；健康教育预案在会上形成雏形，之后完善成具体预案，如预防鼠疫、禽流感等预案。卫生厅统一安排，工作支持力度大，经费设备有保障，与传染病防治工作联系紧密，配合较好。健康教育参与了各项工作，专家们经常及时到疫情现场开展健康教育工作。

建议：希望今后举办健康教育培训班时有更多的健康教育专业人员参加，保证培训后开展后续的健康教育工作，否则工作没有延续性，实际工作不能产生应有的影响。

9.3 公众健康教育工作

宁夏、青海、新疆将健康教育纳入县乡级卫生人员培训课程中，培训如何利用当地资源开展健康教育活动。青海、新疆健康教育所与传染病防治机构配合开展了鼠疫、禽流感等传染病防治健康教育工作。宁夏、云南健康教育所是独立机构，传染病防治健康教育主要由传染病防治机构自己开展。由于经费有限，项目在公众健康教育领域投入少、开展的工作少。

访谈记录

宁夏学员：健康教育比较薄弱，专题培训少；健康教育停留在宣传水平，认识到健康教育重要性，但不知如何做，什么是有效方法，怎么做没有具体指导；效果没有追踪、评估；健康教育是独立机构，与传染病防治机构合作配合少，宣传日有合作，日常工作合作少，发生疫情后传染病防治机构自己开展健康教育。

面临的困难与不足之处：(1) 目前由于机构设置原因，传染病防治健康教育工作主要由疾控部门承担，健康教育部门参与比较少，两个部门之间沟通、配合不够；(2) 由于疾控人员精力有限、缺乏健康教育专业技能，传染病防治健康教育仍停留在卫生宣传水平，形式、内容单一，不能满足公众的需要；(3) 传播材料的制作、发放与传播活动没有紧密联系。

建议：(1) 加强各级健康教育与疾控两个部门之间的沟通协作，将健康教育融入传染病防治工作中，充分发挥健康教育在传染病防治中的作用；(2) 加大对

传染病防治健康教育工作的人力、物力、财力支持，增强健康教育的针对性、适用性；(3) 结合项目开展的宣传活动设计、制作、使用宣传材料。如果针对《教师手册》和《学生手册》的发放设计和组织相应的宣传活动，《教师手册》和《学生手册》的使用效果将更好。

八、致谢

在评估过程中，卫生部贷款办、项目协调员和专家、各省项目负责人、现场流行病学培训班学员、云南和宁夏的项目工作人员、各位访谈对象给予大力支持，积极配合，使评估工作顺利进行，在此表示感谢。

感谢陈育德教授对评估方案设计、评估实施、评估报告撰写等方面给予的指导。

由于时间仓促，收集的资料、了解的信息可能不全面，如果评估报告中有不妥之处，请批评指正。

附件

附件5.1	亚行赠款项目小组访谈参加人员登记表
附件5.2	个人及小组访谈提纲
附件5.3	亚行赠款项目省地级现场流行病学培训班学员调查问卷
附件5.4	亚行赠款项目省地级现场流行病学培训班学员调查问卷结果汇总

第六章　政策建议

如前所述，在本项目的支持下，亚洲开发银行与中国各级卫生部门展开了密切有效的合作。通过快速评估和持续的对话与交流，项目了解到中国，特别是西部贫困地区在疾病预防控制中存在的几个主要问题和挑战。项目通过合作各方的共同努力试图从某种角度来解决其中的部分问题，同时还希望这些措施能够在更大的范围内得到推广。无论是快速评估中对各地情况的分析还是由亚洲开发银行提供支持所进行的项目干预试点都对国家政策的改善提供了很好的依据。这在本章将予以阐明。其中项目发现和建议重点关注的核心问题是：需要投入更多的资源以加强疾病预防控制工作，特别是在贫困地区。

一、背景

2003 年“非典”疫情的发生和流行，暴露出中国疾病预防控制体系长期存在的弊端，引起了国家和政府的高度重视。党中央、国务院提出了三年建设疾病预防控制体系、如期实现艾滋病、结核病、血吸虫病等重大疾病预防控制目标。但我国疾病预防控制形势仍然十分严峻，重大疾病仍然严重威胁着人民群众身体健康。

首先，预防和控制传染病仍是今后比较长的时间内我国重要的公共卫生问题。目前一些对人民群众健康有严重威胁的重大疾病没有得到有效控制，全国还有1.2 亿乙肝病毒携带者；有近500 万肺结核病例，其中1/3 是传染性很强的涂阳肺结核；我国现有艾滋病病毒携带者约65 万，艾滋病感染和发病率呈明显上升趋势，防治工作任务日益加大；一些死灰复燃的传染病如性病多年发病持续上升的势头仍未得到遏制；登革热等境外输入的传染病出现局部流行；血吸虫病患者总数居高不下，钉螺面积有所增加，近些年来上海、广州、浙江等已经消灭血吸虫病的地区，输入性病例呈上升趋势；一些新发传染病如禽流感的威胁日益加剧。全国有6 000 万左右地方病患者，还有7 个省区尚未达到消除碘缺乏病的目标；3 亿多农民饮用水不达标；无害化厕所普及率不到30％。

其次，绝大部分传染病、地方病和寄生虫病的疫区、病区大都集中在西部地区和农村地区；同时，随着农村工业化、城镇化发展和农民饮食结构及生活方式的改变，农村疾病模式正在由以传染性疾病为主转变为传染性疾病、慢性非传染

性疾病以及伤害并存。而对农村卫生投入人均不到城市的四分之一，基层疾病预防控制专业和管理技术薄弱；加之城乡之间、区域之间疾病预防控制工作发展不平衡，农村地区防病工作任务十分繁重，难以应对复杂的疾病流行局面和多重的疾病负担。

第三，疾病预防控制系统长期缺乏持续有效的投入机制，特别是传染病防治的最基层，如县、乡级传染病防治机构，尤其在中国西部和中部比较贫困和偏僻农村地区，他们常常是传染病暴发和现场处理与控制的第一道防线，但由于长期缺乏必要的传染病防治投入，不能很好地按照传染病报告、隔离和现场处理原则及时控制传染病疫情。

另外，正如本文第二部分中所描述的那样，疾病预防控制系统还面临着其他新的挑战，包括人口的大规模流动，人口老龄化及疾病模式的变化（如非传染性疾病负担不断加重）。尽管这些领域超出了本技术援助项目的覆盖范围，但通过与项目在各地的合作伙伴的对话与交流发现这些方面也是今后需要重点关注的领域。

近年来通过各级政府的不懈努力，中国疾病控制体系建设工作取得了长足的进步与发展，但依然面临着巨大的问题与挑战。本章就中国疾病控制工作面临的问题和挑战、针对疾控体系机构和机制的建设及传染病防治能力的提高提出建议。

二、疾病控制工作所面临的挑战

1. 长效投入机制还没有完全建立，制约疾病预防控制工作的发展

1.1 政府管理疾病预防控制工作的理念尚未普及。“非典”之后，各级政府对疾病预防控制工作重要性的认识都有了不同程度的提高，明确相关政策及保障措施，加大了管理与指导。中央政府重视、支持的力度明显加强。但一部分基层的政府、领导人，还缺乏对疾病预防控制工作重要性的认识，思想观念上还比较保守，还没有真正把疾病预防控制工作放到政府工作的议事日程上。遇有重大疫情和突发公共卫生事件，重重压力之下，稍显重视。一旦过后，重视和支持又仅仅停留在口头上。

1.2 计划经济条件下政府强有力的干预，在投入不足情况下，对保证各项公共卫生策略与措施的落实起到了重要作用；在市场经济条件下，传统措施的效果受到制约，公共卫生机构工作支撑条件没有得到完全解决。虽然通过国债、贷款和筹资等项目的实施，在相当程度上解决了一些疾病预防控制的工作条件，但疾病预防控制工作的长效运行机制和保障机制尚未形成，基层多数地方财政投入不

能保证疾病预防控制机构工作人员的工资待遇和工作经费，迫使一些机构仍然在为“生存”而忙于“创收”，难以开展正常工作，不能完全履行所应承担的公共职能。

1.3 在农村，由于对体现公共服务的疾病预防控制工作投入不足，致使三级预防保健网不够健全、卫生技术人才匮乏，疾病预防控制服务水平低、队伍不稳定，人员素质远不能适应疾病预防控制工作的需要，致使许多疾病预防控制行之有效的措施难以落到实处。

2. 疾病预防控制工作现状尚不适应社会的需求

2.1 经过近几年的建设，各级疾控中心房屋有了很大的改观，但设备不足的问题显得十分突出。很多县级疾病预防控制机构仅仅靠瓶瓶罐罐维持工作，就是有一些，也大多是20 世纪80 年代国家财政“加强县级卫生防疫站能力建设”项目所配的十万元左右的设备，甚至在一些地市级疾控中心也仅有几万元的设备。与《省、地、县级疾病预防控制中心实验室建设指导意见》中提出的装备标准相差甚远，难以适应当前疾病预防控制工作的需要。

2.2 满足设备的需求固然重要，但更重要的是疾病控制系统应当具备相应的“软件”设施，和需要具备应对各种传染病和突发事件的快速反应能力。但目前疾病预防控制机构应对突发公共卫生事件机制尚不够健全，疫情信息监测报告网络不十分完善，缺乏对传染病暴发流行发展势态预测评估和危害性评价，科学有效的预警机制还没有真正建立。现场流行病学调查、现场处置和应急能力仍不足，特别是在传染病病人的及时发现及报告工作质量方面还亟待改进。

2.3 在一些地区，疾病预防控制改革还没有完全到位，疾病预防控制体系还不够完善，疾病预防控制内部机构设置和管理规范化程度较低，基层疾病预防控制专业和管理技术薄弱，城乡之间、区域之间疾病预防控制事业发展不平衡等因素，致使当前的一部分疾病预防控制机构难以应对复杂多变的疾病流行局面。

2.4 流行病学调查能力不足，技术水平较差；实验室检测方面人员技术力量薄弱、设备条件落后，应急能力不足，卫生技术人员中相当一部分业务素质不高，缺乏必要的专业知识和技能，人才队伍建设等问题将成为我国疾病预防控制体系建设能否充分发挥作用与可持续发展的重要制约因素。

2.5 目前，多数疾病预防控制机构人员配置不够合理，如结核病短程督导化疗中的药物投服，性病、艾滋病的早期诊断和确诊病人的治疗控制以及预防接种工作是开展疾病预防控制工作重要手段，但在这些领域仍然存在着很大的缺陷，同时，目前疾病预防控制机构中缺乏具有临床医学背景的工作人员，从事这些工作的人员多为公共卫生医师，按照《中华人民共和国执业医师法》规定，不具备

处方权和对病人、疑似病人进行早期诊断和治疗控制的权力，对落实传染病控制措施产生不利的影响。

资料

据2004 年全国计划免疫评审调查显示，在接受调查的273 个县中，“四苗”全程接种率低于85％的县有74 个，占调查县总数的27％；单苗接种率低于85％的县数分别为：卡介苗11 个县、百白破33 个县、脊灰疫苗28 个县、麻疹疫苗37 个县；新生儿乙肝疫苗接种工作在部分地区进展缓慢，有12 个省份的接种率在85％以下，有72 个县的乙肝疫苗接种率不到85％，首针及时接种率低于60％的有9 个省。更为严重的是一些地方还存在着免疫空白区，以致出现脊髓灰质炎疫苗衍生株流行等。

3. 经济转型期所面临的更为广泛的问题和需求

尽管这些问题超出了本技术援助项目在中国西部地区提高传染病防治能力的覆盖范围，但项目中所开展的对话与评估显示，疾病控制系统也需要具备相应的能力以应对更为广泛的社会需求。

三个典型的例子

1. 我国正面临着疾病流行模式的快速转变，慢性非传染性疾病增多，已经取代传染性疾病成为致死的主要因素。恶性肿瘤、脑血管病、心脏病、呼吸系统疾病、损伤与中毒等五类主要疾病的死亡人数已占我国城乡居民因病死亡人数的80％以上，成为威胁群众生命安全的主要疾病。随着城市化、工业化进程的加快，以及不健康生活习惯等因素的影响，退行性疾病、功能障碍性疾病的预防控制任务繁重，精神心理问题日益突出；新的食源性危害如大肠杆菌 O157 ：H7 等在我国同样突出；全国每年新发尘肺病超过1 万例，现患病人有44 万之多，50 多个厂矿存在不同程度的职业危害；环境污染、伤害以及人口老龄化带来诸多的公共卫生问题都需要着手加以解决。
2. 人口老龄化和高龄化将带来慢性病和老年病增加等疾病模式的改变，人口流动和城市化进程对现行疾病预防控制服务体系及其管理体制提出了新的要求。以往在计划经济体制下主要依赖强大的行政干预和群众运动等措施的疾病预防控制服务模式已不能适应以人为中心，以健康为目标的建设全民小康社会、构建社会主义和谐社会的要求。如何改进服务模式和管理方式，提高服务效能和工作效率，建立适宜的可持续发展的疾病预防控制服务模式是今后疾病预防控制体系建设的重点。

3. 全国流动人口数量逐年加大，流动性强，缺乏有效的管理手段，给疾病预防控制工作造成巨大压力；再加上地方财政很少将流动人员的疾病预防费用列入预算，专业人员配置也未考虑流动人口等因素，开展工作缺乏经费和人力资源保证，流动人口的疾病预防控制已成为工作中的重大问题和薄弱环节。

三、关键策略和建议

“非典”危机期间，我国疾病控制和突发应急体系暴露出诸多问题。各级政府和卫生行政领导、医疗机构、防保机构等工作人员一致认为，诸多问题中首要问题是功能偏废，即公共职能缺位和疾控中心的职能错位。具体表现为整个社会的重医轻防；疾控中心的重有偿服务轻无偿服务、重收益多服务轻收益少服务；社区卫生服务中心、乡镇卫生院和村卫生室则“重医轻防、以医养防、重有偿服务轻无偿服务、重收益多服务轻收益少服务”等并存。针对这些问题的策略包括：明确政府承担疾病预防控制的筹资职能，保障疾控中心适宜投入（适宜的投入标准是关键），使得目前收不抵支的公共产品得到足够补偿，从事疾病预防控制人员有足够的相应的待遇（适宜的人力配置和收入保障是关键）。同时，通过加强管理和改革投入方式增加服务效率（管理体制和机制改革是关键）。如果上述措施得到落实，疾控中心的工作重点能够从服务收费转移到公共产品的提供上来，消除社会整体的重医轻防、重有偿服务轻无偿服务、重收益多服务轻收益少服务的现象，解决职能偏废和公共职能缺位问题。在补偿机制逐步完善并形成制度保障的基础上，公共职能切实落实就不是遥不可及的奢望，疾病预防控制工作当能步入良性循环。

1. 加强机构建设，建立有效机制

(1) 加强政府对疾病预防控制工作的领导，完善政府适宜的投入机制

鉴于公共产品的非排他性特征，虽然成本低、效果好，但是，市场条件下无人愿意提供。因而，疾病预防控制公共职能的筹资、组织、管理乃至提供等，政府责无旁贷。政府对公共产品观念上的重视并不意味着疾病预防控制职能的有效落实，观念上的重视尚需与承担筹资职能建立直接的联系。然而，目前在实践中这一联系尚未有效建立。事实上，正是20 年来政府对卫生公共产品投资的长期缺位，导致了疾控中心的公共职能缺位。所以，在政府重视的前提下，能否扭转疾病预防控制公共职能缺位，成败在于政府能否承担起相应的筹资职能，形成对疾控中心的适宜投入。

(2)　增加政府财政投入的稳定性和投入的效率

政府对疾病预防控制工作的筹资职能，首先表现在投入的适宜性和稳定性，其次表现为投入的效率。而目前政府对疾病预防控制工作的投入在三方面均存在问题，致使效率低下，即①投入总量不足，②投入随意性大，③投入方式单一缺乏激励。

(3)　建立稳定、适宜的投入机制

在解决了财政投入总量不足问题的基础上，需要建立长期稳定的投入机制，形成适宜投入的制度保障，以消除投入的随意性，如与财政支出增长水平同步。这一机制和制度保障，在现实中始终未见形成。

2.　改善疾病控制机构人力资源状况，提高基层卫生人员传染病防治能力

(1)　改革劳动人事制度，稳定和吸引高素质人才

在职能明确、编制标准确定和机构效率提高的前提下，重点满足疾控中心工作人员的合理待遇，营造留住人才、吸引人才的氛围，以提高疾病预防控制人员素质。

面对目前社会整体的重医轻防，以及疾控中心工作人员的经济和社会地位远低于医疗服务人员的状况，疾控中心关键技术人员，其待遇、竞争性工资和福利条件等，应该至少不低于同级医疗机构的业务骨干平均水平。

在营造留住人才、吸引人才的环境氛围前提下，结合事业单位劳动人事制度改革，制定各级疾控中心人力的准入条件和岗位标准，明确非专业技术人员不得从事疾控的业务技术工作。按准入条件和岗位标准（受教育程度和个人能力）择优和竞聘上岗。严格控制非专业人员进入疾控中心，稳定和吸引高素质人才。不符合准入条件和岗位标准的人员分流安排。

(2)　加强在职人员培训工作

在职人员培训的重点要针对基层卫生人员，要提高他们的传染病现场处理能力。短期的培训无法将所有的传染病知识一次传授给他们，短期培训重点要教会基层人员现场处理传染病的基本技能，如传染病的早期初步诊断和报告能力，现场的基本处理如病人隔离、易感者保护、采样及基本数据的收集、现场消毒等基本能力，并配合上级专业人员开展进一步的工作以控制传染病的进一步蔓延。

亚行通过西部地区“非典”和传染病防治项目所开发出来的针对基层卫生人员的传染病防治参与式培训模式具有切合实际、可操作性强、培训效果好的特点，为西部地区基层卫生人员传染病防治培训做了很好的技术积累。

加强省地级传染病防治骨干人员的现场流行病学培训，为各省培训出更多的传染病现场流行病学调查和处理业务骨干，从而适应各地传染病现场控制工作的

需求。省地级传染病防治骨干人员的现场流行病学培训要采取理论学习与现场实践相结合的原则，要注重将所学习的理论知识应用到现场实际的传染病控制过程之中，在学中干，在干中学，从而提高他们的传染病现场处理实际操作技能。

3. 加强流动人口中的传染病控制工作

随着全国流动人口数量的不断增加，流动人口中的传染病控制问题越来越需要得到各方面的重视，“非典”、结核、艾滋病的流行都提示我们，如果没有有效地投入和管理机制，如果忽视了流动人口中各类传染病的预防与控制问题，就会给本地的传染病控制造成巨大的负面影响。需要建立有效的机制来应对流动人口中出现传染病问题，包括有效的属地管理机制，合理有效的投入，与流动人口来源地疾控机构之间的密切联系等。

要针对重点人群加强传染病防治健康教育。提高重点人群的传染病防治意识。制定传染病和突发公共卫生事件健康教育策略，以在传染病出现流行时能够及时地实施相应的健康教育应对措施。

总之，要在新形势下有效地应对传染病的流行和各种突发公共卫生事件的发生，就必须建立有效的投入机制、系统与人才管理、培养和使用机制，特别要重视基层传染病和突发公共卫生事件的处理能力，同时要将西部地区作为投入与关注的重点。

附件

附件1.1　全国非典型肺炎疫情统计表

地区	临床诊断病例		其中医务人员		出院人数		死亡人数		疑似病例	
	新增	累计	新增	累计	新增	累计	新增	累计	新增	累计
北京	122	1 553	20	288	10	100	7	82	96	1 415
天津	12	61	3	26	0	0	0	3	9	87
河北	8	56	0	7	0	0	0	4	30	92
山西	8	307	1	66	3	25	1	10	20	136
内蒙古	27	154	4	20	0	2	2	11	25	224
辽宁	0	1	0	0	0	0	0	0	0	4
吉林	2	9	0	2	0	0	1	1	2	4
黑龙江	0	0	0	0	0	0	0	0	1	3
上海	0	2	0	0	0	0	0	0	6	12
江苏	0	1	0	0	0	0	0	0	2	5
浙江	0	3	0	0	0	0	0	0	0	3
安徽	0	7	0	0	0	0	0	0	2	4
福建	0	3	0	0	1	2	0	0	0	0
江西	0	0	0	0	0	0	0	0	0	2
山东	0	1	0	0	0	0	0	0	0	1
河南	1	13	0	1	0	0	0	0	2	18
湖北	0	3	0	1	0	0	0	0	3	16
湖南	0	6	0	0	0	5	0	1	0	4
广东	7	1 412	0	342	5	1 206	0	51	37	196
广西	0	18	0	0	0	8	0	3	0	2
重庆	0	0	0	0	0	0	0	0	0	6
四川	0	12	0	0	0	3	0	2	1	20
陕西	0	8	0	0	0	0	0	0	8	29
甘肃	0	3	0	0	0	0	0	1	0	2
宁夏	0	5	0	0	0	0	0	1	0	5
新疆	0	0	0	0	0	0	0	0	0	1
合计	187	3 638	28	753	19	1 351	11	170	244	2 291

统计表时限：截至2003 年5 月1 日10 时。

附件1.2 中国防治非典型肺炎经费投入情况

编号	资金来源	用途	额度（人民币/元）	其他
1	财政部	救治“非典”患者，医疗设备购置，卫生工作者补助，“非典”药品和物资储备，科技攻关	20 亿	
2	财政部	国家疾病控制中心防治“非典”专项经费	3.3 亿	
3	财政部	在京部属医院防治“非典”专项经费	5 500 万	医科院系统（阜外医院、协和医院、医科院肿瘤医院、整形外科医院）北大系统（北大医院、人民医院、北大三院）
4	国家发展和改革委员会	加强全国疾病预防控制中心建设专项经费	29 亿	
5	国家发展和改革委员会	国家级疾病控制中心建设（1 期）	6 亿	1 期6 亿，2、3 期计划为4～5 亿
6	国家发展和改革委员会	应对突发公共卫生事件能力建设	8 亿	（未最终确定）
7	社会各界	防治“非典”捐赠资金和物资	1.2 亿	其中5 000 万为资金
8	日本JICA 项目	防治“非典”消毒物资	120 万美元	准备中
9	世界卫生组织	防治“非典”专家现场指导	0	未曾访问西部地区，也没有访问西部省份的计划
10	世界银行	紧急防治“非典”贷款项目	1 300 万美元	第一期（正在准备）
11	亚洲开发银行	紧急防治“非典”赠款项目	200 万美元	正在准备
12	全国地方各级财政	“非典”防治专项经费	8 亿	省及省以下各级财政

资料来源：1. 第1～11 项来源于卫生部计划财务司（规价处、财资处、基建处）、国际合作司（双边处、多边处）和卫生部国外贷款办公室，均通过电话问询获得。截止日期是2003 年4 月30 日，可能欠完整或准确。

2. 第12 项来源于2003 年4 月24 日《人民日报》。截止日期2003 年4 月22 日。

注：本表包括由卫生部组织管理的国际组织贷款、赠款项目以及国内捐款活动。

附件1.3　项目省基本情况

云南、青海、宁夏和新疆省、自治区位于中国西部，自然条件差，灾害频繁，经济落后，卫生条件差，抵抗重大疫情的能力薄弱。云南、新疆是中国边境省份，边境线长，与10 余个国家接壤。4 个项目省共有人口7 200 百万，其中少数民族众多，有维吾尔族、回族、藏族、土族、蒙古族、撒拉族等民族，约占总人口的42 %；共有286 个县，国家级和省级贫困县占全部县数的50 %，其中贫困人口约占总人口的46 %；农民年收入不足2 000 元人民币（详见表1）。

表1　4 个项目省的基本情况

基本情况	云南	青海	宁夏	新疆	合计
面积（万平方公里）	39.4	72.1	5.2	160	276.7
人口（万）	4 240	528	563	1 876	7 207
少数民族比例（%）	33	55	35	61	42
贫困人口					
人数（万人）	2270	197	304	524	3295
贫困人口比例（%）	54	37	54	28	46
县数（个）	129	43	23	99	294
其中：国家级贫困县	73	15	8	27	123
省级贫困县	5	10	3	3	21
农民年人均收入（元）	1 533	1 300	1 078	1 861	<2 000

4 个省共有卫生技术人员28 万人，除省会城市和部分主要城市以外，广大农牧区卫生人力资源匮乏（详见表2），技术落后。防疫机构防治经费不足，设备陈旧，技术力量不足，医技人员缺乏培训和知识更新。

表2　4 个项目省卫生资源情况

	云南	青海	宁夏	新疆	合计
卫生技术人员总数（人）	133 155	22 000	27 924	97 476	280 555
农牧区每千人口卫生技术人员数（人/1 000）	2.53	1.90	3.97	2.47	1.90～3.97
防病中心（所）	147	59	27	207	440
每千人床位数（张）	1.60	2.4	2.43	3.51	1.60～3.51

截止到2003 年4 月29 日，4 个项目省中宁夏、新疆均已经发现传入性“非典”确诊病例或疑似病例，其中宁夏“非典”病例5 例（其中1 例死亡），疑似病例3 例；新疆在4 月29 日发现1 例疑似病例，正在留观2 例。云南先后对27 例医学观察对象进行了隔离治疗和观察，但还未发现“非典”确诊病例和疑似病例。青海尚未发现“非典”确诊病例和疑似病例。四个省正处于未发现输入性病例或传入“非典”早期阶段。

由于各省均有大量输出或输入的劳务人员，也有部分疫区工作人员和学生返回，造成传入“非典”流行的潜在威胁。宁夏紧邻内蒙和北京（流行严重地区），且交通便利，使得宁夏在控制“非典”流行方面面临严峻的挑战。新疆、青海医疗卫生基础设施差，设备落后，地广人稀，一旦发生“非典”流行将导致严重的危害。云南是著名的旅游地，加之目前尚未发现“非典”病例，因此旅游人数有增无减，省内人口密度大（大多数人居住在占全省面积6％的坝区），一旦发生疫情，容易导致蔓延，造成局部流行的危险性极大。

为有效阻断“非典”的传入，各省卫生厅和疾病控制部门在当地政府的领导下，已经开始预防控制“非典”流行的工作，成立了省级“非典”领导小组，制定相关的政策、管理办法和应急预案，建立全省监测工作网络，开展针对性的培训。其中云南省政府已经紧急筹措3 000 万元防治“非典”专项资金，用于防治工作。新疆已经建立25 家定点收治“非典”病例医院和102 个留验站。

四个项目省均为经济欠发达省份，疾病预防控制能力基础薄弱，少数民族和贫困人口众多，防治“非典”资源不足。“非典”一旦在广大的农村贫困地区流行起来，治疗和控制工作很难开展，后果不堪设想。目前，加强医务人员培训，阻断控制传染源，切断可能的传播途径，救治患者是控制“非典”的重要工作，需要包括国际组织在内的各方力量给予支持和援助。

附件1.4　中国非典型肺炎控制策略框架与资金测算（初稿）

	内 容 描 述	经费需求与来源（万美元）			优先顺序*
		政府资金	世行贷款	国际赠款	
目标	1. 近期目标：迅速控制疫情蔓延，减少非典型肺炎发病人数，提高治愈率，降低死亡率 2. 中期目标：完善对非典型肺炎的应急机制，全面提高监测、防治能力 3. 远期目标：加强和改革公共卫生体系，提高协作研究能力，巩固防治成果				
领域	1. 建立领导、协调和管理机构			100	
	2. 加强疫情监测、报告系统		4 300	240	
	3. 控制传染源		9 120	4 380	
	4. 切断传播途径		750	300	
	5. 保护人群		1 300	700	
	6. 病原、流行病学、药物和免疫学国际协作研究		220	50	
	预测经费：合计		15 690	5 770	
活动	1. 建立领导、协调和管理机构				
	(1) 成立各级指挥中心（按事件分3类、实行中央和省两级管理）	√			1
	(2) 设立办公室，建立联络渠道和协调制度并维持运行	√			1
	(3) 根据需要组织和派遣督查、技术小组	√		80	1
	(4) 公众咨询和信息发布	√			2
	(5) 政策开发、修订应急反应预案	√		20	2
	(6) 资料印刷	√			3
	(7) 通讯和交通工具	√			1
	(8) 其他后勤支持系统（药品、物资储备、配送）	√			2

续表

	内 容 描 述	经费需求与来源（万美元）			优先顺序*
		政府资金	世行贷款	国际赠款	
活动	2. 加强疫情监测、报告系统	√	200		1
	(1) 加强信息收集报告系统、确定各机构责任者、制定工作指南，实行日报告制	√	100		1
	(2) 加强“非典”监测，增加监测点	√	500		2
	(3) 扩展现有公共卫生信息网，覆盖到县，改善数据传输、通讯材料和软件	√			2
	(4) 维护和更新卫生部“非典”公共信息网站，及时向公众发布信息	√		20	1
	(5) 信息综合分析，每周提交动态分析报告和预测	√		20	1
	(6) 同国际组织、双边合作者之间的信息交流与协作机制	√	3 000		3
	(7) 中央、省、地（市）、县疾病控制机构监测、防疫能力建设（土建、设备、车辆）	√	500	200	3
	(8) 疾病控制机构人力开发（培训、人事制度改革、充实专业人员）				
	3. 控制传染源	√			1
	(1) 在各医疗机构设立专门的发热门诊，指定医院集中收治病人	√	1 000	100	1
	(2) 改造、扩建传染病医院、科室	√			1
	(3) 建立临时“非典”集中诊疗中心	√			1
	(4) 设立疑似病人隔离观察床位或隔离观察中心	√	100	50	1
	(5) 卫生人员诊断、治疗培训	√			1
	(6) 铁路、公路、水运交通沿线和主要航空站所在地级以上城市设立留验站	√	4 500	1 500	1
	(7) 紧急采购、供应医疗设备、药品、消耗材料	√	1 000	700	1
	(8) 提供救护车辆	√	2 500	2 000	1
	(9) 资助所有无医疗保险的“非典”病人的免费诊断治疗、疑似病例的隔离观察			20	3
	(10) 出院病人跟踪随访、资料分析	√	20	10	2
	(11) 实施死亡患者遗体处理和丧葬规定，监测、检查执行情况				

续表

	内 容 描 述	经费需求与来源(万美元)			优先顺序*
		政府资金	世行贷款	国际赠款	
	4. 切断传播途径				
	(1) 鼓励和指导家庭消毒	√	200	100	1
	(2) 公共场所、公共交通工具消毒	√	500	200	1
	(3) 病例发生地点的标记、消毒处理	√			1
	(4) 医院内污染区、半污染区的标记、隔离	√			1
	(5) 登记、追踪密切接触者	√	50		1
	(6) 机场、车站、码头、口岸、边境设立和实行检疫	√			1
	(7) 重要疫区的隔离、封锁	√			1
	(8) 严格执行医疗废物处理办法，加强监管	√			1
	(9) 加强医用血源管理和质量控制	√			2
	5. 保护人群				
	(1) 大众健康教育：开发、印刷、发放个人防护资料，广泛宣传个人防护知识	√	200	300	1
	(2) 动员民众就地休养，减少外出、旅行和聚会	√			1
	(3) 加强公共厕所清扫管理、提供清洗水源和用具	√	100		2
	(4) 加强水源保护和质量监测	√			2
	(5) 改善公共垃圾处理	√			2
	(6) 加强对餐饮业、公共食堂的卫生监督	√			2
	(7) 在各级疾病控制机构开设“非典”公众咨询电话热线	√		200	1
	(8) 医院、学校开设心理咨询站，解释疑问、减少恐慌、治疗心理疾患	√		200	2
	(9) 加强农村地区健康教育机构能力建设(业务用房改造、设备、培训)	√	1 000		3
	6. 病原、流行病学、药物和免疫学国际协作研究				
	(1) 病原学协作研究	√	100		1
	(2) 流行病学协作研究	√	100	50	1
	(3) 抗“非典”药物(包括中草药)协作研究	√			2
	(4) 免疫学协作研究与疫苗开发	√			3
	(5) 信息交流与成果推广	√	20		1

* 优先顺序：1 最优先；2 优先；3 一般优先。

注：该表为2003 年5 月1 日卫生部贷款办起草的讨论稿。

附件1.5 项目逻辑框架

目的	策略	项目目标	项目领域	活动	评价指标
预防、控制“非典”在中国西部4省的传播	1. 及时发现、掌握“非典”传播情况，控制传染源。	1. 建立、完善项目地区省级防疫机构对“非典”的监测功能	A “非典”监测	1. 培训人员 2. 购置必备的设备 3. 完善监测系统规范	1. 培训班数量（期） 2. 培训人员（人数、人周数） 3. 购置设备的品目、数量 4. 监测规范完成情况 5. 提交监测“非典”报告的次数及利用情况
	2. 提高项目地区卫生管理和疾病预防控制人员应对突发公共卫生事件的能力	2. 提高应对突发公共卫生事件的应急能力	B 应急能力建设	4. 培训人员 5. 购置必备的设备 6. 制定并完善应急方案和程序	6. 培训班数量（期） 7. 培训人员数量（人数、人周数） 8. 购置设备的品目、数量 9. 应急方案和程序完成情况 10. 应对“非典”新传入和新发病例的反应情况
	3. 切断“非典”传播的可能途径	3. 提高公众预防“非典”的意识和能力	C 健康教育	7. 编制、印刷、散发有关预防控制非典的宣传资料 8. 将宣传资料翻译成少数民族语言并在少数民族人群中散发 9. 利用广播、电视、报刊等大众媒体宣传预防、控制“非典”的知识 10. 购置必要的设备	11. 散发资料数量（份） 12. 少数民族宣传资料散发数量（份） 13. 利用大众传媒播放“非典”节目的次数 14. 购置设备的品目、数量 15. 公众对预防“非典”知识的掌握情况

附件1.6　设备清单

	单价美元	云南		青海		宁夏		新疆		合计	
		数量	美元	数量	美元	数量	美元	数量	美元	数量	美元
领域1	**小计**		**90 000**		**60 000**		**70 000**		**90 000**		**300 000**
1. 红外线测温仪	3 600	12	43 200	8	28 800	8	28 800	12	43 200	40	144 000
2. 轻装防护服	750	24	18 000	16	12 000	16	12 000	24	18 000	80	60 000
3. 普通防护服	5	240	1 200	160	800	160	800	240	1 200	800	4 000
4. 肺功能仪	6 000	3	18 000	2	12 000	2	12 000	3	18 000	10	60 000
5. 血气分析仪	800	12	9 600	8	6 400	8	6 400	12	9 600	40	32 000
领域2	**小计**		**120 000**		**80 000**		**80 000**		**120 000**		**400 000**
6. 手提喷雾器	5	30	150	20	100	20	100	30	150	100	500
7. 高压消毒器	1 200	6	7 200	4	4 800	4	4 800	6	7 200	20	24 000
8. 紫外消毒灯（移动式）	85	30	2 550	20	1 700	20	1 700	30	2 550	100	8 500
9. 6 道心电图机	3 600	3	10 800	2	7 200	2	7 200	3	10 800	10	36 000
10. 床头X 光机	7 500	6	45 000	4	30 000	4	30 000	6	45 000	20	150 000
11. 制氧机	1 800	6	10 800	4	7 200	4	7 200	6	10 800	20	36 000
12. 多参数监护仪	6 000	3	18 000	2	12 000	2	12 000	3	18 000	10	60 000
13. 呼吸机（无创）	8 500	3	25 500	2	17 000	2	17 000	3	25 500	10	85 000

续表

	单价美元	云南		青海		宁夏		新疆		合计	
		数量	美元	数量	美元	数量	美元	数量	美元	数量	美元
领域3	**小计**		**90 000**		**60 000**		**60 000**		**90 000**		**300 000**
14. 笔记本计算机	2 500	6	15 000	4	10 000	4	10 000	6	15 000	20	50 000
15. 磁盘	5	300	1 500	200	1 000	200	1 000	300	1 500	1 000	5 000
16. 打印机	300	6	1 800	4	1 200	4	1 200	6	1 800	20	6 000
17. 复印机	3 000	9	27 000	6	18 000	6	18 000	9	27 000	30	90 000
18. 传真机	300	9	2 700	6	1 800	6	1 800	9	2 700	30	9 000
19. 速印机	5 000	6	30 000	4	20 000	4	20 000	6	30 000	20	100 000
20. 多媒体投影仪	4 000	3	12 000	2	8 000	2	8 000	3	12 000	10	40 000
合计			**300 000**		**200 000**		**200 000**		**300 000**		**1 000 000**

附件1.7　预算及资金分配

表1　按活动内容各领域资金分配情况

领　域	培训		设备		技术援助及管理活动		合计	
	万美元	比例（%）	万美元	比例（%）	万美元	比例（%）	万美元	比例（%）
1. 加强监测系统	20	5	30	10	10	5	**60**	**30**
2. 提高应急反应能力	20	10	40	25	20	10	**80**	**40**
3. 健康教育	10	10	30	15	20	10	**60**	**30**
合计	**50**	**25**	**100**	**50**	**50**	**25**	**200**	**100**

表2　按项目省各领域资金分配情况

项目省	培训		设备		技术援助及管理活动		合计	
	万美元	比例（%）	万美元	比例（%）	万美元	比例（%）	万美元	比例（%）
云南	15	25	30	50	15	25	**60**	**30**
青海	10	25	20	50	10	25	**40**	**20**
宁夏	10	25	20	50	10	25	**40**	**20**
新疆	15	25	30	50	15	25	**60**	**30**
合计	**50**	**25**	**100**	**50**	**50**	**25**	**200**	**100**

附件1.8　实施进度计划

	2003 年（月）									2004 年（月）			
	4	5	6	7	8	9	10	11	12	1	2	3	4
1. 编制项目建议书													
2. 亚行审核批准													
3. 开专用账户													
4. 项目启动													
5. 设备采购													
领域1													
6. 监测规范开发													
7. 监测培训													
8. 监测再培训													
9. 技术指导检查													
领域2													
10. 开发控制“非典”应急方案													
11. 人员培训													
12. 再培训													
13. 技术指导检查													
领域3													
14. 编制印刷散发防治“非典”宣传资料													
15. 利用大众媒体开展防治非典活动													
16. 定点播放防治“非典”宣传片													
17. 技术指导检查													
18. 完工总结													

附件2.1

亚洲开发银行　　TAR：PRC 37228（ADB)

中华人民共和国西部地区
抗击“非典”技术援助项目建议书

2003 年5 月

汇率

(以2003 年5 月5 日汇率为准)

货币单位	-	元(人民币)
1 元人民币	=	0.121 美元
1 美元	=	8.277 元人民币

人民币汇率根据浮动汇率制确定。

本报告所用汇率为1 美元= 8.277 元人民币。

缩写

ADB	-	亚洲开发银行
IEC	-	信息发布和宣传教育
MOF	-	财政部
MOH	-	卫生部
NGO	-	非政府组织
PIU	-	项目实施单位
PRC	-	中华人民共和国
SARS	-	严重急性呼吸道症候群
SDRC	-	国家发展和改革委员会
TA	-	技术援助
TOR	-	工作大纲
WHO	-	世界卫生组织

说明

(i) 中国政府的财政年度(FY) 与公历年一致;

(ii) 本报告中“$”符号系指美元。

本报告由亚行项目经济官员、组长宋思年(Christopher A. Spohr) 编写。为本报告提供技术意见建议的有:亚行东亚和中亚局社会处卫生项目经济官员卡里马·萨勒(Karima Saleh) 和卫生专家安川隆子(Takako Yasukawa)、亚行中国代表处首席规划官员许彦根(Edgar Cua)、高级规划官员苏彦士(David Sobel),以及首席经济学家汤敏。

一、简介

严重急性呼吸道症候群(SARS) 是一种新兴传染病，据说在2002 年年末发源于中国广东省，后来疫情不断加剧，传播到中国其他地区，并向中国以外的地区蔓延。除了SARS 的高传染性以及人们对其消长控制因素缺乏了解，发生SARS 疫情的其他原因还包括最初感染地区人口高度密集、流动频繁，监测和应对机制在面对严重公共卫生新威胁时明显的力不从心。根据中国卫生部(MOH)的统计数字，截至2003 年5 月13 日，共有25 个省和自治区(以下统称省份)有确诊SARS 病例发生，所报告的全国死亡人数为262 人。中国SARS 病例总数为5 086 (占全球总数的2/3)，其中近1/5 为医务工作者。

自2003 年2 月以来，中国一直在与世界卫生组织(WHO) 合作，已认识到增强透明度和应对能力的必要性。中国政府已采取更有针对性的行动来处理SARS 危机- 调动国内资源并寻求国际援助，同时已承诺重建中期监测机制和医疗卫生预防系统 。中国政府还在采取措施，应对SARS 疫情可能在比较贫困的西部地区蔓延的威胁，该地区在应对SARS 方面尤其缺乏资源，在西部农村地区、贫困人口和其他弱势人群中这点尤为突出 。2003 年4 月23 日，中国政府向亚洲开发银行(ADB，以下简称亚行) 申请紧急技术援助(TA)，用于在存在风险的西部省份抗击SARS 。经过沟通(其中包括一次三方电视电话会议)，亚行、中国卫生部和财政部(MOF) 已就技术援助的总体目标、一般内容和指导原则达成一致意见，其中包括以下几方面的需要: (i) 紧急运作 ; (ii) 设计和实施的灵活性; (iii) 与世界卫生组织和包括非政府组织在内的其他机构紧密合作，调动一切力量抗击SARS; (iv) 结合政府和出资机构协调抗击SARS 的新框架。附录1 是关于在中国西部地区抗击SARS 的技术援助项目框架。

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① 这点已在卫生部和跨部委指令和公开声明中得到体现。财政部和国务院已调集两笔资金(总金额相当于近6 000 万美元)，重点保证为农村居民和城市贫困人口提供免费SARS 治疗，并加强内地省份的疾病控制机构。

② 对付以往流行病的国际经验表明，由于其免疫系统处于相对与世隔绝的状态，偏远地区和岛屿居民可能面临高风险。

③ 鉴于该技术缓助项目为紧急援助，经批准，项目程序可以不采用《亚行商业机会》的通用导则。

④ 技术援助与亚行SARS 危机应对小组的建议相一致，该小组赞成向中国提供紧急资助。此外，减轻SARS 的社会经济影响也有助于促进亚行在中国和本地区的重点工作的开展。

二、主要问题

中国国民健康指数的总体进步掩盖了政府在公共卫生领域协调一致努力的必要性。此外，辅助性改革和国外出资机构的参与也非常重要。中国需要增加投资、强调分配的公平合理，以重建公共卫生系统，尤其需要加强(i) 农村医疗卫生系统; (ii) 监测和预防服务; (iii) 使贫困人口能够获得优质初级医疗保健服务。投资不足，尤其是对初级医疗保健和传染病防治的投资不足，以及将保证基本社会服务资金来源的责任推卸给省级和省以下级别的政府已对比较贫困的西部地区产生严重影响。与此同时，由于医疗负担转由家庭承担，农村贫困人口和外来务工人员难以获得预防和其他基本医疗卫生服务，因为城市社会保险机制没有覆盖这些人员。收费制度的实行明显降低了对预防服务的需求（如：接种免疫），而对药物治疗的偏重（反映了公共投资趋向和供应机构所面临的实际刺激）则使专门用于疾病监测的财力人力大大减少。

西部地区的公共卫生系统存在明显不足，而且整个地区总体发展水平较低，因此，采取快速行动防止SARS 疫情在该地区的全面传播势在必行。中国政府和国际社会都已认识到这一点。政府已成立国务院防治非典型肺炎指挥部（由副总理兼卫生部长担任总指挥）。好几家双边和多边机构都在对中国的援助申请做出响应，目前（在世界卫生组织技术组的支持下）联合国开发计划署（UNDP）正在这方面发挥核心作用。与此同时，各方正在达成一致意见，承认必须对旨在控制SARS 疫情的现时努力进行协调，并保证这些努力推动以下工作的开展: (i) 在近期加强一般性传染病监测和紧急应对能力建设，把此项工作作为全国乃至全球性公益大事来抓; (ii) 采取更加系统化、更加持续的行动来解决内在原因，如各地区公共卫生系统的发展差距以及良好的治理机制问题。

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⑤ 20 世纪70 年代末，中国开始进行经济改革，以人民公社为基础的农村医疗体制在当时解体，过去广泛的疾病监测、群众免疫和医疗卫生教育机制也随之崩溃。

⑥ 1998 年开展的第二次全国医疗卫生服务调查表明，社会保险计划的人口覆盖面已大幅度下降，而亚行的调查则注意到“中国的医疗卫生服务存在日益严重的城市偏向”。（亚行，马尼拉，2002 年，《2020 年在中国的项目政策支持》）

⑦ 全国非典型肺炎控制战略草案将西部地区、农村贫困人口和外来务工人员列为重点领域。

⑧ 2003 年5 月2 日举办的论坛核实了亚行采取及时灵活行动的必要性，并指定世界银行在中期行动中发挥核心作用。附录2 概述了截至2003 年5 月15 日国外机构对中国抗击SARS 的反应。

三、技术援助

1. 目的和成果

技术援助的目标是在中国西部地区有效控制SARS，防止跨地区传播，并建设快速检测和应对传染病的能力。为了实现该目标，技术援助将针对SARS 的预防、监测、管理和缓解等方面，加强西部地区的地方能力建设，尤其强调采取快速行动，保护一线医务工作人员、贫困人口和其他风险人群，在此基础上帮助目标省份遏制SARS 疫情的发生。上述工作将在与其他国内国际合作伙伴紧密合作的框架下完成。从中吸取的经验教训将进行广泛分享，以促进针对SARS 给公共卫生系统带来的挑战所进行的对话，并提出新的解决模式。

技术援助将以SARS 疫情的发现和预防为重心，帮助各省和地方政府以及卫生主管部门进行能力建设，以规划和落实抗击SARS 的综合方案，同时提供紧缺的设备和物资供应。除了培训一线医务工作者(这对控制SARS 疫情至关重要)，技术援助还将通过信息发布和宣传教育运动(IEC)，来提高公众认知、增强关键防范措施。技术援助将结合相关部委、非政府组织、民间团体、私营部门和国际组织的联合努力，提供实施援助和实现能力建设目标所必须的服务和相关设施。技术援助所资助的设备和物资供应: (i) 属于强化能力建设综合项目组合的一部分; (ii) 是将通过咨询服务和培训等渠道传输的技术专长付诸实践所必需的，其针对领域包括(a) 传染病监测系统和分析; (b) 检查、防护和隔离; 和(c) 信息发布和宣传教育; 以及(iii) 为参与SARS 诊断和治疗的医务工作者提供保护。

中国政府已确定宁夏、青海、新疆和云南等省 为技术援助直接受援对象，确定依据是人口特征，包括贫困程度、有无少数民族、当地医疗卫生资源、目前和预计SARS 流行态势以及接受其他国际援助情况。新疆和云南这两个地方是连接中国、中亚和湄公河次区域的经济和交通运输走廊，因而具有双重关键意义。明显有效的SARS 控制方案对于保持边境开放并免于SARS 疫情传播具有举足轻重的意义。

技术援助的指导原则是及时有效地应对SARS。考虑到SARS 疫情在西部地区传播的方式仍然存在重大不确定性，技术援助在设计和实施安排方面都将保留一定的灵活性。总体而言，技术援助将包括四大成果: (i) 制定健全的抗击SARS 省级计划; (ii) 加强传染病监测系统建设; (iii) 提高紧急应对能力; (iv) 通过切实有效的多种模式的信息发布和卫生教育机制来提高公众对SARS 的认知

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⑨ 这些省份的总人口大约7 200 万。

并强化自我保护措施。

2. 方法和关键工作项

分析评价和规划工作。考虑到西部地区地方医疗卫生系统受难以诊断SARS病例和资源制约的困扰，目前的统计数字可能低于这些省份的SARS 疫情。而且，SARS 的传染态势，尤其是目前农村地区的新增病例，尚未能很好地掌握。与世界卫生组织和其他相关机构进行对话，并在必要时通过有针对性的实地评估加强此种对话，对于分析评价目前的形势以及SARS 在农村传播可能出现的态势具有重要意义。技术援助将协助目标省份的省政府分析评价以下内容：(i) 省级和地方医疗卫生系统应对SARS 的总体准备状况，通过分析确认其主要缺陷领域；(ii) 资源的获取情况，包括人力资源、设备（如：诊断、运输和废弃物管理等）以及基本物资供应；和 (iii) 各省落实综合计划的能力（从监测到信息发布和宣传教育运动等内容都包括在内）。这些分析评价工作将有助于在每个省制定抗击SARS 的健全计划，此种计划将 (i) 建立在已有战略的基础上；(ii) 在制定时需依据当地实际情况，并结合国务院防治非典型肺炎指挥部、世界卫生组织和其他相关机构开发的框架；以及 (iii) 支持开展定期监测工作，以针对SARS 疫情的变化进行相关调整，并吸取可用于加强其他省份应对SARS 能力的经验教训。

传染病监测。技术援助将与各省卫生厅和疾病控制机构合作开展工作，并获取来自卫生部、世界卫生组织和其他国内和国际机构的技术支持，以加强项目省的传染病监测系统建设。技术援助将在对现有能力和制约因素（包括系统覆盖面和数据质量、设备、培训和经费预算等）进行分析评价的基础上帮助开展以下工作：(i) 开发系统完善框架，兑现所需变革；(ii) 确认并采购紧缺设备；(iii) 开发并提供有针对性的培训，重点培训对象是省、地区和县级疾病控制工作者，以及负责传染病报告的实地工作者和警戒人员。在应对SARS 现时威胁的同时，该框架将为建立针对未来威胁的综合监测系统奠定基础。

紧急应对系统。在制定省级抗击SARS 计划的同时，技术援助将协助编制综合有效的紧急应对计划，内容包括：(i) 对需要政府内部共同应对的关键领域（如：各地边界是传染病的一个关键控制点）进行协调；(ii) 建立现时发现和警报机制，并在应急工作者、当地医务室和医院之间进行协调；(iii) 提供紧急医疗和病人鉴别分类，包括医疗运输和隔离措施；(iv) 提供医院救治和病人管理（隔离、消毒、诊断、治疗和报告）；(v) 进行SARS 接触者管理，包括保护各级医务工作者；(vi) 对住家、工作场所和医院进行感染控制预防措施；(vii) 确保样本采集、装卸和最终处理的安全性；并 (viii) 进行总体制度管理、协调和监督能

力建设。

技术援助将借鉴当地人力资源、世界卫生组织、其他国际组织、地方和国际非政府组织、当地医科大学和培训机构的相关经验，开发并提供培训课程，以满足紧急应对系统的需要，尤其是一线医务工作者的需要。能力建设将优先考虑定点防治SARS 医院和其他机构的管理人员和医务工作者。早期培训工作还将覆盖其他关键人群，其中包括负责实施计划的地方政府官员。教室和在职培训形式的选择都将保持灵活，教材和培训机制都将因地制宜(如：向负责消毒公共场所的工人宣传安全操作要领)。技术援助将根据需求分析及与其他国内外机构的对话，提供紧缺设备和人员防护物资供应[瑠]。进行影响分析也有助于保证新的方法得到切实落实。

信息发布和宣传教育运动。技术援助将协助目标省份制定并实施信息发布和宣传教育战略，以有效传播关键信息，如：(i) SARS 临床表现、特征和风险系数；(ii) 个人、家庭和机构(如学校和工作场所)的SARS 预防；(iii) 公众接受免费治疗的权利[瑠]；(iv) 社会责任；以及(v) 为可能接触过SARS 病人的人员(包括家中出现SARS 病人者)提供建议。这些信息传播工作将与全国性举措相结合，并将以地方工作为主，以便解决各省的具体情况。信息发布和宣传教育运动可通过多种形式开展，包括当地报纸和其他印刷材料、电视和广播等，并将努力动员现有社会机构(如村委会、学校等)参与其中。行动计划将包括针对高风险人群和较难涉及人群(如少数民族)的各种努力。技术援助将协助开发有关材料、开展培训、进行社会动员、提供关键设备并落实信息发布和宣传教育运动。

3. 成本与资金来源

技术援助的总成本预计相当于300 万美元。亚行将在其技术援助融资计划下以赠款形式出资200 万美元，中国政府将提供大约相当于100 万美元的配套投入(参见附录3)。作为综合资助项目组合的一项内容，60 万美元将用于采购急需的设备和物资。

4. 实施安排

中国卫生部国外贷款办公室是该技术援助的执行机构。卫生部和财政部的联合指导将保证技术援助与其他国内国际资助活动协调一致，互相补充。由中央项

瑠 可能包括定点医院的防护服、相关物资供应以及诊断和治疗设备，如便携式X 光机(供SARS 病房安全安装)和呼吸机。

瑠 这些权利已在2003 年4 月30 日发布的卫生部-世界卫生组织的联合声明中得到说明。

目实施单位（PIU）负责编写情况介绍，介绍西部四省面临的SARS 压力和应对SARS 的准备状况，并就以下内容向亚行提出建议：(i) 根据世界卫生组织[瑏]及国家发展和改革委员会的建议提出紧缺设备和物资的紧急需求组合；(ii) 在各省之间进行资源和物资分配。各省的项目实施单位将设在所在省的卫生厅，并负责向中央项目实施单位报告工作，具体职责如下：(i) 监督技术援助的日常实施情况；(ii) 确保省级司局、办公室和其他感染SARS 或负责就地应对SARS 的相关机构之间存在协调关系；(iii) 促进各省之间和省内共享信息和经验教训。

鉴于SARS 在西部地区的发展以及国内外资源的调动等方面都存在重要不确定性，技术援助的实施必须灵活，并根据定期分析评价的需要及时进行因地制宜的相关投入。技术专长、设备和物资供应将在中国政府和国际社会应对SARS 的框架内提供，以平衡以下几方面内容：(i) 效率；(ii) 对各省具体需要的反应程度；(iii) 保持战略一致性（如各省和国家行动计划之间的一致性）；以及 (iv) 在各合作伙伴之间进行信息共享，发展采取快速协调行动的能力，并对可用于帮助中国应对SARS 的有限人力资源进行最优利用。

技术援助的实施安排将比较灵活，以便对咨询专家的工作大纲（TOR）、工作期限和专家发表意见的时间安排进行调整。在与卫生部磋商后，亚行将聘用一位国内咨询专家，担任所有项目省的技术援助协调工作，同时将挑选辅助性国际和/或国内咨询专家，以满足已确认的需要和省内能力加强方面的需要[瑐]。亚行将根据其《咨询专家选聘指南》和亚行认可的聘用国内咨询专家的其他规定来聘用个体咨询专家。在开展培训以及编制并发布信息和宣传教育材料时，如果为了提高效果、效率和/或出于紧急性考虑认为确有必要，在与卫生部协商后，亚行可能会考虑直接挑选合格的国内和/或国际组织、地方机构和/或短期人力资源。

需要进行灵活的采购安排，以便及时应对紧急需要和不断发展变化的需要。除非经亚行另行同意，所有采购活动均由中央项目实施单位根据亚行的《采购指南》开展。为了加快采购进度，可以应用直接采购来购买商定的紧缺物资。技术援助协调员将随后协助中央项目实施单位，针对技术援助综合支持组合中的设备和易耗物资供应编写建议书。金额在10 万～50 万美元之间的采购将应用简化的投标程序，采用国际直接采购的方式进行。金额在10 万美元以下的采购可直接购买。附录4 列举了意向性采购目录。为了保证及时提供货物和服务，将根据亚行的《技术援助赠款支付指南》为每个项目省建立预付资金（开设专门的银行账

[瑏] 世界卫生组织已起草在中国紧急应对SARS 的一系列措施。

[瑐] 关于专家提供意见的意向性工作大纲，请参见附录4。亚行将与世界卫生组织协商确定具体的资历要求、工作大纲以及评价辅助性咨询服务的标准（估计总成本相当于25 万美元）。

户)，并且专门账户的设立必须遵守有关条款的规定。

技术援助将从2003 年5 月起实施，于2004 年5 月结束。考虑到SARS 疫情发展的不可预见性，应该频繁开展审查(包括中期审查)，以仔细分析评价实施安排和方法，并落实适当的调整内容。

四、亚行行长建议

亚行行长建议，亚行董事会批准以赠款形式为中华人民共和国政府在西部地区抗击SARS 提供不超过200 万美元的技术援助。

附录1 技术援助框架

设计概述	业绩指标/目标	监测机制	假设与风险
目标 严重急性呼吸道症候群(SARS)在西部地防止区得到有效控制，跨地区传播，防止促进快速传染病检测和应对能力的维持	西部地区SARS感染率从高峰水平急剧下降，没有发生跨地区传播。	卫生部(MOH)关于各省疫情的统计数字、世界卫生组织(WHO)的统计数字和对话。	
目的 SARS在项目省的爆发得到预先制止、控制和逆转，地方预防、诊断、管理和减轻传染性SARS疫情的能力得到加强 强调快速行动，从而使一线医务工作者、贫困人口和其他风险人群得到保护 在与合作伙伴密切合作的框架内进行综合能力建设 吸取并广泛分享经验教训	技术援助为普通政府资助机构框架提供资金，并展示针对各方将达成一致意见的目标所取得的进展。西部地区SARS感染率从高峰水平下降或趋于稳定(最初疫情有上升，这在某种程度上反映了报告情况的改善；此后，下降趋势出现)；医务工作者得到保护(目前，中国报告的SARS病例中有20%是医务工作者)；机构间的协调有效可见；通过各种方式宣传经验教训。	卫生部关于各省的统计数字(目前包括医务工作者所占的比例)、信息收集和分享得到改善；世界卫生组织的统计数字和信息分享，以及出资机构之间的对话；咨询专家进行实地考察并提交报告。	假设技术援助活动得到尽早启动(这点至关重要)；技术援助的实施及时、灵活；与出资方、卫生部和其他机构保持合作。 风险：外部冲击因素、病毒变异等。
成果 1. 制定健全的抗击SARS省级规划 2. 加强传染病监测系统 3. 提高应急能力 4. 提高公众对SARS的认知并强化自我保护措施	切实可行的计划得到起草和实施； 最新数据得到传播，并在公开可见的行动中得到反映； 跨机构之间采取明显的合作行动； 有针对性地发布信息、开展宣传教育活动(IEC)，首先针对关键风险人群开展这些工作。	中央项目实施单位(PIU)进行信息汇总； 咨询专家进行实地考察并提交报告。	假设在卫生和相关部门能够建立基础数据；透明度。 风险：随着时间的推移可能会失去政府投入，或跨机构合作瓦解，或全国性协调失败。

续表

设计概述	业绩指标/目标	监测机制	假设与风险
活动 1. 分析评价和规划工作 a. 快速分析评价SARS疫情、地方需要和能力 b. 获取专家建议 c. 与各级政府和其他关键利益关系方进行对话，制定综合协调计划	2003年5月底对各省进行评审；2003年6月15日之前进行各省需求早期分析，并完成计划草案。	中央项目实施单位(PIU)进行信息汇总； 咨询专家进行实地考察并提交报告； 亚行审查计划草案。	假设在卫生和相关部门能够建立基础数据；地方政府开放且致力于变革和行动。 风险：随着时间的推移可能会失去政府投入，或跨机构合作瓦解，或省以下各级政府协调失败。
2. 传染病监测 a. 专家意见指导行动计划的形成 b. 提供所需的设备，并实施系统变革 c. 开展有针对性的培训，开发相关教材	2003年6月启动系统规划工作。2003年7月底之前举办第一次研讨会(各省主要人员参加)；2003年8月对各地区和县的主要人员进行连续集中培训，并启动第二阶段的培训工作；2003年10月之前核心系统上网。	评价培训影响； 卫生部出具包括信息交流等内容的报告； 咨询专家开展实地考察。	
3. 紧急应对系统 a. 专家意见指导战略制定工作 b. 开展能力建设，并进行后续评价 c. 修改完善并正式建立政府内部协调机制 d 提供所需设备	时间安排同上。	评价培训影响； 卫生部出具包括检测和反应之间联系等内容的报告； 咨询专家开展实地考察。	

续表

设计概述	业绩指标/目标	监测机制	假设与风险
4. 信息发布和宣传教育运动 a. 专家意见指导制定有针对性的、覆盖多个关键群体的信息发布和教育/宣传战略 b. 针对SARS，发布得到改善的公开信息，开展卫生宣传教育，并进行后续评价 c. 进行必要的修改并完善	2003年6月之前完成第一批信息发布和宣传教育活动，散发新编材料。	公开可见； 咨询专家开展实地考察； 来自社会团体的反馈意见。	

说明：将根据对各省的情况分析评价以及与政府和国际机构的对话，对技术援助的最终设计、实施机制和目标进行修改，以保证有效合作和互相补充。

附录2　各捐资机构应对SARS 举措一览表（截至2003 年5 月15 日）

亚行	本文所提议的技术援助是财政部和卫生部提出申请200 万美元亚行技术援助之后各方对话的最高成就。本技术援助适合在亚行专门工作组提议的《太地区抗击SARS 行动计划》开展（与此同时，亚行-世界卫生组织之间的谅解备忘录正在起草）；技术援助的实施将寻求与捐赠者、非政府组织等的互补和直接合作。 亚行和博鳌亚洲论坛（于2003 年5 月13～14 日在北京）联合主办关于SARS 和地区经济的特别论坛，亚行中国代表处将继续在协调国外出资机构方面发挥积极作用，促进亚行各项工作与短期和长期举措的联系，并与世界卫生组织在中国的技术专长挂钩。
世界银行	目前正在与卫生部和财政部讨论支持两大部委抗击SARS 工作的一个紧急项目。在某种程度上，该项目的依据是两个正在进行的针对传染病的卫生项目。世界银行已向卫生部和财政部强调，与其分别与出资机构打交道，不如确定一个比较广义的、很可能分阶段进行的项目，让所有希望尽绵薄之力的机构都可以选择相关内容参与其中，从而保持项目的连贯性。世界银行将成为协调应对比较长期问题的中心机构，并正在与卫生部和世界卫生组织就笼统的项目纲要开展合作。在（旨在满足现时需要的）第一阶段，世界银行计划对目前正在进行的两个卫生项目下的500～1500 万美元的资金进行重新分配，这两个项目已经设立实施单位，而且已在一些感染SARS 的省份开展工作。世界银行还将为北京和广东提供援助，并希望在1～2 周内完成资金重新分配工作。 世界银行还将对其他几个项目进行重组，以释放更多的资金（500～1 500 万美元），该项工作大概需要3～4 周的时间，而且可能会包括其他受感染省份。世界银行正处于评价建立新项目或进行追加贷款的必要性和时间安排的初步阶段。
联合国开发计划署（UNDP）	已收到北京市要求获得宣传技术支持的申请，而国务院防治非典型肺炎指挥部可能会要求获得援助，对农村地区和特殊省份的需求进行评估。联合国开发计划署完全支持为协调一致应对SARS 而做的各种努力，并将（与世界卫生组织一起）成为短期紧急援助的中心机构；UNDP 已主办两次联合国灾难管理小组扩大会议，向出资界通报情况。
世界卫生组织（WHO）	向中国（和其他成员国）提供应对SARS 的广泛技术支持和意见建议：建设政府应对SARS 的技术能力，涉及流行病学、监测、SARS 接触者追踪、医院感染控制、治疗、旅游建议、科研培训、研究、对感染SARS 国家和省份的评价，并（与国际货币基金组织、世界银行和亚行联合开展）SARS 经济成本评价。世界卫生组织将继续在国际技术支持的总体协调方面发挥重要作用，并为联合国灾难管理小组和出资机构应对SARS 提供建议（总体需求、技术设备、宣传工作等）。世界卫生组织还将向各国使馆提供有关SARS 的信息。世界卫生组织已（与卫生部一起）向北京和广东以及河北和广西派出省级评价和支持小组，目前正在调集人员，组成其他工作小组：(i)（与联合国儿童基金合作）派往河南；(ii) 派往安徽（可能与无国界医生合作）；(iii) 协助中国疾病控制中心开展工作。

续表

澳大利亚国际发展署（AusAID）	商务部（于2003年4月30日通过传真）申请对未确定具体数量的医疗设备提供资助，包括呼吸机、呼吸监测机、救护车、X光机、一次性防护用品（防护服、手套、防护镜和面罩）以及充气泵等。澳大利亚国际发展署正在协调应对的前提下考虑该申请。此外，澳发署还向世界卫生组织西太平洋地区代表处提供了相当于77.4万美元的援助，用于该地区抗击“非典”的活动（包括中国），并将向中国提供价值38.7万美元的医疗设备。
加拿大国际开发署（CIDA）	正在探索向世界银行管理的信托资金提供高达350万美元赠款的可能性，以解决公共卫生系统的中期需要；同时，正在考虑向世界卫生组织直接捐款。加拿大大使馆正在调集资金，准备向国际和当地红十字机构提供7.2万美元的紧急捐款。
欧盟	愿意通过其人道主义项目考虑援助申请。
德国	财政部（代表卫生部，并征得商务部同意）已提交具体申请，要求获得数量明确的物资。德国政府将为此提供高达1000万欧元的赠款资金。目前，第一批物品已在筹备之中，有望在2003年5月9日起的一周内到达目的地。汉莎公司将为此批物品提供（法兰克福-北京）免费运输。中国的申请包括：(i) 140台便携式X光机；(ii) 480台呼吸机；(iii) 10台血气分析仪；(iv) 12万套防护服，其中包括3万套可重复使用的防护服；以及(v) 20台空气消毒机。德国方面目前正在分析上述申请内容有多少可以得到赠款资助。
印度	捐赠资金和/或医疗物资：详情未知。
意大利	意大利合作部刚收到来自中国商务部的一般性资助申请，目的是购买医疗设备、救护车、面罩、手套和防护服等。意大利将与商务部联系，了解关于其未来可能介入的更多操作详情（地点、时间和方式），并在研究介入具体项目的可能性，相关举措包括采购物品和物资、提供技术援助和开展卫生宣传教育等。意大利方面正在考虑将技术援助融入其人力资源开发项目，目前，意方正与卫生部人事司和12个西部省份的卫生厅一起实施该项目。意大利很可能与中方开展双边合作，并在第一阶段提供约100万欧元的初始资助。
日本	日本政府已收到中国科学技术部（与卫生部一起）提交的抗击SARS赠款援助申请。日本政府于2003年4月28日通过日本国际协力团（JICA）提供了价值约2亿零500万日元的医疗仪器，包括(i) 医用个人防护设备，包括全身防护服、防护镜和面罩等；(ii) 实验室基础设备，如便携式有害生物检测试剂盒和便携式离心机；(iii) 血样采集仪器；(iv) 样本储藏和装运器材，包括传染物质装运设备和生物冷冻设备；(v) 利巴韦林4号，呔米福和利巴韦林胶囊等药品；以及(iv) 急救设备和数字体温计等其他物资。日本将很快派出医生和官员前往北京的中日友好医院，并将捐赠价值19亿日元的医疗物资。
韩国	捐赠资金和/或医疗物资：详情未知。

续表

瑞典－国际发展署（SIDA)	目前，瑞典正研究是否可能通过向世界卫生组织中国代表处进一步提供瑞典疾病控制技术专长，来加强该代表处的工作。尚未收到来自中国政府抗击SARS 的援助申请，但对此类申请以及来自国外出资机构的协调抱有兴趣。
瑞士	正在考虑提供捐款的可能性，并正在等待中方明确各地区/ 省份的需求。
英国－海外发展署（DFID)	原则上，海外发展署将支持中国主管部门，参与协调应对SARS 的工作。海外发展署提供的任何资金都将属于与赠款资金并行的捐款。不会选择资金融合，因为这么做所涉及的复杂性有碍所需的快速应对。捐赠500 万美元可能比较可行。目前的首要重点是进一步明确中国方面的需要，以及如何满足这些需要。要求世界卫生组织参与其中。
美国	为了帮助中国加强其压力重重的公共卫生系统，美国国际开发署（USAID) 已提供50 万美元，供中国红十字会采购防护服和医疗产品（防护服、面罩、防护镜、体温计等）。美国驻中国大使馆将监督采购活动。美国研究人员自3 月初以来一直在中国和其他地方工作，提供科研和传染病研究支持，捐款是对其工作的一种补充。

资料来源：亚行中国代表处、亚行东亚和中亚局社会处。表中内容根据各国际机构提供的信息编写，这些信息截至2003 年5 月15 日，可能已经过期或欠完整。

附录3 费用估算和筹资计划（单位：万美元）

项目	以外汇计算的成本	以本币计算的成本	总成本
A 亚行出资部分[a]			
1. 咨询专家（包括国际和国内差旅费）	20.0	10.0	30.0
2. 设备[b]	45.0	15.0	60.0
3. 能力加强和研讨会（包括材料编写和物资供应）	15.0	35.0	50.0
4. 调研、评价和监测	0.0	15.0	15.0
5. 行政管理和后勤支持杂项支出	0.0	5.0	5.0
6. 不可预见费	15.0	25.0	40.0
小计（A）	95.0	105.0	200.0
B 政府出资			
1. 办公场所、培训和其他场地以及本地交通	0.0	6.0	6.0
2. 配套人员报酬和每日津贴	0.0	4.0	4.0
3. IEC 经费预算	0.0	5.0	5.0
4. 目标省份抗击SARS 资金调动[c]	0.0	85.0	85.0
小计（B）	0.0	100.0	100.0
合计	95.0	205.0	300.0

IEC = 信息发布和宣传教育运动；SARS = 严重急性呼吸道症候群。

[a] 由亚行技术援助融资计划提供资金。

[b] 紧急组合及其他设备和物资供应与综合技术援助支持有机联系（见附录4）。

[c] 包括为贫困人口提供诊断和治疗，为以媒体播放为基础的宣传运动提供经费预算等。

资料来源：亚行概算。

附录4 咨询专家工作大纲概要及意向性采购组合

1. 工作大纲

中央政府已开始调动资源，应对严重急性呼吸道症候群(SARS)，包括成立国务院防治非典型肺炎指挥部，集中财力(包括一些针对贫困地区和内陆地区的资金)抗击SARS，并就建立广泛合作框架与多家国内和国际机构进行对话。在西部地区，各省都在不同程度上调集资源应对SARS，而且在有些省份，行动计划的组成因素已经到位。但是，各省与全国主管部门之间，邻近省份之间或各省内部各机构之间尚未进行广泛的协调。

在与相关政府和国际机构进行协调(以保证与国家战略保持一致，并为后者作出应有贡献)的基础上，技术援助将提供专家建议，与医疗卫生和其他关键行业的省级主管部门开展合作，以制定或加强综合具体的省级计划(包括成本估算以及在计划实施、预算编制和协调机制等方面明确的职责划分)。在技术援助启动时进行快速需求和能力分析(随后在整个技术援助实施期间开展定期审查和有针对性的调查)对以下方面具有关键意义:(i)通报省级行动计划;(ii)指导技术援助项目下监测、应急以及信息发布和宣传教育(IEC)运动等内容的确定和落实;并(iii)保证为中期努力提供补充，以加强地方卫生和相关部门在这些领域的总体能力。

技术援助协调员(国内咨询专家;12个人月，包括对西部地区进行多次考察所需的预计为期120天的实地工作时间)。协调员向中央项目实施单位报告工作，并与被选省份的项目实施单位密切合作，促进技术援助在目标省份的实施，确保各级政府在工作方面的全面协调一致，并与其他积极参与其中的国内和国际机构进行协调。其他具体任务如下:

(i) 就其他得到国内和国际资助的抗击SARS项目与相关中心机构联系。

(ii) 在与亚行及世界卫生组织密切对话的前提下，协助中央项目实施单位分析评价与技术援助综合项目(补充能力建设、人员保护以及信息发布和宣传教育工作)存在有机联系的必要设备和物资供应。其中包括确认以下内容:(a)各省确定当地需求的能力;(b)供货渠道、采购成本和手段;(c)针对项目省及在这些省份内部进行的分配，以及相关后勤工作;以及(d)培训和其他保证恰当使用设备所必须的投资。此外，需开展跟踪工作，以保证设备和物资得到及时发货、安装部署和恰当使用。

(iii) 协助各项目省的项目实施单位制定综合具体的行动计划，包括成本估算，计划实施及跨机构和跨行政级别的协调工作，以及预算计划的编制等。同时应该根据西部地区的具体情况，考虑现有地方模式（如北京采取的以社区为基础的方法）及从中吸取的经验教训。

(iv) 为所有与实现计划有关的项目实施单位提供指导和协助，并促进宣传工作和信息共享。

(v) 每两周进行简明信息更新，并向亚行提交季度报告。更新工作应该报告进展，确认挑战，并提出解决建议。

协调员还将向中央项目实施单位和亚行确认所需的具体技术专长，以及开展技术援助项目下的关键活动所需的恰当机制。在合适的情况下，亚行将与世界卫生组织[①]及其他相关国际和国内机构密切磋商，形成此方面的相关建议（尤其是关于咨询专家的具体资历和工作大纲）。同样，亚行将通过与世界卫生组织及其他合作伙伴的对话，寻求对咨询专家的意见进行外部认证，以进行质量控制并与抗击SARS 的广泛举措保持一致。

协调员将担任咨询专家小组组长，总体负责技术援助项目所调动的所有辅助性咨询专家或个人资源，同时监督负责有关活动的被选国内和/或国际机构和地方机构，并与它们保持联系。以下是按照总体项目成果归类的专家投入意向性概述。

分析评价和规划工作将包括以下内容：

(i) 收集现有数据，开展进一步调研、研究和分析工作，以汇集涵盖以下关键领域的必要信息：(a) 快速有效收集并分析传染病数据的能力；(b) 在医疗卫生系统内部并向广大民众[②]发布信息的现有能力和潜在能力；及 (c) 公众行为、态度和认知，以及社会团体未雨绸缪准备应对SARS 的各有关方面，尤其强调较难获取信息的农村地区，以及为提高SARS 认知，增强防护而调动地方机构的可能性。

(ii) 确认规划其余技术援助成果所需的其他信息。

(iii) 对计划实施情况和实施效果开展后续监测和分析评价（包括设备的部署和

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① 世界卫生组织是各地区抗击SARS 的主要合作伙伴，亚行正在寻求与世界卫生组织签署联合谅解备忘录，以制定地区合作纲领。

② 这方面的内容应该包括通过各种手段涉及从省到村各级医务工作者的可行性（如：在应急培训中覆盖县及县以上级别的医务工作者，而一般性信息发布和宣传教育运动则可以覆盖社区医务工作者）。

与培训工作的联系)，并提出必要的修改完善建议。

传染病监测将包括以下内容:

(i) 对需求和能力进行有重点的进一步分析评价(如分析SARS 在农村的传播态势)。

(ii) 协助政府开展以下工作: (a) 建立可以在SARS 疫情结束后继续沿用的框架(包括系统覆盖面、数据收集和分析、设备和培训需要、经费预算计划编制等); 以及(b) 确认并调动关键医院/医疗卫生中心/实验室等资源，并储备设备和物资供应。

(iii) 为西部地区的诊断设施建立网络。

(iv) 根据世界卫生组织及国家发展和改革委员会的指南，确认需要优先提供的设备和物资供应。

(v) 开发有针对性的培训课程和教材。

(vi) 提供培训，开展培训影响后续评价。

(vii) 监测隔离措施的充分性和有效性，必要时规划进一步的调动工作。

紧急应对系统应该包括以下内容:

(i) 对本领域的需求和能力进行有针对性的进一步分析评价(如: 确认医院工作人员和其他一线人员所面临的风险系数)。

(ii) 制定省级实施计划，尽早优先考虑紧缺的能力和关键高风险人群，接着将重点放在比较边缘的人群。

(iii) 针对(a) 地方政府官员; 和(b) 其他关键人群开发培训课程和教材。培训内容包括关键操作(如: 早发现、边界控制、社区感染控制、交通运输和隔离、诊室管理、科研系统以及卫生物资供应处理方面的人身和环境安全) 的安全性和有效性。

(iv) 针对风险医务工作者建立补充性信息传播机制，这种机制将与有组织的培训一样，为医务工作者提供防治感染的自我保护操作指南(包括明确的诊断指南)，以及人员监督、系统化医院和诊室监测等。

(v) 根据世界卫生组织及国家发展和改革委员会的指南，确认需要优先提供的设备和物资供应。

(vi) 开展培训和培训影响后续评价。

(vii) 规划在技术援助结束之后向当地教育和培训中心提供可持续技能传输。

信息发布和宣传教育工作将包括以下内容:

(i) 分析评价公众行为、态度和认知。

(ii) 对不同群体(可能包括社区层次上与医疗卫生有关的工作人员)和内容(如:认知、自我保护、能否获得治疗和社会责任,其中包括针对临床病例应该采取的步骤)进行优先排序,确认恰当的有针对性的传媒和宣传模式,以及其他社会调动战略。

(iii) 结合国家战略制定省级信息发布和宣传教育主体计划,包括经过成本核算的实施手段和调动所需财力人力的具体计划。

(iv) 根据世界卫生组织及国家发展和改革委员会的指南,确认需要优先提供的设备和物资供应。

(v) 组织研讨会并进行能力建设。

(vi) 为省级和社区开展信息发布和宣传教育运动编写材料。

(vii) 开展运动,散发材料,进行影响分析评价,并提出修改完善建议。监测工作还应该覆盖对政府出资的预算编制,并提议采取相关手段,保证信息发布和宣传教育工具在项目结束后的可持续性,以继续用于更广泛的医疗卫生问题。

此外,咨询专家小组将在与世界卫生组织和其他国际国内参与者进行对话的前提下,定期分析评价以下内容(i)通过技术援助进行的介入(包括以改革进程为导向的内容)是否恰当;(ii)与不断发展的国家战略的联系;(iii)地方和国家治理的作用;(iv)新出现的政策建议;以及(v)通过SARS事件,就充分监测和其他公益性卫生预防工作的重要性吸取关键经验教训,然后评价在可持续基础上进行战略投资并开展提高卫生系统绩效所必须的其他前瞻性行动的前景。这方面可能包括举办研讨会和其他在关键时刻(如中期审查)进行的有组织活动。

2. 意向性采购组合

下表列出了采购纲要。

采购纲要

采购内容描述	合同数量	成本基数(单位:美元)	采购方式
A 紧急设备组合[a]	1～3	300 000	DP
B 其他			
1. 传染病监测系统[b]	4～8	100 000	DP
2. 紧急应对能力[c]	4～8	100 000	DP

续表

采购内容描述	合同数量	成本基数 (单位: 美元)	采购方式
3. 信息发布和宣传教育运动[d]	4～8	100 000	DP/IS
合计	13～27	600 000	

DP = 直接采购; IS = 国际直接采购。

所有采购必须(i) 依据世界卫生组织及国家发展和改革委员会的建议; (ii) 与技术援助的综合方案有机联系, 从而对能力建设、人员保护及信息发布和宣传教育工作进行补充; 以及(iii) 获得亚行批准。成本基数未包括价格和实物不可预见费用。

[a] 与监测和其他工作有关的紧缺设备(如: 排查装置、诊断设备、供指定SARS 病房使用的便携式X 光机、消毒设备等), 以及保护一线工作人员和防止SARS 疫情在高风险地区传播的易耗物资供应(如: 面罩、手套、防护服、防护镜、消毒剂等)。

[b] 根据需求评价为各省监测系统进一步提供所需设备。

[c] 根据需求评价, 进一步提供诊断和治疗设备及物资供应; 可能包括至关重要的检查设备、呼吸机、便携式X 光机、血样化学分析仪、为一线工作人员提供的防护物资供应等。

[d] 根据需求评价, 可能包括用于多媒体设计和展示的笔记本和/或台式电脑、打印机、硬件和软件, 打印机和复印机等。

资料来源: 亚行概算。

附件3.1 新疆和云南“非典”防治快速评估报告概要

一、背景

应中国政府的要求，亚洲开发银行于2003 年5 月底同意在中国西部地区开展防治非典型肺炎的紧急技术援助项目。由于当地社会经济条件的限制以及薄弱的公共卫生体系，这些省及自治区（以下统称为省）在防治“非典”方面的装备非常落后，特别是在农村和贫困地区。通过与卫生部国外贷款办公室（项目实施机构）密切合作，将对本技术援助项目进行灵活的设计以应对出现的危机及机遇。项目旨在应对非典所带来的直接威胁，同时，也致力于建立关键和长远的公共卫生应急能力。技术合作项目的4 个主要产出是：(1) 适当的省级“非典”防治方案；(2) 加强流行病学监测系统；(3) 提高对紧急事件的应急能力；及(4) 通过多种形式的信息和健康教育机制来提高公众的“非典”防治意识及自我保护能力。

亚洲开发银行和卫生部贷款办共同认识到需要在一期项目活动中开展快速评估工作以对西部地区目前的“非典”流行以及防治机制有一个基本的了解。这种形势分析将直接用于设计本技术援助项目干预活动。新疆和云南省被选为快速评估的省份，因为它们拥有中国在中亚地区和湄公河区域的最主要边境线。同时它们对西部地区的其他省份在应对非典所面临的各种挑战方面也具有代表性，如本技术援助项目所覆盖的青海和宁夏两省。

二、快速评估概况

快速评估小组包括卫生部贷款办的两名官员及四名具备预防医学与公共卫生、监测与感染控制、“非典”临床救治及流行病学与社区防治背景的国际和国内专家。评估小组于2003 年7 月4～23 日访问了新疆和云南两省，主要通过以下3 种方式收集信息：(1) 与当地多部门的领导座谈；(2) 对省、地、县级疾病预防控制中心、医院、机场、火车站、教育机构、边境口岸等地进行现场访问；及(3) 对一线“非典”防治人员进行访谈。在世界卫生组织所提供的访谈清单基础上，评估小组针对西部地区的特点对清单进行了进一步的修改，上述信息的收集主要根据这一清单进行的，同时也包括现场拍照。

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① 本文所反映的内容代表作者的观点，并不一定反映中国卫生部和亚洲开发银行的观点。

三、主要发现及优先行动领域

总的来讲，快速评估小组发现自2003年4月底开始，当地政府采取了一系列强有力的防治措施。评估小组观察到两省在近期的预防及目前的防治方面都投入了很大的力量。但是评估小组同时也发现在几个方面存在的不足，认为这些不足妨碍了“非典”防治工作的有效开展，并不同程度地影响了对其他传染病的预防。根据在这些方面的能力和面临的挑战，评估小组发现有5个方面（在不同级别）需要政府和国际合作者共同努力和优先考虑，其中也包括本技术援助项目所能够支持的领域，这些领域按照从宏观到具体的顺序排列，分述如下。

评估小组认为这些发现也代表西部其他省份的需求，对世界卫生组织在国家一级的建议也具有一定的补充作用。

（一）省级“非典”防治计划

1. 优势/能力

各级政府强有力的领导（如，“非典”防治领导小组）。

大量的财政投入与承诺（如，云南各级政府投入3.4亿元人民币）。

多部门协调与领导进行广泛的社区“非典”防治工作。

特别需要指出的是，云南省在“非典”防治工作中采取了前卫的做法，在“非典”被正式命名以前他们就派送本省的疾病控制人员以及临床医生前往广东学习“非典”流行防治经验。

2. 不足/需求

基本的公共卫生预防能力本来就不足，卫生资源分配不均衡。“非典”防治所采取的各类措施既缺乏成本效益又缺乏持续性，一旦“非典”首先袭击农村或者贫困地区的话，将难于监测与控制。

省级“非典”防治计划主要是从国家及广东和北京的“非典”防治计划那里复制而来，没有很好地针对当地的特点、能力及需求进行调整与适应。

缺乏对公共卫生紧急事件进行处理的快速反应机制。防治“非典”的各项防治措施（在北京和广东防治迟缓所带来沉痛教训的情况下出台）是在付出沉重代价后才得以落实的，这对于其他大多数的公共卫生威胁来讲都是不可能再现的。

全社会在某些方面存在反应过度的情况（如，过度、盲目的消毒、隔离和观

察)。

自上至下出现的“信息泛滥”(如，有100 多个来自中央的政府文件，数百个地方文件)，使卫生专业人员和公众对信息的使用率下降。

3. 优先行动领域方面的建议

在考虑本省特点(包括现有的能力和需求) 的基础上，制定具有本省特点的“非典”及其他传染病防治技术方案。从可持续性和成本效益的角度出发，规划这些防治措施时必须从两个方面考虑:(1) 保持预警机制，在公共卫生投入方面保持增长(和更为有效且均衡的资源分配) 机制;及(2) 正如世界卫生组织所言，“波浪式的能力”，平时保持一种预警机制，一旦有需求可以立即采取行动。

针对上述第二个方面的规划需要强调疾病控制系统在流行病学追踪及处理方面的主导作用，废除各种并行的疾病信息报告渠道和过程。同时也需要建立一种机制确保将来在面对紧急事件时所出台的文件和其他信息经过了严格的核查，并且能够针对使用者的需求，以避免“非典”防治过程中所出现的“信息泛滥”情况的发生。

确保国家和地方疾病预防控制中心所制定的防治措施能够在社区得到落实，省级规划必须建立一种机制，以确保各级对未来公共卫生紧急事件的多部门协调与应对必须建立在科学和有确凿证据的基础之上，而不应当包含过多的政治色彩。

从省级开始，组织决策者、卫生部门及其他部门的有关领导召开研讨会及开展其他形式的开发领导活动，以提高他们对主要公共卫生问题的认识。

指导省级规划的制定，对各省针对“非典”所采取的防治措施、总体准备和特殊的应对机制与措施进行比较和回顾，主要通过:(1) 召开国家级研讨会，参加人员包括省级卫生厅主要决策者及一个或多个来自贫困省“非典”防治领导小组的其他成员;继而(2) 组织省级研讨会，参加人员包括省多部门决策者、卫生部门的领导以及传染病方面的专家。

西部省份还需要特别关注通过国际通道所造成的“非典”和其他传染病的传播，边境地区双方的国家和地方有关部门需要建立协调机制共同应对;提供建议并加强能力建设以增进协调和减少重复，并向边境口岸和机场等地提供必要的设备(如红外体温探测仪)。

（二）信息、教育与交流及培训教材

1. 优势/能力

省、地政府根据当地特点制作了各种各样的健康宣传教育材料，并广泛散发到各地、各级。

公共宣传运动得到了卫生专业人员的参与和支持，采用了张贴画、热线、互联网等形式。

一些健康宣传教育材料能够针对少数民族的特点（如，新疆的宣传材料采用汉维双语，云南将宣传材料翻译成景颇族语）。

在新疆地区级医院看到医务人员在使用国家级的培训教材。

2. 不足/需求

在公众“非典”防治意识或健康教育宣传的效果、覆盖面以及针对性方面各地政府尚没有进行过系统的评价：没有将有关的反馈机制用于健康教育交流材料的设计。

在地方各级所开展的“非典”培训工作通常依赖于国家一级开发的材料，对培训材料的适用性、内容的针对性、培训的模式及培训的效果等方面都没有进行评价，在农村、贫困地区以及边境地区开展培训的覆盖面还很不够。

3. 优先行动领域方面的建议

需要对西部地区所进行的健康教育交流以及培训活动进行回顾。这需要进行定量（包括覆盖面）和定性方面的评估，包括以下方面：

信息、教育与交流材料及方法。主要包括：(1) 健康教育交流活动所针对的主要人群和特殊目标；(2) 其他覆盖面方面的问题，包括平等地向易感人群提供信息；(3) 在提高意识、打破“非典”的“神秘感”及行为改变方面的适用性及总体效果；(4) 与人员培训、对当地政府领导的开发及其他活动之间的联系。

培训。主要包括：(1) 在“非典”专业培训和“非典”前一般性卫生能力建设方面的覆盖面；(2) 培训内容的针对性和培训的模式（参见前面内容）；(3) 采取正式和非正式的模式所培训的各类人员的数量及信息共享的程度；(4) 覆盖面问题（如对农村和贫困地区的人员进行培训的能力）；(5) 培训内容的质量及与西部地区特点的适应性/相关性及对学员的针对性；(6) 培训模式的适用

性（如包括后续培训及其他形式的强化培训）及总体效果；及（7）与更为广泛的卫生领域的活动之间的联系，如提供新的设备/设施等。

将上述回顾中所发现的信息用于传染病和其他危险因素防治的健康教育项目中，并将信息整合到各类培训中去。

（三）流行病学监测、报告和防治能力

1. 优势/能力

各级疾病预防控制中心都已行动起来进行流行病学调查和处理；行政级别越高的疾病预防控制中心组织程度越高。

除了现存的传染病月报制度之外，在疾病预防控制中心系统中每一级都设立了每周7天，每天24小时值班的“非典”疫情日报（至少）制度以确保及时的信息上报。

在“非典”可疑病例的诊断方面疾病预防控制中心与医院之间存在密切的合作。

扩展试点研究，云南在各级医院配备了一种简单的传染病数据输入装置，最开始从乡镇一级配备，这加快了报告的速度。

2. 不足/需求

平行的“非典”疫情报告渠道（如，来自铁路系统的疾病报告从卫生和铁路系统同时逐级上报）会导致重叠报告，并可能会导致资料与应对措施的混淆。

特别是在乡一级医院，传染病的报告（主要职能之一）能力较弱。在医院中需要设置和加强负责疾病报告的部门。

各级疾病预防控制中心的流行病处理能力和设施有限，缺乏实际操作培训、知识、技能和设备。

3. 优先行动领域方面的建议

加强实际操作培训的数量与质量，应先考虑县级疾病预防控制中心人员在现场流行病学调查及医院临床医生在传染病临床诊断方面的培训。按照专家建议，支持目前正在制定和进行的对疾病预防控制系统国家师资培训计划框架的发展。在充分考虑项目资金与人力资源限制的前提下，进一步支持对西部地区县级和部分地级疾病预防控制中心的培训。

类似的师资培训计划也可以用于针对这些地方疾病预防控制中心加强传染病控制能力的培训，主要针对防治的准备方面。掌握有效的传染病控制措施

（如适当的消毒方案、观察、隔离、转运、个人防护等）。对于及时恰当地处理公共卫生应急事件是至关重要的。可以有针对性地开展“非典”防治方面的培训，但培训内容应当在其他领域的准备方面进一步扩展。培训应当包括练习并需要定期得到非正式继续教育的支持。

在各级医院中，设立或加强传染病报告部门的能力，使其成为疾病监测和报告系统的基础和支柱。总而言之，目前最为优先考虑的领域是支持乡镇卫生院（在乡镇一级承担疾病预防控制的职能）：(1) 设立或加强疾病监测和报告部门；(2) 加强其最基本的流行病学认定和分析能力。师资培训班（参见上述部分）可以帮助开发所需要的培训材料（辨认类似症状的提示卡片）及随后的电视或其他形式的强化。

提高传染病报告系统中信息报告的准确性和及时性，首先（并且具有很好的成本效益）考虑的优先领域是在各级医院装备传染病资料输入装置（参见上述部分）。

与此同时，需要广泛地开展对话：(1) 在可能的情况下，在各级合理分配国家传染病报告系统中数据的处理和分析的职能；(2) 更新现有的传染病报告卡（如包括症状）以获取更大的灵活性并对当地的诊断进一步核实，并在同时开展培训和资料开发。可以在一定数量的地县进行先期试点工作。在对需求和解决办法进行评价之后，向相应级别的疾病预防控制中心提供基础性的计算机/数据网络硬件，所提供的硬件应当配置适当（如价格合理并能适用于各级资料分析的需要），开展培训和技术支持以确保工作人员有能力达到国家传染病报告系统软件中所提出的最基本要求。

在存在需求的地方，购置汽车和基本设备以确保每一个省级疾病预防控制中心至少有一辆流行病学调查车辆用于现场流行病学调查和疾病流行的核实。

（四）医院/临床门诊的准备

1. 优势/能力

国家卫生部“非典”临床管理方案在各级都得到了采纳。

省级“非典”定点医院一般布局合理，并配备了必要的呼吸支持治疗设备。

在所有各级医院都有发烧门诊，但发烧门诊的质量存在很大的差异。新疆的发烧门诊与其他门诊是分开的。

针对“非典”病例的处理、自我保护和对可疑“非典”病人的转运等方面的培训在各级都得到了迅速的落实，培训工作得到了上一级业务部门的支持。

2. 不足/需求

发烧门诊的结构、设备/设施及人员方面的准备有很大的差别：越是基层（地县级）条件越差。有些县级医院使用自己制作的个人保护设施，云南有些县级医院发烧门诊与其他门诊混在一起。

在处理“非典”病例的实际操作和临床技能方面培训不足，对各级医院相关人员进行访谈的结果表明，从事“非典”救治的医务人员不具备足够的处理“非典”病人的实际操作知识（仅两位负责“非典”病人转运的司机除外）。

省级以下的一些医院具备“非典”病区，但设计方面不太合理，设备匮乏（如缺乏移动X光机，监护病房缺乏呼吸机）。

3. 优先行动领域方面的建议

师资培训应当加强医务人员对“非典”治疗和自我防护的培训。培训的第一阶段（如在北京或广东）应当培训一批来自西部省份重点医院的师资。培训的内容可以来自目前国家“非典”的培训，邀请东部“非典”流行地区的高级专家作为培训的师资，到举办培训的城市“非典”指定医院进行现场参观，同时配合展示与讲座。但是，需要对培训的课程与活动进行适当地调整以适合西部省份和地区的特点。在培训的第二阶段，接受师资培训的学员将变为省级培训的师资。这一阶段的培训可能会在各省省会或其他可能的地方进行，但重点需要针对地级医院的医生进行培训。与在疾病预防控制中心系统中开展的培训一样，针对危机的预先准备与练习可以帮助学员掌握实际操作知识。

对领导进行开发，使其理解在每一个县级及地级综合医院建立规范化（独立的）发烧门诊对于预防医院“非典”感染（以及可能的向社区进一步的传播）是至关重要的。在每一个县级综合医院建立一个规范的发烧门诊，在结构、设备和管理标准方面符合卫生部的标准。应当最优先考虑目前缺乏这些设施的边境县城。

确保在每一个地级，至少有一个地级综合医院有一个专门治疗“非典”或类似疾病的病区。

向重点地级和县级医院（如人口集中的地区，或具有国际口岸的地方）提供设备如X光机及呼吸机。

（五）“非典”病人和“非典”疑似病人的转运

1. 优势/能力

各级都有对“非典”可疑病人进行转运的方案。

负责“非典”救治和转运的医务人员接受过培训并配备了个人防护设施；与其他被访谈的人员相比，负责转运的司机知识水平较好。

昆明市（云南省）具备完善的“非典”病人转运机制和救护车辆。

2. 不足/需求

省级以下的卫生官员对“非典”疑似病人转运重要性的认识不足。

新疆的救护转运设施非常落后（救护车与必要的设备），即使乌鲁木齐市也是如此，更不用说在农村地区。

3. 优先行动领域方面的建议

对地县及领导进行开发，使他们理解对“非典”可疑病人进行适当转运的重要性。

对有关人员进行“非典”和“非典”疑似病人转运程序方面的培训，包括个人防护及医院转运规程等。

一些省份（如新疆）缺乏救护车辆，这些车辆需要配备处理“非典”或其他传染病的设备。在考虑资源限制的情况下，这类救护车辆的购置和配备应当重点支持人口密集区域的急救中心。

四、结论

本概要概述了亚行所支持的技术援助项目在新疆和云南快速现场评估中的主要发现，所发现的五个主要领域将作为西部地区的各级政府和国际合作者的优先行动领域。希望这些发现可以促使各方面的合作伙伴开展对话以提供相应的支持。

附件4.1 云南亚行项目大事记

一、省外培训

1. 2004 年10～11 月，为了进一步提高项目省在急性传染病预防控制方面的能力，卫生部按照项目要求，组织了国家级专家在北京开展了省、地级疾控人员的高层次现场流行病学培训活动。我省省疾控中心刘晓强、徐闻，昆明市疾控中心刘宏，玉溪市疾控中心吴强，曲靖市疾控中心何丽芳5 名疾病控制的专业人员参加了本次培训。

2. 2005 年9 月26～28 日，卫生部贷款办在北京开展了亚行赠款项目省级传染病与突发公共卫生事件健康教育培训与经验交流活动，我省卫生厅及省疾控中心的田子颖、杨建斌和何继波参加了本次活动。

3. 2005 年10 月9～13 日，卫生部贷款办在北京开展了亚行赠款项目省级、地级疾控人员现场流行病学集中交流培训活动，我省省疾控中心刘晓强、徐闻，昆明市疾控中心刘宏，玉溪市疾控中心吴强，曲靖市疾控中心何丽芳5 名疾病控制的专业人员参加了本次培训。

二、省内培训

1. 2004 年10 月27～31 日，在迪庆州香格里拉县举办第一期亚行项目培训班，由云南省疾控中心、昆医附一院组成的师资，对来自迪庆州3 个县疾控中心的副主任、疾控科科长、30 个乡镇卫生院防保员共45 人进行了培训。培训内容涉及流脑、乙脑、新发传染病、病毒性肝炎及结核病等的防治，疫情报告和管理以及呼吸道、肠道传染病诊治等方面。同时，全体学员还参观了香格里拉县疾控中心，并针对所学知识进行了现场讨论和分析，理论与实践相结合，巩固了所学知识。

2. 2004 年11 月20～24 日，在玉溪市澄江县举办第二期亚行项目培训班，由云南省疾控中心、昆医附一院、玉溪市疾控中心组成的师资，对来自玉溪市8 个县（区）疾控中心的流行病医师、部分乡镇卫生院防保组长共50 余人进行了培训。培训内容涉及传染病、突发公共卫生事件报告与管理，结核病、麻疹、肝炎、伤寒等的现场流行病学处置等方面。培训期间，全体学员参观了澄江县疾控中心和龙街镇卫生院，并现场讨论被参观单位提出的案例，把理论与实践较好结合。

3. 2004 年12 月19～25 日，在红河州个旧市举办第三期培训班。由云南省疾

控中心、昆医附一院、红河州疾控中心组成的授课教师，对红河州13 个县（市、区）级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员、综合医院从事传染病临床和防保工作的医生，以及32 个乡镇卫生院从事传染病临床和防保工作的医生，共47 人进行传染病防治技术培训。培训内容涉及疫情暴发现场处理、疫情报告与管理，现场流行病学调查，结核病、食物中毒、麻疹、病毒性肝炎等的防治。全体学员参观了个旧市疾控中心和大屯乡卫生院，并现场讨论案例，与当地的相关人员进行经验交流，理论与实践相结合，达到预期培训效果。

4. 2005 年1 月5～10 日，在红河州建水县举办第四期培训班。由云南省疾控中心、昆医附一院、红河州疾控中心的授课教师。对红河州13 个县（市、区）级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员，综合医院从事传染病临床和防保工作的医生，以及32 个乡镇卫生院从事传染病临床和防保工作的医生，共47 人进行传染病防治技术培训。培训内容包括霍乱及甲肝暴发现场处置，伤寒防治，结核病预防控制，食物中毒的现场处置，出疹性疾病、流脑、乙脑的诊断与治疗。培训期间组织学员参观了建水县疾控中心和面甸乡卫生院。此次培训班结合基层学员的实际情况，充分满足基层疾控人员的实际需要，圆满完成了教学任务。

5. 2005 年1 月15～21 日，在德宏州芒市举办第五期培训班。由云南省疾控中心、昆医附一院、思茅卫校、德宏州疾控中心的授课教师，对来自德宏州6 个县级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员、7 个县级医院从事传染病临床和防保工作的医生，以及26 个乡镇卫生院从事传染病临床和防保工作的医生共45 人进行了传染病防治培训。培训内容涉及新传染病防治法、疫情管理，伤寒、麻疹、恙虫病、肠道传染病、疟疾及鼠疫等方面的防治。全体学员参观了潞西市疾控中心、法帕镇卫生院，并进行现场案例讨论，与当地相关人员进行经验交流，把理论与实践较好结合起来。

6. 2005 年5 月29 日～6 月3 日，在红河州弥勒县举办第六期传染病防治培训班，由省疾控中心、红河州疾控中心、红河州医院的授课教师，对来自红河州13 个县级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员、综合医院从事传染病临床和防保工作的医生，以及32 个乡镇卫生院从事传染病临床和防保工作的医生共50 人进行了传染病防治培训。培训内容涉及伤寒、食物中毒、霍乱、甲肝、流脑、乙脑、出疹性疾病的防治，腹痛、腹泻病人的案例分析，传染病疫情报告与管理等方面。全体学员参观了弥勒县疾控中心和朋普卫生院，当地的主管人员对该单位的基本情况和传染病控制情况作了详细讲解，并讲解了一个案例，和学员共同讨论和交流了疾病防控经验。

7. 2005 年7 月10～14 日，在文山州举办第七期传染病防治培训班，由省疾控中心、文山州疾控中心、文山州医院、红河州医院组成的授课教师，对来自文山州8 个县级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员、8 个县级医院从事传染病临床和防保工作的医生，以及29 个乡镇卫生院从事传染病临床和防保工作的医生共45 人进行了传染病防治培训。培训内容涉及腹痛、腹泻病人案例分析，流脑、乙脑、伤寒、出疹性疾病、甲肝的防治，传染病疫情报告、管理以及现场处置。所有参加培训人员到文山县得厚卫生院和文山县疾控中心进行现场参观，当地的主管人员对该单位的基本情况和传染病控制情况作了详细讲解，学员们认真听取了当地的工作经验，并相互交流。

8. 2005 年7 月17～21 日，在楚雄州楚雄市举办第八期传染病防治培训班，由省疾控中心、楚雄州疾控中心、楚雄州医院组成的授课教师，对来自楚雄州10 个县级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员、10 个县级医院从事传染病临床和防保工作的医生，以及25 个乡镇卫生院从事传染病临床和防保工作的医生共45 人进行了传染病防治培训。培训内容涉及腹痛、腹泻病人案例分析，伤寒、鼠疫、甲肝的防治，传染病疫情报告、管理以及现场处置，突发公共卫生事件现场处置。全体参加培训人员到楚雄州疾控中心和楚雄市苍岭卫生院参观学习，当地的主管人员对该单位的基本情况和传染病控制情况作了详细讲解，学员们认真听取了当地的工作经验，并相互交流。

9. 2005 年7 月24～28 日，在思茅市举办第九期传染病防治培训班，由省疾控中心、省寄生虫病防治所、昆明市第三人民医院、思茅市疾控中心、思茅卫校组成的授课教师，对来自思茅市10 个县级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员、10 个县级医院从事传染病临床和防保工作的医生，以及25 个乡镇卫生院从事传染病临床和防保工作的医生共45 人进行了传染病防治培训。培训内容涉及腹痛、腹泻病人案例分析，鼠疫、伤寒、疟疾的防治，传染病疫情报告、管理以及现场处置。全体参加培训人员到思茅市疾控中心和思茅市倚像卫生院参观学习，当地的主管人员对该单位的基本情况和传染病控制情况作了详细讲解，学员们认真听取了当地的工作经验，并相互交流。

10. 2005 年8 月7～11 日，在文山州举办第十期传染病防治培训班，由玉溪市疾控中心、文山州疾控中心、文山州医院、文山卫校的授课教师，对来自文山8 个县（市、区）级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员、以及42 个乡镇卫生院从事传染病临床和防保工作的医生共50 人进行了传染病防治培训。培训内容涉及乙脑、流脑的诊断及防治，出疹性疾病诊治，食物中毒现场处理，传染病疫情报告管理以及现场处置等方面。全体参加培训人员到文山县疾控中心和得厚卫生院参观学习，当地的主管人员对该单位的基本情况和

传染病控制情况作了详细讲解，学员们认真听取了当地的工作经验，并相互交流。

11. 2005 年8 月14 ～18 日，在昭通市举办第十一期传染病防治培训班，由省疾控中心、昭通市疾控中心、昭通市第一人民医院，对来自昭通市11 个县级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员、11 个县级医院从事传染病临床和防保工作的医生，以及23 个乡镇卫生院从事传染病临床和防保工作的医生共45 人进行了传染病防治培训。培训内容涉及出疹性疾病、病毒性肝炎、伤寒、结核病的防治，传染病疫情报告、管理以及现场处置，突发公共卫生事件报告管理规范，群体性不明原因疾病分析，食物中毒现场处置等。全体参加培训人员到朝阳区疾控中心和卫生院参观学习，当地的主管人员对该单位的基本情况和传染病控制情况作了详细讲解，并讲解一个案例，和学员共同讨论和交流，并介绍了该单位在处理疫情过程中的经验，让学员加深了对理论知识的学习。

12. 2005 年8 月21 ～25 日，在曲靖市举办第十二期传染病防治培训班，由省疾控中心、昆明市第三人民医院、曲靖市疾控中心、曲靖市卫校，对来自曲靖市9 个县级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员、9 个县级医院从事传染病临床和防保工作的医生，以及27 个乡镇卫生院从事传染病临床和防保工作的医生共45 人进行了传染病防治培训。培训内容涉及鼠疫、常见肠道传染病、水痘及带状疱疹、甲肝的防治等，传染病疫情报告、管理以及现场处置，突发公共卫生事件报告管理规范，群体性不明原因疾病分析，食物中毒的现场处置等。全体参加培训人员到到麒麟区疾控中心和珠街卫生院参观学习，当地的主管人员对该单位的基本情况和传染病控制情况作了详细讲解，并讲解了一个案例，和学员共同讨论和交流，并介绍了该单位在处理疫情过程中的经验，让学员加深了对理论知识的学习。

13. 2005 年9 月4 ～8 日，在楚雄州举办第十三期传染病防治培训班，由省疾控中心、楚雄州疾控中心、楚雄州医院，对来自楚雄州10 个县54 个乡镇卫生院从事传染病临床和防保工作的医生共50 人进行了传染病防治培训。培训内容涉及鼠疫、常见肠道传染病、水痘及带状疱疹、甲肝的防治，传染病疫情报告、管理以及现场处置，突发公共卫生事件报告管理规范，群体性不明原因疾病分析，食物中毒的现场处置等。全体参加培训人员到楚雄州疾控中心和楚雄市东瓜镇中心卫生院，听取了楚雄州疾控中心主任对楚雄州疾病预防控制工作情况介绍，参观了楚雄州疾控中心科室业务工作情况以及突发公共卫生事件应急储备物资。东瓜镇卫生院院长向学员介绍了基层防保工作情况，学员参观了东瓜镇卫生院的防保工作，与卫生院的防保人员进行基层防保工作经验交流学习。

14. 2005 年9 月11 ～15 日，在临沧市举办第十四期传染病防治培训班，由省疾控中心、昆明市第三人民医院、临沧市疾控中心、临沧市卫校、思茅市卫校的老师，对来自临沧市8 个县级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员、8 个县级医院从事传染病临床和防保工作的医生，以及29 个乡镇卫生院从事传染病临床和防保工作的医生共45 人进行了传染病防治培训。培训内容涉及鼠疫、常见肠道传染病、伤寒、疟疾、出疹性疾病的防治，传染病疫情报告、管理以及现场处置，现场流行病学调查等方面。全体参加培训人员到临翔区疾控中心和幸福乡卫生院参观学习，当地的主管人员对该单位的基本情况和传染病控制情况作了详细讲解，并讲解案例和学员共同讨论和交流。

15. 2005 年9 月19 ～23 日，在大理州举办第十五期传染病防治培训班，由省疾控中心、省地病所、大理州疾控中心、大理州医院的老师，对来自大理州12 个县级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员、12 个县级医院从事传染病临床和防保工作的医生，以及24 个乡镇卫生院从事传染病临床和防保工作的医生共45 人进行了传染病防治培训。培训内容涉及流脑、乙脑、常见肠道传染病、地方性猝死、人兽共患病、出疹性疾病的防治，传染病疫情报告、管理以及现场处置，现场流行病学调查等方面。全体参加培训人员到巍山县疾控中心和庙街卫生院参观学习，巍山县疾控中心主任向学员详细介绍了一起毒鼠强案例的发生与处理经过，并与学员充分进行讨论与讲解，让学员对此有了具体了解和认识，较好地把理论和实践结合在一起。

16. 2005 年9 月26 ～30 日，在思茅市举办第十六期传染病防治培训班，由省疾控中心、省寄生虫病防治所、思茅市疾控中心、思茅卫校、思茅市人民医院组成的授课教师，对来自思茅市10 个县级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员，以及35 个乡镇卫生院从事传染病临床和防保工作的医生共45 人进行了传染病防治培训。培训内容涉及常见肠道传染病防治，伤寒、疟疾、旋毛虫的防治，传染病疫情报告管理以及现场处置等方面。全体参加培训人员到思茅市疾控中心和思茅市倚像卫生院参观学习，当地的主管人员对该单位的基本情况和传染病控制情况作了详细讲解，学员们认真听取了当地的工作经验，并相互交流。

17. 2005 年10 月17 ～21 日，在丽江市举办第十七期传染病防治培训班，由省疾控中心、昆医附一院、丽江市疾控中心、思茅市卫校、丽江市民专的老师，对来自丽江市5 个县级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员、5 个县级医院从事传染病临床和防保工作的医生，以及30 个乡镇卫生院从事传染病临床和防保工作的医生共45 人进行了传染病防治培训。培训内容涉及乙肝病毒血清标志物意义解读，出疹性疾病、伤寒、疟疾防治，传染病疫情

报告、管理以及现场处置，现场流行病学调查，艾滋病防治知识等方面。所有参加培训的卫生人员到丽江市古城区七河乡中心卫生院和古城区疾控中心进行参观学习，当地的主管人员对该单位的基本情况和传染病控制情况作了详细讲解，学员们认真听取了当地的工作经验并相互交流。

18. 2005 年10 月24～28 日，在保山市举办第十八期传染病防治培训班，由省疾控中心、昆医附一院、省寄防所、保山市疾控中心、保山市人民医院的老师，对来自保山市5 个县级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员、5 个县级医院从事传染病临床和防保工作的医生，以及35 个乡镇卫生院从事传染病临床和防保工作的医生共45 人进行了传染病防治培训。培训内容涉及乙肝病毒血清标志物意义解读，出疹性疾病、伤寒、疟疾防治，传染病疫情报告、管理以及现场处置，现场流行病学调查，食物中毒现场处置等方面。全体参加培训人员到隆阳区疾控中心和保山市蒲缥卫生院参观学习，当地的主管人员对该单位的基本情况和传染病控制情况作了详细讲解，学员们认真听取了当地的工作经验并相互交流。

19. 2005 年11 月7～11 日，在怒江州举办第十九期传染病防治培训班，由省疾控中心、红河州医院、昆明市第三人民医院、思茅卫校、怒江州疾控中心的老师，对来自怒江州4 个县（区）级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员、4 个县（区）级医院从事传染病临床和防保工作的医生，以及33 个乡镇卫生院从事传染病临床和防保工作的医生共45 人进行了传染病防治培训。培训内容涉及出疹性疾病、伤寒、疟疾防治，传染病疫情报告、管理以及现场处置，腹痛腹泻病人的处理，流感、禽流感的诊治，结核病项目管理等方面。所有参加培训的卫生人员到泸水县疾控中心和上江中心卫生院进行了参观学习，当地的主管人员对该单位的基本情况和传染病控制、疫情报告管理工作等方面作了详细讲解，学员们认真听取了当地的工作经验并相互交流。

20. 2005 年11 月14～18 日，在昆明市举办第二十期传染病防治项目培训班，由省疾控中心、昆医附一院、昆明市第三人民医院、昆明市疾控中心的老师，对来自昆明市14 个县（区）级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员、14 个县（区）级医院从事传染病临床和防保工作的医生，以及32 个乡镇卫生院从事传染病临床和防保工作的医生共50 人进行了传染病防治培训。培训内容涉及出疹性疾病、病毒性肝炎的诊治，伤寒防治、传染病疫情报告、管理以及现场处置，流感、禽流感的诊治，结核病项目管理等方面。所有参加培训的卫生人员到五华区疾控中心和福海中心卫生院进行了参观学习，当地的主管人员对该单位的基本情况和传染病控制、疫情报告管理工作等方面作了详细讲解，学员们认真听取了当地的工作经验并相互交流。

21. 2006 年5 月15 ～19 日，在版纳州举办该项目后续扩展第一期传染病防治项目培训班，由红河州医院、思茅市疾控中心、版纳州职业教育学院、版纳州疾控中心的老师，对来自版纳州3 个县（区）级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员、11 个农场医院从事传染病临床和防保工作的医生，以及37 个乡镇卫生院从事传染病临床和防保工作的医生共51 人进行了传染病防治培训。培训内容涉及腹痛、腹泻病人的处理，鼠疫的防治，疟疾的防治，传染病疫情报告、管理以及现场流行病学调查，麻风病的诊断与治疗，结核病项目管理等方面。所有参加培训的卫生人员到景洪市疾控中心和嘎洒中心卫生院进行了参观学习，当地的主管人员对该单位的基本情况和传染病控制、疫情报告管理工作等方面作了详细讲解，学员们认真听取了当地的工作经验并相互交流。

22. 2006 年5 月15 ～19 日，在大理州举办该项目后续扩展第二期传染病防治项目培训班，由省地病所、大理州疾控中心、大理州第一人民医院的老师，对来自大理州12 个县（区）级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员，以及36 个乡镇卫生院从事传染病临床和防保工作的医生共48 人进行了传染病防治培训。培训内容涉及流感与禽流感、麻疹、艾滋病、病毒性肝炎、巴尔通体病、食物中毒以及现场流行病学调查等方面。所有参加培训的卫生人员到祥云县疾控中心和沙龙中心卫生院进行了参观学习，当地的主管人员对该单位的基本情况和传染病控制、疫情报告管理工作等方面作了详细讲解，学员们认真听取了当地的工作经验并相互交流。

23. 2006 年5 月22 ～27 日，在德宏州举办该项目后续扩展第三期传染病防治项目培训班，由红河州医院、思茅市疾控中心、版纳州职业教育学院、版纳州疾控中心的老师，对来自德宏州5 个县级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员、1 个防保中心从事传染病临床和防保工作的医生，以及37 个乡镇卫生院从事传染病临床和防保工作的医生共45 人进行了传染病防治培训。培训内容涉及病毒性肝炎、疟疾、艾滋病、伤寒、痢疾、食物中毒以及现场流行病学调查等方面。所有参加培训的卫生人员到潞西市疾控中心和风平中心卫生院进行了参观学习，当地的主管人员对该单位的基本情况和传染病控制、疫情报告管理工作等方面作了详细讲解，学员们认真听取了当地的工作经验并相互交流。

24. 2006 年5 月23 ～27 日，在临沧市举办该项目后续扩展第四期传染病防治项目培训班，由昆明市三院、临沧市疾控中心、临沧市卫校的老师，对来自临沧市8 个县（区）级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员、8 个县级综合医院从事传染病临床和防保工作的医生，以及34 个乡镇卫生院从事传染病临床和防保工作的医生共50 人进行了传染病防治培训。培训内容

涉及肠道传染病、鼠疫、麻疹、疟疾、结核病、传染病疫情报告管理以及现场流行病学调查等方面。所有参加培训的卫生人员到凤庆县疾控中心和幸福中心卫生院进行了参观学习，当地的主管人员对该单位的基本情况和传染病控制、疫情报告管理工作等方面作了详细讲解，学员们认真听取了当地的工作经验并相互交流。

25. 2006 年5 月22～26 日，在保山市举办该项目后续扩展第五期传染病防治项目培训班，由省疾控中心、保山市疾控中心、保山市卫校的老师，对来自保山市5 个县（区）级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员，以及40 个乡镇卫生院从事传染病临床和防保工作的医生共45 人进行了传染病防治培训。培训内容涉及流感与禽流感、霍乱、伤寒、疟疾、食蕈菌中毒、不明肺炎、传染病疫情报告管理以及疫情分析等方面。所有参加培训的卫生人员到隆阳区疾控中心和蒲缥卫生院参观学习，当地的主管人员对该单位的基本情况和传染病控制情况作了详细讲解，学员们认真听取了当地的工作经验并相互交流。

26. 2006 年5 月21～25 日，在思茅市举办该项目后续扩展第六期传染病防治项目培训班，由省地病所、思茅市疾控中心、思茅市卫校的老师，对来自思茅市10 个县（区）级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员，以及35 个乡镇卫生院从事传染病临床和防保工作的医生共45 人进行了传染病防治培训。培训内容涉及肠道传染病、鼠疫、伤寒、疟疾、旋毛虫、麻疹、现场流行病学等方面。所有参加培训的卫生人员到倚像卫生院参观学习，当地的主管人员对该单位的基本情况和传染病控制情况作了详细讲解，学员们认真听取了当地的工作经验并相互交流。

27. 2006 年5 月29～6 月2 日，在昭通市举办该项目后续扩展第七期传染病防治项目培训班，由省疾控中心、昭通市第一人民医院、昭通市疾控中心的老师，对来自昭通市11 个县（区）级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员，以及35 个乡镇卫生院从事传染病临床和防保工作的医生共45 人进行了传染病防治培训。培训内容涉及痢疾、伤寒、麻疹、结核病、病毒性肝炎、传染病疫情报告管理、现场流行病学、食物中毒、疾控工作中协调和处理等方面。所有参加培训的卫生人员到朝阳区疾控中心和乐居卫生院参观学习，当地的主管人员对该单位的基本情况和传染病控制情况作了详细讲解，学员们认真听取了当地的工作经验并相互交流。

28. 2006 年5 月29～6 月2 日，在文山州举办该项目后续扩展第八期传染病防治项目培训班，由红河州医院、文山州医院、文山州疾控中心、文山州卫校的老师，对来自文山州8 个县的47 个乡镇卫生院从事传染病临床和防保工作的医生共47 人进行了传染病防治培训。培训内容涉及痢疾、霍乱、伤寒、麻疹、鼠

疫、传染病疫情报告管理、现场流行病学等方面。所有参加培训的卫生人员到文山县疾控中心和古木卫生院参观学习，当地的主管人员对该单位的基本情况和传染病控制情况作了详细讲解，学员们认真听取了当地的工作经验并相互交流。

29. 2006 年6 月5～9 日，在昆明市举办该项目后续扩展第九期传染病防治项目培训班，由省疾控中心、昆医附一院、昆明市疾控中心、昆明市三院的老师，对来自昆明市14 个县（区）级疾控中心从事传染病和突发公共卫生事件处理与控制的专业人员、以及31 个乡镇卫生院从事传染病临床和防保工作的医生共45 人进行了传染病防治培训。培训内容涉及流感与禽流感、肠道传染病、病毒性肝炎、麻疹、食物中毒、传染病疫情报告管理、现场流行病学等方面。所有参加培训的卫生人员到呈贡县疾控中心和洛阳卫生院参观学习，当地的主管人员对该单位的基本情况和传染病控制情况作了详细讲解，学员们认真听取了当地的工作经验并相互交流。

30. 2006 年6 月12～16 日，在曲靖市举办该项目后续扩展第十期传染病防治项目培训班，并有亚行项目官员、卫生部贷款办领导和项目官员，以及广西和贵州省卫生行政部门及疾病预防控制人员前来观摩。此次授课教师由省疾控中心、曲靖市疾控中心、昆明市疾控中心、思茅市卫校的老师组成，对来自曲靖市9 个县（区）级疾病预防控制中心从事传染病和突发公共卫生事件处理与控制的专业人员、9 个县级综合医院从事传染病临床和防保工作的医生以及22 个乡镇卫生院从事传染病临床和防保工作的医生共48 人进行了传染病防治培训。培训内容涉及流感与禽流感、食物中毒、传染病疫情报告管理、现场流行病学以及不明原因疾病的调查和处理等方面。所有参加培训的学员到沾益县疾控中心和卫生院参观学习，当地的主管人员对该单位的基本情况和传染病控制情况作了详细讲解，学员们认真听取了当地的工作经验并相互交流。

三、项目督导

1. 2005 年10 月17～21 日，卫生部贷款办朱宝铎、王立秋对我省在丽江市举办的扩展培训班进行了现场参观，对参与式教学如何较好的运用于课堂进行了点评和指导，并对参观县疾控中心和乡镇卫生院做了具体的安排，给培训班提出了很多宝贵的意见和建议。在卫生部专家的指导下，培训班师资进一步提高了教学质量，培训班取得了较好成效。

2. 2005 年11 月17～18 日，卫生部国外贷款办段明月、王立秋到我省玉溪市元江县进行项目督导和评估，对参加过亚行项目培训班的县疾控、县医院、乡镇卫生院的人员和相关领导进行了访谈和经验交流，共有10 余人参加了此次座谈

交流会，会上对接受培训者参加培训后在日常工作中的业务素质方面的变化，参加现场流行病学疫情的处置等方面进行了交流。青龙厂镇卫生院的李文雅就自己处理过的一起疫情进行了讲解，并介绍了参加培训班的感受和体会。相关领导也对参加培训的学员给予了点评。会议气氛和谐，达到了预期效果。

附件4.2 云南项目培训产出一览表

地州	培训学员数（人）	县级覆盖率（%）	乡级覆盖率（%）
玉溪	135	100.0	100.0
红河	145	100.0	100.0
文山	140	100.0	100.0
思茅	135	100.0	100.0
版纳	51	100.0	100.0
保山	90	100.0	100.0
德宏	90	100.0	100.0
怒江	45	100.0	100.0
迪庆	45	100.0	100.0
临沧	95	100.0	78.4
楚雄	95	100.0	66.0
大理	90	100.0	56.0
丽江	45	100.0	56.0
昭通	90	100.0	52.0
昆明	90	100.0	47.8
曲靖	95	100.0	46.8
合计	1 476	100.0	72.4

附件4.3　青海亚行项目大事记

1. 项目官员及国家级专家参与我省活动

(1) 2003 年10 月现场调研。

(2) 2004 年6 月第一期省地级师资培训班。

(3) 2004 年9 月参加试点培训班。

(4) 2005 年5 月第二期省地级师资培训班。

(5) 2005 年6 月现场督导检查。

2. 装备设备

(1) 越野车1 辆，便携式电脑9 台，多媒体投影仪9 台，数码摄像机1 台，数码相机5 个。

(2) 普通防护服126 件，一次性手套1 000 双，高压消毒锅5 个，口罩1 000 个，护目镜500 个，红外线测温仪10 台。

3. 人员培训

(1) 师资培训：2 期，80 人次。

(2) 基层卫生人员培训：13 期，625 人，覆盖54 个疾控机构(100%)、386 个乡镇卫生院(94%)。

(3) 培训高级流行病人员5 人，培训传染病健康教育资料开发人员4 人。

4. 培训教材

(1) 《常见传染病与急性中毒预防和控治手册》4 356 本。

(2) 《常见传染病与性病图谱》2 290 本。

(3) 《基层卫生人员常见传染病与急性中毒防治参与式培训教案》170 本，配套光盘170 套。

(4) 《传染病报告卡教学挂图》50 张。

(5) 《急性传染病诊断思路与处理流程图》3 000 张。

5. 学校健康教育材料(针对全省贫困县)

《教师手册》12 000 册，《学生手册》18 000 册。

附件4.4 宁夏亚行培训项目一览表

时间	地点	参加人数	省级教师	省项目主管	市卫生局主管领导	县主管领导	县卫生局
2004.05.30～06.03	青铜峡	40	2	2	2	2	2
2004.09.01～04	平罗县	40	2	2	1	1	1
2004.11.16～19	固原市	42	2	2	1		1
2004.11.22～25	贺兰县	42	2	2		1	1
2005.07.04～09	中宁县	42	2	2	1	1	1
2005.07.11～15	红寺堡	45	2	2			1
2005.07.20～24	西夏区	40	2	2	1	1	1
2005.07.25～29	惠农区	42	2	1	1		1
2005.08.01～05	原州区	45	2	1	1	1	1
2005.11.21～24	西吉县	44	2	1	1	1	1
2005.11.15～18	中卫市	40	2	1	1		
2006.05.28～31	盐池县	40	2	1	2	1	1
2006.06.01～04	海原县	40	2	2	1	1	2

附件4.5　新疆亚行项目大事记

1. “亚行赠款传染性非典型肺炎与传染病防治项目师资培训班”：为更好开展针对县级疾病预防控制机构和乡镇卫生院传染病防治的培训，卫生部贷款办与自治区卫生厅定于在我区举办自治区、地两级师资培训班。2004 年6 月8 ～12 日及6 月13 ～17 日在乌鲁木齐市及喀什市分别举办了“亚行赠款传染性非典型肺炎与传染病防治项目师资培训班”，与会期间邀请国内知名传染病专家及流行病学专家授课。会议期间有来自16 个地州市级卫生防疫人员及临床医生作为此次培训的重点师资参加了培训，共计62 人。

针对成人教育的特点，本次培训重点介绍参与式培训的组织、方法和案例分析，目的是让学员理解参与式教学的重点及与传统教学的差别，从而进一步针对基层卫生人员的需求开展下一步的培训工作。在此次培训过程中，学员积极参与讨论，并实际模拟演练授课，老师及时针对模拟演练中出现的问题组织学员开展讨论，使发现的问题得以及时解决，培养学员的自信心，鼓励各学员充分发挥自己的特长，与同伴一起能承担今后的培训任务。

2. “亚行新疆传染病防治师资培训及经验交流会”：2005 年4 月17 ～23 日在乌鲁木齐市举办第二期针对自治区、各地州既往培训师资队伍，旨在强化师资队伍授课技能的培训及经验交流会议，会议期间邀请国内知名传染病专家及流行病学专家授课，亚行项目官员届时也出席了会议。会议期间有来自新疆15 个地州市级既往接受培训的卫生防疫人员及临床医生作为此次培训的重点人员参加了培训，共计有61 人参加。此次会议通过对教学方法、教学内容安排，如何提高教学效果进行了强化培训和经验交流，通过培训和交流，进一步加深师资队伍对培训技巧的掌握，使参与式培训手段能在日后培训中更加得到深入运用，提高扩展培训的效果。

3. 翻译、印刷并下发《传染病防控手册》：针对新疆是一个少数民族聚集地区，少数民族医务工作者占基层的60 % 以上，而且基层许多少数民族医务工作者汉语水平不高，在阅读汉文手册时较为吃力的情况，为方便基层医务工作者在学习和工作中查阅资料的方便，在请示亚行批准后，自治区组织8 名少数民族翻译和审校人员，在短短3 个月时间内圆满完成手册维文版的翻译、审校和印刷，并及时下发到全区15 个地州市96 个县市疾控中心和乡卫生员。做到每个县乡镇都能有2 本手册，方便了基层医务工作者实际处理常见传染病、急性中毒。从对使用过的基层医务工作者的回访来看，普遍认为该书对指导具体工作的实用性非常大，不失为一本非常实用的工具书。

附件4.6 新疆项目产出文件一栏表

序号	文件内容及文件号	文件签发时间	签发单位
1	关于举办亚洲开发银行赠款项目县乡级卫生人员常见传染病与急性中毒防治试点培训班的通知 新卫疾控发[2004] 67 号	2004.08.22	新疆维吾尔自治区卫生厅
2	关于举办亚行赠款项目县乡级卫生人员常见传染病与急性中毒防治培训班的通知 新卫传发[2004] 163 号	2004.10.18	新疆维吾尔自治区卫生厅
3	关于举办亚行赠款项目县乡级卫生人员常见传染病与急性中毒防治培训班的通知 新卫疾控发[2004] 108 号	2004.12.29	新疆维吾尔自治区卫生厅
4	关于举办亚洲开发银行赠款非典型肺炎防治项目自治区传染病防治师资培训及经验交流会议的通知 新卫传发[2005] 38 号	2005.04.08	新疆维吾尔自治区卫生厅
5	卫生厅关于举办亚行赠款项目县乡级卫生人员常见传染病与急性中毒防治培训班的通知 新卫疾控发[2005] 59 号	2005.06.28	新疆维吾尔自治区卫生厅
6	卫生厅关于举办亚行赠款项目常见传染病与急性中毒防治培训班的通知 新卫传发[2005] 117 号	2005.09.07	新疆维吾尔自治区卫生厅
7	卫生厅关于举办亚行赠款项目县乡级卫生人员常见传染病与急性中毒防治培训班的通知 新卫疾控发[2005] 75 号	2005.09.28	新疆维吾尔自治区卫生厅
8	关于发放亚行传染病培训材料的函 新疾控函字[2005] 86 号	2005.10.31	新疆维吾尔自治区疾病预防控制中心
9	关于举办亚行赠款项目地州级传染病疫情处理培训班的通知 新卫传发[2006] 2 号	2006.01.09	新疆维吾尔自治区卫生厅
10	关于发放亚行传染病培训材料的函 新疾控函字[2006] 40 号	2006.04.11	新疆维吾尔自治区疾病预防控制中心

附件4.7　各类人员对本项目的心得体会

一、部分中央师资体会

1. 中国疾病预防控制中心任学锋研究员的体会

1.1 健康教育手册在中小学校传染病预防健康教育中的作用

目前学校传染病爆发事件占总事件的75％以上，尚没有一本专门给教师的预防传染病的指导手册。教师预试验普遍反映《教师手册》一书很实用，对学校基层工作有一定的指导性，特别是该手册还增加了学校发生传染病或可疑疫情如何做到早期察觉、报告及处理措施等内容，促进基层的教师了解学校传染病预防的基本方法及应对措施，使他们在工作中能有章可循，并把一些生活中常见的传染病预防知识通过适宜的参与式教学方式传授给学生。

《学生手册》是针对广大农村中小学校学生开发的一个自我读本。该手册经过数轮预试验及专题访谈，形成了一个适合学生的浅显易懂、图文并茂的学生自学材料。该手册不同于以往教科书式或医学科普性材料，立足于介绍传染病的传播途径、为什么要保持好的卫生习惯及如何通过这些行为来预防传染病的发生来促进学生的认知与理解。这本手册重点强调了学生保持个人卫生、饮食卫生、环境卫生、异常情况的处置等预防传染病的关键性自我保健行为，同时也突出了学生作为高危或易感人群如何通过个人行为来预防动物源性传染病的环节。并以互动式的“想一想、说一说”、“你知道吗”、“制定行动计划”等方式启发学生的思考与讨论。学生预试验普遍反映这本手册深受学生的欢迎，并能够起到相应的教育意义，与《教师手册》共同组成了针对农村中小学学校的传染病预防健康教育系列材料。

1.2 新疆喀什地区传染病社区监测与预警系统的快速评估

本工作的目的在于评估新疆喀什地区传染病的社区监测与预警系统及公众传染病认知水平在传染病的早期识别、上报及应对方面的能力。以为开展社区为基层的能力建设及健康教育提供依据。这个评估首次探讨了社区水平传染病早期识别、报告与应对能力在传染病早期预警及控制中的意义。并为今后如何加强农村社区水平“传染病的社区监测与预警”系统建设提出了建议。

1.3 参与式教学方法在基层传染病防治能力建设培训中的应用

亚行项目在基层传染病应对能力建设培训中使用以案例教学为主的参与式教学方法，通过案例分析结合小组讨论、角色扮演、头脑风暴等多种参与式活动，能充分调动学员的积极参与和发言、能促进相互学习、互动性强。通过对培训效果的评价、学员访谈及反馈结果的调查表明，以案例教学为主的参与式培训方法

适用于基层卫生人员传染病防治能力建设培训，可以有效改善他们的传染病诊断、处理技能，以及突发疫情识别与应对能力，值得推广使用。

另外，这些培训创新性地开发了一系列适用于基层的、实用性的学员教材、工具与培训材料，如《基层卫生人员参与式培训教案》及配套光盘、传染病与急性中毒的四步诊断法、疫情报告与处理流程图等。亚行的系列培训还有以下特色：

(1) 针对基层的实际需求及当地重点传染病的疫情控制，密切结合基层卫生工作的需要。

(2) 针对学员的自身特点及需求，通过认真调查及了解学员的背景知识、工作经验及需求的基础上设计教学活动，在教学过程中也紧紧围绕当地重点传染病及学员需求反馈结果，随时调整培训教案，还采用维吾尔语等语言教学形式为少数民族学员提供参与式培训。

(3) 针对基层传染病预防控制中最薄弱的环境提供能力建设：在社区传染病应对现状及需求评估的基础上，项目明确了加强基层卫生人员传染病应对能力建设为社区传染病预防控制工作的突破点，紧紧围绕着疫情的早期诊断、察觉、疫情报告、早期的有效控制措施与沟通、结合流行病学暴露史与基层现有的诊疗条件来快速判断与处理可能的爆发疫情等技术。

(4) 培训方法的特色：重点通过参与式培训、实际的案例分析、小组讨论及角色扮演的方法，启发学员思维、提高学员实际工作技能。

1.4 省级传染病与突发疫情应对健康教育培训与经验交流

为提高省级疾控中心及健康教育所健康教育策略与计划能力，掌握传染病突发公共卫生事件发生时开展健康教育应急预案的制定与实施步骤，此次采用参与式培训方法。这是首次为全国健康教育单位提供突发公共卫生事件应对健康传播培训，这是以往健康教育工作所很少涉及的领域，包括疫情爆发的不同阶段信息传播的步骤、核心信息、如何发展应急信息传播预案；如何与公众、媒体、政府官员及跨部门进行有效信息沟通问题，提供的一些案例式（如安徽疫苗事件）的介绍与讨论。会议结束后，各省编写了自己的突发疫情信息传播预案，作为本省今后开展突发公共卫生事件信息传播的参考，以帮助省级今后建立相应的应对策略与机制。这些工作对于健康教育领域都具有很大应用价值及开拓性。对于今后开展突发公共卫生事件信息传播及与媒体建立合作等方面都有启发意义。

1.5 问题与建议

(1) 本项目持续的实践及覆盖的范围有限，从项目中获得的有价值的经验与成果需要在更大范围内推广，并能结合到卫生部或其他部门（如教育部）今后的重点工作规划及工作中，如基层人员能力建设、学校传染病预防控制等工作。

(2) 本项目培养了一大批国家及省级参与式教学师资，希望卫生部能利用这些宝贵的人力资源，为今后扩大培训及开展相关活动提供帮助。

2. 安徽省疾病预防控制中心李群主任医师的体会

2.1 项目背景

2003 年“非典”疫情暴露出我国公共卫生体系中的诸多问题，如疾病预防控制机构业务人员的现场流行病学调查力量薄弱。“非典”疫情之后，我国各级卫生部门积极开展现场流行病学培训，以期建立一支业务扎实、经验丰富的现场流行病学人员队伍，提高突发公共卫生事件应急处置能力。

按照中国政府与亚行合作“加强中国西部地区非典型肺炎防治能力建设”赠款项目提高项目省传染病预防控制能力的要求，2004 年10 月～2005 年10 月，在云南、青海、宁夏、新疆四省(自治区)，实施了项目省地级疾病控制人员实用现场流行病学培训项目，此项目的开展，为提高项目省疾病预防控制业务骨干的现场流行病学能力，提高当地传染病爆发等突发公共卫生事件应对能力发挥了积极的作用。

2.2 项目组织和管理

该培训在卫生部贷款办的领导下，根据项目要求，首先由各省各推荐10 名候选学员，推荐时要求各省提供学员详细的个人简历，并由推荐学员提交一篇近年来所开展的现场流行病学调查与处理方面的文章，根据项目实用现场流行病学培训的要求，由有关专家根据每个人的专业背景情况确定20 名学员名单，最后由卫生部贷款办正式发文确认学员名单。

培训的前期准备及培训过程都是在特邀专家和项目管理人员共同努力下，分步骤、分阶段逐步完成，包括有关讲课专家的邀请，课程内容的设计、一个月的集中授课、课堂实习、10 个月的现场实习、资料收集及论文写作、中央级专家现场指导，最后一个月的集中交流等。在整个培训过程中，负责培训的专家和管理人员不断征求参训学员的意见和了解学员的需求，力争提高培训效果。

2.3 培训对象

本次培训学员采取单位推荐和统一筛选的方法产生，要求学员具备一定的学历、职称、工作经历和业务能力，共招收四个项目省学员20 名，每省5 名，其中男生14 名，女生6 名，副高职称11 人，中级职称6 人，初级职称3 人。

2.4 项目实施过程

本次培训项目采取理论和实践相结合的培训方式，培训时间为1 年。其中理论培训为集中培训，时间为1 个月，现场培训为分单位培训，时间为10 个月。

2004 年6 月，项目启动，确定项目省和项目实施计划。

2004 年9 月，下发项目实施通知，通过单位推荐和专家评定，确定各省参加培训学员。

2004 年10 月10 日～11 月5 日，学员在北京集中，进行为期一个月的理论培训。

2004 年11 月～2005 年10 月，学员在原工作单位进行现场实习，完成现场实习任务。项目派出专家指导组，赴各省对学员现场实习工作进行指导。

2005 年10 月9 日～13 日，在北京举办了项目总结会暨学员工作汇报会。对一年的培训工作进行了系统的回顾和总结。同时安排有关专家就现场流行病学、数据统计和分析做了专题讲座。

2.5 理论培训

2004 年10 月10 日～11 月5 日，在北京集中培训第一部分内容即理论培训，这为学员今后的培训工作打下一个较扎实的理论基础，更好的完成培训任务。理论培训共计安排了46 个单元的授课内容，内容涉及现场流行病学基础知识、现场调查和处理技术、常见突发公共卫生事件的现场调查和处理、案例分析等，具体教学内容见表1。此次理论课程的设置，参考了中国现场流行病学培训项目的核心授课内容，以训练学员实际工作能力为重点，所有授课老师都是国内专业或有教学经验的外籍教师，在教学过程中引进了国内外的经典案例，以反复培训学员现场调查思路和工作方法。通过对学员培训前和培训后的测试表明，学员在基本知识、基本方法和基本技能各个方面都有了显著提高。

表1 实用现场流行病学培训项目理论课培训内容

内　　容	单元	课时（小时）
现场流行病学基础知识	10	22
现场调查和处理技术	19	64
常见突发公共卫生事件的现场调查和处理	12	42
案例分析	4	16
现场实习	1	16
合计	46	160

为加强学员“干中学、学中干”的能力，培训期间要求学员模拟开展现场调查，自己选题，自己选择调查地点，自行开展组织实施工作，所有调查方案、调查表格、数据库、数据录入和分析，调查报告都由学员自己完成，指导老师通过讨论、提示给予一定的技术帮助。学员分为两组，完成了《北京某社区居民养狗状况及狂犬病防治知识调查》和《北京某宾馆服务人员艾滋病预防知识、态度和

行为调查》两项调查工作，虽然工作时间仅为1 周，但在较短时间浓缩了一个现场调查工作的主要部分，对学员的现场能力是一次实际演练，并强化了学员的团队合作精神。最后，通过流行病学、统计学和相关专业专家对学员的调查工作全面、系统的点评，每个学员都深有感触，都有针对性地发现了自身的不足和缺点，学员普遍反映这种在实践中学习特别有针对性，收获也最大。

2.6 现场实习

学员理论课培训结束后，按照培训要求，学员即各自返回原省份进行现场实习。为做好现场培训工作，卫生部贷款办下发了“亚行赠款项目西部四省现场流行病学培训现场实习和培训计划”，要求学员回单位后继续发扬“学中干、干中学”的宗旨，运用集中授课时所学习的理论和方法，结合自身实际工作，不断提高传染病防治及其他突发公共卫生事件现场处置能力。同时，每个学员现场实习期间，要独立完成一次传染病暴发、其他群发性卫生事件的现场调查和处理工作，或流行病学专题调查工作，并完成相应的调查报告。

为做好学员的现场实习工作，各项目省为学员指定了学术指导老师，指导本省学员的现场实习和培训工作，帮助学员安排现场工作，完成培训任务；指定一名学员作为本省学员组长，负责本省学员的联络，并帮助其他学员完成培训任务。同时，项目为每位学员固定1 名中央级专家作为指导老师，以及时提供技术支援，学员和教师之间至少每月通过电话沟通一次，报告工作进展。另每名学员在开展现场调查前、调查中和结束调查、离开现场前均要向指导老师汇报，以便更规范地完成现场调查工作。

为更好的指导学员现场实习工作，项目陆续派出指导老师，赴现场考察学员现场实习工作情况。2005 年6 月15 日～19 日，指导组赴云南工作，7 月27 日～29 日赴新疆工作，7 月6 日～11 日赴青海工作，8 月21 日～30 日赴宁夏工作。指导组在各省工作期间，听取了学员阶段工作情况报告，对学员已经完成的现场调查工作进行点评、解决学员现场工作中存在的疑难问题，并和当地项目主管部门、疾控中心主要负责人进行了沟通和交流，以取得当地更好的支持和配合。在每个省召开业务讨论会时，均邀请当地疾控中心的业务人员参加，项目也起到了良好的示范效应。

在现场实习中，各省学员共独立或合作完成了17 个调查报告，其中有关传染病疫情调查处理13 起、中毒事件处理3 起，地震灾后卫生学评价的1 起，详见表2 。

表2 学员完成现场调查情况一览表

省份	调查名称	完成学员
云南	一起椰毒假单胞菌酵米面亚种食物中毒的调查处理	刘晓强
	云南省双柏县一起感染性腹泻暴发调查分析	徐闻
	云南省曲靖市一起突发意外氯气泄漏事故的调查	何丽芳
	云南省富宁县一起婴幼儿轮状病毒腹泻暴发调查	吴强
	一起边远山区细菌性痢疾暴发的调查报告	刘宏
青海	青海省西宁市城东区一例流行性脑脊髓膜炎病例调查分析	李伟、王学文、董世存
	青海省德令哈市2 例流行性脑脊髓膜炎病例现场调查报告	罗永红
	贵德县一起流感样病例暴发调查报告	王学文、董世存
	青海省西宁市城东区东关小学腮腺炎暴发流行调查报告	董世存、王学文、李伟
	黄南州同仁县年都乎乡夏卜浪村一起麻疹暴发疫情的调查报告	王建仁、王学文、董世存
宁夏	吴忠市一起食物中毒的调查报告	张征
	平罗县宝丰镇人间皮肤炭疽暴发的调查报告	王冠梅、谭卫星、吴永军
	西夏区镇北堡昊苑村智慧小学麻疹暴发调查报告	张越明
新疆	新疆墨玉县流行性腮腺炎现场流行病学调查报告	文前
	伽师县病毒性脑膜脑炎调查分析	李朝霞
	2005 年1 ～7 月乌鲁木齐市流行性脑脊髓膜脑炎流行调查	刘清、米吉提
	乌什县英阿瓦提乡地震灾后的卫生学评价	尼加提

在每一起事件中，学员基本上可以按照现场调查步骤规范开展调查工作，对资料进行了较深入的分析，并规范撰写了调查报告，注重了对事件发生和处理过程的经验总结，使调查结果的公共卫生意义增强。

2005 年10 月9 日～13 日，在北京举办了项目总结会暨学员工作汇报会，在此次会议上，对学员一年的培训工作进行了系统的回顾和总结，每个学员报告了自己的工作情况和主要调查结果，指导老师对学员的工作情况进行了系统的点评，根据老师的评审意见，新疆学员李朝霞所做的《伽师县病毒性脑膜脑炎调查分析》获得优秀调查报告奖。同时，总结会上还应学员要求，安排有关专家就现场流行病学、数据统计和分析做了专题讲座。

2.7 项目总结

通过历时1 年的工作，亚行省级疾病控制人员实用现场流行病学培训项目圆满完成，该项目的工作受到了卫生部贷款办、亚洲开发银行、项目执行省、受聘专家和学员等各方面的一致好评。为提高云南、青海、宁夏、新疆四个项目省疾病预防控制业务骨干的现场流行病学能力，提高当地传染病爆发等突发公共卫生事件处置能力发挥了积极作用。

通过规范的学习，学员基本具备了以下能力:

具有比较清晰的现场调查工作思路;

具备设计现场调查方案、调查表的能力;

具备收集数据，整理数据，运用统计软件，分析数据的能力;

具备根据调查结果，提出防控策略和措施的能力;

具备规范撰写调查报告能力;

具备利用互联网采集检索信息的能力;

具备了“学中干，干中学”的能力。

2.8 该项目之所以得以成功实施，取决于以下几个方面

(1)　项目切入点准，符合当地培训需求

疾病预防控制机构业务人员的现场流行病学调查力量薄弱，是我国在“非典”疫情之后人力资源建设的重点之一。西部地区相比较我国发达地区，在人力资源建设方面存在诸多不足，因此，西部地区的人力资源建设工作是整体提高我国疾病预防控制系统突发公共卫生事件现场处置能力的重中之重。该项目的实施，正是抓住了当前我国疾控系统人力资源建设的关键之处，正因为如此，该项目获得各个方面的广泛支持，也为项目的成功实施打下了良好的基础。

(2)　项目设计科学、合理，操作性强

该项目借鉴了当前世界卫生组织所推荐的现场流行病学培训模式，在理论课设计和学员现场实习工作要求等方面，参考中国现场流行病学培训项目执行四年的成功经验，课程设置以提高学员实际工作能力为目的，既考虑我国公共卫生存在的普遍问题，又结合各项目省实际情况，因此，虽然集中理论培训的时间只有一个月，但培训效果明显。

在培训过程中，引用了案例教学，把一些国内外经典的案例用于教学实践，不断强化和规范学员的现场工作思路和方法，取得了事半功倍的效果。在讲授理论课同时，即注意培养学员实际工作能力，贯彻“学中干、干中学”的理念，通过要求学员开展一些小的调查，以不断训练学员调查设计、资料整理分析、报告撰写和演讲表达能力。在项目执行过程中，注意了实施的可操作性，尤其是在学员现场实习过程中，对学员的实习方法、工作内容和完成任务都有详细的要求，

同时，从业务指导、行政保证和工作条件各方面都作出了周到的安排，因此，保证学员可以按照培训要求按质按量的完成培训任务。

(3) 项目组织保障有力

此项目由卫生部贷款办直接管理，各项目省卫生厅都有专门部门和专人负责，亚行官员也从始至终参与项目管理工作，卫生部贷款办项目官员富有项目管理经验，同时亚行在项目资金上也给了充分保证，这些都为项目的良好运转提供了有力保障。

(4) 指导教师工作卓有成效

从理论培训开始，项目即聘请了国内有经验的专家和一些长期从事现场流行病学培训的外籍教师担任授课教师，保证了培训教学质量。项目聘请了固定的专业指导教师，以保证学员在遇到问题时能及时得到指导，指导教师和学员之间建立了对应的联系模式，指导老师通过电话、邮件和现场指导等方式，保持和学员经常性、及时性的联络，以掌握学员工作动态和现场实习进展情况，根据学员的需要，在学员开始一项现场工作时，可从学员调查设计、调查工作开展、资料分析和调查报告撰写等进行全程跟踪指导。指导老师卓有成效的工作是项目教学质量的重要保证。

(5) 受训学员学习认真、积极主动

来自四个项目省的学员多是各单位的业务骨干，具有一定的理论基础和工作经验，也有各自的业务专长，但多缺乏系统的现场流行病学理论知识和较全面的突发公共卫生事件应对经验，少数学员尚不能熟练掌握专业工具。尽管各学员起点不同，但都能认真学习，珍惜这一难得的学习机会，在现场实习过程中，也克服了种种困难，按质按量完成了所有的培训内容，取得了不菲的成绩，也受到了受训学员单位的好评。

总之，在各方的努力下，该项目实施顺利，圆满完成了项目计划，做到了项目管理方、合作方、用人方和学员的多方满意，实现多赢。为项目省，培训了应对突发公共卫生事件的核心力量，由于这些学员工作在疾控工作的第一线，也必将对项目四省的疾控工作带来长远的示范效应。通过该项目的实施，也为今后类似的培训计划和国际合作项目提供了成功的范例。

二、部分省级师资的体会

1. 新疆疾控中心李凡的体会

参与式教学是近一二十年来发展较快的一种教学方法，广泛的应用在基础教育、医学教育等领域，它突破了传统填鸭式教学方法，从以老师为中心过渡到以

学员为中心，充分调动学员的积极性，培养学员的创新精神，要求培训者和学员共同承担学习任务，共同承担责任，但它更加强调的是学而不是教，突出知识与实用相结合，这就带来了培训者与学员角色的变化和培训过程与方式的一系列改变，我们在亚行资助的急性传染病和急性中毒处理的培训中较为成功运用了参与式教学法，现在谈一点体会。

1.1 做好充分准备工作

为保障培训效果，准备工作十分重要。首先要确定2～4 名师资，师资最好是有丰富的现场流行病学、常见传染病和急性中毒临床诊断治疗的理论知识，同时还应有处理过突发公共卫生事件和常年从事临床诊疗的实际经验，从事过教学工作的业务骨干为好。在培训前至少一周以上通知师资授课内容、形式和要点，按要求事先准备好来源于当地的实际案例，并在培训前2 天集中备课，进一步修改教案，熟悉课程、统一培训方法。参与式培训是以教学者和学员互动式学习，需要准备一个相对宽敞的场地，便于开展活动，同时食宿安排要让学员满意，在现场实习参观时要事先联系好参观单位，准备好车辆，教材和文具要事先备齐，各种教学用具要落实，保障培训工作顺利实施。

1.2 课程设置要科学，内容要实用

我们在做二级培训时，针对新疆地域广，各地常见传染病谱不同，有针对性从基层出发，以既往实际工作中处理过的真实案例为基础，编撰教学案例。案例最好来源于实际，以培训地区既往发生案例最好，但可以有针对性地进行加工，涉及面要涵盖急性传染病或急性中毒的流行病学、临床诊断、鉴别诊断和治疗内容。设计时可以从症状入手，实验室诊断只涉及三大常规和X 光影像学诊断，供诊断参考之用。主要通过一步步流行病学调查和临床诊疗，逐步引入到主题，最终达到提高基层卫生人员应对突发公共卫生事件能力的目的。

实际授课中，我们根据鼠疫自然疫源地在新疆分部比较广的特点，将1987 年人间鼠疫真实案例改编为教学案例。在教学案例设置上，目的是通过案例分析使学员加深对疫情报告重要性的理解，熟悉报告程序，掌握诸如甲类传染病等应对突发公共卫生事件的现场流行病学调查处理程序，熟悉临床诊断和治疗原则。案例安排上主要是通过设置若干个流行病学和临床资料的背景，模拟现场实际状况，由浅入深逐步呈现给学员，让学员模拟分析。在背景一，通过真实事件强调疫情报告重要性、报告程序和突发公共卫生事件处置准备工作的要点；在背景二，我们通过案例中病人出现的临床症状和体征表现，让学员熟悉临床诊断和鉴别诊断的要点；通过背景三，让学员熟悉对疫情核实诊断的意义，现场流行病学调查思考方向和调查要点，核实诊断后，从哪几方面入手控制疫情；背景四的设置，让学员熟悉急性传染病治疗的要点，同时通过一个现场流行病学调查疏漏事

实，更进一步阐述流行病学调查在控制疫情中的重要意义；背景五，我们让学员熟悉甲类传染病控制措施，以及对措施的效果评估。整个课程既安排学习了疫情报告，也掌握了现场流行病调查处理程序和要点，同时也熟悉了急性传染病的临床诊断、鉴别诊断和治疗的注意事项。

1.3 鼓励学员积极参与，积极思考

在传统的教学过程中加入参与式教学法的元素，可以使学员的学习积极性得到提高，理论与实践联系得更加紧密，解决实际问题的能力得到加强。我们在实际培训工作中以小组讨论为主，把学员按从事临床、流行病专业，以及是否来自基层乡卫生院或县疾控中心，交叉分在不同组中，使涉及临床和流行病学的问题都能有来自不同层次不同专业的人参与讨论。授课中针对实际工作需要，把工作中常遇到的问题穿插在案例中，尽可能采用多种激励手段鼓励所有的学员积极投入到教学中，形成以学员为中心，以解决问题为目标的启发式学习模式，学会引导学员以当事人身份去思考问题，以实际工作出发提出解决办法，并通过大家讨论和分享，促进参与达成一种趋同的意见。

在案例分析教学时，要注意针对不同案例，既要讲授个案的特点，还要强调急性传染病或中毒在流行病学、临床诊疗上的共性，鼓励学员运用已学习过的流行病学和临床知识对个案例进行分析，加深对突发公共卫生事件流行病学调查处理和临床诊疗的基本原则和方法的掌握，并能在实际工作熟练应用。为反复加深对课程理解，同一内容在安排教师为主引导的案例以外，还要有目的设计一些内容相近案例交给学员自己讨论，来强化学员对所学的知识运用。

1.4 注意观察，积极调动学员的主观能动性

在参与式教学中，教学者要从传统教学中以自己为中心转变到以学员为中心，以解决问题为核心。教学者是一个组织者和引导者，与培训对象是平等、互动、相互配合和协作，需要很好的控制课堂局面，学会引导和鼓动学员参与到教学活动中，要善于观察每个学员的动态，要从学员的一言一行中观察学员对内容的理解程度，要知道谁是课堂中积极参与者，要多创造一些机会，鼓励那些不愿意参与的人参与到学习中。在培训中可以利用一些小技巧提高参与性，如告诉学员，对每个人的答案无论对错均没有指责，强调只有更好地解决问题的方法；对不爱发言的人，可以有意识鼓励或直接让其发言。同时也可利用一些角色演练来增强学员参与意识。实际培训中，曾利用模拟电话报告疫情，看在接听和初步核实疫情报告真伪时存在的问题，增加学员的参与性。

1.5 形式多样，提高学员学习兴趣和参与性

好的参与式教学，可以让学员最大程度参与到学习中，学员在互动中可以不断地表达自己的观点和想法，更大程度与他人分享知识、经验和情感。自身的参

与使学员更专注，而课程安排上强调实用性，会更增强学员学有所用的感受，提高学习效率，利用一些小组或集体讨论，又可增加团队协作精神。为此我们在培训中除在内容上注意科学性和实用性以外，在形式上也进行了要求，根据所讲授内容特点，安排适当的参与教学方法，如，头脑风暴、小组讨论或集体讨论、小讲座、角色扮演、案例分析、现场参观等，为活跃气氛、消除疲劳，还可以在课中间穿插一些热身游戏等。

参与式教学培训时，教学者要善于引导学员参与，学会收集总结各类观点，加以总结归纳，要注意强调不要随意打断别人发言、允许不同观点的存在，采取非评判态度，不要批评，可以商讨，逐步达成一致意见；在提问时尽量使用带有“为什么”、“怎么样”等语句的开放式问题来提问；案例分析时，要鼓励用所学知识分析问题，通过讨论和阐述各自的观点，鼓励大家共同商讨出解决问题的办法，这样可增加培训的趣味性，提高培训效果。做好评估工作，不断提高教学质量：在每次培训结束后，通过笔试掌握学员在培训后对授课知识和技能掌握情况。为了解学员对培训课程时间、场地、组织安排、课程内容、各授课老师授课技巧的意见或建议，可以通过评估问卷来了解学员的反映，为改进今后培训提供依据。

1.6 通过参与亚行培训浅析新疆传染病预防与控制存在的问题和对策

新疆是一个传染病高发且多民族聚集的地区，人口1 800 余万。2005 年传染病发病率在523/10 万，病死率为24.4/ 万，肺结核237/10 万、乙肝126/10 万、痢疾68/10 万、甲肝31/10 万、淋病15/10 万，占发病总数的91.00%。传染病一直是威胁新疆各族人民群众主要的公共卫生问题，也是新疆各民族群众因病返贫、因病致贫的重要原因之一。新疆历史上曾发生过多起重大传染病疫情，如1972 年和田地区的鼠疫流行、1986～1988 年新疆非甲非乙型肝炎病人的流行，累积发病人数超过30 万人，传染病已成为制约当地经济发展的主要因素之一。各种急性传染病和中毒事件时有发生，而基层在应对突发公共卫生事件能力上十分薄弱，一旦发生重大突发公共卫生事件，极易造成传染病或其他事件扩散，给人民生命及财产带来重大的损失。通过近两年来参加亚行基层培训工作，通过在培训中与基层工作人员接触和实地考察，使自己对新疆传染病预防与控制可能存在的限制因素有了进一步了解，现谈一点点感受：

1.6.1 投入不足

自“非典”暴发以后，中央和地方政府均增加了在传染病预防与控制上的投入，但与实际需要尚存在一定差距，如目前投入较多的是鼠疫、霍乱、结核、艾滋病、计划免疫；而其他一些传染病投入很少，如炭疽、流脑、新疆出血热、流感、寄生虫、病毒性肝炎等已多年没有进行投入，没有建立有效、灵敏的监测网

络，也缺乏建立快速有效的实验室诊断手段，同时缺乏应急处理储备；一旦发生该类传染病疫情，会影响及时有效的疫情控制，可能造成疫情的播散，给人民群众带来很大的危害。政府需要在增加投入的同时，多渠道筹资，充分利用国际项目的支持。

1.6.2 急性传染病疫情是经常威胁新疆各族人民群众的公共卫生事件

近年来每年发生食物中毒事件多达几十起，各种急性传染病突发疫情时有发生，2005 年新疆境内就发生禽间禽流感12 起。一些新发传染病对新疆威胁也十分严峻，政府及各级卫生行政部门要提高防范意识，减少突发公共卫生事件给社会带来的危害和损失，把传染病预防纳入到当地公共卫生重要工作之一，切实加以落实，各级卫生部门还必须具备有应对突发公共卫生事件能力。

1.6.3 缺乏训练有素的应对传染病疫情的工作人员

(1) 从2003 年的部分地区调查情况显示，目前我区疾病控制机构从事传染病防治的专业人员本科毕业学生只占到13%左右，其中高级职称只占7%左右、中级职称占33%左右。

(2) 在2004 年以前新疆未举办过应对突发公共卫生应急处理培训班，只有2004 年12 月举办过自治区级突发公共卫生事件地州县级应急培训。但县一级没有覆盖到，县及乡级卫生人员很少有机会接受自治区级培训，在做调查时了解到县疾控中心医务人员每年能接受到自治区级培训的不超过15%，乡级卫生人员低于5%，知识主要来源于学校学习到的专业知识和工作中自学的，其知识更新非常慢，远远不能适应工作需要。

(3) 我们目前利用亚行资金培训只覆盖了全区96 个县的226 个乡，而全区有1024 个乡，覆盖率只有22%左右。从全区实际需要来看，目前培训还远没有满足实际需要，今后还需要通过走出去、请进来，多方筹资、利用多种途径加大此方面培训工作的力度。

1.6.4 培训内容和方法上更加适应防病工作实际需要

(1) 从既往传染病培训来看，在内容设置上以理论为主，讲授内容往往与实际工作需要脱节，培训达不到应有的效果，培训的内容不能转变为实际解决办法，对提高实际操作能力和解决实际问题缺乏指导意义。

(2) 既往培训方法都是以满堂灌述法，受培人员往往缺乏主动参与意识，在课堂上只关注教师讲授的内容，很少能把自己融入到课堂的内容中，学员很少会跟着教师主动思考，学员主观能动性不能很好调动起来，学员对讲授的内容理解和实际运用联系程度远低于参与式教学方法。

(3) 传统培训课程设置是教师根据培训需要设置的，没有考虑到基层卫生人员实际工作需要，也没有考虑到基层卫生人员在知识和技能上的不足之处，没有

做到需要什么、授什么，因此教授内容与实际需要相脱节。

(4)　根据需要调整目前培训内容，使培训内容既要考虑到理论也要兼顾实际操作，不断提高培训效果，形成一套适合我国基层卫生人员的培训大纲。

1.6.5 缺乏先进的疾病防治设备

(1)　目前全自治区各级疾病控制机构尚未有一家P3 级生物实验室，影响急性传染病或新发传染病病原确定，直接影响到疫情诊断。同时各级疾病控制机构缺少带负压环境的P2 级生物安全柜，致使很多传染病快速诊断不能开展，如禽流感、“非典”、炭疽等传染病，直接影响到传染病疫情的快速诊断。

(2)　目前各级疾病控制机构缺少先进的消毒设备，很多疾病控制机构缺少专业空气消毒设备，同时也缺少消毒后快速判断消毒效果的设备，一旦发生疫情会影响消灭病原微生物及疫情控制。

需要在争取政府投入同时，多方面筹资，不断改进设备落后的局面。

1.6.6 缺少资料分析利用能力人员

缺少熟悉应用疫情调查分析手段的人员。很多基层疾病控制机构，特别是南疆地区疾控机构缺乏熟悉流行病学和统计学的传染病防治人员；在发生疫情或突发公共卫生事件时，缺乏设计爆发疫情调查方案、调查问卷的专业人员；同时也缺少分析利用调查资料人员，影响对疫情做出准确综合判断。在今后培训工作中需要考虑举办一个暴发疫情调查方案设计和资料分析利用培训班，以提高基层疾病控制中心应对突发传染病疫情的综合处置能力。

从自治区来看，85％以上的县级，70％以上的地级疾病控制机构缺少熟练使用疫情分析处理软件能力人员，时常遇到基层人员在做各种传染病及其他防病工作时不能采用软件分析调查数据，影响到疫情综合分析判断能力。为此需要适时安排一些数据库建立、数据分析的培训班，特别是举办EPIDAT 数据库建立，EPIINFO 软件分析培训班，以提高基层数据分析处理能力。

2.　云南思茅卫校李跃斌的体会

对为期四天的成年人专业卫生人员的培训，参与式培训是一个较理想的模式。以往采取讲大课的形式，学员在培训过程中容易犯困，而这次为参与式培训，学员上课不敢旷课，也不敢打瞌睡，培训时也不能做与课堂无关的事。

参与式培训方法对师资的要求也十分严格。教师不但须具备扎实的理论知识和丰富的实践经验，也须仔细理解参与式教学方法以及里面应用的各种方法。教师在授课之前要认真备课，上课时结合一些小游戏，才能在课堂中更好的调动学员的积极性，活跃课堂气氛。亚行编写的培训教案，讲述了培训的组织、与学员交流的技巧，热身游戏等方面。所以教师在授课前要做到心中有数，胸有成竹。

亚行项目对基层卫生人员的培训很大的一个特点是用案例来引导参与式培训。通过案例这个平台，让学员分析讨论，增进交流，从中学习、应用知识以及提高处理问题的技能。因此，教师一定要充分准备好案例，包括案例的背景资料、需要讨论的问题、参考答案、小讲课的内容、热身的游戏等。其次，案例最好选择真实的，真实的案例比虚拟的案例更能提供参与式培训的氛围。再者，案例的背景资料和问题要有联系，而且不要一次性展示给学员。最后，学员在回答完问题后，教师要对学员做出的回答给予点评并提供参考答案。通常，亚行项目培训班以一个上午或者下午为教学单元，但学员在一个单元中能接受的知识量是有限的，因此不要传授太多具体的内容。而应该以真实案例引出的问题为切入点组织教学，不要贪多贪全，让学员在参与式的教学中学到知识技能、体会到思维方法才是理想的模式。

如果教师传授的知识和学员的经验相联系，并建立在他们已有知识基础上，学习的效果就会更好。因此在开始上课时一定要提出一些问题以便了解学员对所讲题目的感受和掌握情况。只有教学内容与学员想知道的知识有关联，讲课方法有趣，而且不拘泥于一种方法，学员才会对所讲的内容产生兴趣。

作为一个教员，教学时首先要打破僵局，活跃教学氛围。教员介绍自己可以幽默些，然后让学员介绍自己或者自己的家乡或是身边的学员等。教员要衣着整洁、自信，精神面貌佳，给学员良好的形象，让学员看到后能信任你，当然最重要的是教师要有激情。

参加该培训班的学员是来自县级和乡卫生院的卫生专业人员，他们的文化层次相对较低，但却是我们传染病防治的网底，经常面对的是疫情处理的现场并担负着突发公共卫生事件的及时上报任务，在日常工作中也积累了不少宝贵的实践经验。因此，在参与式教学中，会出现不同学员对一些问题的看法不一、发言跑题、发言时间过长等现象。而教师该如何控制局面，鼓励学员参与以及处理意外情况、处理困境的能力，这些都是需要锻炼和不断提高的。

在参与式的教学中，很重要的一点就是要调动学员的积极性和参与性，所以教师应该组织好教学，不能像一盘散沙没有主题。培训结束时应该让学员做到心中有数。教学培训应该坚持以学员为主体，教师为主导的原则，对基层卫生人员要适当增加“小讲课”的培训方法。

作为该项目的一位培训师资，参加该项目的整个过程使我不仅在授课经验方面有了提高，而且也进一步了解了各地传染病的情况和基层卫生人员对知识的掌握情况，可以说是获益匪浅。希望在今后的工作中，能有更多的机会参与到类似的项目中。

3. 云南红河州医院许云亚的体会

我曾两次参加过亚行项目的师资培训，第一次是在曲靖举办的师资培训班，这是我第一次接触到参与式培训这种方法，对此产生了兴趣，但因为是初次接触，对参与式培训这种方法没有完全掌握和吸收。第二次在澄江的师资培训，我深刻体会到参与式培训在该项目中的目的和意义，以及如何运用于课堂中，学到了参与式培训的一些技巧，譬如如何更好地把案例分析、角色扮演、头脑风暴、小组讨论、小讲课等运用于课堂中。正如王若涛教授所说的，参与式培训就是要让学员“听得懂，记得住，会运用”，这也成为了我在今后授课过程中的一个方向。

在参加完师资培训班之后，我曾多次担当该项目培训的师资，到过弥勒、文山、西双版纳、怒江、思茅、曲靖等地方，授课内容涉及鼠疫、霍乱、痢疾、伤寒、流脑、乙脑、麻疹等方面。每次培训班上，我都全程参与并与学员展开讨论和交流。

(1) 进一步认识到临床医生与疾病预防控制部门的密切合作，才能更好地控制和处理传染病和突发公共卫生事件的暴发。作为一名临床医生，在参加师资培训和县乡级人员的培训过程中，临床方面无太多的提高，但我深刻体会到传染病防治与疾病预防控制部门密切相关，以及临床医生如何与疾病预防控制部门合作。同时对进一步了解疫情发生，如何进行现场处置，疫情上报等方面的知识都有了提高，这些是一个学习和提高的机会。

(2) 教学方法新颖，灵活性强，更适于县乡级卫生人员。基层卫生人员的医学知识背景参差不齐，在工作过程中面对和需要解决的都是一些实际问题，例如如何处理和治疗病人，如何上报疫情，如何进行现场流调。而该项目县乡级培训班，正是采用了参与式教学，运用案例分析等方法，把一些最基本、最实用的知识传授给学员，让学员能够记住并运用于今后的工作中。

(3) 课堂气氛轻松。在培训过程中，第一天的破冰游戏让学员对彼此有了一个初步了解，教师再辅以一些小游戏、笑话等内容，让学员在学习过程中能够与老师积极交流，而不需要有什么心理负担，从而更好地和老师配合，并学以致用。

在今后的工作中，希望能加强与疾病预防控制部门的合作和交流，能有更多的项目和资金来支持基层卫生人员的培训工作，更好地防治传染病。

三、部分流行病学培训班学员体会

1. 云南省疾控中心刘晓强的体会

该项目的实施，在技术援助方面对我省的基层卫生人员以及传染病的防治提

供了一次宝贵的机会。相关设备的配备，《常见传染病与急性中毒预防和控制手册》、《图谱》、《基层医务人员急性传染病诊断思路与处理流程图》等相关资料的开发和编写，更便于基层卫生人员日常工作中参考和自学。

我参加过两次省地级师资培训，培训班上请来了王若涛、陈志海等资深专家，为我们做了参与式教学方法的培训和指导。来参加培训的人员一般都具有本科学历或者是中高级职称，有的是来自医院或是疾控机构的专家，学员的文化素质比较高，所以在师资培训中传授参与式教学方法和思维方式比传授知识更重要，学员可以自己组织一个问题或是以亲身处理过的案例到课堂上与其他学员进行讨论。

此外，我还参加了在北京举办的省、地级疾控人员参加的高层次现场流行病学培训活动，进行了为期一个月的学习。在学习过程中，我再一次更深层次地学习了现场流行病学方面的相关知识，这也为我今后在疫情现场处置过程中以及扩展培训中提供了更多值得借鉴和学习的经验和知识。

之后，我们参加学习的五个学员做了培训后的现场实习，包括现场流调报告和案例分析，并把成绩汇报到最后的培训班总结会上。我们觉得这次培训对自己提高很大，无论是在理论方面还是对实践技能操作方面，都有了较大的进步。

总之，该项目无论是对自己还是基层的卫生人员都有较大的帮助和提高。希望以后还能有更多的机会参加这样的项目和培训。

2. 新疆疾控中心米吉提的体会

2004 年10 月～2005 年10 月参加了由亚行赠款项目支持，在北京和项目省现场举办的实用现场流行病学培训班，使我掌握了工作18 年以来从未学到过的参与式教学方法。在学习的实习期间，除了完成一起突发事件处理工作外，根据项目要求，在新疆南北东疆举办了参与式教学培训班，本人主要承担喀什地区、塔城地区、阿克苏地区对维吾尔族学员的参与式教学任务，我认为与以前的传统教学不同，新疆学员能歌善舞，课堂气氛活跃，容易沟通，无论是授课的老师与学员之间，还是学员互相之间全堂课都能相互询问、解答，以达到提出问题、分析问题、解决问题的目的。从而将学习的内容学懂弄通、融会贯通，使学员们很好地应用于实际工作之中。本人通过承担对少数民族地区的参与式教学任务以后，感触较深，从以下几点谈谈自己的体会:

2.1 老师的启发性很强

无论是临床师资，还是流调师资，他（她）们都是一些专家学者，具有很高的学识水平和教学经验。他（她）们在参与式教学中所提的问题具有画龙点睛的作用，能开阔学员的思路和视野，老师只要一点学员就懂，有了问题，就不怕找

不到解决的好办法。所以，在老师们的启发下，学员们相互补充，畅所欲言，达到预期目的。本人通过讲课体会到：学员越少效果越好，老师与学员的距离越近效果越好。老师的目光如果偏向于某一组效果并不理想，无论在老师引导、启发过程中，还是在小讲课时，老师的目光应扫向每个学员，这样能促使学员的快速思考反应能力。另外，学员年龄越大参与率越低。

2.2 切入点准确合适

新疆农村的水源、卫生状况虽然有所改善，但夏季伤寒、痢疾等肠道传染病、食物中毒和秋冬季流脑、流感、甲、戊型肝炎依然居高不下，特别是结核病、乙型肝炎发病率在上升。在此之前我认为新疆没有举办过类似的培训，由于新疆基层卫生人员素质、知识水平、实验室诊断等方面的种种原因，使传染病的诊断、预防、控制等方面一直存在许多问题。而本次亚行和卫生部支持下的此项目，就是针对培养和提高传染病诊断、治疗、报告、控制以及健康教育等方面的水平和能力开展的，是新疆基层卫生人员传染病防治工作全面提升的一个开始。

2.3 形式多样，能提高学员兴趣

利用少数民族语言进行参与式教学中，学员在互动式教学中不断用本民族语言表达自己的观点和想法，和其他学员分享经验、分享知识、分享情感。为了提高学习效率，利用小讲课、小组讨论、集体讨论、头脑风暴、角色扮演、案例分析等教学方式互相学习，为了活跃气氛、消除疲劳，在课间发挥学员的业余特长，穿插笑话、民族舞蹈、民族歌曲、游戏等节目，不仅提高了业务水平，而且加深了老师、学员相互间的感情。

2.4 方法得当、灵活性很强

参与式教学能够加强学员的内在激励，有利于提高学员的学习自觉性和积极性。这几次培训班是我见过的培训效果最好的一个，除了师资力量较强之外，方法非常重要。让学员选择案例和题目，提前备课，第二天学生扮演老师的角色，自己动手动脑、自己想象，这样学生通过自己的智慧得出的结论，要比老师单纯的灌输给学生效果好得多。参与式教学或学习无论从教学的组织还是课程的设置上，无论从讲课内容或讲课方法，无不体现着以人为本的思想和科学理念。因此，教学的内容和方法非常灵活多样。可以说是学、教、问、思、论、看为一体，动脑、动手、动嘴相结合。这种方法适合于不同水平的学员，所有参加人员都有很大收获。

2.5 课前准备工作很重要

为提高培训效果，培训前的准备工作非常重要，特别是选择具有丰富知识和教学经验的、处理过突发事件的师资，并在开班前一周通知老师，以便做好备课工作，培训前2 天集中备课，熟悉课程安排，统一培训方法。另外准备培训场

所，安排好学员食宿，准备好教材和车辆，以保障培训工作的顺利实施。

2.6 值得提出的几点建议

(1) 要选择具有教学经验、理论知识丰富、多次处理过突发公共卫生事件的师资。欠缺上述任何一项能力都将会影响培训效果。

(2) 参与式教学要采取多种方法、灵活性要强，让学生自己动手、自己动脑，老师要适当引导，不能不管不问，放任自流。

(3) 老师要及时总结，抓住学生急于鉴别自己探索结果的心理，立即回到主导地位中去剖析错漏，归纳、推导出正确的结论。

3. 新疆疾控中心刘清

2004 年10 月～2005 年10 月本人参加了由亚行赠款项目支持的现场流行病学培训，经过为期1 个月的理论学习和10 个多月的现场实践，本人在突发事件现场应急处理、疫情调查和分析、调查报告的撰写等方面的能力有了长足的进步，对现场流行病学本身内涵和重要意义有了更深入的理解，对日常工作帮助也很大，真是受益匪浅。下面针对一个实际案例谈一谈自己这一方面的体会。

案例

2005 年10 月18 日下午18 时新疆自治区疾控中心接到和田地区疾控中心报告，和田地区墨玉县出现以发热、头痛、恶心、瘀点、瘀斑以及神志不清为主要症状的病例，县医院及地区医院诊断为疑似流脑病人。自治区卫生厅对此事非常重视，立即委派由自治区人民医院传染病科及自治区疾控中心业务人员组成的疫情处理组赴现场处理疫情。经调查，截至目前，共报告疑似流脑病例15 例，死亡3 例。疫情发生后，当地政府、医疗和疾控中心采取了相应的措施力求控制疫情蔓延。

3.1 疫情处理能力有所提高

以前，在处理一些突发事件时，往往感到手足无措，没有一定的条理性，思路不是十分清晰。经过培训以后，掌握了基本的现场流行病学疫情调查处理的技能和原则，分析处理能力明显提高。比如在奔赴现场以前能够有针对性地复习本次疑似流脑疫情发生地和田地区墨玉县既往流脑疫情发病水平、人群流脑菌苗接种情况等基本信息；到达现场以后能够通过探视病人、询问接诊医生和当地流行病学调查人员、查阅病例记录和个案调查表以及听取汇报等多种渠道快速掌握疫情信息，并做出初步核实和判断；根据边调查边处理原则及已掌握的信息，迅速采取对病人隔离治疗、密切接触者医学观察、教室和宿舍通风消毒等措施控制疫情的蔓延；经过进一步的深入调查和病原学检测，核实了疫情的性质，发现疫情局限于县一中，是学校发生的一起A 群流脑暴发疫情。该县所有学校学生近3 年

未接种过A群流脑疫苗，故提出并监督县疾控中心对县城所有中学在校舍学生近15 000人实施了A群流脑疫情应急接种。在此过程撰写了流脑疫情初步调查、处理报告、疫情调查和处理进展报告和最后的总结报告，整个处理过程有条不紊，较为清晰。

3.2 提高了现场宣传和培训的意识

既往在处理疫情时，往往会忽视对当地调查对象和业务工作人员的现场健康宣教和培训。本次疫情处理中，我们用了1个多小时为县城学校在校学生和家长讲解了流脑的一些基本知识和个人防护的技能，用了半天时间对县疾控和医院的业务人员进行了流脑知识、疫情调查和处理技能的培训。经过宣传和培训，解除了群众的恐慌情绪，提高了业务人员的应急能力。

3.3 重视与当地领导的沟通

在疫情处理中，我们及时向当地政府通报了疫情状况，疫情发展的可能趋势以及所采取的应急措施，使当地政府在现场会上当即表态由县政府出钱为当地在校学生接种A+C流脑菌苗。

4. 青海疾控中心王学文的体会

2004年10月青海省选派5人参加了亚行和卫生部贷款办举办的现场流行病学培训班，进行了为期一个月的集中培训，通过系统的学习掌握了现场流行病学的基本知识和方法应用，在我省各类突发疫情中充分体现了现场流行病学培训的效果。现以我省2005年刚察县候鸟中发生高致病性禽流感实践工作为例进行介绍。

2005年5月通过我省农林部门的发现和国家的认可，确认了刚察县候鸟高致病性禽流感疫情为H5N1流感病毒，省政府立即召开紧急会议向有关部门通报了情况，我省卫生厅立即召集相关人员进行研究部署，安排我单位迅速开展人间疫情的监测工作。

若在以往，我们可能会采取下发文件、通知的方式要求各地进行工作。但由于我们参加了现场流行病学学习，知道现场的重要性，所以直接赶到现场，对现场进行了初步了解后，才根据实际情况进行现场要求和指导工作。在以往工作中常看到什么问题解决什么问题，没有系统的思路和工作计划。本次充分应用了流行病学的观察性研究、数学模型研究、实验室研究的方法，从目的入手，制订计划，设定方法等。

由于疫情仅仅发生在候鸟当中，尚没有波及人类，我们避免了以往的等待可疑病例的做法，采取了主动积极的态度和行动，主要进行了以下工作:

(1) 收集已有的资料确定发生的范围; (2) 根据人禽流感的主要特征，建立

病例定义，实施监测，识别所有受威胁的人群；(3) 了解候鸟的主要类型和来源；(4) 候鸟的停留时间、主要去向等；(5) 获取尽可能多的与病原传播来源有关的环境样本等基础资料；(6) 在调查中应特别注意流感样病例、不明原因肺炎病例等的实验室检验；(7) 组织应急队伍，包括流行病学专家、临床医生、实验室工作人员和其他卫生人员；(8) 取得当地政府部门和卫生行政部门的支持。

开展主动监测，对所有可能接触人群不断地收集发生疾病的动态分布资料，并将有关信息及时传达给有关的单位和个人，以便采取适宜的干预措施。对密切接触人群实施医学观察，连续监测直至最长潜伏期，进一步观察措施实施后的疫情变化。

同时采取了现场评价工作，以往评价工作仅仅在工作全部结束后进行，而本次的监测工作评价在活动进行的各个阶段进行，以便及时总结经验与教训，为切实提高该项活动的质量服务。尽管可能已经采取很多针对性的控制措施，也可能已经包括了控制上述危险因素的措施，但应该重新评价已采取的措施是否完全到位，有无需要补救的地方。

本次禽流感疫情在我省感染规模较大，时间较长（由于候鸟迁徙时间在10月左右），但在我省没有引起人间的疫情，这与正确的决策和工作方法密切相关。

在这些实际的应用工作中，无一不是和我们掌握的公共卫生学知识密切相关。因此，在此又一次提醒我们的疾控工作人员要加强流行病学的知识，要把学习流行病学作为今后工作的基础和重点。同时也提示我们，流行病学的学习不在于知识的高深，而在于真正能够把学到的知识充分应用于实践当中。

流行病学是一门方法学，是对疾病进行研究的学科，因此学习流行病学其实就是学习流行病学的这些研究方法。学好了这些技术方法，就能以不变应万变，遇事就能处变不惊。

四、部分县乡级卫生工作人员对项目培训的体会

1. 宁夏固原市疾控中心赵连飞的体会

2004～2005 年“亚行项目”基层卫生人员常见传染病与急性中毒培训班在固原市举办了三期，共培训基层卫生人员123 人。学员主要来自县级疾控中心和各乡镇卫生院从事传染病防治人员。通过三期培训班，培训覆盖全市所有乡镇卫生院。为了解培训效果，固原市疾控中心对学员常见传染病与急性中毒防治能力是否提高做了一次调查。通过调查了解，培训后学员的工作能力有显著提高。主要表现在：

1.1 掌握了一种新的培训方法——参与式教学

县、乡级从事传染病与急性中毒防治的工作人员大部分承担着对乡、村级卫

生服务人员的培训任务，他们普遍认为在以前的培训工作中均采取讲大课形式，效果通常是很不理想，学员上课注意力不集中，打瞌睡，晚上喝酒打牌，新讲的知识容易遗忘，应用与实践的能力差。他们在参加“亚行项目”培训后，根据老师所讲的参与式教学案例，结合本县、本乡镇往年发生的案例，编写教学案例，采用参与式培训方法，首先讲解学员熟悉案例，案例的背景材料一部分一部分出现，让学员有一种吊胃口的感觉，学员发言、讨论积极，学习兴趣大增，常常在下课后、饭桌上和宿舍中还在进行讨论。掌握一种新的培训方法并应用实践，这是培训成功的一个主要表现。

1.2 传染病报告与管理——意识增强

“亚行项目”培训过程中，现场模拟填写传染病报告卡，通过老师点评，学员对传染病报告程序、时限、传染病卡的填写质量均明显提高，对及时、准确报告传染病的意义有了更进一步认识。全市传染病诊断到报告时间由2003年平均3.8天提高到1.3天，传染病漏报率降到2%以下，这是“亚行项目”培训取得的又一成果。

1.3 实践工作能力——显著提高

在参与式培训中，教师向学员展示案例背景，提出讨论问题：假如你接诊这个病人，结合现有的背景材料，你首先要考虑哪些病？为什么？你还要补充询问哪些病史？为什么？是否还要做哪些辅助检查？确诊为传染病后如何报告？疾控中心接到报告后应当及时做什么？如何进行现场流行病学调查？如何对疫情及时有效地控制等问题。通过对上述问题的讨论、点评和讲解，学员们由原来仅凭症状就做出诊断，掌握了一种新的疾病诊断模式：症状入手→流行病学史→临床诊断→进一步诊断（实验室结果）。

案例

1：我市2003年发生一例皮肤炭疽疫情。病人就诊于某乡镇卫生院，被误诊为普通细菌感染，致使这起因接触病畜而发生的皮肤炭疽疫情未能及时处理，同时畜间炭疽疫情也未得到及时控制，造成了较大经济损失。

2：2005年6月我市又发生一例皮肤炭疽，病人就诊与某乡镇卫生院，接诊医师曾参加过“亚行项目”培训，他从典型的临床表现和询问流行病学史初步诊断为皮肤炭疽，立即将病人隔离治疗，并及时向县疾控中心电话报告了疫情，县疾控中心及时向畜牧部门通报疫情信息，并及时到疫区进行调查处理，使人间、畜间疫情得到了及时处理，有效地控制了疫情。通过亚行项目培训，使学员们强化和掌握了一整套临床思维和流行病学调查处理方法，这是亚行项目培训取得的巨大成果。

2. 宁夏平罗县卫生防疫站姜兆丽的体会

2004 年8 月，石嘴山市卫生局在我县举办了亚洲赠款项目传染病知识培训班。参加培训的人员有石嘴山市辖区各县区疾控中心专业人员，各乡镇防疫专干、医生。主要培训了传染病监测、疫情报告、流行病学调查、食物中毒和常见传染病的诊断处理等。学员们经过系统的学习后，将所学知识运用在实际工作中，提高了传染病的处置能力，达到了较好的效果。

2.1 培训前的知识水平

(1) 各乡卫生院的防疫人员、医生缺乏流行病学调查知识，对常见传染病的诊断、处理无规范、系统的方法，仅仅停留在对症治疗的阶段，缺乏疫情报告、现场控制、收集资料等意识。

(2) 县疾控中心专业人员传染病及急性中毒的诊断思路不太清晰，培训方法单一。

2.2 培训后的工作能力

培训后，经过一年多的实践操作，县疾控中心的专业人员、各乡医生和防疫专干在工作中对传染病的诊断、处理能力均有了明显的提高，从报告、诊断、处理均能严格按照程序进行，有效快速地处理疫情。

今年4 月份，我县平罗中学暴发麻疹，发现病例40 多例，分布在各年级。平罗中学校址在县城，共有学生2 000 多名，而县城还有其他中学二所、小学三所、幼儿园三所，一旦疫情蔓延，后果不堪设想。疫情发生后，县疾控中心立即采取了措施，按照疫情现场调查与处理的要求，追踪传染源，隔离治疗病人，对县城内的中心学生应急接种麻疹疫苗，加强了各学校的晨检、消毒制度。由于措施得力，及时地控制了疫情。

7 月份，我县的宝丰镇医生发现宝丰3 队村民出现不明原因皮肤病，立即向防疫站进行了报告。接到疫情报告后，我们立即组织人员进行调查。调查人员运用“四步诊断法”确定了调查方向。经过详细的流行病学调查，确定为人间皮肤炭疽，主要的传播途径是村民剥食了病死牛羊肉引起的。通过采取有效措施，及时控制了疫情。

这两起疫情是理论知识运用到实践的典范。通过培训班系统的学习，学员们掌握了常见传染病的诊断方法、调查处理方法，准确地做出判断，及时报告，采取了行之有效的控制措施，控制了疫情。

2.3 培训取得的效果

(1) 提高了学员的诊断能力。学员们通过培训，学到了传染病与急性中毒的诊断思路，并通过实践验证后，提高了诊断和鉴别诊断能力。

(2) 提高了学员的处置能力。培训中教会了学员调查方法，在调查时应注意

收集的资料，怎样开始调查，找出问题的主要因素等。

(3)　提高了学员的培训能力。培训改变了以往满堂灌的教学方法，利用讲小课的形式，生动活泼，充分调动了学员的积极性和参与意识。

3.　宁夏西夏区疾控中心薛晓红的体会

2004 年我中心正式接管西夏区的疾病控制工作，我具体负责传染病的管理工作，虽然在学校学习过各种传染病诊治知识，但在第一次独立管理传染病的报告、疫情处理及控制工作实际工作中，还是感到力不从心。通过亚行项目的传染病防治与急性中毒防治培训后，自己的业务能力明显提高。

2005 年7 月我参加了“亚行赠款项目县乡级卫生人员传染病与急性中毒防治培训班”，亚行项目培训采用参与式、讨论式的互动学习并且安排实习以巩固学习效果，感觉学习气氛轻松愉快，效果好。

大家聚集一堂分别讲述自己对一项疫情的处理意见，老师给以综合分析、归纳，使知识条理化、操作规范化。这样，知道自己错在那里，为什么出错，怎样做才是正确的。对传染病的报告、处理及控制方法熟悉了，提高了自己现场流行病学处理的实际工作能力。例如去年辖区有所学校发生水痘，我只是按照所学的知识，电话告知学校应消毒教室，隔离患病的学生，没有到现场进行调查和具体指导，患者从2～3 名学生发展成10 名学生。最后虽然控制了疫情，但是我的处理过程明显地存在问题。在学习班上大家和老师对我的处理分别提出许多质疑，帮助我分析了情况，提出了正确的处理意见，使我受益匪浅。

例如2005 年10 月份，在接到辖区芦花乡卫生院先后报告的2 例腮腺炎传染病后，我高度重视，立即电话核实，经确认后立即与同事到达2 名学生所在的学校进行现场流行病学调查，调查2 名学生是否在同班，所在班级、年级有无其他相同发病的情况。根据腮腺炎的潜伏期、传播途径向学校负责人讲解有关消毒隔离的知识，具体告知学校如何进行预防，要求学校密切观察，发现发热的学生，立即到医院核实诊断，确诊的学生应在家隔离到腮腺肿胀消失。同时告知学生可以口服板蓝根进行预防。经过上述的现场流行病学的处理。潜伏期后没有后续病例的发病。成功的控制了腮腺炎在该学校的爆发。

学习班还介绍了许多新发生传染病的知识。虽然，有些传染病目前在宁夏甚至我国还没有发生，但我们了解了这些知识，对其提高了警惕性，如疯牛病、禽流感等，一旦有病人出现相似症状会及时向上级部门报告，及时排除或诊断，防止疫情蔓延。

学习班发的教材和图谱也非常的实用，现在我将这两本书放在办公桌上作为指导实践的工具书经常翻看。只有不断学习，不断给自己“充电”，才能提高自

己的业务，才能更好地工作。这就是参加亚行项目学习传染病防治有关知识的心得，真希望这类的学习班在我们基层多办。

4. 宁夏中宁县宁安镇防保站李琴的体会

2005 年7 月5 日～9 日，我参加了“亚行赠款县、乡级两级传染病防治与中毒急救培训班”。通过四天的学习和实习，提高了思想认识，加深了记忆，牢固掌握了甲、乙、丙类传染病的分类、报告内容、报告程序及报告时限。掌握了突发公共卫生事件的应急报告内容、范围、程序及时间，并能把所学知识应用到实际工作中去。

过去我院的传染病管理有漏洞，下半年经建议性的指导和大夫的合作，传染病防治工作有进步，传染病卡片填写清楚完整，报告及时。为了更好地开展传染病防治工作，建议这样的学习班多办几期。使所有的防保人员以及医院内的大夫都能参加。

5. 宁夏中宁县新堡乡防保站赵忠红的体会

2005 年7 月5 日，我作为乡级卫生人员参加了中卫市疾控中心组织的亚行赠款项目乡级卫生人员常见传染病与急性中毒的培训，在7 天的时间里主要学习了以下几方面知识:

5.1 传染病的报告方面

(1) 传染病的种类、报告时限及程序、报告人、报告单位。

(2) 传染病报告卡的填写、审核。

(3) 几种特殊情况下的报告。

(4) 报卡时应注意的几个问题。

5.2 学习了突发公共卫生事件应急报告

(1) 突发公共卫生事件的定义、报告时限、报告方式。

(2) 重大疫情及突发事件报告范围。

(3) 报告主要项目: 主要包括事件发生地点、时间、主要病征、发病人数、死亡人数、年龄、性别、可能原因、采取措施、现状和事情的趋势。

(4) 乡级卫生人员在疫情暴发初期的工作程序。首先报告，加强本级卫生部门内部的疫情通报，采取初步处理措施，防止疫情蔓延或扩散。

5.3 现场流行病学的调查与应急处理

(1) 现场调查的目的: 及时控制疫情蔓延，确定病因，尽快寻找传染源，判明传播途径，明确诊断，及时了解采取针对性措施控制疫情发展。

(2) 现场流行病学调查内容: 个案调查、暴发或流行调查、病因调查、特殊

调查。

(3) 现场调查的基本任务：在了解传染源或传播途径情况下，应尽早采取防控措施，遏制疾病流行。

5.4 个案调查要解决的问题

(1) 核实诊断，根据问病史、体检结果、流行病学资料确定诊断。

(2) 根据可疑传染源的接触史，查明传染源与传播途径。

(3) 根据病人的活动范围，确定疫源地的范围。

(4) 调查与登记密切接触者，并做好管理工作。

(5) 提出防制措施。

(6) 开展健康教育，提高公众对该病的防病意识与预防方法的认识。

经过这次系统的学习，使我们乡级卫生人员在传染病的报告，重大疫情突发事件的范围，以及对现场流行病学调查应急处理方面有了一个全面的认识，强化了业务知识，提高了工作能力，通过师生问与答的互动交流，解决了实际工作中存在的一些疑难问题，主要有以下几个方面的提高：

①传染病报告卡的填写方面：如发病期、诊断期、填卡日期的逻辑关系的错误，注意填写患者的职业以及传染病分类等。

②明确了几种特殊情况的报告：如一个人发生两种传染病、同时病种需报告两张卡片。

③订正报告的应用。

④突发公共卫生事件的范围：如中毒人数超过3 人或出现1 例以上死亡，短期内发病3 例以上或出现1 例死亡的病例等。

⑤通过对中卫城区年初麻疹案例的分析，对现场流行病学调查的具体工作程序，应急处理措施有了清楚的认识。

6. 云南一名县疾控中心工作人员的体会

作为一名县疾控中心的工作人员，这是我首次接触参与式教学方式，也是首次与当地乡卫生院的工作人员一起参加一个涉及我们当地常见多发病的诊治、现场流行病学、疫情报告管理等内容的培训班。

在此次培训中通过对当地典型案例的讨论，对我们当地常见多发病有了更深刻的理解和认识，学习了一整套应对突发公共卫生事件的处理方法和疫情上报制度，规范了工作方式。课堂中同学们热烈积极地对老师提出的问题进行了讨论、交换了意见，并以此弥补了自己在以往工作中的不足，学习了其他学员的经验。培训班采用的参与式教学方式很新颖也很有效果，课程安排也是我们所亟待解决和学习的方面，参与授课的老师也是各方面的专家。为了更好地促进该项目培训

班的开展我也提出我的几点建议：(1) 组建该项目专家组，对学员进行介绍，建立教师与学员的长期合作交流关系，使基层卫生人员能通过此次培训班结识各类专家，有利于以后工作中及时请教、解决问题。(2) 组织到较好的临床医院参观传染病科，现场教授相关临床诊治知识。(3) 每次培训班有半天时间不事先安排课程，而是将老师在教学过程中发现的问题和学员缺乏、薄弱的知识相结合，从而决定讲课内容。

7. 云南一名乡级卫生人员体会

2006 年5 月底，我参加了卫生部贷款办在文山举办的亚行赠款“非典”与传染病防治项目县乡级卫生人员培训班，培训班采用了参与式教学，作为在基层工作了三十多年并即将退休的我来说，参加这样的省级培训还是第一次，同时也是第一次接受这样的培训方法。以往参加过的培训都是灌输式、填鸭式的，而此次的培训所用的方法却不一样，不仅是老师在上面讲，我们学员也能参与到讲课中，充分发表自己的观点和看法，如果有不同意见还可以在课上提出。最终达到将所学知识学懂弄懂，并能运用于今后的工作中。

第一天参加培训的时候，老师让学员做自我介绍，当时我拿着话筒，心里很紧张，毕竟是第一次接触到这样的授课方法，接着还让我当组长，当时心里挺没谱的，真担心做不好。可在老师的鼓励和同桌的帮助下，慢慢的我也不紧张了，而且还能很好的组织本组的学员参与到老师的讨论和学习中。对自己而言也是一个锻炼和提高的机会，以后碰到这样的事就不会紧张了。

培训班不但有理论知识的讲解和传授，同时还有现场参观，在我们学习理论知识的同时，到工作开展较好的县疾控中心和乡镇卫生院参观学习，对自己来说也是一次很好的学习机会。在参观乡卫生院时，当看到别人做得好的方面时，参照自己的工作，找出存在的不足。同时，还能与相关科室的人员作经验交流，也是一个很好的学习和借鉴的机会。

对为期4 天的培训班的学习和参与，给我最深的体会是：(1) 授课师资具备丰富的理论知识和较强的现场处理能力，临床方面的老师具有较深的临床方面的知识和经验，让我对一些具体病种有了更深一步的学习。(2) 授课方法新颖，能让我们在学习疲惫的同时辅以一些游戏，做到劳逸结合。(3) 对自己今后在传染病防治方面如何开展工作有了更明晰的认识，同时也可以将此种方法运用到村一级的培训中去。

建议：(1) 学员来自县级和乡级，不同学员的知识层次有所差距，使教师在授课过程中不能面面俱到，建议以后举办类似的培训班考虑学员的知识基础。(2) 希望乡镇卫生院的临床医生也能参加类似培训班，以更好的和防保医生配合

开展工作。(3)　建议多组织此类培训，增加学员培训的频率。

8. 青海海北藏族自治州海晏县托勒乡卫生院李福科的体会

以往也参加过多次培训，但这种培训方式是第一次经历，我认为这种方式比较适合有工作经验的人员。在参与式的教学中，如：分组积极讨论、头脑风暴、课堂游戏等使大家思维活跃了，胆子大了，能够主动发言，接受的内容也就多了。同时，老师讲课的内容比较灵活，不像书本上的那么条条框框，而是非常巧妙地使理论与实践相结合，在加深理论基础知识的同时，能够引导在实践工作中的正确思路，更好地使理论与实践相结合，使学到的知识更加巩固。

以前在传染病病人的处理方面比较紧张，不知先做什么，后做什么，没有明确的应急方案。经过培训后这8个月来，利用所学到的知识，在临床诊断工作中，自己思路明确，能够较为准确地诊断临床病例，尤其是传染病病例（通过流学病史、临床表现、实验室检查、特殊表现等）；发现传染病例时，能够及时上报疫情，正确地处理某种传染病（从控制传染源、切断传播途径、保护易感人群入手）。学到的这些知识，在实际工作中的帮助非常大，提高了我在临床工作中的实践技能。

我希望以后各类培训班都能考虑利用这种参与式的授课方法，使我们基层人员多学到更多的实践知识，同时也希望培训班能够举办一些现场模拟活动，开发一些有实践经验的教材。

9. 青海黄南藏族自治州泽库县疾控中心夏吾尼玛的体会

我自工作以来参加过不少培训班，但这次的培训班让我大开眼界。老师们简短的理论介绍，全程参与、启发与讨论，老师与学生互相提问，课堂气氛十分活跃，都让我觉得不像是在学习，而是像在单位参加某个业务讨论会。培训班各路专家云集，意见纷纷，忽然觉得自己的知识面太窄，晚上恨不能将书本上的东西全部学会。四天的学习，使我自身的理论与实践得到了极大的提高。

通过这次培训，我掌握了传染病的诊断、疫情的报告、突发公共卫生事件的处理、健康教育等方面的知识，不仅对我从事的结核病控制工作有极大的帮助，同时对我单位其他方面的工作都有了全面地了解和认识。在和乡一级人员共同参加学习和实践工作中，知道了乡镇卫生院的医生们是怎样工作的，在制定结核病的发现、诊断、登记、管理等计划时，能充分考虑它们的实际难处，制定出比较合理的计划。在结核病的健康教育工作中，能够自己开发一些适合本地区的健康教育材料。同时自己也在学着老师的培训方法对我县的乡村医生在结核病方面进行培训，虽然不能和省级的老师相比，但我觉得比以往的说教效果要好得多。

我希望今后能参加更多类似的培训，同时我也希望能够参加专门讲课方法的培训，使我能够在今后对乡村及人员培训时，更好的利用这种方法。

10. 云南玉溪市元江县青龙厂乡卫生院李文雅的体会

2005 年4 月21 日，我院接到青龙厂村委会汉泥扒村村医的报告：汉泥扒村有三例麻疹疑似病例。接到报告后我院组织调查组到村里进行调查。调查后发现先后有6 个村民出现发热、咽痛、咳嗽、眼结膜充血、皮肤红疹等症状。调查组根据临床症状初步考虑为麻疹、风疹或猩红热，但由于见过的病例有限，很难进行确诊。调查结束后我立即将详细情况报告给了县疾控中心和镇政府。疾控中心立即组织专业人员到汉泥扒村进行调查，更为细致地根据“草莓舌”，“帕氏线”，“口周苍白圈”等典型症状诊断为猩红热。

当晚，县疾控中心、镇政府、卫生院相关人员集中开会讨论应对措施。由于汉泥扒村是彝族中相对落后的三苏支系，整体防治意识差，同时由于贫穷，病人没有钱接受住院治疗。为防止疫情的进一步扩大，镇政府作出不考虑治疗费用问题，将所有现症病人收住入院的决定。同时从流行病学方面出发在村子里进行室内空气消毒，进行相关防治知识宣传，尤其强调室内通风和不走村串户。次日，所有病人入院治疗、进行室内空气消毒，对村民进行防治知识宣传，让村医密切监视疫情动态并及时报告。一波未平一波又起，镇内其他村委会的个别村寨也相继有病例报告，并且发病人群有一个共同的特点——三苏民族为主。根据具体情况，在镇政府领导、县疾控中心指导下我们派了医疗组下村就地治疗、并进行防治知识宣传。同时，针对三苏民族防护意识落后，发病后不进行相对隔离，四处串门的情况，对村民用复方新诺明和阿莫西林进行预防服药。

5 月中旬，疫情基本得到控制，共有27 例病例报告。由于处理及时、措施到位，各个部门配合默契，疫情没有进一步扩散，没有病例死亡或留下后遗症。

在这次事件的处理中，在澄江县参加的“亚行赠款项目县乡级人员传染病防治培训”给了我如下几个方面的指导性的帮助。

首先，核实疫情。接到疫情报告后，我们在第一时间赶到现场，调查病情、发病人数、可疑病种、可疑传染源（首例病人）和波及范围。工作近九年，类似问题从未遇到，在以前我不知道会如何处理，但至少这次在处理过程中我的心里知道该调查什么，怎么调查以及如何判断疫情的严重性。

其次，报告疫情。以前上报疫情脑子里只有疾控中心，没有向同级政府报告的概念。在这次的处理过程中，政府强大的力量得以充分体现。试想，如果不是政府支持，一个工资都不能保证的小小卫生院何以在这样短的时间内将疫情控制？治疗需要钱，而那些连读书都困难的老百姓会有几个积极的治疗，又会有多

少人不断被感染?

再次，通过培训我知道了处理疫情需要有一个完整的处理过程记录。这就督促我们在处理的同时注意收集资料、整理资料，在收集整理的同时又可以发现一些问题并针对性的提出应对措施。

另外，处理中防保组和医疗组之间进行了同步合作。这种合作从收住第一个病人开始一直到整个事件得以控制。病人收住入院，首先对医护人员进行了相关防护措施的介绍，尤其是病区的消毒。同时要求他们对病人及家属进行防治要点的宣传，以便更好的控制传染源，切断传染途径。

这次事件的发生给人民的生活带来了不利影响，但从另外一个角度来看也给了我们一次学以致用，积累经验的机会，也使人们懂得了一些疾病的防护知识。同时，我更深地体会到了学习交流的重要性。只有通过学习交流才可以使一些好的经验得以传播，而不至于在事件发生时手忙脚乱无以适从。

附件5.1　亚行赠款项目小组访谈参加人员登记表　　时间_____地点_____

姓名	单　　位	性别	年龄	职务	职称	学历	专业领域	从事工作年限	签　名

附件5.2　个人及小组访谈提纲

一、中央协调员访谈提纲

1. 项目计划、管理、实施情况。
2. 如何与相关部门、地区协调。
3. 项目主要开展了哪些工作？对各项工作的影响及效果。
4. 项目对西部地区传染病防治工作及能力建设的影响。
5. 项目的主要产出。
6. 项目的成功经验。
7. 项目需要改进的地方及建议。

二、中央级专家访谈提纲

1. 参与的主要项目工作。
2. 此项工作如何开展的，有哪些档案资料？
3. 产出有哪些？
4. 这些工作对传染病应对、传染病防治能力建设有哪些作用？
5. 体会与感受。
6. 成功经验。
7. 需改进的方面与改进建议。

三、省级项目负责人访谈提纲

1. 项目计划、管理、实施情况。
2. 档案资料管理情况。
3. 主要开展哪些项目活动，这些活动对本省传染病防治规划、机制建设、传染病监测与上报系统建设、传染病应对能力建设取什么作用？
4. 项目的主要产出与影响。
5. 师资与骨干人员发挥哪些作用？
6. 配备的设备分发使用情况，发挥的作用。
7. 教材及传播材料分发使用情况，发挥的作用。
8. 体会与感受。
9. 经验与建议。

四、省疾控中心传染病防治负责人访谈提纲

1. 疾控中心参与哪些项目活动？

2. 项目对传染病防治产生哪些影响（规划、机制建设、监测与上报系统建设、能力建设、传播材料）？

3. 师资和骨干在单位发挥哪些作用？

4. 设备分发使用情况，对工作的影响。

5. 教材分发使用情况，对工作的影响和改进意见。

6. 项目的成功经验。

7. 项目需改进的方面与改进意见。

五、省地级培训师资访谈提纲

1. 参加过哪些培训班（时间、地点、举办单位），学到哪些知识和技能，对培训班的评价和感受，希望今后学习哪些知识与技能？

2. 作为老师参加过哪些培训班，培训的知识与技能应用如何，曾遇到哪些问题，有哪些经验？

3. 参与过哪些传染病防治工作，有什么典型案例，培训对工作有哪些帮助？

4. 看过哪些教材、手册？对它们评价如何？哪些地方需要改进？如何改进？

5. 项目对单位、当地传染病防治工作产生哪些影响？

6. 体会与感受。

7. 建议。

六、既往县乡级学员访谈提纲

1. 参加培训班的时间、地点。学到哪些知识和技能？对培训班的评价和感受。希望今后学习哪些知识与技能？

2. 培训后参与过哪些传染病防治工作，有什么典型案例，培训对工作有哪些帮助？

3. 看过哪些教材、手册？对它们评价如何？哪些地方需要改进？如何改进？

4. 项目对单位、当地传染病防治工作产生哪些影响？

5. 体会与感受。

6. 对传染病防治工作及项目建议。

七、培训班上县乡级学员访谈提纲

1. 参加培训班学到哪些知识和技能？

2. 对培训班组织、管理的评价。

3. 对师资的评价。

4. 对现场考察与实习的评价。

5. 对培训班的体会和感受。
6. 希望今后学习哪些知识与技能?
7. 看过哪些教材、手册? 对它们评价如何? 哪些地方需要改进? 如何改进?
8. 对培训班的建议。

八、负责人或教师访谈提纲

1. 你见过这个《教师手册》吗? 学校什么时候、收到多少册? 从哪里下发的? 有签收登记吗? 这些手册由哪些老师保管和使用?
2. 看过这个手册吗? 从手册中了解到哪些内容? 哪些地方不明白? 哪些地方需要修改? 如何修改?
3. 你用过这个《教师手册》吗? 如何使用的? 这个手册对您有什么帮助? 对学校传染病防治工作有哪些帮助?
4. 你见过这个《学生手册》吗? 学校什么时候、收到多少册? 从哪里下发的? 有签收登记吗?
5. 学生如何使用这些手册? 他们喜欢这个手册吗? 他们有哪些意见和建议?
6. 对学校传染病防治工作有哪些建议?

九、学生访谈提纲

1. 你见过这个《学生手册》吗? 从哪里见到的?
2. 你看过这个手册吗? 从手册中了解到哪些内容? 哪些地方不明白? 哪些地方需要修改? 如何修改?
3. 你喜欢这个手册吗? 哪些地方好? 哪些地方不好?
4. 你愿意向别人推荐这个手册吗? 你向家人、朋友讲过这个手册的内容吗?
5. 学校和班级如何使用这个手册? 开展过相关活动吗?
6. 对于学校传染病防治你有哪些建议?

附件5.3 亚行赠款项目省地级现场流行病学培训班学员调查问卷

编号□□□

一、基本情况

姓名_____ 单位_____

职务_____ 职称_____ 科室_____

专业_____ 从事专业工作时间_____年

二、现场流行病学培训班学习情况

1. 通过培训，你学到哪些知识和技能?
2. 对培训班的组织，培训师资的水平、讲课技巧，培训班提供的信息与服务等评价如何?
3. 现场实习的内容与效果。
4. 对于培训有哪些感受和体会?
5. 培训班的成功经验。
6. 培训班哪些方面需要改进，提出改进建议。
7. 培训班为你配备了哪些设备?目前设备保管与使用情况。

三、作为学员参加师资培训情况(参加者填写，没有参加者不填)

1. 你参加师资培训班的时间、地点。
2. 从师资培训班学到的知识、技能。
3. 对参加的师资培训的组织，培训师资的水平、讲课技巧，培训班提供的信息与服务等方面的评价。
4. 感受与体会。
5. 培训班的成功经验。
6. 培训班哪些方面需要改进，改进建议。

四、作为师资参加培训情况(参加者填写，没有参加者不填)

1. 培训班的时间、地点、学员人数。
2. 你在培训班上承担的具体任务(包括组织协调、讲课、实习等)。
3. 培训技能与方法应用情况。
4. 你对培训班的评价。
5. 学员的评价与感受。

6. 培训班的成功经验。
7. 培训班哪些方面需要改进，提出改进建议。

五、参加传染病防治工作情况

1. 培训后你参与过哪些传染病防治工作?
2. 你认为自己在哪些方面能力有所提高?
3. 哪些方面有待提高?
4. 所做传染病防治工作的典型案例。

六、与项目有关的产出(包括著作、论文等)

七、亚行赠款项目对个人、单位、地区传染病防治能力建设产生哪些影响(传染病防治机制建设、传染病应对能力、传染病监测与上报系统建设、传染病防治健康教育等)

八、项目的成功经验

九、项目的改进建议

附件5.4 亚行赠款项目省地级现场流行病学培训班学员调查问卷结果汇总

一、基本情况

共调查20 名学员，回收有效问卷19 份。19 名学员的基本情况如下:

1. 单位: 省级8 人，地市级11 人。

2. 职务: 地市级疾控中心副主任2 人，科长11 人，副科长4 人，2 人无职务。

3. 职称: 副高职称9 人，中级职称8 人，初级职称2 人。

4. 科室: 传染病防治科5 人，疾病控制科3 人，防疫科2 人，疫情管理与突发事件应急处置中心、综合业务管理科、信息科、公共卫生科、食品安全营养与学校卫生科、健康监护科、主任室、办公室各1 人，1 人科室不详。

5. 从事专业工作时间: 3～23 年，合计295 年，平均15.53 年。

二、现场流行病学培训班学习情况

1. 通过培训，你学到哪些知识、技能?

(1) 基本掌握了流行病学的基本概念。

(2) 系统的学习了现场流行病学调查的方式方法，掌握了一定的现场调查技巧和方法，提高了现场流行病学调查和报告写作技能。

(3) 加深了对监测的理解及应用。

(4) 进一步提高了突发事件现场应急处置能力及综合分析能力，尤其是传染病、不明原因疾病、急性中毒等疾病的控制和处理。

(5) 了解了多种计算机统计软件，提高了统计分析能力。

(6) 掌握了案例教学和参与式教学方法。

2. 对培训班的组织，培训师资的水平、讲课技巧，培训班提供的信息与服务等评价如何?

培训班的组织规范，老师为国内外知名专家，水平很高，讲课技巧新颖、灵活多变，容易接受，提供的信息新，培训内容实用，服务好，受益匪浅。对培训效果2 人非常满意，5 人很满意，2 人满意，1 人比较满意。

3. 现场实习的内容与结果。

实习内容包括流脑、流行性腮腺炎、感染性腹泻、细菌性痢疾爆发、不明原因肺炎、狂犬病不明原因脑膜脑炎疫情、鲁布革多依完小流感暴发、人间皮肤炭疽疫情暴发等疫情的调查处理，地震灾后卫生学评价，食物中毒、职业中毒等调查处理。合作或独立完成17 份调查报告。

4. 对于培训有哪些感受和体会?

(1) 一个月集中学习所学到的现场流行病学知识胜过我工作10 年的经验。

(2) 培训基层卫生工作人员非常必要。

(3) 培训前的准备，包括师资的选择、课程的安排和现场实习场所的准备至关重要，要因地制宜。

(4) 获益匪浅，帮助和提高很大。

(5) 开拓了眼界，拓宽了思路，学到了不少新知识，交了新朋友。

(6) 增强了传染病防病意识及处理疫情的信心，对不明原因疾病调查不再感到无从下手了。

(7) 希望有机会能再次参加类似的培训。

(8) 培训班举办的次数少，参加的人员少，市县级参加的机会少，培训内容多、时间短。

5. 培训班的成功经验。

(1) 组织得好，管理严格。

(2) 学员选择有一定工作经验的人员，学员间团结互助，学员积极学习、交流学习体会和知识，参与性强。

(3) 培训内容针对性强、实用性强，不但有系统的理论知识讲解，更注重实践技能的培养。

(4) 采取理论与实践相结合、形式多样的参与式教学方法，调动学员的积极性。

(5) 给每位学员配备了较先进的学习工具(如笔记本电脑、照相机等)。

(6) 教师配备的好，师资水平高，教师准备充分，授课认真、深入、到位。

(7) 采用小班教学、面对面讨论教学方法很好。

(8) 经费充足。

(9) 通过理论和实践相结合的教学，培养和造就了一批省地级各类突发公共卫生事件现场调查和应急处理的骨干能手。

6. 培训班哪些方面需要改进?有何改进建议?

(1) 培训时间过紧，但培训内容多，有些老师准备的内容无法讲透、讲好，导致所学内容不能很好地、细致地理解掌握。

(2) 疾病控制与临床诊断衔接不好，整个课程安排不完整，教学时间太短，讨论时间太少、讨论不充分，多给讲解和分析问题的机会。

(3) 集中授课后实习应改为实践与理论同时进行，既能及时解决问题，也强化对理论的理解。

(4) 教学内容需要进一步深化，介绍国家政策、专业新进展、新发传染病的防治知识。

(5) 注重现场实际操作，教师最好能到基层亲自指导，进行实地演练，希望能和授课老师共同调查处理突发事件。

(6) 应多介绍国内现场调查处理的典型案例，多采用案例分析来强化理论知识的培训。

(7) 没有延续性、后续的培训，希望组织学员定期进行交流，加强学员之间的相互学习与沟通，可以确保知识的更新和信息的流通。

(8) 建议多举办此类形式的培训班。

7. 培训班为你配备了哪些设备？目前设备保管与使用情况。

培训班为学员配备了笔记本电脑、U 盘和数码照相机，单位进行了固定资产登记，主要由学员保管和使用。

三、作为学员参加师资培训情况（参加者填写，没有参加者不填）

1. 你参加师资培训班的时间、地点。

14 人参加了21 人次的师资培训。

2. 从师资培训班学到的知识、技能。

(1) 参与式培训的理念、方式、方法、技巧，学习了小讲座、头脑风暴、角色转换和案例分析等形式的授课方。

(2) 作为师资应具备的基本条件与能力。

(3) 基层卫生人员传染病与急性中毒防治参与式培训的方法与技能。

(4) 学会如何组织、安排有效的培训。

(5) 流行病学的基础知识，现场调查技能。

3. 对参加的师资培训的组织，培训师资的水平、讲课技巧，培训班提供的信息与服务等方面的评价。

(1) 各方面都非常好（1 人），各方面都很出色（1 人），一切都非常令人耳目一新（1 人），很好（3 人），好（1 人），满意（1 人）。

(2) 对参与式教学的推广应用起到良好的作用。

(3) 培训班组织规范，运作良好。

(4) 师资均有国家级流行病学专家和临床专家、健康教育专家组成，培训老师知识面广，授课经验丰富，讲课技巧新颖、灵活、生动，水平高。

(5) 所提供的专业信息、知识新且实用。

(6) 服务周到。

4. 感受与体会。

(1) 通过学习，对现场流行病学的基本理论和方法有了较为系统地了解，对参与式教学法也有了深刻地理解，提升了作为省级师资实施基层培训的信心和技能，增强了传染病防病意识及处理疫情的信心。

(2) 这种参与式培训方法很好，在课堂上老师讲的内容直到现在还历历在目。讲课方式新颖，老师讲课时调动了每个人的积极性，使我们爱听、喜欢思考、愿意回答，我们都跟着老师的思路共同思考问题，每一个问题都经过大脑仔细考虑过，因此记忆的就特别深刻，同时穿插着老师的精彩讲座，我们都觉得时间过得特别的快。

(3) 参与式教学这种教学方式对提高基层传染病防治人员的技能作用很好，针对性强，效果明显，符合国内实际情况，希望今后加大培训力度。

(4) 提高了被培训师资的专业技术水平，对拓宽思维很有帮助。

(5) 课堂上学员胆子要大，对自己不懂的问题，及时请教有经验的老师和有关专家，寻找正确的答案和共识。

(6) 教师的水平直接影响讲课的效果，作为教师要做好充分的准备，扩展知识面。

(7) 学到了新的知识，交了新朋友。

5. 培训班的成功经验。

(1) 得到当地卫生行政部门和亚洲开发银行的有力支持。

(2) 准备充分，经费充足，培训班的硬件、软件环境好，组织规范，服务好。

(3) 适宜的师资和培训方法的选择是成功的关键。

(4) 授课老师经验丰富，知识面广，水平较高，授课技巧新颖、灵活，以案例教学为主，提供了较新的信息。

(5) 较好地调动了学员参与讨论的热情，以学员为中心，充分调动学员的积极性，培养学员的创新精神，与培训者共同承担学习任务，强调学而不是教，突出知识与实用相结合。

6. 培训班哪些方面需要改进，改进建议。

(1) 让每位被培训的师资，有机会主持自己的课堂，锻炼自己。

(2) 顾及不同层次学员的需求，根据培训对象的业务水平，制定授课内容和讲课方式。

(3) 教学内容不要限于培训者准备，学员可以将自己实际遇到的案例进行讨论。

(4) 要进一步提高学员新发传染病的防治知识。

(5) 教学时间太短，讨论不充分，应多给讲解和分析问题的机会，人人参与个案病例的诊断，能够举办一些现场模拟活动，开发一些有实践经验的教材。

四、作为师资参加培训情况（参加者填写，没有参加者不填）

1. 培训班的时间、地点、学员人数。

16 名学员作为师资参加县乡级卫生人员培训，共参加60 人次，最多的参加13 期培训班。

刘晓强等学员作为组织者和师资，参加了省、州市、县疾控机构现场流行病学专业人员的培训工作。

2. 你在培训班上承担的具体任务（包括组织协调、讲课、实习等）。

主要承担讲课和实习任务，部分学员参与培训班组织、协调工作。

3. 培训技能与方法的应用情况。

应用参与式案例教学的方法，具体应用了头脑风暴、小组讨论、大组汇报、课堂游戏、角色扮演等，效果较好。

4. 你对培训班的评价。

(1) 非常成功（1 人），很成功（1 人），较好（3 人）。

(2) 培训班采用了省地级师资培训班的培训的方式和方法，组织规范，授课新颖、认真，学员积极主动、好学。

(3) 与其他灌输性教学相比有明显的提高。

(4) 切实地提高了各级现场流行病学队伍的理论水平，同时也提高了各级疾控机构应对突发事件的能力，对全省的现场流行病调查能力有一定的促进作用。

(5) 掌握了现场流行病学调查的基本步骤，疫情报告时限，针对肠道传染病和呼吸道传染病采取的措施及如何书写调查报告。

(6) 气氛活跃，学员积极性高，踊跃发言，小组讨论热烈，能帮助基层卫生技术人员解决实际问题。

(7) 当你尽心尽责地实施培训工作的每一项时，从学员们积极参与和感兴趣程度上可以评价培训的效果。

(8) 教学方法灵活、教学内容务实。

5. 学员的评价与感受。

(1) 很好（4 人），好（1 人），较好（2 人），还可以（1 人）。

(2) 新颖、实用。

(3) 加深了学员对传染病防治的理解和提高了实际应用能力，开拓了眼界，拓宽了思路，能促使改进平时工作当中的错误和缺点，也锻炼了自己，增加了学员间相互学习的机会，广交朋友，增进了友谊。

(4)　希望以后多采用类似的方法进行培训。

(5)　安排合理，教师授课认真，教学方法合理，学员积极主动。

(6)　学员认为这种方式很好，记得牢，能够达到学以致用的目的。

(7)　学员们希望多举办互动、参与式的培训班，能够帮助基层业务人员回答平时工作中遇到的问题，简化了过程，取得了良好的培训效果。

(8)　尤其是少数民族学员反响强烈，他们认为非常适合他们，非常好。

6.　培训班的成功经验。

(1)　当地卫生行政部门和亚行的大力支持，领导重视，经费有保障。

(2)　组织协调好，教师授课认真、负责，教学方法合理，学员积极主动，纪律严明、教学准备充分，也是教学取得成功的关键。

(3)　较好地运用了参与式教学方法，理论讲授与案例分析相结合，让学员知道了、记住了、会用了。

(4)　根据学员提出的普遍性问题进行培训，多数学员能够接受。

(5)　教学方式新颖，能够开阔思路、调查步骤清晰、周密，最重要的是非常实用。

(6)　组织较好，师资力量较为雄厚。

(7)　启发、激励学员人人参与，人人提高。

(8)　根据新疆实际选择少数民族师资同时举办维、汉平行班，案例选用当地实际发生的案例。

(9)　为本地区传染病现场流行病学调查培养了技术骨干，同时也建立了一支师资队伍。

7.　培训班哪些方面需要改进，改进建议。

(1)　培训内容需要更新、并增加一定难度。

(2)　培训对象要认真选择，学员人数不宜过多，以免影响培训质量。

(3)　分层培训，特别是各县有1～2人的现场流行病学骨干培训（系统培训），可带动整个县的现场调查和处置，包括现场调查报告的书写、流行病学分析，提出假设，验证假设，采取控制措施等。

(4)　教学时间太短，讨论时间太少、讨论不充分，应多讲个案病例的诊断。

(5)　希望今后多举办此类培训班，希望今后能考虑延长培训天数。

(6)　教师应经常参加知识更新的学习，不断提高教师的知识面，才能更好地教育、引导学员，给他们教到最新的知识；才能真正提高学员的知识水平。

(7)　在准备教材时，要做好充分的准备；如准备一些经典的案例。

(8) 在如何更进一步的提高诊断技术方面下工夫，诊断技术是我们基层的一大难点，在基层经常发生误诊、误报的问题，有些疾病的鉴别诊断更是困难，有的疾病如其他感染性腹泻病就没有诊断标准，一到腹泻病监测季节报告非常混乱，报告时一个地方出来几百个，给人的假象是这个地方发生了腹泻病的爆发。

(9) 除了让大家讨论以外，要结合小讲课的内容，老师要时常做一些小讲课，结合学员提出的问题讲，因为我们培训的目的一方面是要让学员学会参与式培训，另一方面也要让学员学到一些新理论、新知识。

(10) 参与式学习的方式要多样化，不能只限与一种或几种方式。善于用各种方式调动每一个学员的积极性。给学员创造一种轻松、愉快的学习氛围。

(11) 参与式在基层能很好地发挥作用，在少数民族地区用双语讲座效果更好。只用汉语授课，由于学员基础不同，反而适得其反，这是今后要注意的重要一点。

五、参加传染病防治工作情况

1. 培训后你参与过哪些传染病防治工作?

(1) 传染病暴发疫情的调查处理，如流脑、伤寒、流感、狂犬病、肝炎、结核病、痢疾、流行性腮腺炎、水痘、皮肤炭疽、婴幼儿轮状病毒感染、重症肺炎、禽流感等。

(2) 传染病及突发事件的现场流行病学调查。

(3) 传染病监测工作。

(4) 不明原因疾病疫情的调查处理工作。

(5) 突发公共卫生事件的现场处置。

(6) 传染病疫情的管理。

2. 你认为自己在哪些方面能力有所提高?

(1) 现场调查的组织协调能力。

(2) 应急处理能力。

(3) 调查报告撰写能力。

(4) 疫情上报能力。

(5) 教学技巧，教学方法。

(6) 现场流行病学调查处理能力和运用专业知识的能力。

(7) 调查思路比过去清晰。

3. 哪些方面有待提高?

(1) 分析能力。
(2) 应对媒体的能力。
(3) 统计软件应用能力。
(4) 写作水平。
(5) 临床知识、技能。
(6) 实验室检测技术。
(7) 应急处理能力。
(8) 心理学知识。

4. 所做传染病防治工作的典型案例。

皮肤炭疽的爆发调查、一起急性死亡疫情分析、文山州富宁县一起婴幼儿轮状病毒感染爆发调查、一起重症肺炎的调查与处置、一起暴发流感的调查与处置、乌什县地震后有些乙丙类的传染病局部流行的调查、黄南州同仁县年都乎乡夏卜浪村一起麻疹暴发疫情的现场调查处理、吴忠市食物中毒事件调查处理、不明原因肺炎的调查、学校群发性癔病调查、学校流感暴发调查、不明原因中毒调查、新疆伽师县不明原因脑膜脑炎疫情流行病学调查分析、伽师县2005年夏季伤寒流行期伤寒流行病学调查分析、一起重症肺炎的现场调查(已列入全国重点教学案例)、一起椰毒假单胞菌中毒的现场调查、一起不明原因肺炎的现场调查、德令哈市一起流脑疫情的现场调查处理。

六、与项目有关的产出(包括著作、论文等)

论文9篇，调查报告9篇，吴强参与的《玉溪市维持无脊髓灰质炎可持续性研究》项目获得2006年玉溪市政府科技成果一等奖，李朝霞“新疆伽师县不明原因脑膜脑炎疫情流行病学调查分析”拟申报科技成果奖。

七、亚行赠款项目对个人、单位、地区传染病防治能力建设产生哪些影响(传染病防治机制建设、传染病应对能力、传染病监测与上报系统建设、传染病防治健康教育等)

1. 提高了县乡级卫生人员的传染病初步鉴别诊断能力和报告意识，能够早期发现传染病疫情，并能够及时正确地向有关部门报告，为早期控制传染病疫情赢得了时间，而且具有简单的现场调查处置能力，均能够按照规范要求填写和报告传染病报告卡。

2. 提高了突发公共卫生事件的应急处置能力，通过培训，实现了县、乡人员的整体覆盖，对各级染病防治机制建设、传染病应对能力、传染病监测与上报系统建设、传染病防治将产生积极和深远的影响。

3. 为传染病与急性中毒的防治工作奠定了坚实的基础，加强了人力资源建设，巩固了卫生软件，建立一支由省地级疾病控制、临床诊断、医学教育等方面人员组成的师资队伍。

4. 提升了基层工作人员的素质，使各级传染病防治队伍的能力有了长足进步，也使各项业务工作更加规范。

5. 参与式培训方法已在各类培训班中推广使用。

6. 下发的《教师手册》及《学生手册》已发挥了其作用，各学校较以前更加重视了学校中传染病与急性中毒的防治，能够及时向有关部门上报学校内发生的传染病，传染病及急性中毒的报告意识较以前有了很大的提高。

7. 下发的《传染病控制手册》和《图谱》已成为县、乡级基层卫生人员工作中必不可少的工具，在诊断、治疗传染病病人及现场疫情调查处理中发挥了重要作用。

8. 提高了传染病防治健康教育水平。

八、项目的成功经验

1. 充分的培训前准备，灵活的教学方法，实用的培训内容。

2. 案例取材于当地。

3. 覆盖面广，培训层次清晰、教学方式先进，教学内容实用。

4. 注重实践技能的培训，注重适用知识的培训，注重基层的接受能力。

5. 多学科参与，培训到基层。

6. 有卫生部贷款办、省卫生厅的大力支持，教师准备充分，授课认真，深入、到位，学员积极学习，培训效果良好。

7. 参与式教学能够加强学员的内在激励，有利于提高学员的学习自觉性和积极性，这几次培训班是我见过的培训效果最好的一个，要比老师单纯的灌输给学生效果好得多。参与式教学或学习无论从教学的组织还是课程的设置上，无论从讲课内容或讲课方法，无不体现着以人为本的思想和科学理念。因此，教学的内容和方法非常灵活多样。可以说是学、教、问、思、论、看为一体，动脑、动手相结合。这种方法适合不同水平的学员，所有参加人员都有很大收获。

8. 该项目的成功经验体现在组织管理到位，培训班在安排上更是人性化，师资的配置合理，授课的老师当中很多都具有非常丰富的现场流行病学调查经验，对学员在现场调查工作方面提出了很多指导意见。

9. 经费由中央统一负责，地方无须承担配套费用，保证了经费充足、及时到位，以参与式教学这种方式对基层防疫人员进行培训，针对性强、效果好。

10. 国家需要、领导重视、经费有保障。

11. 项目从需求出发，真正解决了我省实际存在的问题。项目灵活操作，根据不同的情况及时调整，适应当前的卫生形式。

12. 我们偏远地区的流行病学专业人员有机会参加国家级培训，提高了我们的现场流行病学调查处理水平。

13. 采用小班讲课，面对面教学，集体讨论的方法，有利于经验交流，并为学员建立了今后工作交流的平台。

14. 采用理论和实践相结合的教学，培养了一批省地级各类突发公共卫生现场调查和应急处理骨干能手。用短时间、好方法练就了一批在防病第一线具有提出问题、分析问题、解决问题能力的疾病防控工作者。

九、项目的改进建议

1. 培训相应增加小讲课内容，为学员提供更多的理论信息。

2. 现场实习的锻炼较少，现场实习要有更强的针对性。

3. 培训内容要不断更新。

4. 进一步做好培训前准备，特别是保证师资充足的集中备课时间。

5. 研究项目的可持续发展，培训更多的人员。可作为一项长期工作坚持下去，这样利国利民。

6. 分层培训，重点骨干人员的能力培训（系统培训）。

7. 对现场流行病学培训班的学员提供再一次交流学习的机会。

8. 希望该项目继续做下去，每年把学员集中一次，交流工作，传授新知识，最大限度地发挥学员在工作中的作用。

9. 扩展一些其他的内容，继续增加对西部的支持力度，增加培训的机会等。

10. 希望亚行能有后期培训项目，培养我省的高级流行病学人员，继续支持我省的中小学校，培训村级医务人员，发放教材，宣传卡片等，加强与外省专业人员的现场处理经验交流。

11. 要选择具有教学经验、理论知识丰富、多次处理过突发公共卫生事件的师资。欠缺上述任何一项能力都将会影响培训效果。

12. 参与式教学要采取多种方法、灵活性要强，让学生自己动手、自己动脑，老师要适当引导，不能不管不问，放任自流。

13. 老师要及时总结，抓住学生急于鉴别自己探索结果的心理，立即回到主导地位中去，剖析错漏，归纳、推导出正确的结论。

14. 建议增加与外省市兄弟单位的交流，吸收他们在传染病防治工作中的好的做法和经验，弥补和改进我单位存在的不足和问题。由于地域之差，疾病种类不同，发生事件不同，为了掌握全面知识和提高工作能力，创造地区之间的交流实习机会，将会对学员有更大的启发和提高。

15. 希望今后的卫生项目，能够借鉴本次亚行项目，以实际需求出发，真正解决问题为主要目标，不要以国外的经验来套在国内使用，建议今后不要搞太大的项目，将项目分解，以小项目实施，可能会取得大项目意想不到的效果。

16. 希望项目再向偏远地区倾斜。

亚洲开发银行赠款中国西部地区传染性非典型肺炎与传染病防治能力建设项目大事记

1. 2003 年5 月，中国政府与亚洲开发银行正式签署项目协议。
2. 2003 年6 月，项目正式启动。
3. 2003 年7 月，项目聘请国际国内专家，赴新疆和云南进行项目快速评估。
4. 2003 年10 月，项目完成购置第一批防护物品与设备，包括防护服、口罩、乳胶手套、护目镜、红外体温探测仪、消毒锅。
5. 2003 年11 月～12 月，在北京和四个项目省分别组织了国家和省级非典型肺炎与传染病防治战略规划研讨会。
6. 2003 年12 月～2004 年6 月，组织国家和省级专家编写《常见传染病与急性中毒预防和控制手册》，并由北京大学医学出版社正式出版，印发35 000 册。
7. 2004 年2 月，项目为各项目省疾控中心购置一辆尼桑越野车，用于现场流行病学调查，并配备笔记本电脑、数码摄像机、照相机等。
8. 2004 年2 月，在云南西双版纳及新疆昌吉开展基层（县级疾控中心及乡镇卫生院）卫生人员传染病与急性中毒防治参与式培训试点。
9. 2004 年2 月～2005 年12 月，组织国家和省级专家编写《基层卫生人员传染病与急性中毒防治参与式培训教案》及配套光盘，印发1 000 套。
10. 2004 年5 月～7 月，2005 年5 月～7 月，在四个项目省分别进行了两轮师资培训，共举办12 期师资培训班，为各项目省培训省地级参与式培训师资180 余人。
11. 2004 年7 月～2005 年5 月，为项目省购置和分发培训设备，包括为每个地州配备一台笔记本电脑和一台多媒体投影仪。
12. 2004 年7 月～2005 年12 月组织国家级专家编写《基层医务人员急性传染病诊断思路与处理流程图》并试用，于2006 年3 月印刷30 万份，发往全国各级传染病防治机构。
13. 2004 年7 月～2006 年6 月，开展县乡级传染病防治人员传染病与急性中毒扩展培训，共举办84 期扩展培训班（包括试点培训），培训基层卫生人员4 000 余人。
14. 2004 年8 月，组织项目省疾控人员参加在北京举办的国际禽流感防治大会。
15. 2004 年8 月～2005 年5 月，组织国家级专家完成《中小学校教师传染病预防与突发公共卫生事件应对手册》及《学生手册——青少年带头用良好的卫生习惯战胜传染病》的编写和印发，分别印发15 万册和14 万册。
16. 2004 年10 月，组织国家级专家编写《常见传染病与性病图谱》，由北京大学

医学出版社正式出版，印发20 000 册。

17. 2004 年10 月～2005 年10 月，组织省地级传染病防治骨干人员参加的实用现场流行病学培训班，为四个项目省培训20 名传染病现场流行病学调查骨干人员。

18. 2005 年8 月，新疆自治区组织完成《常见传染病与急性中毒预防和控制手册》维语版的翻译和出版，印发5 000 册。

19. 2005 年9 月，完成《中小学校教师传染病预防与突发公共卫生事件应对手册》及《学生手册——青少年带头用良好的卫生习惯战胜传染病》的蒙语版的翻译，共印发40 000 册。

20. 2005 年9 月，举办省级健康教育人员传染病防治健康教育战略规划研讨会，来自项目省、西部有关省及北京和上海的25 名省级健康教育与传染病防治人员参加研讨会。

21. 2005 年12 月，举行项目总结与经验交流会，来自财政部、卫生部、项目省及有关国际组织代表共28 人参加了总结会。

22. 2005 年12 月～2006 年3 月，组织完成《常见传染病与急性中毒预防和控制手册》，《常见传染病与性病图谱》二次出版印刷，印刷22 000 册，发往西部其他8 省县级疾控中心和乡镇卫生院。

23. 2006 年6 月，在云南曲靖组织基层卫生人员传染病防治联合培训班，特邀广西和贵州的疾病预防控制人员及乡镇卫生院传染病诊治人员观摩参与式培训教学方法。

24. 2006 年6 月，项目聘请中国疾控中心健康教育所专家对项目进行外部评估，于7 月初完成项目外部评估报告。

25. 2006 年6 月，项目开始准备《中国西部地区传染性非典型肺炎与传染病防治能力建设项目总结与回顾》一书的编纂工作，于12 月份印刷出版。

英（译）文部分

COMBATING SEVERE ACUTE RESPIRATORY SYNDROME IN THE WESTERN REGION OF THE P. R. CHINA SUMMARY AND REVIEW

PREFACE

After the first suspected case of severe acute respiratory syndrome (SARS) was discovered in Guangdong province in November, 2002, it spread, within 5 short months, through a total of 26 Chinese provinces, autonomous regions, and municipalities, including Beijing, Shanghai, and Guangzhou, and the Hong Kong and Taiwan regions, and almost became a nationwide epidemic disease. In the face of the threat of SARS, the Chinese government responded quickly, raised funds from various channels, and reallocating human resources and materials to control the epidemic.

As part of their efforts to control the spread of SARS, the Ministries of Finance and Health submitted an urgent request to the Asian Development Bank (ADB) for emergency technical assistance to combat SARS in at-risk Western Region provinces. This request was met with strong support from the ADB, which immediately assembled a project team. Thanks to dialogue and cooperation between the ADB, the Foreign Loans Office of the Ministry of Health (MOH-FLO, designated as the TA executing agency) and the Ministry of Finance, the proposal, "TA 4118-PRC: Combating Severe Acute Respiratory Syndrome in the Western Region" was approved on the 22nd May 2003, and was the fastest processed ADB TA to date (approved in just less than one month after the government's request).

Consistent with the TA's flexible design and thanks to effective collaboration between MOH-FLO, ADB, and local project partners, the TA was able to flexibly respond to an evolving health context. Namely, following an initial focus on addressing the urgent threat posed by SARS, the TA gradually shifted to address broader infectious diseases and public health threats, particularly those facing poorer rural areas.

This project had been underway in Yunnan, Qinghai, Ningxia and Xinjiang for 3 years in June 30, 2006. The goal of the project was to enhance public health systems and infectious disease prevention. This report summarizes and reviews the entire process of preparation and implementation of the different aspects of the program- background, design, administration and monitoring, implementation, out-

puts, external evaluation and policy recommendation. At the same time, we have reported some of the personal views of the technical personnel who were involved in this project, that they may offer their, less quantifiable views of the program to readers. We sincerely hope that this report will be a useful reference for that medical faculty wishing to develop similar projects in the future.

This summary and review was born as a result of the efforts of many people, including project management officers, experts, disease control and prevention personnel from MOH-FLO, the national experts panel and provincial project staff (Yunnan, Qinghai, Ningxia and Xinjiang) under the leadership of MOH-FLO. The task manager of ADB and the project coordinator also made significant contributions. We wish to thank them and acknowledge all of their efforts.

The Summary and Review Editing Team

September 15, 2006

CONTENTS

EXECUTIVE SUMMARY

I. Project Background

Since the first case of severe acute respiratory syndrome (SARS) (through retrospective investigation) was found in Guangdong province in November, 2002, the SARS epidemic spread throughout the country. This occurred for a number of reasons, including: the highly contagious nature of the disease; lack of knowledge about its pathogenesis, epidemiology, diagnosis and treatment at early stage of the outbreak; lack of a sound public health emergency response system; and high population density coupled with a large mobile population. To effectively control the further spread of SARS, the People's Republic China (PRC)'s government adopted a series of measures, including establishing the national SARS prevention and control headquarters, passing legislation that made SARS a reportable disease, creating a special fund for SARS prevention and control, and implementing strict quarantine in highly contaminated regions.

In April, 2003, the Asian Development Bank (ADB) established a Task Force on SARS, reporting directly to senior management, to mobilize the ADB's regional response to the rising threat of the disease in Asia. Shortly thereafter, on April 23, the Government of the PRC requested the ADB to provide emergency technical assistance (TA) for selected provinces and autonomous regions (henceforth, simply provinces) in the PRC's Western Region. The ADB rapidly assembled a project team to communicate with the Foreign Loan Office of the Ministry of Health (MOH-FLO) and the Ministry of Finance. On May 22nd, the proposal, "TA 4118-PRC: Combating Severe Acute Respiratory Syndrome in the Western Region" was approved, and began to be implemented in Yunnan, Qinghai, Ningxia and Xinjiang provinces. Consistent with the TA's flexible design and thanks to effective collaboration between MOH-FLO, ADB, and local project partners, the TA was able to adapt to an evolving context. Namely, following an initial focus on addressing the ur-

gent threat posed by SARS, based on continuous dialogue and needs assessment, the TA gradually shifted to address additional infectious diseases and public health threats, particularly those facing poorer rural areas.

II. Major Contents of the TA

The TA was designed to address SARS and infectious disease prevention and control in PRC's western region, with a total investment of US $2 million. According to the original plan, the period of the TA was one year. However, it was later agreed to extend the period of the TA to three years to better develop local capacities for prevention and control of infectious diseases, including SARS, based on the progress of the project and the needs of the target provinces. The TA was mainly implemented in four provinces: Yunnan, Qinghai, Ningxia and Xinjiang, in PRC's western region. Its purpose was to strengthen the capacity of the target provinces for SARS prevention, surveillance, management and alleviation in order to prevent SARS from spreading in the PRC's western region; to establish a rapid response system to protect front line medical staff and high risk populations; and to help target provinces to build a long term public health response capacity while combating the instant threat of SARS. The TA prioritized interventions such as: (1) helping target provinces to develop suitable provincial plans for SARS prevention and control; (2) strengthening epidemiological surveillance system for SARS and infectious diseases; (3) enhancing public health emergency response capacity; and (4) raising public awareness of SARS and infectious disease and self-protection through multi-mode information and health education delivery mechanisms.

Design and implementation of project activities was done with the overall objectives of the TA in mind, as well as the gaps in abilities and the needs of each target province. During implementation, multiply communication channels were set up within each province to glean feedback from grassroots staff on the training proposed, with adjustments made to content in order to target the training more effectively. Moreover, we maintained communication with international and internal organizations to facilitate successful implementation of the TA.

Based on rapid assessment (RA) and dialogue among the target provinces, the

actual needs were identified and a series of activities were carried out, including: (1) helping each province to refine its plan for SARS and infectious disease prevention and control; (2) developing multi-level and multi-oriented practical training for grassroots health staff on infectious disease prevention and control; and (3) strengthening the local capacity for health education about infectious diseases, and develop and distribute health education materials to relevant population groups.

III. Efficacy of the TA

1. Supported Target Provinces to Develop and Refine Provincial Plans on SARS and Infectious Disease Prevention and Control.

Established and improved local emergency response systems for SARS and infectious disease prevention and control; established emergency network across provinces, autonomous regions, prefectures, counties and townships; and increased investment into public health undertakings, disease control in particular.

2. Strengthened Local Capacity for Infectious Disease Prevention and Control in Target Provinces.

For this purpose, two facilities were used: 1) handbooks, such as the Handbook of Common Infectious Disease and Acute Poisoning Prevention and Control, which was treated as reference for day-to-day work or self-learning for grassroots health staff; 2) pragmatic face-to-face training involving participatory methods for grassroots health staff.

2.1 Compiled and distributed the **Handbook of Common Infectious Disease and Acute Poisoning Prevention and Control** and the **Photo Bank for Common Infectious Diseases and Sexually Transmitted Diseases**.

A total of 35,000 volumes of the Handbook of Common Infectious Disease and Acute Poisoning Prevention and Control, were printed and distributed to provincial, prefectural and county level centers for control and prevention (CDCs) and township hospitals (6-8 volumes per unit). Based on the feedback we received, the handbook--featuring easy-to-understand illustrations--proved a useful reference and guide, and became very popular among grassroots health staff. The book was translated into the Uyghur language (the language spoken by the major ethnic group

in Xinjiang) and 5,000 volumes were printed and distributed to related units in Xinjiang. Another book, the *Photo Bank for Common Infectious Diseases and Sexually Transmitted Diseases*, was also printed and distributed to each unit; 20,000 volumes copies with 4-6 copies distributed to each unit. Both books were printed a second time, 22,000 copies for each book, which were distributed to county level CDCs and township hospitals of other western provinces to guide disease control and prevention work in those areas. To guide grassroots health staff in diagnosis and evaluation of infectious diseases, national and provincial experts were organized under the TA to compile the *Flow Chart for the Diagnosis and Management of the Acute Infectious Diseases by Grassroots Medical Staff*. Three hundred thousand copies of this book were printed and distributed to county level CDCs and township hospitals throughout the nation.

2.2 Targeted training for grassroots health staff for infectious disease prevention and control.

Health staff was grouped by provincial level and county & township level, separately receiving professional training.

Provincial level training of trainers (TOT): Two rounds of training were held; once in May-July, 2004 and again in May-July, 2005. Altogether, there were 6 training classes, which trained more than 180 trainers skilled in participatory teaching methods.

County and township level training: This was organized by trainers who had received the provincial-level TOT (above), targeted at county level CDCs and township health staff, and focused on training for infectious disease and acute poisoning prevention and control. The trial training involved 14 prefectures of the four target provinces, with about 900 participants from county and township level.

Following the trial training, the second and third rounds of extended training targeting were conducted for staff from all prefectures, and comprising 62 training classes, with at least 1-2 professionals from each county. The three rounds of grassroots level training, including the trial training, encompassed a total of 84 training classes and trained more than 4,000 disease control staff at county and

township level.

To support the above training, national experts developed demonstration discs and participatory training plans to accompany the participatory training. The first version of the demonstration discs was distributed to provincial and prefecture level trainers to guide them in extended training. The revised versions of the discs and the participatory training plans had been published by the Peking University Medical Press, and distributed to target provinces for future training purposes.

2.3 Practical training on epidemiological investigation (PTEI) for disease control staff at provincial and prefecture level.

Between Oct. 10-Nov. 10, 2004, we conducted PTEI targeted at provincial and prefecture level CDCs was held in Beijing, with 20 trainees; 5 trainees from each province, including 2 provincial-level professionals and 3 prefecture-level professionals. The training comprised: 1) one month of centralized learning, including advanced theory of practical epidemiology and case study, proposal design, investigation form design, data collection, input, analysis, synthesis, and report writing; 2) and one year of field exercise, combined with final investigation report.

3. Health Education On Infectious Disease Control And Prevention

3.1 Health education materials

The Teachers' Guidebook for Preventing Common Infectious Diseases and Responding to Public Health Emergencies, and Children as Promoters of Hygiene Practices and Protection Against Common Infectious Diseases- student handbooks were developed and 140,000 and 150,000 copies printed, respectively. Copies of the teachers' handbook were distributed to primary schools in the poorest counties of the target provinces (those in the national poverty relief program) and all junior secondary schools in target provinces. Copies of the students' handbook were distributed to students in grades 4-6 and in junior secondary schools in the poorest counties of target provinces. Generally, one students' handbook was distributed between ten students, and 4-5 teachers' handbooks were distributed to each school, depending on the recorded number of students in each province. Relevant experts were organized under the TA to work out a Mongolian version of students' handbook, which then had 6,000 copies printed and distributed to primary schools in Inner Mongolia.

3.2 Health education training for infectious disease and public health emergency

To strengthen the strategic capacity for health education of health education and disease control staff, provincial training and review on strategic planning of health education for infectious disease and public health emergency targeted at related professionals was held in the four target provinces, in accordance with the TA design. Provincial strategic frameworks and response plans on this issue were drafted after discussion with trainees and guided by national experts. The provincial strategic framework provided every target province with an important guide for further development of its health education campaign for infectious disease and public health emergencies.

4. Procurement and Distribution of Equipments and Materials

Equipment and materials purchased for target provinces in the project included: four Nissan vehicles, 48 potable computers, 48 multi-media projectors, 20 cameras, 4 digital videos, 9 autoclave sterilizers, 9712 N95 masks, 426 sets of lab coat, 40 infrared temperature detectors, 2,000 pairs of goggles, and 4000 pairs of latex gloves.

Except for direct procurement of equipment under the TA, part of the fund was also used for developing and printing training and education materials, such as the Handbook of Common Infectious Disease and Acute Poisoning Prevention and Control, the Photo Bank for Common Infectious Diseases and Sexually Transmitted Diseases, the Teachers' Guidebook for Preventing Common Infectious Diseases and Responding to Public Health Emergencies, the Children as Promoters of Hygiene Practices and Protection Against Common Infectious Diseases- student handbooks, and the Flow Chart for the Diagnosis and Management of the Acute Infectious Diseases by Grassroots Medical Staff, which, as mentioned above, had been distributed to related grassroots staff.

IV. Policy Recommendations

1. Reinforce Mechanism Building

1.1 Strengthening government's administration of disease control and prevention, improving government's resource allocation mechanism

In the last 20 years, insufficient funding from government to public health services has led to the dilapidation of the public function of disease control agencies. As part of the program, local governments began to pay greater attention to this issue. Poor public function of the CDCs has depended on whether the government has been able to raise fund to provide appropriate investment to them.

1.2 Enhance stability and efficiency of the government's allocation

Expediency, stability, and efficiency are the same important issues when the government implements its function on raising funds to disease control and prevention. To date, however, the governments have made inefficient efforts in this regard. This has mainly been caused by: (a) insufficient overall investment in health; (b) highly random allocation of resources; (c) use of a sole investment mode without any encourage mechanism; and (d) comparatively low investment in staff capacity building.

1.3 Establish stable and proper allocation mechanism

On the basis of finding sufficient funds, a stable investment mechanism-ensuring long term, proper allocation and eliminating random allocation-should be established. For example, disease control allocation should keep pace with the government's overall increasing financial expenditure. However, a mechanism like this was not observed.

2. Improve Human Resources of Disease Control Agencies, and Strengthen Capacity Building for Grassroots Health Staff

2.1 Reform the staffing system to keep and attract high quality personnel.

Institutions should prioritize creating an environment which attracts and keeps high quality staff, in particular though implementing a competitive salary mechanism and welfare scheme. In addition, CDCs should adopt a competitive recruitment mecha-

rism to avoid recruiting unskilled staff (i. e. non-health professionals).

2.2 Strengthen staff training. Staff training should be primarily targeted at grassroots health staff to enhance their capacity in epidemiology.

PTEI should be focused on provincial- and prefecture-level CDCs' key staff to foster epidemiological investigators who are able to manage responses to infectious disease outbreaks. Training content should be pragmatic and targeted, and the training should be delivered in a participatory and practical manner.

3. Reinforce Rural Areas' Health Work on Disease Control

In rural areas, rural residents have long been faced with barriers to seeking health services, including the introduction of often-unaffordable fees for medical consultations, since the health system was deregulated in the 1980s. To solve the problems, on one hand the government should adopt a variety of mechanisms to establish a suitable rural cooperation medical system, and on the other hand the government should reinforce the prevention of infectious diseases and other common diseases in rural areas, and raise prevention awareness to effectively reduce the disease burden among rural residents.

4. Strengthen Disease Control and Prevention Targeted at Mobile Populations

Along with a growing national mobile population, disease control and prevention among a mobile population requires more and more attention from all parts of society. As we have seen with SARS, tuberculosis and AIDS/HIV, if we do not adopt effective investment and management mechanisms and if we ignore prevention and control of infectious diseases among large mobile populations, we essentially counter all our efforts at prevention and control of infectious disease. Hence, it requires the establishment of effective systems to address the problem of increasing occurrences of infectious diseases among an increasingly mobile population, including carrying out effective management of mobile populations at their origin, proper and effective inputs, and collaborating closely with disease control agencies in the places of origin of mobile people.

ACRONYMS AND ABBREVIATION

ADB	sian Development Bank
APF	Advance payment facility
BOH	Bureau of health
CDC	Center for Disease Control and Prevention
ICT	Information and communications technology
IEC	Information, education, and communication
M&E	Monitoring and evaluation
MOE	Ministry of Education
MOF	Ministry of Finance
MOH	Ministry of Health
MOH-FLO	Foreign Loan Office, Ministry of Health
NGO	Non government organization
PHE	Public health emergency
PIU	Project implementation unit
PRC	People's Republic of China
PTEI	Practical training on epidemiological investigation
RA	Rapid assessment
SARS	Severe acute respiratory syndrome
SDRC	State Development and Reform Commission
SDRF	Strengthening disease response foundations
TA	Technical assistance
TB	Tuberculosis
TOR	Terms of reference
TOT	Training-of-trainers
UNICEF	United Nations Children's Fund
WB	World Bank
WHO	World Health Organization

Chapter I INITIAL PROPOSAL: BACKGROUND AND RECOMMENDED FRAMEWORK

1. Background of the Initial Proposal

According to the disease surveillance report, the first case of sever acute respiratory syndrome (SARS) patient as well as its discovery was reported in disease surveillance report of Guangdong province on November, 2002. Since then SARS pandemic continually spread, as a result of high infectivity of SARS, a lack of knowledge about SARS pathogenesis, epidemiology, diagnosis and treatment and etc, a want of sound public health response system, and PRC's high population density and large mobile population. From Ministry of Health (MOH) statistics, as of 10am of May 1st, SARS patients had been found in People's Republic of China (PRC) 26 provinces, autonomous regions, and municipalities, as well as Hong Kong and Taiwan regions, whilst that a total of 3638 SARS patients and 170 deaths (see appendix I. 1) had been reported in the mainland of PRC. In order to effectively prevent further spread of SARS, PRC government had adopted a range of measures, from establishing a national SARS prevention and control headquarters, making SARS a statutory epidemic under the PRC's legislation, addressing special budget for general prevention and control of SARS, to strict quarantine implemented in high SARS-prevalent regions. No doubt that fund was a crucial factor of prevention and control of SARS, PRC government had started to raise fund for SARS prevention and control from all round. About fund for prevention and control of SARS could be seen in appendix I. 2.

Before a quick spread of SARS in western provinces, it was urgent to translate cumulative successful lessons from other high SARS-prevalent regions into the assistance and support of response capacity building for public health emergencies in western region as soon as possible, in strengthening epidemiological surveillance and report system, adopting effective and appropriate approaches to prevent and

control SARS, enhancing disease control system, further developing health education campaign, raising awareness on disease prevention among the public, and maximizing the possibility of nipping the spread of infectious disease in the bud. Facing insufficient domestic funds comparing with the all-round requirements of the national SARS prevention and control, support and assistance from international organizations was urgent in supporting PRC to overcome the immediate difficulties. Hence, MOH submit a request to the Asian Development Bank (ADB) for emergency technical assistance (TA) to develop "Project on Strengthening Response Capabilities for Severe Acute Respiratory Syndrome in PRC's Western Region".

2. Initial Project Proposal

2.1 Target Coverage

Yunnan, Qinghai, Ningxia, Xinjiang, four western provinces (autonomous regions) had been chosen as target provinces, according to the principle of choosing the places in which, though no one or only few SARS patients had been reported, potential risk for SARS epidemic was posed. Substantial project units involved provincial centers for disease control and prevention (CDC) and health education institutions. Situation in target provinces could be seen in appendix I. 3.

2.2 Target Objectives

Strengthen surveillance capabilities on SARS in target regions by CDCs, to enhance response capabilities for public health emergencies, and to increase public awareness and self-protection on capabilities on SARS through the project implementation.

2.3 Project's Logic Framework

Since SARS is a newly found and highly infectious disease, yet not to be fully understood to mankind to date, in light of the cumulative knowledge and experiences of SARS prevention and control, the project strategy should focus on control of the carriers of infectious disease and block of the possible transmission routes for SARS. The TA logic framework (see appendix I. 5) was designed under the project objectives on the basis of PRC's strategic framework against SARS (see appendix I. 4).

2.4 Target Initiatives

component 1: ***to strengthen capacity building of epidemiological surveillance system***

To provide epidemiological surveillance departments with necessary equipments for information collecting, processing, analyzing and feedback, to establish mechanisms and procedures on SARS detection and reporting, to develop staff training programs in order to strengthen capacities for epidemiological surveillance.

To establish SARS surveillance mechanisms and procedures: To organize experts from the WHO, as well as experts at nationwide and provincial level to participate in seminars, to compile provisions of SARS surveillance for each province, and then distribute them to relevant units within corresponding districts. A budget of 10-15 thousand dollars should be located on this.

Training: Target provinces respectively initiate one or two rounds of training sessions on SARS surveillance to foster SARS surveillance staffs at provincial and prefecture level. A budget of 20-35 thousand dollars offered for this.

Retraining: Retraining sessions on SASR surveillance for county-level staffs would be delivered by the prefecture-level staffs trained, and the corresponding provision booklets on SARS surveillance would be distributed to those who are in charge of county-level surveillance. A budget of 20-30 thousand dollars offered for this.

WHOs, national and provincial experts provide technical guide and examinations based on the actual conditions. A budget of 10 thousand dollars offered for this.

Equipment procurement: It could be seen in appendix I. 6.

component 2: ***emergency response capacity building***

To contract experts to teach diagnosis standard and treatment methods on SARS, as well as measures of improving system of information reporting and feedback, through professional training and seminars on medical treatment or disease prevention, in order to enhance comprehensive capabilities of clinical diagnosis and treatment among the staffs. Provide equipments urgently needed and strengthen emergency response capabilities.

To formulate emergency response plan on SARS control: To organize national and provincial experts to participate in seminars, to compile SARS emergency response plans for each province respectively, and then distribute them to relevant units within corresponding districts. A budget of 10-15 thousand dollars offered for this.

Training: Target provinces respectively initiate two or three rounds of training sessions on emergency response, ranged from SARS clinical diagnosis and treatment, disinfection and quarantine, to patient management, etc, in order to foster key medical practitioners worked at fever clinics and designated hospitals at provincal and prefectural level. A budget of 20-35 thousand dollars offered for this.

Retraining: Retraining sessions would be delivered by these trained, key medical practitioners, to medical staffs at the same units as well as at sub-level hospitals, and together with training materials to trainees at each level. A budget of 30-40 thousand dollars offered for this.

WHOs, national and provincial experts provide technical guide and examinations based on the actual conditions. A budget of 20-30 thousand dollars offered for this.

Equipment procurement: it could be seen in appendix I. 6.

component **3**: ***To enhance capacity building on health education public and self-***protection

To compile and disseminate easy-to-read health education materials focused on SARS prevention, for the purpose of strengthening public awareness and capabilities of self-protection.

To compile, print and disseminate materials for education campaign on SARS prevention and control: to organize health education staffs to compile materials that are full of pictures and photographs, easy-to-read, and adapt to the local custom and language, to print and disseminate according to the demand of it. A budget of 20-30 thousand dollars offered for this.

To develop mass media campaigns for SARS prevention and control: to collaborate with best popular publishing houses and broadcast media in the local areas to produce health education related media program and play time after time. A budget of 30-40 thousand dollars offered for this.

Release campaign videos on SARS prevention and control in designated places: to purchase or produce VCD or video tapes to show repeatedly in public places (stations, hospitals and shopping centers). A budget of 10-20 thousand dollars offered for this.

WHOs, national and provincial experts provide technical guide and examinations based on the actual situations. A budget of 20-30 thousand dollars offered for this.

Equipment procurement: it could be seen in appendix I. 6.

2.5 Budget and Allocation

2.5.1 Budget

A grand of 2 million dollars would be proposed for the use of capacity building on SARS prevention and treatment in the four western provinces, of which 400 thousand dollars to Ningxia and Qinghai each, and 600 thousand dollars to Xinjiang and Yunnan each, with project period being one year. Details about allocation could be seen in appendix I. 7.

2.5.2 Equipment procurement

As much as 50% of the total grand would be proposed for the use of equipment procurement to support activities under the TA, such as capacity building of epidemiological surveillance, strengthening emergency response, and health education campaign. The list of equipment procurement could be seen in appendix I. 6.

2.6 Project Organization and Administration

2.6.1 Project organization

Lead and organized by MOH and Ministry of Finance (MOF), the Foreign Loan Office, MOH (MOH-FLO) would be in charge of concrete work in coordination and management, ranged from project proposal, organizing the implementation, equipment procurement and financial management, and etc. MOH-FLO would assign special persons for organizing the implementation of the TA and reporting to ADB about the process and completion. Each target provincial health bureau should assign special persons for organizing and implementing initiatives within respective provinces, and reporting to the MOH-FLO about the process and completion.

2.6.2 Financial management

MOH-FLO established a distinct project bank account to handle fund flows for the TA. On the mechanism of "payment based on the report", MOH-FLO would be in charge of the relevant reports and materials provided to ADB, making application for fund following the TA progress, and maintain timely reallocation to target provinces. Each target province should establish designated account for the coming fund. Project units at every level and financial departments at every level should establish independent accounting, keep specific records of expenditure related, and preserve the whole fiscal receipts and documents, making it available and ready for

ADB or other designated mechanisms to go through or audit.

Accounting and financial management during the TA would be implemented according to the Financial Management Regulations of Grant Project Administrated by International Department, Ministry of Finance and the Accounting Regulations of Grant Project Administrated by International Department, Ministry of Finance (Fi text [2001] No. 195) issued by the MOF of PRC.

2.6.3 Management of equipment procurement

In terms of the direct approach that ADB could accept, equipment purchase would be implemented by MOH-FLO or by target provinces themselves under the leadship of MOH-FLO. The entire procurement documents and receipts must be well preserved, making it ready and available for ADB to go through and audit.

2.6.4 Project program

In late April 2003, the PRC Government began dialogue with ADB on possible assistance in the above areas. Guided by MOH-FLO leaders and strong communication linking MOH-FLO, Ministry of Finance, and ADB, intensive combined efforts supported rapid development of the final TA design, incorporating elements of the above initial proposal. The final version of the TA (described in Chapter II) secured final internal approval by ADB on 22nd May 2003 and the TA Letter of Agreement was signed with the PRC Government on 30 May 2003, and this cooperation was announced in the front page of Health News and via other prominent media. Project timetable could be seen in Appendix I. 8.

Appendix List

Appendix I. 1	National Statistics on SARS Pandemic
Appendix I. 2	PRC's Fund for SARS
Appendix I. 3	Basic Situation in the Target Provinces
Appendix I. 4	PRC's Strategic Framework of SARS Response and Budget
Appendix I. 5	Project's Logical Framework
Appendix I. 6	Equipment Procurement List
Appendix I. 7	Budget and Allocation
Appendix I. 8	Timetable of Project Implementation

Chapter II TECHNICAL ASSISTANCE DESIGN OVERVIEW

1. Overall TA Design

The TA was guided by the principles of timeliness and efficacy in response, incorporating flexibility in the design and implementation arrangements in view of substantial uncertainties in the way the SARS epidemic would unfold in the Western Region and the rest of PRC in April/May 2003. As its longer term, macro-level goal, the TA aimed to support effective containment of SARS in the Western Region, preventing cross-border transmission and developing capacity for rapid epidemic detection and response. Within an overall objective of containing the outbreak of SARS in the target provinces by strengthening local capacities for SARS prevention, surveillance, management, and mitigation, the TA design particularly emphasized (i) protecting front-line medical workers, the poor, and other at-risk groups; (ii) working within a framework of close collaboration with other domestic and international partners; and (iii) collecting and widely sharing lessons from SARS, in order to advance dialogue on addressing challenges facing the PRC public health system, and to present new models.

Guided by this goal and objective, the TA was designed to flexibly respond to evolving threats, as well as opportunities to link to other national and internationally-supported interventions. In addition, while addressing the immediate threat posed by SARS, the TA's design framework prioritized interventions to simultaneously build critical, longer-term capacities in the public health system. The TA design foresaw 4 components (outlined in below box) targeting the following key, broadly defined outputs: (i) sound provincial plans to address SARS; (ii) strengthened epidemiological surveillance systems; (iii) augmented emergency response capabilities; and (iv) increased public awareness of SARS and self-protection through multi-mode information and health education delivery mechanisms.

Description of Components in the Initial TA Design

The approved TA paper (Appendix II. 1) provides details of the TA design, including the logical framework. While stressing the need for flexibility to meet evolving challenges and needs, the design envisaged four broad components, paraphrased below.

Component 1: Assessment and Planning. Combining dialogue with the World Health Organization (WHO) and other relevant organizations and focused field evaluations as needed, the TA will assess current conditions and SARS likely transmission dynamics in the target provinces (especially rural areas). In turn, it will assist target provincial governments to assess (i) the overall readiness of provincial and subprovincial health systems to respond to SARS, identifying key shortfalls; (ii) resource availability, including human resources, equipment (e.g., for diagnosis, transport, and waste management), and basic supplies; and (iii) provincial capacity to implement a comprehensive plan, ranging from surveillance to information, communication, and education (IEC) interventions. These will support establishment of sound plans for combating SARS in each province that (i) build on strategy elements already in place; (ii) are formulated in alignment with both local context and frameworks developed by the Leading Group on SARS, WHO, and other relevant bodies; and (iii) support periodic monitoring to facilitate adjustments in response to changes in the SARS situation, and to capture lessons that may be used to strengthen epidemic response in other provinces.

Component 2: Epidemiological Surveillance. The TA will work with provincial health bureaus and disease control agencies, with technical support from MOH, WHO, and other national and international agencies, to enhance epidemiological surveillance systems in the target provinces. Based on assessed capacities and constraints (e.g., in system coverage and data quality, equipment, training, and operational budgets), the TA will help (i) develop a system improvement framework for affecting needed changes, (ii) identify and procure urgently needed equipment; (iii) develop and provide targeted training, focusing on disease control staff at provincial, prefecture, and county levels, as well as on-site and sentinel staff responsible for epidemiological reporting. While addressing the immediate threat of SARS, the framework will provide the basis for a comprehensive surveillance system to address future threats.

Component 3: Emergency Response Systems. In parallel with the development of provincial plans for addressing SARS, the TA will assist in compiling effective, comprehensive emergency response plans covering (i) coordination in key areas requiring intragovernment reaction (e.g., borders as a key control point for epidemics); (ii) mechanisms for immediate detection and alert, and coordination between emergency response staff, local clinics, and hospitals; (iii) emergency medical care and triage, including medical transport and quarantine procedures; (iv) hospital-based medical care and patient management (isolation, disinfection, diagnosis, treatment, and reporting), (v) exposure management, including protection for health personnel at all levels; (vi) infection control precautions for households, the workplace, and hospitals; (vii) safety in specimen collection, handling, and final processing; and (viii) overall system management, coordination, and supervision capacity.

Component 4: Information, Education, and Communication (IEC). The TA will assist target provinces in formulating and implementing IEC strategies to effectively disseminate key information such as (i) SARS symptoms, characteristics, and risk factors; (ii) SARS prevention for individuals, households, and institutions (e.g., schools and workplaces); (iii) existing control mechanisms and available health services; (iv) public rights to cost-free treatment; (v) social responsibility; and (vi) advice for people who may have been exposed (including by family members). These will be linked to national-level initiatives, but will also build on local efforts, in order to address province-specific needs. Multiple delivery modes for IEC will include local newspapers and other printed material, television, and radio, and will seek to mobilize existing social institutions (e.g., village committees, schools, etc.). Action plans will include targeted efforts for reaching high-risk groups and the hard-to-reach (e.g., ethnic minorities). The TA will assist in materials development, training, social mobilization, provision of key equipment, and IEC implementation.

As described below and in Chapter IV, the balance of efforts across these components and across indicative activity areas within each component was adjusted in response to findings of early activities, priorities expressed by the target provinces, and the perceived comparative advantage or potential "value added" of TA support vis-a-vis other national and internationally supported interventions. For example, component 1 activities aimed at strengthening provincial level planning for SARS (such as support for joint and then province-specific seminars following completion of the rapid assessment, as discussed below) were concentrated earlier in

the TA, while joint dialogue on assessment continued throughout the TA but increasingly focused on capacity building needs. Similarly, during TA implementation it was deemed that work to develop a formal framework for improving epidemiological surveillance systems was not within the TA's comparative advantage, and in practice component 2 support focused on more concrete capacity-building: as described in later sections, this ranged from the Practical Training on Epidemiological Investigation (PTEI), principally targeted at provincial-level CDC epidemiologists and packaging in four-wheel drive vehicles and related equipment, to inclusion of core competencies for county-level CDC staff under the Strengthening Disease Response Foundations (SDRF) initiative. While institution-building aspects of emergency response systems (component 3) were deemphasized during implementation to allow more focus on areas deemed to be the TA's core comparative advantage, more focused emergency response capacities were boosted through the PTEI as well as a training program targeted principally at provincial-level CDC health education institutes on strategic planning for IEC to respond to outbreaks and public health emergencies. The latter, in turn, also comprised an important thrust under component 4, which also supported school-targeted IEC campaigns. These interventions are described in more detail in Chapter IV.

To ensure that flexibility built into the TA design translated into effective responses to the immediate threat of SARS and the need to build key longer-term capacities, the TA design (and multi-partner dialogue underlying that design) emphasized critical pillars:

- dialogue linking ADB's support with MOH-FLO and local bureaus of health and CDCs to continually reassess how limited project resources could best respond to key needs;
- information sharing, dialogue, and efforts to seek partnerships with a broader range of stakeholders (e.g., government agencies and government-linked institutions at national to local levels, international organizations, local and international nongovernment organizations (NGOs), etc.) in order to combine efforts, avoid duplication, and maximize complementarity; and
- wherever possible, integration of elements into a comprehensive or packaged

approach linking "hardware" and critical "software" - e.g., capacity building via a Practical Training on Epidemiological Investigation (see Chapter IV) was supported by provision of vehicles and Information and Communications Technology (ICT) hardware to provincial CDCs, with the combined effect of strengthening investigatory and emergency response capacities.

Guided by these principles, efficacy of TA interventions also relied on ensuring effective and pragmatic coordination in implementation, as outlined below.

2. Basic Implementation Arrangements

As per the approved TA paper, MOH-FLO served as the TA's Executing Agency. The TA also foresaw for periodic dialogue with the Ministry of Finance and other agencies as needed to ensure consistency and complementarity between the TA and other domestic and foreign-assisted initiatives. As detailed in the TA paper (Appendix II.1), the TA design also envisaged the establishment of

- a central project implementation unit (PIU), based in MOH-FLO, to coordinate assessment of needs in the 4 target provinces and to periodically propose to ADB work plans (including allocation of TA resources) to address these; and
- reporting to the central PIU, provincial PIUs set up within health bureaus of the 4 target provinces to oversee day-to-day implementation, ensure coordination with other local actors (e.g., CDCs as well as provincial-level bureaus under other line ministries), and facilitate sharing of information and lessons learned within and across provinces.

As noted in Chapter IV, it was later agreed to adjust these formal arrangements, while maintaining the underlying principles of coordinated efforts. The TA additionally funded a TA Coordinator consultant (see below) to work closely with MOH-FLO and provincial partners in overseeing implementation. As noted in Chapter III, the TA was initially foreseen to be implemented from May 2003 to May 2004, but was

① As an exception to standard ADB TA, during the design phase, the ADB team secured senior management approval to include $600,000 in the estimated TA budget for equipment, ranging from emergency medical and staff protection supplies to other equipment and materials linked directly to broader capacity building interventions.

later extended through June 2006 in line with its shifting focus towards building longer term capacities against a broader array of public health threats.

3. Framework for Expert Inputs and Equipment Procurement

The TA design also foresaw the need for flexibility in arrangements for expert inputs (e.g., consultants) and for procurement of goods and other services. Namely, uncertainties in the evolution of SARS in the Western Region and in national and externally supported responses placed a premium on flexibility to provide timely inputs tailored to periodically assessed needs. Although generally adhering to relevant ADB project administration guidelines[③], the ADB project design team (see Chapter I) secured senior approval to relax certain standard provisions, as justified under this emergency TA. In addition to the principle that the TA should provide integrated interventions, expert inputs and procurements were to be provided within the framework of Government and external responses, balancing (i) efficiency; (ii) responsiveness to province-specific needs; (iii) strategic consistency (e.g., between provincial and national action plans); and (iv) inter-partner information sharing, capacity for quick concerted action, and optimal use of very limited human resources deployable to SARS responses in the PRC.

In terms of expert inputs, to support MOH-FLO in overall TA implementation, the TA design foresaw recruitment of one domestic consultant to act as a full-time as TA Coordinator. Reporting to the central PIU within MOH-FLO and working closely with provincial PIUs, the TA Coordinator's overall role was to facilitate implementation of the TA in the target provinces, ensuring full communication and dovetailing of efforts across all administrative levels, and with other active national and international agencies. Additional key tasks included (i) liaison with other domestic and international agencies and initiatives; (ii) supporting provinces to identify and period-

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② For example, following feedback on the first version of SDRF print materials, the project team worked with Xinjiang partners to develop and distribute a Uyghur language version of the main handbook to better reach staff in township hospitals in more remote, predominantly Uyghur areas of Xinjiang.

③ These include ADB's *Guidelines on the Use of Consultants*, *Guidelines for Procurement*, and *Guidelines for Disbursement of Technical Assistance Grants*.

cally reassess needed expert inputs and equipment/supplies, formulate action plans to address priority needs, and to implement those plans/interventions; (iii) report progress to MOH-FLO and ADB and facilitate broader information sharing; and (iv) assist in identification of needed expert inputs, and act as the team leader and take overall responsibility for auxiliary consultants and other expert inputs mobilized, as well as monitoring and liaise with domestic and/or international organizations and local institutions selected to carry out activities.

In view of the need for flexibility, the design for TA 4118 provided an indicative terms of reference (TOR) grouped by task areas linked to the TA's 4 components, rather than providing detailed, individual-specific TOR for pre-determined consultant positions (specifying person-months, etc.) as in standard ADB TAs. As per the TA paper (Appendix II.1), all consultants were recruited by ADB as individuals based on joint dialogue and identification with MOH-FLO. The TA design also adopted flexible procurement arrangements to allow timely response to urgent and evolving needs, including use of direct purchase to procure an initial "emergency package" of equipment and supplies and for all subsequent procurements below a ceiling of $100,000. Finally, the TA design provided for establishment of an advance payment facility for MOH-FLO and (as needed) for each province (under distinct bank accounts) to facilitate timely funding for implementation of workshops, training, and other in-field activities, as well as provision of certain goods and services.

Appendix List

Appendix II.1	Proposed Technical Assistance to The People's Republic of China for Combating Severe Acute Respiratory Syndrome in the Western Region (TAR: PRC 37228).

④ In addition to auxiliary international and domestic experts formally contracted as consultants, the TA also put an emphasis on utilizing local short-term resource persons, supporting implementation capacity by local partners (e.g., organizing and supporting prefecture-level CDC staff as training teams for county/township level staff), and informally sharing expert inputs with international organizations such as WHO and United Nations Children's Fund (UNICEF).

CHAPTER III PROJECT ADMINISTRATION, MONITORING, AND STAKEHOLDER COORDINATION

This chapter outlines cooperation by MOH-FLO (the TA executing agency) and the ADB to administer the TA, as well as with cooperation with provincial and lower level partners in the TA's 4 target provinces and dialogue and coordination with other key stakeholders. As noted above, the TA design allowed for flexible response in the face of a changing context, which put a strong premium on establishing early in the TA a foundation for smooth, flexible, and effective implementation. In particular, while the approved TA paper set out a framework for interventions and overall project administration (as outlined in Chapter II), the TA design acted as a framework to guide an iterative approach wherein findings of early activities and continual monitoring and dialogue fed into continual reassessment of needs, which in turn guided subsequent interventions under the TA's overall framework noted in Appendix II.1. Thus, the first section below outlines in some detail the key activities and the overall process during the TA's critical early stages, which set the foundations for subsequent implementation. Remaining sections more briefly overview project management and monitoring roles, financial arrangements (see also Chapter IV), mid-implementation adjustments to the TA timetable and scope of activities, dialogue and coordination with key partners, and general observations and lessons learned.

1. Critical Early-stage Implementation

The TA design recognized that "rapid assessment (RA) of needs and capacities at the start of the TA (followed by periodic review and targeted investigation throughout period covered) will be critical to (i) inform provincial action plans; (ii) guide formulation and implementation of surveillance, emergency response, and IEC campaigns components under the TA; and (iii) ensure feed-in to medium-term efforts to strengthen general capacities in these areas within local health and related

sectors." Shortly after TA approval and recruitment of the TA Coordinator[①], MOH-FLO and ADB agreed to mobilize a first-pass rapid assessment to provide a basic understanding of the current SARS context and coping mechanisms in the Western Region, and in turn to inform planning for TA interventions.

Xinjiang and Yunnan were selected for RA visits because of their positioning as key borders for Central Asia and the Mekong Region, while they are also considered to be representative of conditions and challenges in the TA's other 2 target provinces, Qinghai and Ningxia. ADB and MOH-FLO coordinated to rapidly recruit 3 short-term consultants, who joined the TA Coordinator to form the RA team, under MOH-FLO leadership.[②] Due to an ADB ban on mission travel to the PRC, the ADB project officer could not physically join the RA, but worked closely with MOH-FLO in mission planning and maintained dialogue with the RA team in the field. Findings of the RA are described in Appendix III. 1.

Following partial relaxation of ADB's restriction on mission travel to the PRC, ADB coordinated with MOH-FLO to field a mission to Beijing in late July 2003, immediately after completion of RA visits, in order to (i) debrief the RA team; (ii) take part in a presentation and multi-stakeholder discussion on RA findings; and (iii) plot the next directions under the TA. At a roundtable meeting with representatives of the Ministries of Health and Finance as well as key international agencies held on July 29, the RA consultants presented findings from field visits for review and discussion. Findings from the RA and follow-up dialogue were critical in framing subsequent TA activities, under the TA's overall design framework. In view of the risk of a national resurgence of SARS in the subsequent fall/winter it was agreed to maintain the TA's principal focus on SARS at that stage, while at the same time prioritizing (to the extent possible) interventions that would be able to simultaneously

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① Based on his depth of experience in both project administration and multi-sector responses to infectious diseases, as recommended by MOH-FLO, ADB recruited Dr. Wang Liqiu of China CDC as TA Coordinator. Dr. Wang's familiarity and networks with Western Region provinces also served as a key asset in maintaining fluid cooperation during TA implementation.

② This included securing clearances within ADB for a special waiver of the mission ban to allow consultant fielding within the RA team, consisting of 2 MOH-FLO officials, plus 3 domestic and 1 international consultants. The international expert was selected in dialogue with WHO from their global database of potential SARS experts.

address a range of infectious diseases and other threats to public health. Accordingly, following procurement of the first batch of equipment and supplies needed for SARS emergency preparedness, it was generally agreed that subsequent allocations under the TA's budget for equipment should prioritize items that would be (i) flexible in addressing SARS risks and other threats to health; (ii) integrally linked to capacity building initiatives, as specified in the TA paper; and (iii) assessed to be very cost-effective, based on evidence from WHO and other available sources, as appropriate. MOH-FLO and the ADB Mission also agreed to continually review the threat from SARS and, in the absence of a resurgence of SARS, to consider possible extension of the TA beyond May 2004 to address key gaps in local capacities to respond to broader infectious disease threats evidenced by the RA and other analysis.

In terms of more concrete directions ahead, discussions during and directly after the first ADB mission identified 2 areas for immediate preparatory action:

i. a two-stage seminar series on provincial planning for SARS and other infectious diseases (see below and Chapter IV); and
ii. a Strengthening Disease Response Foundations (SDRF) initiative to augment target provinces' capacities to respond to SARS and other diseases through designing and pilot testing new approaches, including content development and training via appropriate modes. More specifically, the SDRF would aim at enhancing practical competencies at the foundation of the disease response chain: county-level CDCs and local (mostly township-level) hospitals.

The principal ADB project officer returned to the PRC in late October 2003 for a special administration mission to participate in the first-stage provincial planning workshop (see item [i] above and see in below box) hosted by MOH-FLO in Beijing on 5-7 November and to engage in discussions and preparations for subsequent TA activities.

Beijing Seminar (5-7 November 2003) and Foundations for Continued Support

A key thrust of the TA was to assist local governments to evaluate and address weaknesses in (i) overall readiness of provincial and sub-provincial health systems; (ii) human and material resource availability; and (iii) provincial capacity to formulate and implement comprehensive planning, ranging from surveillance to IEC to inform and protect the public. To advance this aim, an Inter-provincial Seminar on "SARS and Other Infectious Disease Prevention and Control in ADB and World Bank-supported Provinces" was held in Beijing from 5-7 November 2003. While the ADB TA provided the main support for

planning and basic costs, World Bank funded participants from 8 of its project provinces and provided other valuable inputs to the Seminar, which supported dialogue and lesson sharing across diverse provinces.

The Beijing Seminar provided a forum for participants to review SARS responses and general preparedness and capacity to respond to other infectious disease, drawing inferences from cross-province comparisons as well as expert advice. The workshop drew representatives from three key groups of actors in provincial SARS responses to date (provincial governments and bureaus under various ministries, sub-national CDCs, and local clinical experts). Vice-Minister of Health Wang Longde provided the keynote address, setting the tone of the meeting and emphasizing the need incorporate the SARS experience in sustained efforts to address broader disease threats. A read statement from ADB Vice President, Operations Group 2, J. Eichenberger and remarks by R. Meyers of the World Bank echoed Vice-Minister Wang's key points. Technical and critical analysis included presentations by representatives from WHO, the China Office of the United States CDC, and several high-level national experts drawn from various institutions, as well as the ADB consultant team. In addition to 5 formal provincial presentations, small group sessions elicited participation from representatives of all attending provinces.

As one key output, small group and plenary discussions identified a list of key lessons from SARS, as well as broader public health issues, problems and challenges, and recommendations. After the Seminar, a short document identifying key lessons learned, remaining shortfalls in preparedness, and priority areas for immediate and medium-term actions was disseminated to participating provincial bureaus of health as well as relevant central MOH departments and other key national and international agencies. This also provided a strong basis for a series of second stage workshops (see Chapter IV) in the TA's 4 target provinces, which aimed at translating general findings and priorities from the Beijing Seminar into more focused dialogue on refining provincial plans for SARS and other public health threats in view of local contexts.

Discussions during this second ADB mission also helped to solidify tentative ideas for addressing key gaps in applied capacities at the foundation of the disease re-

③ These ranged from 6 Western Region provinces to Beijing and Guangdong, which had more direct experience in dealing with SARS.

sponse chain (i. e. , county level CDCs and township hospitals). Namely, in view of ongoing needs assessment and provincial dialogue, the proposed SDRF was emerging as the central capacity building thrust under the TA. Design work was further solidified following an in-field assessment visit to Qinghai, after which the team compiled a list of priorities for information and basic competencies for discussion among relevant agencies and organizations. Chinese CDC, US CDC, and WHO provided particularly key inputs to the drafting process for the SDRF's core materials, as described in Chapter IV.

As detailed in formal aide memoires, these missions and related multi-partner dialogue plotted the course for the TA's principal interventions, refining and reinforcing the framework for assistance set down in the TA paper. They set a firmer footing for continued smooth TA implementation, including operationalizing the flexibility foreseen in the TA design to continually reassess needs and adjust approaches, while also coordinating across multiple partners at the central and local levels.

2. Project Management and Monitoring

As noted in Chapter II on the TA design, MOH-FLO provided overall guidance as the TA executing agency. While not physically distinct within MOH-FLO, a core group of staff served as the de facto PIU, with active involvement up to MOH-FLO's most senior leadership [including in particular Director General Zhu Baoduo and (former) Deputy Director General Cai Jiming] providing strong guidance for the project. Based in MOH-FLO for much of the duration of the project, the TA Coordinator facilitated provincial identification of core needs and assisted the central PIU in compiling work plans and submission to ADB of proposals for equipment and consumable supplies integral to the TA's comprehensive support program.

From ADB's side, the ADB project officer took principal responsibility for project management, in dialogue with MOH-FLO. In view of the importance ADB ascribed to the TA and its special nature, the ADB project officer also played a hands-on role during the TA, working closely with the TA Coordinator and auxiliary consultants in designing, assessing, and refining core interventions, as well as liaising with international organizations, as noted below. In addition to regular exchanges

by email and telephone, cooperation and dialogue with MOH-FLO and the consultants was facilitated by frequent opportunities for face-to-face discussions during the ADB project officer's frequent missions to/through the PRC, and following his transfer to the ADB Resident Mission in the PRC. Sections below and in Chapter IV and further describe mobilization of inputs by consultants (recruited by ADB as individuals, in consultation with MOH-FLO) and additional resource persons as well as provision of equipment and materials during TA implementation.

Monitoring and evaluation (M&E) of project implementation also followed a similar loose division of labor. MOH-FLO, supported by the TA Coordinator, assumed principal responsibility for maintaining dialogue with local partners to ensure that interventions were well targeted and effective at addressing identified needs. ADB supported this monitoring through maintaining close dialogue with the TA Coordinator and other consultants (including reviewing various reports/updates), as well as tracking expenditures against budgeted work plans. While the TA was MOH-FLO's first exposure to ADB procedures and requirements for accounting and liquidation of expenditures, and on occasion there were difficulties in reconciling figures across records held/compiled by MOH-FLO, the ADB project officer, and the ADB Controller's Department, these posed no major problems. Monitoring of project impacts included internal M&E—i.e., training programs included pre- and post-training examinations as well as qualitative feedback from participants, and the consultants maintained dialogue with local partners and fielded review missions as needed—as well as a formal external assessment near project completion (see Chapter V). Moreover, the need for formal M&E was lessened by the fact that design of major capacity building interventions, materials development, etc. was very par-

④ These included 6 formal missions, during end July-early August 2003 (focusing on the RA roundtable and drafting an aide memoire to guide next steps), early November 2003 (focusing on the Beijing Seminar and planning for provincial seminars and design of the SDRF, reflected in a second aide memoire), late February 2004 (including attending a first pilot test of the SDRF training in Jinghong Prefecture, Yunnan), mid-September 2004 (for an early-phase SDRF training and piloting of school-targeted IEC materials in Germu, County Qinghai), late April 2005 (for a second-round TOT session in Urumqi, Xinjiang), and June 2006 visits to Qujing and Altai Prefectures of Yunnan and Xinjiang for final SDRF training sessions. These were interspersed by meetings during the ADB project officer's visit/pass through Beijing for 3 other missions, prior to his transfer in August 2004.

ticipatory (e. g. , local experts were included in drafting teams and/or asked to assess local relevance of draft materials) and iterative (i. e. , early feedback on draft materials or training programs was used to refine their design) .

3. Financial Arrangements

Excluding consultancy contracts (directly between ADB and the agreed experts) , ADB-financed TA expenditures were based on agreed work plans, which covered major activities during the course of the TA, with some allowance made for flexibly adjusting or adding activities. Fund flows utilized a combination of three mechanisms: (i) the advance payment facility (APF; see below) , under which ADB provided MOH-FLO funds on an advance basis for implementation of agreed activities according to budgeted work plans; (ii) MOH-FLO disbursement for agreed activities or procurements on a reimbursement basis; and (iii) procurements by direct purchase by ADB. At the project s start, MOH-FLO established a distinct project bank account to handle fund flows for the first two of these. As per the TA paper, ADB established an APF for MOH-FLO in August 2003. While the TA paper allowed for setting up separate APFs for each province, it was later agreed that it would be more practical to channel expenditures through the MOH-FLO account via a single APF, with MOH-FLO responsible for reallocation to the provinces. ADB approved a total of 6 APF advances to MOH-FLO: totaling roughly $1. 03 million, these advances provided the bulk of funds for activities such as capacity building, though in some cases MOH-FLO provided funds on a reimbursement basis to expedite activity implementation.

Expenditures under APF advances or by other mechanisms noted were according to budgeted activity work plans jointly developed by MOH-FLO and the ADB project officer. These, as well as MOH-FLO liquidations of completed expenditures were facilitated by the TA Coordinator. It should be noted that MOH-FLO maintained a very strong track record of documenting expenditures, with no major difficulties in liquidating expenditures to ADB s Controller s Department in Manila. In view of this, ADB was able to provide overlapping APF advances to improve timeliness and flexibility of funding.

4. TA Extension and Minor Changes of Scope

At the time of TA processing and approval, it was foreseen that the TA would be implemented from May 2003 to May 2004, with the bulk of TA support (in terms of fund allocation) be directed to activities and procurements to be rolled out quickly to respond to the rising threat of SARS. However, the TA paper noted the inability to predict the evolution of SARS and the need to revisit this indicative timetable (as well as overall implementation arrangements and approaches) through frequent reviews to assess implementation progress and the context of SARS and other infectious disease threats. In practice, SARS never gained a foothold in the Western Region, however the RA and other early-stage work under the TA (as well as dialogue with national, international, and local partners) yielded a clearer understanding that many of the risk factors associated with a SARS epidemic lay in broader gaps in foundational capacities to address the threat of infectious disease as a whole.

In view of a changing context of SARS and other infectious diseases, MOH-FLO and ADB agreed to incrementally shift the balance of TA interventions towards building broader disease response capacities. This was fully consistent with the flexible framework afforded in the TA design and the TA paper's emphasis (at the objective level) on tapping lessons learned from SARS response to advance dialogue on, and present new models for, addressing challenges facing the PRC public health system by building critical, longer-term capacities (particularly in poorer rural areas of the Western Region). It was also agreed that development of new models should emphasize efficacy through approaches that were based on a thorough understanding of local contexts, more applied, and more participatory. As described in Chapter IV, the latter ranged from

- involving local stakeholders in iterative design and pilot-testing of materials and programs, in order to ensure relevance and quality; to
- building up capacities among local partners to implement these programs (e.g., via a comprehensive training-of-trainers (TOT) program under the SDRF); to
- ensuring mastery of applied knowledge and core competencies by utilizing innovative participatory, active-learning methodologies in face-to-face training programs, as part of integrated capacity building interventions combining print-

based materials, face-to-face training, and various follow-up support.

These approaches, as well as efforts to build broader partnerships (see next chapter), were more time-intensive than conventional approaches, but proved key to enhancing program efficacy and ensuring broader complementarities.

To maximize the impact of successful interventions and strengthen the TA's contribution post-project to sustainable, longer-term capacities, MOH-FLO and ADB agreed to extend the TA through June 2005, and later through December 2005, with ADB enacting corresponding minor changes of scope. In light of clear evidence of the TA's strong impact and high levels of demand from partners in the target provinces and beyond, ADB granted a final extension through 30 June 2006 to allow utilization of TA savings to expand the coverage of the SDRF training and support dialogue on linking project achievements to efforts against the threat of avian influenza and longer-term public health threats.

5. Broader Dialogue and Coordination

TA implementation also emphasized dialogue with key national and international agencies. MOH-FLO took a lead role in ensuring linkages to the MOH system. Coordination with relevant national initiatives on SARS and other infectious diseases was also facilitated by the fact that several of the consultants were recruited from the Chinses CDC system, while others were respected clinical doctors from leading hospitals in Beijing with substantial experience. This combination also proved essential in ensuring that capacity building and other interventions could address needs and strengthen coordination between local CDC and clinical staff in the target provinces, perhaps best illustrated in the SDRF (see Chapter IV).

ADB took a lead role in coordination with relevant international organizations supporting various aspects of a response to SARS and other health issues in the PRC, including:

United Nations agencies, particularly the WHO, United Nations Children's Fund (UNICEF), and United Nations Development Programme (UNDP);

the World Bank (WB);

key bilateral agencies including the United States CDC Global AIDS Program-

China Office, United Kingdom Department for International Development (DFID), Australia Agency for International Development (AusAID), and Japan Bank for International Cooperation (JBIC); and

where possible, relevant international NGOs, such as Medecins Sans Frontieres (MSF).

Starting from TA design phase and early-stage implementation, this dialogue played a key role in information exchange, avoiding duplication, facilitating coordination, and maximizing complementarity of national and internationally-supported interventions. For example, the roundtable to review findings of the RA (see above) and follow-up discussions helped to elucidate complementarities with other planned and ongoing, and in setting the direction for the TA's subsequent interventions under the flexible framework set down in the TA design. This dialogue culminated in a focused synopsis refining key findings from RA field visits and dialogue in Beijing, developed by the RA consultants under guidance from MOH-FLO and working with the ADB project officer. This document, which identified more concrete recommendations and proposed priority actions by various domestic and international partners was then distributed to key national and international agencies. A second important example was the noted November 2003 Beijing Seminar, jointly sponsored by World Bank and involving speakers and participants from a range of international organizations. Effective, if often informal, collaboration with international agencies also included technical review and other valuable contributions from WHO and US CDC in the TA teams design of the core SDRF handbook, and also from UNICEF and WHO in the design of school-targeted IEC materials and later addition of expanded avian influenza content. As noted in Chapter IV, the latter IEC materials also involved cooperation with the Ministry of Education (MOE), and Mongolian-language versions were later developed and distributed in Inner Mongolia thanks to collaboration with local youth development federations.

6. General Observations on Project Administration

As noted above, a key characteristic of the TA was that while the project design provided a clear and comprehensive framework, the design was premised on flexibility to periodically reassess needs and provide timely, appropriate response.

However, capturing the benefits of such flexibility put a premium on fluid coordination among MOH-FLO, ADB, and other project partners. Maintaining such coordination was a keystone to the TA's successful implementation, described in the next chapter. In terms of drawing general lessons for project implementation, the following seemed particularly critical to maintaining fluid cooperation throughout the course of the TA: (i) close, flexible, and largely informal dialogue between MOH-FLO and ADB, facilitated by the TA Coordinator and a strong commitment by all parties to deliver on the project's aims and meet the needs of the target provinces; (ii) within this, frequent face-to-face dialogue during missions/visits to the PRC by the ADB project officer and after his transfer to the ADB Resident Mission in the PRC; and (iii) a relatively high level of continuity among project staff on both sides.

Finally, before proceeding to discuss project implementation, it is worth emphasizing the important role of feedback mechanisms to ensure project efficacy in assessing and addressing actual needs in the targeted areas. At the project level, this included periodically seeking feedback from local partners, as well as occasional missions by project team members to assess implementation progress and impact. In terms of individual interventions outlined in the next chapter, it should also be noted that principal project interventions (ranging from the SDRF capacity building and training-of-trainers to development of school-targeted IEC materials) were developed through iterative pilot testing, in order ensure they were appropriately targeted to the end beneficiaries. While this added to the time required for program/material development, feedback these interventions target groups suggests this to have been critical to ensure efficacy.

Appendix

Appendix III. 1	Focused Synopsis for the Rapid Assessment of SARS Response and Preparedness in Xinjiang and Yunnan

⑤ This responds to a common observation in some other projects that materials and programs developed by "experts" fail to address local "realities" or are inappropriate given beneficiaries limited techrical background.

CHAPTER IV PROJECT IMPLEMENTATION, INPUTS AND OUTPUTS

1. Project Implementation Strategy

In order to strengthen the capacity on SARS and infectious diseases prevention and control in each provinces, the project organized the related experts to provide a series of technical assistance, including (i) help each province to improve their provincial plans on SARS and infectious disease prevention and control; (ii) conducted multiple levels and aspects training targeting health staff at grass roots; (iii) improved the capacities of health education among provincial health education staff; and develop and disseminate health education materials on infectious disease prevention to priority target populations.

2. Project Achievements

2.1 Support the Development and Improvement of the Plan on SARS and Infectious Disease Prevention and Control

Based on the finding from the rapid assessment, provinces need to strengthen and improve their strategic plan on SARS and infectious diseases prevention and control. The project organized seminars in Beijing and the four project provinces on SARS and infectious diseases prevention and control at the end of 2003. Through wide communication and discussion in the seminars, participants realized that mechanisms developed during the response to SARS are effective also in response to other infectious diseases and public health emergencies, these mechanisms need to be strengthened and improved; governments at different levels should increase the investment on public health, especially on infectious disease prevention and control; needs for disease prevention and control from grass roots health staffs at county and township level are tremendous, and they face great working pressure, and their capacities, skills and equipment need to be improved urgently. Provincial

health bureaus and related professional departments paid great attentions on this work, and actively organized manpower to discuss, develop and improve the plan on SARS and infectious diseases prevention and control. The plan focused on establishing mechanisms in response to infectious diseases and public health emergencies, emphasized on preparedness for diseases prevention. That mechanism and storage of resources (human resources and goods) should be developed, once outbreaks of infectious diseases and public health emergencies happened, prompt action will be taken and events will be contained in its early stage, this will prevent the spreading of infectious diseases and avoid wide scale of the adverse effects on society.

2.2 Strengthen the Capacities Building Targeting Health Staff at Grass Roots in Project Provinces on Infectious Disease Prevention and Control

The finding from rapid assessment and further field visit indicated that disease prevention staff at different levels in each provinces especially at county and township levels greatly possess insufficient capacities on infectious disease prevention and control, there is need to provide technical support and training to them through different kinds of methods to improve their capacities on management of infectious diseases and public health emergencies. In response to this need, the project provided capacity building support through two ways, one is to provide a set of reference handbook including *Handbook for common infectious diseases and acute poisoning prevention and control*, and *Photo bank for common infectious diseases and sexually transmitted diseases* and *Flow chart for diagnosis and management of common infectious diseases*, because the reference handbook has the characteristic of repaid access, wide coverage and long term use, and is suitable for the self learning and reference for the daily works; the second methods is to provide face-to-face training targeting grassroots health staffs, because the face-to-face training has the characteristic of directness and obvious effectiveness, but the shortcoming is its limited coverage.

2.2.1 The development and distribution of the **Handbook of common infectious diseases and acute poisoning prevention and control** and **Photo bank for common infectious diseases and sexually transmitted diseases**

Through the communication with professionals involved in infectious diseases prevention and control during the rapid assessment and field investigation, nationals

experts found that health staff at grass roots are in urgent needs of a handbook which is suitable for their actual works, it should be practical and operational for guiding local health staff in response to infectious diseases and acute poisoning. In order to meet this requirement, the project organized the national and provincial experts, promptly developed the *Handbook of common infectious diseases and acute poisoning prevention and control* which is suitable for them, printed and disseminated 35,000 copies of the handbook to CDCs in the four project provinces at provincial, prefecture, county levels and township hospitals, and each working institutes was provided with 6-8 copies. Feedback from grassroots health administrative departments and institutes indicated that this handbook is very suitable for the actual disease control work by local health staff. They reflected that the book is concise, practical, and has provided very focused and powerful guidance to diseases prevention work at grass roots, and was accepted as a very good reference handbook. In order to cooperate with the usage of the handbook for the daily disease control work, and in consideration of the characteristics of many infectious diseases have the change of the skin and outlook of the patients, the project organized the experts in clinical field to develop the *Photo bank of common infectious diseases and sexually transmitted diseases*, this photo bank is provided for the use by grassroots health staff during the diagnosis and treatment of the infectious diseases in hospitals and in the field. With this tool, the local health staff can easily recognize the infectious diseases and helped to control the spreading of the diseases. The photo bank was printed and distributed with 20,000 copies to health institutes at different levels in project provinces. In order to expand the role of the two reference books, the project organized the second batch of the printing and dissemination of these two books with 22,000 copies to the county level CDC and township hospitals (4-6 sets for each institute) in other western region provinces. Meanwhile, in order to cooperate with the infectious diseases diagnosis and differential diagnosis, the national and provincial experts developed *Flow chart for the diagnosis and management of the acute infectious diseases by grassroots medical staff*, this flow chart was printed and disseminated with 300,000 copies to the county level CDC and township hospitals nationwide.

2.2.2 Training on infectious diseases prevention and control targeting grassroots health staff

Rapid assessment found that health workers at grass roots (county CDC staff and doctors from township hospitals) seldom have the opportunities to receive professional training, though certain kind of training have been organized for them during the SARS period, but because of traditional training mainly used the lecture and trained many people at the same time, the effectiveness of the training was not good; meanwhile, traditional training usually took the method of lower level receiving training by upper levels trainers, considering the multiple levels in China and this will cause the information to lose gradually as the training level come downwards, and also the training contents were not based on the need from the grass roots but assigned by the central or upper level, so the contents were not targeting to the local needs. So new training method need to be developed to break the traditional perfusion, and pure theoretical lecturing mode, the training methods and content need to emphasize on practical and operational characteristic. At the beginning of 2004, two pilot training were conducted in Yunnan and Xinjiang on prevention and control of infectious diseases and acute poisoning targeting health workers at grass roots. Based on the characteristics of the adult education, the pilot training used participatory training methods, using different kind of cases of outbreak of infectious diseases and acute poisoning, tried to encourage and induce the participants to think and actively participate in the discussion, trainers (facilitators) will guide the cases analysis and give periodical summary to the group discussion, through this actual cases analysis and discussion, participants can be enlightened with right idea or thinking methods to deal with the same kind of problems, and gradually master methods in dealing with different kind of infectious diseases and acute public health emergencies. The pilot training has also organized the participants to have a field visit at local county CDC and township hospital based on the situation and needs from the participants, through the field visit and communication as well as the actual cases analysis and discussion, participants further improved their actual skills in dealing with outbreaks of infectious diseases and public health emergencies. The training methods were widely accepted by participants, they considered that these participatory training methods can always activate the thinking of the participants and can strengthen the memory, and have better training effectiveness compared with traditional lecture training methods.

In order to expand the training to health staff at grass roots, a batch of excellent trainers need to be trained in each province, and the trainers need to master more new training methods in order to improve training effectiveness, participatory training methods should be the focus of the TOT. Just like the effectiveness showed from the pilot training, participatory training is suitable for adult education, can activate the participants' active thinking and participation. And participants are more easily to memorize and use the skills and knowledge learned from this kind of training method. Training of trainers targeting provincial key disease prevention and control professionals were conducted in two rounds during May to July in 2004, and May to July in 2005, 6 training of trainers courses were conducted in each round of the training, about 180 trainers received this kind of TOT training. The training tried to emphasize on introduction of participatory training methods to the trainers, such as short lecture, role play, field imitation, teachers' facilitation of the cases analysis and discussion, group discussion and group reporting, facilitators' comment and summarization, etc. meanwhile, in order to combine the theory and skills with the practical works, the training of trainers also organize the participants to visit the local county CDC and township hospitals to understand the actual working situation, and conduct actual field cases analysis and discussion based on the actual outbreak cases of infectious diseases or public health emergencies which took place recently and locally, as to deep the impression of the learning among participants. The new participatory training method is new to most of the participants, it broke the limit of the traditional lecture methods, through 4 days of the theoretical explanation, demonstration by teachers, discussion, group preparation and practical trial and facilitator's comments on the participants' performance during their trials, participants gradually understand the advantage of this participatory training method, and gradually would like to make a try to use this participatory training method during their teaching practice, and through the trials and facilitators' comments, participants gradually mastered the new participatory training method. Meanwhile, in order to cooperate with the training of trainers and expanded training, national experts have developed the protocol for participatory training and demonstrating teaching CD-ROM, the first version CD-ROMs were disseminated to provincial trainers to guide their expanded training. Revised protocol of participatory training and demonstration CD-ROMs have also been formally published by Beijing University Medical Press, and disseminated to the four project provinces to guide further training to

grassroots health staff in each province.

After the first round of training of trainers, and according to the training plan each province conduct their first pilot training trained by their own provincial trainers who participated in the training during the first round of TOT, participants were health staff from county CDC (10 participants) and township hospitals (30 participants) who involved in disease prevention and control and the training contents focused on infectious diseases and acute poisoning prevention and control. Effectiveness shown from these pilot training in each province reflected that provincial trainers basically mastered the key point of the participatory training, and can effectively use the four days of training to organize the participatory training and field visit. Feedback from the participants showed that this kind of participatory training method can motivate the active participation among the trainees, have better training effectiveness compared with traditional lecture training, and from the observation of the four days of the pilot training, the participants can always actively participated in the training and there were almost no absence among the participants. Trainers who participated in the pilot training also experienced and felt the characteristics of the participatory training, they felt they have further understanding and became more confident on their training effectiveness after the pilot training, summary after the first pilot showed the provincial trainers think that effective training result can be achieved with efforts and felt the participatory training required the trainer to master their professional knowledge and skills, have organizing capacity, can activate the learning atmosphere in class. After the first pilot in each province, they have trained their own provincial and prefecture trainers and basically mastered the training method and procedure for expanding the training in their own province. Based on this, the project invest more funds to conduct the first batch of expanded training in each province. The first batch of expanded training include 14 prefecture, about 900 participants from county CDC and township hospitals received the first batch of training.

Based on the two rounds of the TOT and the first batch of expanded training, provincial trainers have relatively mastered the skills of the participatory training, further expanded training (batch 2 and 3) targeting health staff at grass roots were conducted step by step, totally 84 expanded training courses were conducted which

covered all county CDC (1-2 persons received training) and most of the township hospitals (1 participants from each hospital) in each project province, more than 4,000 health staff received training. Feedback from the four project provinces indicated that this kind of participatory training were welcomed by grassroots health staff and meet the actual need of local infectious diseases prevention and control, the training improved their skills of field management of infectious diseases, enriched their knowledge and experience for infectious diseases prevention and control. In the evaluation form, most of the participants expected to have more this kind of training in the future.

2.2.3 Practical training on epidemiological investigation (PTEI) targeting provincial and prefecture diseases prevention staff

Based on the needs of improving the skills of field epidemiological investigation among provincial and prefectural disease prevention and control staff, the project organized a PTEI courses in Beijing starting in Oct. 2004, 20 participants received the PTEI, 5 participants (2 provincial and 3 prefecture level) were selected from each project province. The training includes one-month concentrated theoretical courses on advanced epidemiology. Experts in the field of epidemiology, health statistics, clinical medicine, etc. were invited to deliver the training to PTEI participants. Besides the lecture of the basic theory and concept of advanced epidemiology, the training also arranged practical exercise during the intensive training, participants were requested to divided into groups to be involved in project planning, questionnaires design, data collection and entry, analysis, summary and report writing. This training further increased the understanding among participants of the methods and procedures of field epidemiological investigation; the second phase of the training is practical training in the field, this took 10 months after they complete the first intensive training in Beijing and participants were requested to independently complete at least one practical field epidemiological investigation process including data collection, analysis, report writing etc.; the third phase is one-week gathering in Beijing (Oct. 11-15, 2005) to report their field investigation results after their 10 months field practice. Through this three phase systematic training, PTEI participants further mastered the basic principle of field epidemiology, field epidemiological investigation and the route and skills of diseases prevention and control in the field. Feedback from provincial field facilitators and health administra-

tive leaders showed that PTEI participants can combine the basic epidemiological knowledge and skills learned with the practical field diseases prevention and control work, PTEI training has significantly improved their field investigation and disease control skills. Meanwhile, participants have also suggested that this kind of mechanism for training and communication should be kept and further improve their capacity of field investigation and diseases management.

2.3 Health Education for Infectious Disease Prevention and Control

2.3.1 Development of health education materials

According to the project plan, health education on infectious disease prevention and control will be conducted within selected priority target populations to improve their awareness and skills of SARS and infectious diseases prevention. In order to achieve this objective, the project invited a national expert and conduct rapid assessment in Xinjiang on health education situation in community and school, the rapid assessment found that in the community, especially in schools, students were generally short of the basic knowledge and skills for infectious diseases prevention. Schools are a setting that many persons gathered, outbreak of different kinds of infectious diseases are regularly happened and reported in schools, especially in primary schools. So schools are in urgent need of a students handbook on infectious diseases prevention knowledge and skills and a teachers guidebook on infectious disease early finding, management and report to local health authority. Based on this finding, the national experts developed the *Children as Promoters of Hygiene Practices and Protection Against Common Infectious Diseases* and *Teachers Guidebook for Preventing Common Infectious Diseases and Responding to Public Health Emergencies*. These handbooks based on the situation that students are in the process of forming their hygienic behaviors, the handbook on healthy behavior promotion can help them to form a healthy habit so as to prevent them from getting different kind of diseases, some cartoon pictures were inserted into the text of the students handbook to increase the reading interests among the primary school students and help them to form healthy habit gradually; and the teachers guidebook can help the school leaders and teachers to have early response when outbreak of certain infectious diseases or public health emergencies happened, the guidebook will guide them how to identify and report the potential outbreak of infectious diseases, and how to take early action to isolate suspicious students with possible infec-

tion of certain diseases to avoid further spreading of the diseases and protect other students. These two handbooks were widely welcome by the teachers and students, and consider these handbooks were very helpful for their prevention of infectious diseases. These two handbooks were printed respectively with 140,000 and 150,000 copies and the students handbooks were distributed to all primary schools (grade 4-6) in national poverty counties in the four project provinces, each students handbook can be share by 10 students, the teacher s guidebook were distributed to all the primary schools and secondary schools in the four project provinces, and each schools can have 4-5 copies of the teachers guidebook.

According to joint plan by MOH and MOF, they plan to conduct health education works in primary and secondary schools for infectious diseases prevention nationwide, Ministry of Health has organized relative experts to develop a guiding guidebook to be used by school teachers for infectious diseases prevention. This guidebook had been developed by related experts and the contents of the guidebook by MOH and MOE has referred the ADB teacher s guidebook. Meanwhile, ADB experts have also contribute technically to the development of the MOH/MOE guidebook.

2.3.2 Seminar on health education of infectious diseases and public health emergencies

Health education is one of the important steps for infectious diseases prevention and control. When outbreaks of infectious diseases or public emergencies take place, besides for prompt action on field investigation to identify the cause or the potential risk factors of the diseases or events, prompt action on health education should also be taken to intervene the cause or potential risk factors. So as a messenger to disseminate the health education information, health education will take very important role for controlling the spread of diseases when outbreaks of infectious diseases or public health emergencies take place. But the rapid assessment found that provincial health education department in provincial CDC has not yet developed their provincial health education strategic plan to cope with the outbreak of infectious diseases or public health emergencies. In order to improve the provincial capacity in response to outbreak of infectious diseases in terms of health education, project organized a seminar and invited the health education and diseases prevention and

control staffs from provincial CDC to have further discussion and exercise to develop a draft plan on health education in response to the outbreak of infectious diseases or public health emergencies. This will help provincial CDC to develop their provincial strategic plan of frameworks of health education in response to the outbreak of infectious diseases or public health emergencies.

2.4 Equipment and Materials Procurement and Dissemination

Based on the situations that project provinces short of the basic equipment for infectious diseases prevention and control, especially during the stage of the SARS outbreak, provinces were short of the basic personal protection materials and equipment. The project promptly organized the procurement and dissemination of the first batch of the personal protection materials and equipment, this includes: lab coats, N95 masks, goggles, medical gloves, infrared temperature detectors, autoclaves. Based on the situation that provincial CDC need to go to the field in the local area to conduct the field epidemiological investigation, diseases surveillance and management, and the western region provinces are usually located in mountain area with long distance from the provincial capitals, the project procured 4 vehicles equipped with a portable computer and a digital video camera and provided to provincial CDC for field epidemiological investigation, data collection, analysis, report and disease control. In order to cooperate with the PTEI training, the project equips one portable computer and one digital camera for the PTEI participants. In order to facilitate the expanded training on infectious diseases prevention and control targeting grassroots health staff at county CDCs and township hospitals. The project procured two batches of portable computers and multi-media projectors. In terms of quantity, each prefecture and provincial CDCs were equipped with one portable computer and one multi-media projector (see table IV. 2), these equipment were used for the expanded training targeting grassroots health staff. The total expenditure for this equipment procurement is 360,000 USD. During the project implementation, the expenditure for the printing and distribution of the *Handbook of common infectious diseases and acute poisoning prevention and control* and *Photo bank of common infectious diseases and sexually transmitted diseases*, the *Students handbook* and *Teachers guidebook*, the *Flow chart* was totally 370,000 USD, the total expenditure for the equipment and materials procurement was 730,000 USD.

3. Overview of the Project and Experience Exchange

According to the project plan, the summary and experience exchange workshop was held in Beijing in Dec. 21, 2005, representatives from Ministry of Finance, Ministry of Health, related international agencies, the Health Bureau of the four project provinces and Guangxi Health Bureau as specially invited guest participated in the summary workshop. Totally 28 participants participated in the workshop, the workshop reported the project achievement and impact during its two and half years implementation in the four project provinces, the four project provincial health bureaus reported their project implementation situation and impact of the capacity building training targeting the grassroots health staff as provincial project implementer and beneficiary, as well the project's contribution to the diseases prevention and control work in their province. Representatives from MOF and MOH and related international agencies highly appraised the achievement by the project, and consider the flexible implementation, the practical implementation strategy was very helpful to improve the capacity of grassroots health staff on infectious diseases prevention and control. ADB is expected to give further supports to conduct this kind of project in China and support more provinces to improve their capacity on diseases prevention and control.

In order to expand the experience on participatory training targeting grassroots health staff on infectious diseases prevention and control acquired in the project, the project organized a joint training in Qujing prefecture, Yunnan province in June 2006, the joint training specifically invited total 10 representatives from Guangxi and Yunnan provincial and county CDC as well as township hospitals to observe and participate the joint training in Qujing to learn the participatory training methods and use it in the capacity building for grassroots health staff. This joint training will provide good experience and reference for further capacity building in these two provinces in the future.

The *Handbook of common infectious diseases and acute poisoning prevention and control* and *Photo bank for common infectious diseases and sexually transmitted diseases* were well accepted by grassroots health staff, they consider this handbook is practical, easy to read and understand, provided excellent guidance to their actual diseases prevention and control work. In order to play further role of the

handbook, the project organized the second batch of the printing with 22,000 copies of the handbook and the photo bank, and distributed to the county CDC and township hospitals in the other 8 western region provinces. Meanwhile, the project developed *Flow chart for the diagnosis and management of the acute infectious diseases by grassroots medical staff*, this flow charts were printed and disseminated with 300,000 copies to the county CDC and township hospitals nationwide. Through the expanded dissemination of the materials developed in this TA project, the role of the materials developed in the project was enlarged.

In summary, through the implementation of the TA 4118: Combating SARS and Infections Diseases in Western Region, at the meantime that the four project province receive the training on infectious diseases prevention and control, they also established a provincial trainers team composed of provincial and prefectural key staff in the field of diseases prevention and control, in the meantime, through secondary training, the project had help the provinces improve the capacity and skills in response to infectious diseases at grass roots. The provincial and prefectural training teams and training mode established during the implementation of the ADB project had now gradually penetrated into the routine training activities in provinces, we believe these kind of sustainable training mode will provide valuable reference for further capacity building on infectious diseases prevention and control in provinces.

4. Fund Expenditure

Table IV. 1 Fund expenditure situation on TA 4118

Categories	Amount (USD)
Rapid assessment	16,526
Capacity building and expect inputs	1,203,761
Equipment and materials development and dissemination	733,284
Total	1,953,571

5. Project Output

Table IV. 2 Summary table for project provincial basic situation and allocation of the equipment and materials

Item	Yunnan	Qinghai	Ningxia	Xinjiang	Central and non project province	Total
Provincial basic situation						
No. of prefecture	16	8	4	14		42
No. of county	129	43	23	99		294
No. of township	1,582	424	343	1,004		3,353
Training situation						
No. of participants received PTEI training	5	5	5	5		20
No. of participants received TOT	72	38	26	68		204
No. of courses of SDRF training	32	13	13	26		84
No. of participants received SDRF training	1,620	625	580	1,310	10	4,145
Equipment allocation situation						
No. of vehicle provided to provincial CDC	1	1	1	1		4
No. of portable computer provided to provincial PTEI	1	1	1	1		4
No. of multi-media projector provided to provincial PTEI	1	1	1	1		4
No. of portable computer provided to prefecture	16	8	5	15		44
No. of multi-media projector provided to prefecture	16	8	5	15		44

Continue

Item	Yunnan	Qinghai	Ningxia	Xinjiang	Central and non project province	Total
No. of digital camera provided to PTEI participants	5	5	5	5		20
No. of digital video camera provided to provincial CDC	1	1	1	1		4
No. of autoclave		5	4			9
N95 mask	3,002	1,000	1,000	4,710		9,712
Lab coat	100	126	100	100		426
Infrared temperature detector		10	15	15		40
Goggle	500	500	500	500		2, 000
Glove	1,000	1,000	1,000	1,000		4,000
Materials distribution situation						
Diseases prevention handbook	14,708	4,356	3,372	11,564	22,000	56,000
Diseases prevention handbook (Uigur language)				5,000		5,000
Photo bank for common infectious diseases and transmitted diseases	8,437	2,290	1,702	6,571	22,000	41,000
Protocol of TOT	320	170	150	260	100	1,000
CD-ROM for the TOT	320	170	150	260	100	1,000
Students handbook	110,000	12,400	14,600	11,000	2,000	150,000
Teachers guidebook	78,100	11,800	14,600	33,000	2,500	140,000
Students guidebook (Mongolian language)					6,000	6,000
Teachers guidebook (Mongolian language)					6,000	6,000
Flowcharts for infectious diseases diagnosis and management	9,900	3,000	2,000	6,400	277,700	299,000

6. Project summary reports of each province

6.1 Yunnan Province

6.1.1 General Information

There are 16 prefectures, 129 counties, 1,574 towns and 13,842 villages in Yunnan, and there are 73 national level poverty counties and 7 provincial level poverty counties. The total area is more than 394 thousand sq. km, and the mountainous area is 360 thousand sq. km, account for 91.4%; the border line is 4,060 km, and there are 8 prefectures, 25 counties share land borders upon the other country. At the end of 2004, the population of the province is 44.152 million, 7.777 million in poor. There are 52 nationalities in Yunnan, included 25 minorities with more than 5,000 people who live there generation by generation, and 15 unique nationalities, 16 nationalities that live in land borders, which occupy one third of the whole population. In 2004, the estimated GDP of the whole province is 29.5948 billion, the GNP is about 6,703 yuan, and the average income per farmer is 1,697 yuan.

Recently years, our province have conducted different channels, different levels and many forms (included meeting instead of training) professional trainings to counties and township about the knowledge of infectious disease prevention. Incomplete stat, the average rate of those who are received training is about 50%. By the training, the ability of infectious disease prevention and control in counties and township is a certain extent enhanced, but because of lacking training budget and standard teaching material, the training does not form a system and standardization. So in order to build and complete the system of training of counties and township, and to improve the ability of professional doctor's operation level and lacking of basic knowledge of public health and technical weakness, it's necessary to conduct the training project to the counties and township.

6.1.2 Organization and Management

6.1.2.1 Organization

Under the leading of MOH and the MOF, the MOH-FLO is responsible for the project formulation, implementation, equipment purchase and finance management, and report the progress and summarizable progress to ADB. Each provincial ministry bu-

reau is responsible for organization and management of the project, and should put the report to MOH-FLO.

6.1.2.2 Financial management

The MOH-FLO set up special account and managed the project finance. Basing on the project progress, MOH-FLO applied funds from ADB and appropriated funds to each project province. So each project province open special account and recorded the expenditure, conserved all the finance credence and record, so as for the checkup and audit by the ADB or appointed institution.

6.1.2.3 Equipment purchase management

FLO purchased and distributed all equipment to the project province.

6.1.3 Project Implementation Situation

6.1.3.1 Project rapid assessment

After the project initiated in May, 2003, a rapid assessment experts team including domestic and international experts was organized by MOH-FLO to conduct the rapid assessment in selected two project provinces (Xingjian and Yunnan) in July, 2003, the purpose of the rapid assessment was for improving the understanding of the capacities for SARS and other infectious diseases prevention and control among governments and disease control institutes at different levels, especially the further understanding on the capacities of infectious diseases prevention and control at grass roots. The main funding from the rapid assessment includes: (i) each province should improve their SARS prevention and control strategic plan based on their own provincial situation, and expand this mechanism to the other infectious diseases prevention and control; (ii) conduct training according to the need of health staff at provincial, prefecture, county and township level in order to improve their capacities on the diagnosis, report, field epidemiological management of different kinds of infectious diseases and public health emergencies. (iii) Improve the capacities of provincial health education staff on IEC information distribution and communication, and provide appropriate diseases prevention information to prioritize target populations.

Through the problem of the rapid assessment and the requirement on SARS and infectious diseases prevention and control, organize a series of following activities: (i) provide *Handbook of Common Infectious Diseases and Acute Poisoning Preven-*

tion and Control, and Photo Bank for Common Infectious Diseases and Sexually Transmitted Diseases and Flow Chart for the Diagnosis and Management of the Acute Infectious Diseases by Grassroots Medical Staff to the project province, so it's convenient for the grassroots medical staffs to study by themselves and work daily reference; (ii) to bring up a group of excellent teachers, and expand the coverage of the training, so it will be convenient for the grassroots medical staffs to provide the face-to-face training. (iii) conduct training to provincial and prefecture CDC staff in advanced field epidemiology. (iv) organize training to the provincial IEC staff for improving their capacities of IEC materials development and information distribution.

6.1.3.2 To hold seminar on strategic planning of SARS and other infectious diseases prevention

6.1.3.2.1 National seminar on strategic planning of SARS and other infectious diseases prevention

On Nov. 5-7th of 2003, the national seminar on strategic planning of SARS and other infectious diseases prevention held in Beijing, The participants of Yunnan included: Du kelin, vice director of Yunnan Health Bureau, Duan Qixiong, Ou Yanglin, Yang Jun and Yang Weibo. During the meeting, Wang Longde make an important talking, who is the vice of MOH, emphasizing on the importance of further develop the international cooperation, experience communication and strategic planning on the SARS and other infectious diseases prevention. Meanwhile, to organize the representations to the Beijing Di Tan hospital and Beijing CDC to field visit on the SARS and other infectious diseases prevention.

Through the further communication and discussion in the meeting, the representations reached the common understanding, through the fighting against SARS to form the mechanism of infectious disease and emergent public health events response can effect to prevent every infectious disease and emergent public health events but need to further strengthen and perfect. The every level government need put into more money for public health especially disease control area; counties and township's doctors, especially for the grassroots medical staff's disease prevention and control, rank the biggest demand, meanwhile, we also endure larger work pressure, so we need to improve and strengthen our work in technology, capability

and equipment area.

6.1.3.2.2 Provincial seminar on strategic planning of SARS and other infectious diseases prevention

Based on the national seminar on strategic planning of SARS and other infectious diseases prevention, aiming at the project provinces' need of further strengthening the SARS and infectious disease prevention and control strategy plan, from Nov. to Dec. of 2003, FLO organized the national experts in disease prevention and control and clinic to go to the four project provinces to develop the field visiting and technical assistance. Dec. 14th-17th, the expert group visit Yunnan CDC (YNCDC), No. 1 affiliated hospital of Kunming medical college, Kunming CDC, No. 3 Kunming hospital, Kunming Yan'an hospital, An'ning CDC, Kunming railway bureau, Yunnan civil aviation bureau and communicate with related staff. Meanwhile, they provided some guiding suggestion for the discovering problem. We conducted the provincial seminar on strategic planning of SARS and other infectious diseases prevention, and the Yunnan health bureau, Yunnan financial bureau, Yunnan railway bureau, Yunnan traffic bureau all attend this meeting. The vice secretary-general Qian also attend the meeting. Through the deliberation, they further specified the advantage and disadvantage in the SARS and other infectious diseases prevention, and united the actual situation to refine the prevention and control project.

6.1.3.3 Project financing allocation

The necessary finance of each training workshop from national project office directly appropriate to the participated units. After the project initiated, we have received 1.59 million of training finance and fully use it for each training workshop.

6.1.3.4 Equipment and materials

Up to June of 2006, all of the equipment and materials (see table IV.2) of training and health education have been sent to the PIU according to the plan.

6.1.3.5 Training achievement

6.1.3.5.1 National training

From Oct. to Nov. of 2004, in order to further improve the ability on acute infectious disease control in project provinces, according to the demand of MOH, they

organized the national experts to conduct training to provincial and prefecture CDC staff in advanced field epidemiology. Liu Xiaoqiang and Xu Wen from YNCDC, Liu hong from Kunming CDC, Wu qiang from Yuxi CDC, He Lifang from Qu Jing CDC, all attended this training.

On Sep. 26th-28th of 2005, FLO conducted a provincial training of IEO and experience communication on infectious disease and emergent public health events response in Beijing, Tian ziying, Yang jianbin and He jibo from Yunnan Health Bureau and YNCDC attended this training.

On Oct. 9-13 of 2005, MOH-FLO conducted ADB capacity building project on field epidemiological training of provincial and prefecture CDC, Liu Xiaoqiang, Xu wen from YNCDC, Liu Hong from Kunming CDC, Wu Qiang from Yuxi CDC, He Lifang from Qujing CDC, all attended this training.

6.1.3.5.2 Provincial training

From 2004 to June of 2006, the ADB capacity building project had covered sixteen prefectures of Yunnan province and conducted four trainings workshop, one pilot training workshop, one expanding pilot training workshop, twenty expanding training workshops and ten following expanding training workshops, with accumulative total trained 1,476 trainers.

i Pilot training

The pilot training workshops for infectious diseases and acute poisoning management targeting grassroots medical staff (county CDC staff and township hospital doctors) were conducted in Xishuangbanna of Yunnan in Feb. 2004, the curriculum of the pilot training workshops were designed based on the characteristics of the adult education, the main teaching methods used were participatory methods, through cases analysis of different kinds of common infectious diseases and acute poisoning in each project province, the training workshops tried to lead the participation, active thinking and discussion by participants, facilitators played the role of summarizing and concluding the analysis of each cases analysis and giving a relative right reference answer. This method can lead the participants to form a right way of thinking and solving the related issues, and gradually grasp the methods and skills in dealing with these kind of infectious diseases and acute poisoning. Based on the requirement of the participants, the pilot training workshops have also organized field visit to county level CDC and township hospital to learn their good practice and

share information in the field, and participated an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants practical skills. The participatory training methodology was widely accepted by participants. They all considered that the participatory training can actively mobilize their thinking, strengthen their memorization, and have more impact on the training effectiveness compared with the traditional training. The pilot training explored a set of complete, and appropriated model and methods for the training on infectious diseases prevention and control for grassroots medical staff, the pilot training has also trained a batch of provincial and prefecture level trainers.

ii TOT

From June to July of 2004, MOH-FLO held teachers training workshop in Kunming city and Qujing city. The trainers came from sixteen prefectures CDC and hospitals who are engaged in the infectious disease prevention and control and emergent public health events response, and engaged in the infectious diagnose and cure, and teaching epidemiology. There are 64 trainers to attend this training.

From May. 16th to 22nd of 2005, MOH-FLO held two teachers training workshops in Chengjiang of Yuxi. The trainers are those who have attended the first training and the nuclear teachers for the expanding training. There are 75 trainers who attend this training, including sixteen prefectures CDC and hospitals doctors and teachers who are engaged in the infectious disease prevention and control and emergent public health events response, and engaged in the infectious diagnose and cure, and teaching epidemiology.

iii Expanding training

(a) Expanding pilot training From Aug. 24th to 29th of 2004, we held a pilot training workshop in Chengjiang of Yuxi in Yunnan. The teachers consist of YNCDC, No. 1 affiliated hospital of Kunming medical college, Yuxi CDC and Simao junior medical school, have trained 50 trainers, who are from eight county level CDCs and part of township hospitals director of prevention and health care department. The training is related to the field infectious disease and emergent public health events response, cholera's prevention and control, hepatitis A prevention and control, TB prevention and control, measles's prevention and control, typhoid and sub-typhoid's prevention and control, malaria's prevention and control. Based on the requirement of the participants, the training workshops have also organized field visit to county

level CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants practical skills.

(b) Expanding training workshop From Oct. 2004 to Dec. 2005, we have held twenty expanding training workshops in fifteen prefectures (except Xishuangbanna). Each training workshop s teachers consist of provincial and prefecture, targeting the whole province s important infectious disease and common infectious disease in every prefecture. And we have trained 924 trainers targeting trained infectious disease prevention and control.

(c) Following expanding training workshop Based on the arrangement of the ADB capacity building project on SARS & infectious disease prevention and control, using part of project surplus funds to conduct the participatory training in the four project provinces, the ten workshops set in Yunnan, four workshops in Qinghai, two workshops in Ningxia, four workshops in Xinjiang.

From May to June 15th 2006, we held ten expanding training workshops in ten prefectures. Each training workshop s teachers consist of provincial and prefecture, targeting the important infectious disease and common infectious disease and acute poisoning in every prefecture. And we have trained 552 trainers targeting infectious disease prevention and control.

6.1.4 Expanding Training Effect Assessment

Until June 2006, we have held thirty-one expanding training workshops and covered all county level CDCs and township hospitals of sixteen prefectures, who are engaged in infectious disease and emergent public health events response. The participatory training methodology was widely accepted by participants, they all considered that the course setting is reasonable and adequately link with the local disease epidemic situation and common infectious disease report and management. They received plenty of knowledge in short time, meanwhile, they had idiographic recognition on the new infectious disease and updated their knowledge. Through the four days participatory training, they all considered the training workshop was successful and management was normative. The participatory training can actively mobilize their thinking, strengthen their memorization, and have more impact on the training effectiveness compared with the traditional training.

Participatory training method has broken the traditional teaching method, which makes the students actively participate in the class and express their viewpoints or opinions, and encourage the teachers and students communicate and discuss with each other. So it can actively mobilize their thinking and advance the teaching quality.

The combination of the course and field visit makes the students learn the theory; meanwhile the field visit can also check out the students learning result and communicate with each other.

6.1.5 Project Outputs

Under the imbursement by ADB and supporting of MOH-FLO, leading by disease control department of Yunnan Health Bureau, the project cooperation office of YNCDC concretely undertake, meanwhile, we got the greatly support and help from every health administration department, CDC and provincial and prefectures teachers, so as to make our trainings to get greatly improvement for the grassroots health staff.

ADB have all devoted 1.59 million yuan for the training for grassroots health staff and have totally trained 1,476 grassroots health staffs.

6.1.6 Existing Problem and Recommendation

For lacking of funds and time, the training workshop can't cover all of township doctors.

For the training study time is limited, the arrangement of training content can't satisfy the need of students.

For the difference between teachers and students communication, different place got difference training effects.

It's suggested to organize such training more after time and increase training frequency and enlarge the training area. We hope to organize students to visit and study advanced places.

6.2 Qinghai Province

6.2.1 The Project Management and Supervision

The project were arranged and monitored by by FLO of MOH, The staff of Qinghai provincial level organized and implemented the project action plan, supervised by

Qinghai provincial public health bureau and cooperated by different level health department. From Sep 2004 to April 2005, two training courses for trainer and 13 training courses for the low level health sector s medical staff. During the training, relevant leaders came our province for instructor. the leaders of Qinghai province health bureau came to supervise at the beginning of training courses, after training courses the all participators have taken the final evaluation examination.

According to the project action plan, the training materials and some equipment were organized and allocated by Qinghai provincial health bureau.

6.2.2 The Project Implementation

Thirty training courses in 8 prefectures organized by Provincial CDC from Dec 2004 to April 2006, by adopting participatory training methodology and protocol of TOT, using Disease prevention handbook, Photo bank developed by ADB and MOH-FLO, Question and answer handbook on infectious diseases and Infectious diseases control and prevention reference handbook developed by Provincial CDC, 548 trainees from 54 CDCs and 386 township hospitals received training.

By typical case analysis, demonstration, manipulation and course of lectures etc, tried to make trainees think and participate in their own initiative, and make trainees improve methodology and skill to deal with infectious disease prevalence situation.

The experienced trainers were selected by provincial health bureau, before the training they prepared fully and consciertiously, tried their best to teach trainees and participate in discussion with trainees through the training courses.

According to provincial health bureau arrangement, provincial CDC distributed materials developed by ADB and MOH-FLO to the participators who from different low levels health sector in the training course.

6.2.3 The Project Input and Output

The two training courses of trainers and 13 training courses for infectious disease control have been organized, the trainers come from national CDC, Provincial and prefecture level gave the lecture for the training course, 628 trainees from 54 CDCs and 386 township hospitals received training.

After two training courses of trainers, the trainers know very well how to organize participatory training course, participatory training methodology and skills, improve

their ability to organize similar training courses. With practice in the participatory training course for the low level health staff the skill of trainer to give the training are also improved. So the project trained a batch of trainers at provincial and prefecture level which constituted of professionals from disease control, clinical diagnosis and medical health education etc.

The project also provide some personal protection equipment, vehicles, laptop computers, multimedia projectors, digital video camera, digital camera and so on (see table IV. 2), which gave great help for the training course and the benefits for the public health emergencies field management.

Materials developed by the project are met the needs of low level staff and improve both teachers and trainees infectious disease prevention consciousness, these materials include *Handbook of common infectious disease and acute poisoning prevention and control*, *Photo bank for common infectious disease and STEs*, *Protocol of participatory training for TOT* and demonstration CD-ROM, *Flow charts*, *Teachers guidebook*, *Students handbook* and so on.

6.2.4 The Project Effectiveness

The project achieve satisfying effectiveness supported by ADB and MOH-FLO. At first, according to the project arrangement, use the best of the project funds and finish the training courses completely, the training courses contribute to the improvement in the aspects of human resources building, technical skills, training methodology and skills for the low level etc. Realize the project objectives and establish foundation for infectious disease and acute poisoning control in our province.

Second, strengthen human resources building and establish a batch of trainer team at provincial and prefecture level which constituted of professionals from disease control, clinical diagnosis and medical health education, etc. The trainer team will play an important role in the training, infectious disease diagnosis, prevention and control. Adopt participatory training methodology in Field Epidemiology investigation project training and it was highly effective in the training, now participatory training methodology be adopted in other training.

Third, the training course increased capacities for disease diagnosis and report consciousness at township level, township level health staff mastered basic diagnosis skills and timely reports the epidemic situation to the related department with simple field management capacities. All of them can write exactly infectious dis-

ease card and report.

Finally, materials developed by the project are suitable to meet the needs of low level staff. IEC materials had played important roles in school, the staff in school regard infectious disease and acute poisoning than before and timely report. Reference handbook and photo bank had become the tools for routine use by grassroots staff, and played important roles in case diagnosis, treat and field epidemic management.

6.2.5 Further Needs and Recommendation

- Lacking the number of high level epidemiologist makes impossibility of meeting the needs of different levels disease control institutes.
- Teachers in school know a little about infectious disease, and this project only supported poverty areas, but the other places still need the support.
- Village level health staff lack the training and self-study textbook.
- Shortage of intercommunion experience of field investigation between different provinces and places.

6.3 Ningxia Hui Autonomous Region

6.3.1 General Information

Ningxia Hui Autonomous Region, one of China's five autonomous regions for ethnic groups, and one of the worst poverty-stricken provinces in China, is located in the east part of the country's northwest area on the Loes Plateau, in the upper reaches of the Yellow River and adjacent to Shaanxi and Gansu Province and the Inner Mongolian Autonomous Region. The total area of Ningxia region covers 66,400 km^2 with 56% of the area being mountain and hill covered. There are, under the government of the region, 5 cities and 22 counties, towns and districts with 9 counties to be the state-designated poverty-stricken counties. Ningxia Region's population has by now reached 5.8 million in total with more than 4 million or 69% of the total population living in rural areas. The annual per capita income of the farmers in the Region is merely RMB 1,917 yuan.

There are 29 disease prevention and control institutions at county level with 1,286 medical workers in Ningxia Region. With townships disestablished to merge with towns, there are, at present, 5 cities at locality level, 12 counties, 2 cities at county level, 7 districts under the city government, 1 immigrants' development area

at county level, 188 townships and/or towns, 39 sub-district offices, 2,569 administrative villages, and 435 residents committees. There are, in Ningxia Region, 325 township hospitals, 2,945 village clinics, and more than 100 communities medical care stations with 3,498 village doctors.

6.3.2 Major Outcome

6.3.2.1 Trainings on preventing and controlling infectious diseases and acute poisoning oriented towards county and township medical workers

During the period from May 2004 and June 2006, totally 13 sessions of training classes in relation to preventing and controlling infectious and acute poisoning diseases have been started for medical workers at basic levels in the city of Yinchuan including Helan County and Xixia District; Wuzhong City including the Bronze Gorge City, Hongsipu District, and Yanchi County; The City of Shizuishan incl. Huinong District and Pingluo County; Guyuan City incl. Yuanzhou District and Xiji County; and in Zhongwei City incl. Zhongning and Haiyuan County. The range of the trainings have covered 22 county diseases curbing institutions and 332 township medical institutions in Ningxia Region with accumulated 540 medicine practitioners having been trained, which has largely improved the basic-level medical institutions capability to dealt with public health emergencies (PHE). By providing necessary guidance and trainings in various forms, remarkable results have been achieved.

6.3.2.2 Distribution of training materials

Handbooks provided by the project such as *Handbook of Common Infectious Diseases and Acute Poisoning Prevention and Control* accompanied by *Photo Bank for Common Infectious Diseases and Sexually Transmitted Diseases*, *Flow Chart for the Diagnosis and Management of the Acute Infectious Diseases by Grassroots Medical Staff*, and *Protocol of Participartory Training for Training of Trainers on Infectious Diseases and Acute Poisoning Prevention and Control by Grassroots Medical Staff* have been delivered to 1 regional level disease control institution, 5 municipal institutions, 22 disease control institutions at county level, each township hospital and part of medical care centers, which has provided the medical workers at basic levels with materials and references indispensable for their self-study and day-to-day practical work. The materials provided have played an efficient role as technical guidance. Through inspections, we found that most of the township hospitals

have put the picture posters in the conspicuous places in their respective medical institutions, which has in turn well regulated their day-to-day work behaviors and have well popularized the know-how of preventing and controlling infectious diseases.

The project provided *Teachers' Guidebook for Preventing Common Infectious Diseases and Responding to Public Health Emergencies* has been delivered to 5,571 middle school teachers and 16,458 primary school teachers in 2,537 primary and junior middle schools in all the poverty-stricken and non-poverty-stricken counties. *Children as Promoters of Hygiene Practices and Protection Against Common Infectious Diseases* has been delivered to all the 4th-6th year students in 2,342 elementary schools and to 147,358 juniors in the 9 poverty-stricken counties of Ningxia Region. The material delivery has enabled the teachers and students to obtain a better understanding of infectious diseases prevention and treatment, and has strengthened local people's consciousness and concepts of preventing and controlling infectious diseases as well as correcting and eliminating their bad health keeping and food styles.

6.3.2.3 Central level trainings, monitoring and supervision

Officers of MOH-FLO, coordinater and national experts have for many time come to Ningxia, organizing and training the 20 key teaching personnel at both the region and municipal level in Ningxia, conducting inspections upon and guiding the Region's project implementation. We have been very much impressed with the experts' expertise, high level of teaching and their free and unrestrained teaching style. 5 key specialists from the provincial and prefectural CDCs in the field related to dealing with infectious diseases and PHE have selected to receive the one-month state-level epidemiological trainings. Through relating the relevant theories and practices in form of the centralized lectures and the on-spot practices, their ability to solve the on-spot problems have been quickly improved. The interns have acquired the ability of training their counterpart medical workers. We have, in addition, organized 3 province-level trainers to participate in the *National Training on Health-Related Education Policies and Experience Exchange aiming at SARS, Infectious Diseases and PHE for Health Educators*. The project has hammered out a number of public health talents for Ningxia, who have, since last year, participated in handing some emergency epidemics in our region. They have come up with valuable proposals

and solutions in line with the actual condition of the region by applying what they have learnt to practical work.

Five NDPHI leaders and leaders from the Province level CDC and Ningxia Infectious Diseases Hospital have participated in the central-level seminar on policies concerning SARS and infectious diseases prevention and control, which has strengthened and improved their understanding of the importance of the international cooperation and experience exchange in studying the policies with regard to preventing and controlling SARS in the current situation. Targets have been identified for our work in developing the Region's policies concerning the SARS and infectious diseases prevention and treatment in the days ahead through studying, extensive and in-depth discussions, and on-the-spot investigations. They have reached the consensus that the Region's mechanism in dealing with infectious ailments and PHE needs to be strengthened and improved; input from the government sectors at different levels in the field related to public health care and diseases control ought to be strengthened; and that strengthening and improving the technology, capability and equipment level of the diseases controlling personnel at basic level have become the imminent tasks.

With the energetic support provided by the state-level experts in disease control and the state-level clinical experts in form of the on-spot investigations conducted to SARS and infectious diseases prevention and control, and support provided by the experts in form of technical aid, we have organized a seminar at the region level on policies concerning SARS and infectious diseases prevention and control. The seminar was attended by the sectors that involve public health, finance, planning, railway, communications and many other special sectors. Through discuss and study, we identified our weaknesses in preventing and controlling SARS and infectious diseases, and accordingly put forward scientific proposals for improvement.

6.3.2.4 Equipment distribution and management

All equipment (see table IV.2) provided by the TA have played an important role in assisting us with conducting the on-spot investigations in infectious diseases and PHE, monitoring and controlling the epidemics, personnel training, and collecting, sorting out, analyzing and reporting the on-spot video materials and data.

6.3.3 Implementations and Findings

6.3.3.1 Energetic support from the leaders; well organized; strengthened management

After the project was launched, the disease control division of Ningxia Bureau of Health (BOH) has been appointed to in charge of the TA. One special officer has been designated to handle all regular issues related to the TA. During the course of project implementation we have got energetic support from and enthusiastic cooperation of the government sectors public health bureaus, diseases control centers (or epidemic prevention stations) at different levels, and Ningxia Medical College, Hospital Affiliated with Ningxia Medical College and Yinchuan City Hospital. Leader of disease control division, NBOH, leaders from county public health bureaus and diseases control centers at the two different levels attended the opening ceremonies for all the 13 training classes on "County and Township Medical Workers Infectious Diseases & Acute Poisoning Preventing and controlling Capability" with the attendance of 11 leaders from the public bureaus at locality and municipal levels, 9 person-times of the leaders from the local county government sectors.

6.3.3.2 Optimizing teaching teams and improving level of trainings in line with the actual local conditions

According to the TA's requirements, training plans, sites and trainers were developed and identified in line with the actual local context. NBOH issued the relevant documents which were submitted to MOH-FLO for approval. Quotas were distributed by prefectural public health sectors with the training programme being organized and implemented by CDC under the supervision of Diseases NBOH Control Section. To ensure the sound quality of training, most of the trainers for the 13 training classes are of the province-level tutors except the ADB trained trainers from hospitals at prefectural levels, which ensures that township medical workers receive training directly from the province-level trainers, and that used to be unimaginable.

In the time of selecting trainees, directors of township hospitals were chosen for the trainings by government of cities at prefectural level in consideration of the fact that these directors are also physicians and managers who are in charge of such affairs as infectious diseases, planned immunity, and maternity and children health care. Some counties even sent directors of their major township hospitals to the training classes, which has well standardized and promoted the hospitals' work in relation to reporting and handling the infectious diseases.

To ensure a sound quality of trainings, major courses were taught by 2 province-level experts with local teachers to provide examples or cases once happened in their respective localities. Examples and cases were chosen and identified flexibly in accordance with the epidemics occurred in the relevant localities over the past years. For example, experts in hemorrhagic fever and plague were assigned to teach theoretical courses at the training classes started in Yuanzhou District, the area where plague and hemorrhagic fever are epidemic, with teachers from the municipal diseases control centers providing the specific examples in the regard. Practice activities were based on hemorrhagic fever related examples, which has enabled the grassroots medical workers attach great importance to local epidemic diseases and give out timely and correct diagnosis. For trainings started in Huinong District where there are the most of the Region's factories, plants and coal mines, examples and cases are closely related to giving the first aid and treating the patients with job-related poisoning diseases common in the area. Similarly, in the Zhongwei County, analysis were conducted on basis of encephalitis B which is epidemic in the county; Examples and cases related to organophosphorus poisoning in Xixia District with course on tuberculosis prevention and control being added in Hongsipu Development Area.

In the arrangement for practicing, the training classes followed such processes as: Introducing the management methods and epidemic treatment process of each county level CDC briefly → visiting relevant departments and laboratories of the institution → visiting and conducting investigations to relevant township hospitals or villages → group discussing, which did not only enriched the teaching content, but also strengthened experience exchange between different institutions.

6.3.3.3 Trainings in entirely new forms and with high quality and remarkable results

In line with the characteristics of adult education, the project carried out the teaching activities by the participatory methods coupled with on-spot practices. Through analyzing the typical cases of various infectious diseases and the unexpected acute poisoning incidents, interns were guided to think and to participate in relevant discussions with assistance of their tutors, which helped form the interns' correct way of thinking about solving the problems alike, and helped them gradually master the methods for dealing with different infectious diseases and PHE; We have, further-

more, organized the interns to practice at county diseases control centers and township hospitals. On-spot visits, idea exchanges and example-based analysis have improved the interns' practical ability. Trainees agree that the participatory trainings can keep their minds actively, and strengthen the memory. In comparison with the traditional trainings, better results can be obtained in this entirely new form of training. Just some examples are:

6.3.3.3.1 Having aroused trainees' enthusiasm in learning. It was hard for medical workers at basic levels, particularly clinical doctors, diseases preventing and health caring doctors of township hospitals to get trained; The limited trainings were conducted from the top down to the basic level, which caused limited information delivery. The content designing of training did not have clear aims and direction. The unique and entirely new venue arrangement and layout, and the participation and discussion based training coupled with on-spot practice break the traditional theory and lecture based pattern of training. All these are entirely new to the interns who are attracted by the wonderful lectures given by experts. The trainees say that they dared not to leave the class without permission nor they dared to sleep or think about other matters in class. The interns were kept busy by asking and answering questions. Lecturers were deeply moved and influenced by the trainees' enthusiasm of learning. "Order in ADB-funded project training class is by far the best", said Pro. Zhang Xu, a chief physician of Hospital Affiliated with Ningxia Medical College, "all the students opened their eyes wide and made active response to what the teacher said, and I was greatly encouraged by that, feeling that I was full of energy and enthusiasm while teaching". Once in a training class in the County of Yanchi, a trainee came over to ask for leave as her nine-year old nephew had had a road accident and was in critical condition, saying with tears in eyes "Such a dynamic opportunity for learning is rare indeed! The tutor teaches so wonderful that it's really a great pity that I have to leave half the way". Seeing that she felt so reluctant to leave, others were so sorry for her.

6.3.3.3.2 On-spot practicing, underpinned idea exchanges and experience sharing. The on-spot practicing course arranged by the training class has not only enriched the learning content in class but has also intensified the trainees' memory and provided them with the dynamic opportunity sharing what they have learnt. Through

practicing, interns discovered the strengths of the host units and pointed out the weaknesses they have found. They, in addition, shared with the host units their own techniques which they felt to be helpful. e. g. Interns that have been to the anthrax-hit Township of Baofeng in Pingluo County said that they would never forget what they had experienced in the area. "Should we see the patients of the disease, we would never make wrong diagnosis", said the interns. While practicing at Zhongwei prefectural, the trainees found that the organization lacked for specialists in the regard, they helped work out a solution to the problem by recommending the graduating college students that they were acquainted with, which is also what they usually do to solve the problem alike in their own work units. The recommended students were later employed by the diseases control center after they had sat and passed the relevant tests. While visiting the Township Hospital of the Town of Zhongning County, trainees from Haiyuan County level CDC found that the standardized immunization clinic of the township hospital were rationally designed and had high value for practical application, they gave a report to the leaders of their own work unit and put forward rational suggestions in line with the actual condition of their own county. Work in building the standardized immunization clinic for the planned immunity are now ongoing, process of the work in the regard has been therefore accelerated. Some of the interns pointed out the weaknesses existing in the laboratory management of the institutions they were visiting and introduced the helpful work techniques employed by their diseases control center or their own epidemics prevention station. Some township hospital directors questioned the visited township hospital for their enteropathy clinic in the same room with paediatrics. Not long ago when visiting the Township of Wanglejing in Yanchi County, trainees found that the township hospital put the ADB *Flow Chart for the Diagnosis and Management of the Acute Infectious Diseases by Grassroots Medical Staff* in the information board. They immediately suggested that the chart be put in the relevant departments and offices, which did not only make it possible for the long service of the chart (it was then only 20 days since the chart had been delivered) but also reminded other relevant institutions. The on-spot practicing provided the interns with a sound opportunity for sharing experience, discovering other people's strengths and weaknesses, clarifying the work objectives, and improving the implementation of all the work in the regard.

6.3.3.3.3 Verifiable and Remarkable Training Outputs. Assessment was conducted in form of questionnaires before and after the trainings. The questionnaires involved such major aspects as basic concept and skills of dealing with infectious diseases and PHE including clinical reorganization, treatment and individual protecting policies of infectious diseases, and the epidemic disease related on-spot investigations as well as community engagement, etc. Scores obtained before the trainings are 30% higher than those obtained after the trainings, which exhibits a sound training result. Trainees have played an active role in conducting investigations in and dealing with the infectious diseases and the PHE in different areas of Ningxia Region.

We have, since the second half of 2005, collected some experience and understandings written by participants in the project trainings, and visited some of the trainees, all spoke highly of the ADB trainings. They told us that the training type is entirely new to them, saying that they had not even seen desks and chairs so arranged. They all agree that this training type is better for those the experienced medical workers than other type. They also remarked that lectures taking the form of example-based discussions are easier for them to accept. The opportunity for the trainees to ask questions in class enables them to obtaining a better understanding of what the teacher says right away. It moreover enables them to consult their tutors with their difficulties and queries in practical work, which has in turn largely benefited their work in the regard. This form of training has been introduced to our on-spot epidemiology related trainings.

Not long ago, Doctor Zhang, who gave the presentation on the field visit at the Township Hospital of Xi an/ Haiyuan County, is a trainee in the 2005 SDRF training class. He learned a great deal from the training with perfect understanding. His professional ability has been largely improved. In addition, he takes the chance of the regular meetings of village doctors to share what he has learnt in the training class with the village doctors.

6.3.3.3.4 Prominent teaching team of excellence has laid a sound foundation for the related trainings in days ahead. The selected key special technicians at both province and city levels have participated in the two rounds of trainings nationwide. The well tempered teaching staff have guaranteed a number of excellent teachers who have played an important role in popularizing the trainings in form of small lec-

tures, role play, on-spot simulations, teacher-led example analyzing and discussing, group discussions, group report and teacher evaluations. Mr. Zhang Xu, a teacher from the Hospital Affiliated with Ningxia Medical Collage undertakes to teach nearly all the courses offered by the ADB training in the field of the clinical diagnosis of infectious diseases and preventing and controlling the new incidence of infectious diseases. Through his ceaseless efforts of studying and exploring the current situation of the infectious diseases in Ningxia, he has collected a large number of practical and typical cases which have resulted in his improved level of lecturing. Apart from doing a good job in teaching the ADB project specified courses, Pro. Zhang has given a lecture titled "The Latest Advances Ever Obtained in Preventing and Treating Aids" to the medical workers in Yuanzhou District, and has given lectures on infectious diseases prevention and control to the hospital directors at the different levels in Ningxia Region. Prof. Zhang has for many times taught the infectious disease related courses for the trainings started by the local public health sectors. With his outstanding skills, Pro. Zhang won the second prize in the 2005 Ningxia Medical Collage Competition of Lectures. "The prize winning is very much due to the ADB-funded project" he exclaimed. One more example, Mr. Zhang Yinhao, the associated-chief-physician, Ningxia CDC, was assumed to teach all the training courses on infectious diseases and epidemiology. "With Mr. Zhang's language full of magnetism, the course used to be so boring to us becomes so interesting", the trainees remarked. Both the two province-level tutors have been spoken highly of by the trainees and relevant hosting departments. At present, relevant NDPH departments and training classes started by the region's cities and counties have appointed the two tutors to give lectures.

Trainers from the CDC at different levels assume to organize the trainings in their respective areas. Every link of work, from submitting plans, distributing quotas, inviting leaders, arranging for accommodations and venues, and discussing about the courses with trainers to the close of the training class, is well connected and arranged with the teaching activities being carried out by strictly following the pattern of the experimental training classes. For the half-day long practicing undertaken by epidemic diseases prevention stations, cases are strictly selected and screened with special case-reporters and means of transportation being appointed and arranged. Lectures were given in details to the trainees with the assistance of the local public in the disease-hit area organized by the stations. With the implementation

of the trainings, the special personnel participated in the work concerned have been well trained with a committed and efficient team of diseases prevention and control and trainers having been fostered.

6.3.3.3.5 Bringing the role of the key special personnel into full play, relating theories to practice, and dealing with epidemics in a standardized and orderly way. The project have trained 5 key professionals at the region level and more than 20 trainers at prefectural levels. All the counties and districts attach great importance to these key personnel s roles in practical work. They have not only played an important role as major force in practical work but has also demonstrated their talent in dealing with epidemics. For example, with 15 cases of skin anthrax patients were discovered in the Township of Baofeng of Pingluo County in July 2005 because of eating the dead and ill cattle, it was ascertained that the disease was erupting in the area. Having received the relevant report, the county epidemics prevention station selected and appointed Jiang Zhaoli, a trainee of the 2004 ADB training programme, to be in charge of the affairs related to dealing with the disease. She did a large number of pre-stage work such as immediately reporting the epidemic situation to the department at higher level, putting forward specific proposals, developing relevant charts and statements, conducting investigations into the epidemic disease and individual cases, building temporary wards to isolate the patients on spot. "She is an expert of our station", the station director told us afterwards. All the 5 key personnel trained by the ADB-funded project have participated in investigating and dealing with the epidemic disease and have played an important role in the regard. With the energetic support from the government agencies and administrative departments at different levels, and with the outstanding skills of our professionals and correct methods, the epidemic disease was soon put under control, which was praised by both the region and the city public health departments. In addition, the ADB trainees have played as important roles in such work as dealing with measles in the City Proper District of Zhongwei, the bird flu in Shangqiancheng, the plague diseases in Xingqing District, and strengthening the measles virus vaccine application. All have best exhibited the key processional personnel, when educated by ADB training programme, have been presenting themselves in diseases prevention and control affairs in Ningxia.

6.3.4 Recommendations

To maintain the results achieved, we would propose that advanced or high-level class of on-spot training on epidemiology be started for the disease preventing and controlling personnel at both the province and locality levels including: public health related software application, database establishment, material statistics and analysis, material utilization and sharing; We would propose, simultaneously, that trainings oriented toward medical workers at basic levels be still better extended in both the coverage and in depth. Carry out the work in electing model trainers or tutors to encourage the teachers at province, locality (or city) and county levels who have outstanding performance in the ADB trainings; Increase the amount of the infectious diseases work flow chart to assure the reach of the chart delivery to even more institutions to regulate the process of diagnosis and report.

Finally, we would like to take this chance to express our sincere gratitude for ADB's energetic support and aid to our affairs in every aspect. We do appreciate the leaders of MPH Foreign Project Office and ADB-funded project coordinators. We are also grateful for the government sectors and public health administrative departments at different levels, Ningxia Medical College, leaders of diseases prevention and control centers or epidemics prevention stations, and all the teachers who have shown concern about and participated in the project !

6.4 Xinjiang Uygur Autonomous Region

6.4.1 General Information

Xinjiang is an underdeveloped area with sparsely population and vast land. The infectious diseases are the major public health issues which having been persistently impacting the development of Xinjiang economy, and they are also the crucial factors that lead to poverty or returning to poverty. Recently, with the development of the society, some of traditional infectious diseases are curbed, however, some new emerged diseases are at risk of prevailing and some controlled infectious diseases are likely to re-emerge. During implementation of infectious diseases response, such as SARS and avian flu, etc, many vulnerabilities of the grassroots units are exposed, particularly in diagnosis and therapy, and the field epidemiological management, for example, high misdiagnosis rate and shortage of standardized drug use in the clinical diagnosis and therapy, and inappropriate organization of epidemiological investigations, incomplete collection of epidemiological data, not sci-

ertific analysis and use of the data, not timely and standardized writing of the epidemiological report. So it appears much urgent to improve the capability of the grassroots healthcare units in diagnosis and therapy, and epidemiological management. Considering those conditions, and with support of the ADB Project for capability building of SARS and other infectious diseases response in Western China, a series of trainings have been delivered in Xinjiang. The details are as followed:

6.4.2 Project Management and Supervision

6.4.2.1 Strengthen project management and supervision so as to ensure the implementation of trainings as planned.

The Department of the Xinjiang Bureau of the Health (BOH) is the coordinative and management agency of the project, responsible for organization and coordination prior to training, supervision during project implementation. In order to ensure the successful development of the project, the BoH often assigns experts to deliver on site trainings irregularly, to involve in the training, track the progress of the projects and find out and solve the problems in training. The CDC of Xinjiang Uygur Autonomous Region is the actual executive agency of project. The CDC specified professionals to take charge of the project. With the supports of the No.1 affiliated hospital of the Xinjiang medical university and regional people's hospital, a regional teaching team is established to undertake the project of training, which lay a solid foundation for the smooth running of the project.

6.4.2.2 Enhance management and get well done with the pre-training coordination and organization.

In order to ensure the training efficacy, the BoH issues the official document to the agencies to get trained fifteen days before training starting, enabling them to select the qualified professionals to attend the training and also prepare other issues as per the document as required, for example, preparation of the lectures, boarding and administration, teaching practice sites, etc, in this way to make good preparation and coordination to ensure the successful implementation of training as planned.

6.4.3 Implementation of the Project

6.4.3.1 Actively involved in development of the training manuals and other materials

Get Actively invdlved in developing the manual for clinical management and contrd of the common infectious diseases and acute poisonings. According to the unified arrangement of the MOH-FLD, and based on the practical situations of the infectious diseases and poisoning in Xinjiang, the Xinjiang BOH organized eighteen experts from Xinjiang CDC, the No. 1 affiliated hospital of Xinjiang medical university, the regional Uygur hospital and the regional peoples hospital to write the relevant chapters of the manual from September to October of 2003, and also appoint one professional to revise the manual in Beijing in December 2003.

At preparation stage of the training, the BOH organized five professionals to cdlect cases of the common infectious diseases and poisoning ever emerged in Xinjiang as the teaching cases to develop a manual of teaching protocol for trainers training on the infectious diseases and acute poisoning targeting the grassroots health professionals to support the future expended training.

6.4.3.2 Conduct effective piloting training and lay foundation for the training expansion.

Do well in piloting training and summarize the appropriate teaching models, methods and contents to improve the training efficacy. As per the unified arrangement of the foreign office of loading of MoH, and based on the actual situations of Xinjiang, the first regional piloting training was held in Changji in March 2004, with 86 epidemiological professionals, physicians and other healthcare workers from county CDCs and the township hospitals in changji and Tulufan prefectures. Through piloting training, the needs of the trainees were understood, the training contents and methods were identified, and the practical training materials for Xinjiang were developed.

6.4.3.3 Implement trainings for teachers to lay foundation for the expansive training.

To build up a well trained and capable teaching forces to take on training tasks for the grassroots units, thus to improve their capability of responding to the public health emergencies. Arranged by MOH-FLO in May 2004, two piloting trainings

were delivered in Urumqi and Karshigur respectively. Sixty-two trainees of CDC and hospitals in fifteen prefectures and cities were all experienced in infectious diseases and poisonings control and therapy and with bachelor degree. Through systemic training, they all got familiar with the participatory teaching methods, contents and organization for infectious diseases and acute poisoning to ensure the successful completion of the expansion of training. And two training session were held in Urumqi towards the teachers ever trained for the consistent improvement of the their teaching capabilities.

6.4.3.4 Make an adequate preparedness and ensure that the trainings acquire the expected effect

Sternly select the trainers: In order to ensure the teaching efficacy, every trainer should receive ADB strict training. The trainers should be the most excellent. The regional trainers, with assistance of the local teachers, play a core role of teaching, help the local future training run smoothly. The curricula and the training requirements are worked out and offered to every trainer one week ahead of training starting, and the centralized preparation for lessons are conduct three days prior to training courses, which enable the teachers to prepare and get acquainted with the training contents sufficiently to ensure training efficacy.

Prior to launching training, a liaison person is specified responsible for contacting to manage the trainees needs, and arranging the practice site and content to run the training smoothly.

In selection of the teachers, considering that Xinjiang is a minority area, we select minorities to be trainers and adopt bilingual method (Chinese and ethnic languages) to facilitate training and improve the acceptance of the training.

Curricula arrangement: based on the features of the acute infectious diseases and poisonings in the project areas, we make the best use of the participatory training methods, focusing on the improvement of the capability to solve the practical problems, to arrange theory teaching. The cases are collected and prepared two weeks ahead of the training starting, preferably locally collected. Generally, the curricula are introduced by the case analysis, the participants are actively involved in discussion, and the instructors make the final summaries. The case studies are involved with the principles and procedures of clinical and epidemiological management of category A and category B and C infectious dis-

eases, and acute poisoning. Through training, the trainees well grasp the key points of the public health emergency management. The cases touch upon many common infectious diseases and acute poisonings at the grass roots, for example, the respiratory and digestive infectious diseases, food poisoning, etc, which broaden the visions of the trainees. The cases are designed purposely with several mistakes in them, instructing the trainees to find out and correct the mistakes so as to improve their practical management capacity. Several lectures are given in training on the infectious diseases and acute poisoning treatment and control to improve the knowledge among the trainees.

Teaching: All trainers are required to adopt the participatory teaching methods and manage to activate the trainees' subjective initiatives to improve the participatory awareness of the trainees and increase and keep active atmosphere among both active and inactive trainees. Making full use of various teaching methods, for example, cases analysis, brainstorm, role play and mini course, etc improve the participatory awareness among the trainees and enable them actively to participate in the teaching process and understand the training content in the view of their practical works.

Bilingual teaching: In light of 60% of the grassroots healthcare workers being minorities in Xinjiang, we have trained three regional bilingual minority trainers to meet the bilingual teaching needs. And we also think much of exerting the roles of the local minority trainers to improve the trainers' quality and capacity of the grassroots minority healthcare workers to manage the acute infectious diseases and poisoning.

6.4.3.5. Implementation of the extensive trainings to improve the capacity of the grass roots to manage the public health emergencies in Xinjiang

As per arrangement of the foreign loading office of the MoH and based on the actual conditions, a series of trainings have been launched from 2004 to Jun 2006. Two prefectural trainers' trainings were delivered in 2004 and an intensified training was held following the above trainings in 2005. Two piloting trainings were offered in 2004 to support the following trainings. From September 2004 to Jun 2006, totally nineteen training courses are held on acute infectious diseases and poison control and prevention targeting grassroots granted by ADB (TA 4118-PRC), of which six trainings were parallel classes, one adopted Chinese teaching, the other minority language. A total of 864 healthcare workers participated in the trainings, covering

all counties or cities of the 15 prefectures in Xinjiang. It is very important for the grass roots to improve their capability to respond to the public health emergency in clinical therapy and epidemiological management.

6.4.4 Project Inputs, Outputs and Outcomes

6.4.4.1 Inputs

There are the specified professionals in BOH, regional CDC, regional people's hospital and the No.1 affiliated hospital of Xinjiang medical university responsible for the training. From 2004 to June 2006, totally 560 person-days were input for the training programs at regional level, and 600 person-days at prefectural levels.

6.4.4.2 Outputs

Establishment of a team of trainers for training on the public health emergencies. The training project has trained 62 teachers for the fifteen prefectures. Through different levels of training, the trainers have come through the practical training exercises on teaching the knowledge of medical treatment and management of the public health emergencies, and become an experienced teaching team, which laid a solid foundation for the local response work.

Translation and distribution of *Handbook of Common Infectious Diseases and Acute Poisoning Prevention and Control*: 60% of medical workers at grass roots in Xinjiang are minorities with low Chinese proficiency and hard to read the Chinese version of handbook. In order to facilitate use of handbook for the grass roots, approved by the ADB, we have successfully organized translation of the handbook from Chinese into Uygur version and distributed them among the healthcare professionals of 96 CDCs and township hospitals of 15 prefectures in Xinjiang. From the general reflections of the grassroots medical workers, they basically consider the manual a very useful tool for the practical works.

Distribute the training materials, compiled and printed by ADB, of *Disease prevention handbook*, *Photo bank* and IECs on the infectious diseases cure and prevention for students to 96 counties or cities of 15 prefectures.

Training outcomes: Through pre- and post-training evaluations, we keep eyes on the training efficacy and the trainees' response so as to adjust the training contents and methods to improve the training effectiveness. The findings of the evaluation survey among 19 training classes revealed that the average correct answer rate is only 23.2% prior to training, however 78.2% after training. The

results of questionnaire survey showed that the training project has got good responses, 83% of trainees gave five marks for the trainings, 15.4% four marks; 94% of trainees considered the teaching efficacy very good. As compared with the past trainings, 86% of trainees thought the current training project was much better, 13% better; 77% thought that the most successful point of the training is to involve the trainees in teaching process; 65% thought that the key point is the improvement of the practical capabilities of performance; 23% thought that the unsuccessful points are the relatively few contents and less training time; 67% thought that the cases study and discussion are helpful for the improvement of the capacity to solve the practical issues and expected that the preparation of on site practice should be more sufficient, and the training time should be more longer to get much better training outcomes. The majorities of the grassroots healthcare workers thought that the trainings have fulfilled the goal of training on improvement of the grassroots professionals' qualities and practical performance skills and expected that more training courses like those kinds be held in the future.

Find out the existing problems in time: Through survey on the grassroots situations, we found that in the past, healthcare professionals at the grass roots lacked systematic training, and the professional quality was basically not high. To intensify the training should be an important approach to build up the capabilities of the grass roots towards the infectious diseases and acute poisoning control. So the local health administrative agency should pay much more attention to the training project. In Xinjiang, especially in the southern part of Xinjiang, the minorities account for 70% of the total population. So a well-trained minority teaching team is a must. Reinforcement of the training towards the grassroots minority medical workers can really improve the capability of response to the acute infectious diseases and poisoning and safeguard the life security of various nationalities in Xinjiang.

To promote the standardized training towards the grassroots trainers: In the course of implementation of training, we required that every trainer should take each class seriously, preparing various teaching materials and lectures beforehand and summing up after training, accumulating good experience and overcoming the weaknesses, in this way to constantly increase the teaching skills and improve the training efficacy.

6.4.5 The Future Needs and Recommendation

Expend the coverage of training. Currently, the training only covers the all county-level CDC and parts of township-level hospitals. The township-level training coverage is far lower than what they actually need.

Development of high-level trainings. To conduct training towards the core professionals at the prefecture levels to improve the prefectural overall capability to manage the epidemic situations.

Should construct the regional rapid diagnosis laboratories to meet the needs of the future public health emergencies.

Reinforcement of the corporation of cure and prevention in other infectious diseases, for example, AIDS, Hepatitis, newly emerged and unknown infectious diseases.

Appendix List

Appendix IV.1	Events of PRC-ADB Project TA 4118 in Yunnan
Appendix IV.2	Table of Project Outlet of Yunnan Training
Appendix IV.3	Events of PRC-ADB Project TA 4118 in Qinghai
Appendix IV.4	Ningxia SDRF Training List
Appendix IV.5	Events of PRC-ADB Project TA 4118 in Xinjiang
Appendix IV.6	List of PRC-ADB Project in Xinjiang

CHAPTER V EXTERNAL EVALUATION REPORT

1. Background of Evaluation

Facing with the severe threat of SARS, Chinese government who cooperated with the ADB established and started the technical assistance project on SARS and infectious diseases prevention and control in the Western Region of China since April, 2003. Total investment is 200,000 USD. The project which implement in provinces of Yunnan, Qinghai, Ningxia and Xinjiang was ended on June 30, 2006 with an implementation period of 3 years. It covers with 42 districts and 294 counties including the population of 7,200,000. The objective of the project is to promote the ability of SARS and other infectious diseases prevention and control in the western region of China and control multinational transmission of the diseases. There are four emphases of the project including:

To make appropriate schemes of SARS prevention and control at provincial level;

To strengthen the surveillance system and network on infectious diseases;

To promote the abilities on responding the public health emergencies;

And to promote the public awareness and self-protective abilities on preventing SARS and other infectious diseases through various health education and information mechanisms.

MOH-FLO decided to make an external evaluation on this project during May, 2006 to June, 2006 after negotiating with ADB.

2. Purpose of the Evaluation

To evaluate the implementation plans feasibility, the implementation situation, realization of the purposes, the outcomes, experiences, problems and suggestions. To provide some experiences in the field of technical supports on infectious diseases prevention in China technical support.

3. Evaluation Contents

Project design.

Project management.

Management of equipments procurement.

Constituting and improving SARS and other infectious diseases prevention plan.

Compilation, distribution and use of the training materials.

Training on infectious diseases prevention for grass roots health workers.

Field epidemiological training.

Health education activities about infectious diseases prevention and control.

4. Evaluation Approaches

The evaluation was implemented with approaches of qualitative research and quantitative research:

4.1 Documents review: external evaluation experts reviewed the project plan, national and provincial project summaries, purchasing plan of equipments and protective facilities, distributing plan, receiving record, training workshop notifications, schedules, teaching plan, evaluation forms, conference notifications, directory, teaching materials and manuals, designing drafts of guidelines for teachers and students, pre-testing records and files of Yunnan and national program offices.

4.2 Interview: the experts face-to-face interviewed 5 central coordinators and experts, 2 provincial program managers and 2 prefecture-level CDCs leaders. The experts interviewed 4 provincial program managers and 3 representatives from infectious diseases and public health emergencies health education training workshop. And the experts interviewed 10 provincial teachers, 10 students of preverient training workshop at county levels, 12 students of training workshop at county levels, 9 training workshop observers from Guangxi and Guizhou, 7 staff from education sector and 10 students.

4.3 Questionaire survey: the experts investigated 20 students of field epidemiological training workshop by questionnaires and received 19 valid questionnaires.

4.4 Field observation: the experts made on-the-spot investigations on the workshops at Qujing, Yunnan province and Xingqing district, Yinchuan, Ningxia province.

4.5 Field visit: the experts made on-the-spot investigations at the CDC in Yunnan province, Qujing city, Zhanyi county and Xingqing district, township health centers in Zhangzheng and Zhanyi and monitoring base of plague in Yinchuan.

5. Timetable

May 23rd ~26th	Information collected and evaluation plan draffed.
May 27th ~31st	Looking through datum of the project; made a list of evaluation indicators, contents and materials of the project; determining target groups of interviews and investigations; making syllabuses of face-to-face interview and focus group interview; designing questionnaires.
June 1st ~11th	Collecting relative materials. Interviewing target groups, including 5 central coordinators and experts by face-to-face interview, 4 provincial project leaders and 3 representatives of the training workshop by telephone interview and 20 trainees of the training workshop by questionnaire.
June 12th ~16th	Field evaluation in Yunnan province. External evaluation experts visited Yunnan CDC, Qujing city CDC, Zhanyi county CDC and township health center and interviewed leaders and trainees of the workshop. The experts looked through the project files and inspected the training workshop for health worker at Qujing city. When the experts visited at the Qujing Second primary school, we interviewed 7 leaders and doctors and 20 students to learn the distribution, use and effects of the guideline for students. The experts also interviewed 2 provincial project officers, 5 provincial teachers, 9 observers of the training workshop from Guangxi and Guizhou and 6 county health workers.
June 27th ~30th	Field evaluation in Ningxia. We inspected the training workshops for county health workers and visited Xinqing district CDC in Yinchuan, Zhangzheng township health center and monitoring base of plague. The experts interviewed 5 provincial trainers and 7 trainees of former training workshop at county levels and 6 trainees of the health workers training workshop at county level by focus groups.
June 17th ~July 5th	Data processing, input and analysing. Written evaluation reports in two versions: Chinese and English.
6th ~9th, July	Evaluation report modification and submission.

6. Overview of Evaluation Findings

6.1 Achievements

6.1.1 The project plan was flexible which focused on the explicit, appropriate and concrete audiences. The implementation process was easy to operate with effective management and regulations. The project achieved its objects successfully.

6.1.2 The project included infectious diseases prevention planning, distributing equipment and self-protective facilities, editing and distributing manuals and guidelines, staff training on diseases prevention and control and teachers training at provincial level, training for health education at provincial level and health workers training at county level. These trainings established a network and a group of staff on infectious diseases prevention and public health emergencies respondence at all levels and a competent group of teachers, exploring the methods and models on skeleton staff's capacity building key medical staffs, promoting the abilities of infectious diseases prevention and control and public health emergencies respondence in western region of China, strengthening the infectious diseases monitoring and reporting system, promoting the abilities of infectious diseases monitoring, diagnosis, reporting and dealing at all levels, and controlling the multinational transmission of the diseases.

6.1.3 This project would give public health system building and infectious diseases prevention a sustaining and deep effect in whole China, especially in the western region. The plan on preventing infectious diseases and responding public health emergencies and working mechanisms gave a good preparation to everywhere; the equipments and self-protective facilities would continue to exert their effects; the teachers and staff who were gotten trained would be the long-time reserve and effect more people; the manuals, guidelines and flow charts would provide guides and reference to key staffs. The methods of participatory training and case study which gave some positive effects to basic training mechanism building were suitable to capacity building of infectious diseases prevention and control for grassroots workers, so it is worthy to be recommended and promoted. Basic training and the work of infectious diseases diagnosis, reporting and dealing were standardized

through regulatory and systematic training. The efficiency of responding to infectious diseases and public health emergencies was enhanced, epidemic diffusion was decreased, and harms were reduced.

6.2 Shortcomings and problems

For the limited fund, extended training in Yunnan and Xinjiang could not cover all township health centers and the manuals and materials could not meet all demands of grass roots.

Some of the trainees didn't exert their effects well.

Except the department of disease control, other departments didn't involved in infectious diseases prevention and control enough, including health education department.

The sustainable development and supports for trainees faced huge challenges after the project completion.

6.3 Recommendations

The project exerted its good effect at the underway stage of the capacity building in western region of China. If ADB or other international organizations continually to give China more supports and aids on this base, it will get better effect.

For the future, when the project provinces make a planning, they should be given definite decision-making power according to their conditions.

Each province should establish relative working mechanism and provide some chances of training, learning and practicing for their staffs. They should encourage their staffs to continually learn more knowledge and exert their good effects to maintain the quality of their institutions.

To summarize and promote the successful experience of this project, such as printing more manuals and materials, extending the range and quantity of materials distribution, attending international exchanges and case-based participant training approaches.

To advocate more sectors attending infectious diseases prevention and control and exert the effects of health education to promote the public's protective awareness and self-protective ability of preventing infectious diseases.

Each province should continually make full use of the working mechanism and counterplans established, equipments, facilities, teaching materials and manu-

als supported, and persons in order to make the TA project achievements sustainable.

7. Specific Findings for Various Aspects of the TA

7.1 Project Planning

The main purpose of the project was to provide technical support to western region. Based on the quick assessment and needs of the localities, the contents and implementing approaches were designed according to the purpose of the project. The project offices at all levels developed practical manuals and communicating materials and provided essential equipments to local health institutions. They also provided trainings according to the needs of different levels. They adjusted the points and contents through supervising the conditions of infectious diseases occurrence and development.

The design of the project is flexible, practical, feasible and rational which had ensured the quality of implementation.

7.2 Project Management

ADB and MOH-FLO managed and deployed the project and central coordinators took charge of project planning, organizing, coordinating and financing. With the orderly management, integrated materials and reasonable finance, each activity was implemented as planning.

On the mechanism of "payment based on report", MOH-FLO established a special account for financing management of the project. Each province appointed fixed account to accept funds. Each payout was recorded in particular and the financial vouchers were kept intactly. With strict implementation of financial rules of MOF and ADB, the fund was paid in time and used rationally.

Disease prevention and control division of each province health bureau was in charge of the project. They actively mobilized all resources and organized activities directly as planning. There were special persons who were assigned to take the responsibility of project implementation. Leaders at all levels attached importance to the project and took part in all activities with great passions. The project operated very smoothly under the cooperation and support of health sectors at all levels.

Central experts have high theoretical level with profuse working and teaching ex-

perience. They prepared plenteous cases with lucid analysis and adopted participatory methods spontaneously and glibly. They were not only responsible for planning and implementing idiographic work in each field, but also as the key staffs in proposal planning, material developing, teachers training, field supervising and technical supporting. They exerted important effects in project planning, implementing, monitoring and technical supporting. Project officers and trainees gave high praise for their capabilities, scientific attainments and working attitudes.

The provincial experts played an important role in project implementation. They compiled teaching materials, arranged the schedule of training workshops, and chose cases and inspecting spots. They were not only as teachers of the workshops, but also gave a lot of supports and aid to sub-trainings during their busy work. For example, Li Fan from Xinjiang, Wang Xuewen from Qinghai, Zhang Yinhao and Zhang Xu from Ningxia and Liu Xiaoqiang from Yunnan, they attended all workshops. All project staffs and trainees gave them high appreciation about their abilities, professions and attitudes.

There were some problems in project implementation: 1) There were some difference among each province because of the different diathesis of staffs; 2) The guidance from national and provincial experts were needed to enforce further.

Recommendation: if there will be more similiar projects, it should 1) select staffs with experiences in field of infectious diseases prevention and control, and with teaching skills for provincial programs implementation; 2) give provincial offices some power to make decision by themselves; 3) enforce guidance for grass roots.

7.3 Management for Equipments and Procurement

The project equipped each province with Nissan cross-country vehicles, laptop computers, multi-media projectors, digital cameras and digital camcorders and protective facilities, such as protective clothing, respirators, protective glasses, gloves, Infrared Thermometers and steam disinfectors, etc. All equipment and facilities were bought by centralized procurement and distributed to health facilities timely as planning with statement signitures by the receivers. These equipment exerted their effects during responding public health emergencies, trainings at all levels and infectious diseases prevention and control, such as avian flu, cutaneous anthrax, and sylvatic plague, etc.

7.4 Supervision

The leaders of MOH-FLO, central coordinator and national experts made field supervisions more than 20 times (each province more than 6 times). They held TOT workshops and pilot training courses. During the training workshops, they inspected the whole process and gave field supervision to trainees' practices in project provinces and counties. They also gave some guidance to trainees by phone and by mail. By contacting with the project staffs closely, they learned the conditions of project implementation, problems and barriers timely. Under the effective guidance of them, project staffs could adjust the project strategies and contents to ensure pertinence, practicability and feasibility of the project.

Provincial project officers gave supervisions on every training workshop at county level and employed settled professional teachers to give some guidance to trainees in order to fulfill the suggestions of national office and ensure the project operating smoothly.

There are some problems that are: 1) although the basic health workers got many times supervisions at national level, they hoped to get more guidance from national experts directly; 2) national program office and experts gave some suggestions to each province after supervisions, but they should follow up the rectifications of each province.

So we recommended that provincial project office should give counties' program officers some guidance for their routine work, ensure financial needs and establish supervision institutions.

7.5 Constituting and Improving SARS and Other Infectious Diseases Prevention Plan

The workshop on strategy and planning against for SARS and other infectious diseases were held respectively at national and provincial levels in Beijing and four project provinces at the end of 2003. Each province organized relative sectors and persons to attend the workshop. After the workshop, Yunnan province has made infectious diseases responding plans for 27 infectious diseases of category A and category B and diseases prevention plans for AIDS, tuberculosis and STDs. Other three provinces also made relative plans as required according to the local situation. These plans exerted their effects in epidemic situations and public health emergencies. For example, health workers took quick and effective actions according to the

plans and enhance the responding efficiencies when there were human plague happened in Qinghai, sylvatic plague happened in Yinchuan and avian flu happened in Yunnan in 2005.

7.6 Compilation, Distribution and Use of the Training Materials

According to the results of quick assesment, requirements of participative training and needs assessment of grassroots health workers, national experts organized by MOF-FLO compiled three manuals: *Protocol of Participatory Training for Training of Trainers on Infectious Diseases and Acute Poisoning Prevention and Control by Grass Root Level Medical Staff*, *Handbook of Common Infectious Diseases and Acute Poisoning Preventing and Control* and *Photo Bank for Common Infectious Diseases and Sexually Transmitted Diseases*. They also compiled *Flow Chart for the Diagnosis and Management of the Acute Infectious Diseases by Grassroots Medical Staff* and CD-ROM for participatory training. The contents of these manuals are practical, scientific and clear with several times of discussions and reversions.

Handbook of Common Infectious Diseases and Acute Poisoning Prevention and Control has been printed with 57,000 copies, *Photo Bank for Common Infectious Disease and Sexually Transmitted Diseases* has been printed with 42,000 copies and *Flow Chart for the Diagnosis and Management of the Acute Infectious Diseases by Grassroots Medical Staff* 300,000 copies. These manuals were distributed to the CDC at provincial, district and county levels and county hospitals as planned. *Handbook of Common Infectious Diseases and Acute Poisoning Prevention and Control* has been translated into Ughur language in Xin Jiang province for Ughur workers. *Photo Bank for Common Infectious Diseases and Sexually Transmitted Diseases* and *Flow Chart for the Diagnosis and Management of the Acute Infectious Diseases by Grassroots Medical Staff* were printed for other 22,000 copies each and were distributed to county CDC and township health center in other 8 provinces in western region. *Protocol of Participatory Training for Training of Trainers on Infectious Diseases and Acute Poisoning Prevention and Control by Grassroots Medical Staff* has been translated into Mongolian Language and printed with thousands of copies which were used in inner-Mongolia.

Users considered these manuals as simple, applied and suitable to the requirements of basic health workers. They thought these materials would give them a lot of help in the everyday work which had become their necessitous references in

working. Guideline for hackneyed infectious diseases and acute poisoning prevention and control has been translated into Uighur to let Uighur health workers use. Flow Chart for the Diagnosis and Management of the Acute Infectious Diseases by Grassroots Medical Staff has been distributed to county and township hospitals and CDCs of whole country. So the impact of the program was expanded widely to the basic infectious diseases prevention and control in other provinces.

The grassroots health workers thought that Handbook of Common Infectious Disease and Acute Poisoning Prevention and Control, Photo Bank for Common Infectious Diseases and Sexually Transmitted Diseases and Flow Chart for the Diagnosis and Management of the Acute Infectious Disease by Grassroots Medical Staff were very fit to the countryside level use, so they hoped to get more materials that can meet the requirements of more health workers. They wanted to expand the distribution quantities and range of the flow chart. The cases in Protocol of Participatory Training for Training of Trainers on Infectious Diseases and Acute Poisoning Prevention and Control by Grassroots Medical Staff should be reviewed and modified by national experts to ensure their scientific and regularity.

There were some problems that: 1) the flow charts have no use instruction, so basic health workers didn't know use site clearly that they put up at wrong sites; 2) the materials haven't been distributed to correct enterprises; 3) there were lacks of monitoring and supervisions to the use and effects of the materials; 4) limited by the finance, the printing of materials was not enough to fulfill the needs of all health workers; 5) the materials which fitted for the village level health workers didn't distributed to village level.

So the recommendations are that: 1) there should be use instructions with relative materials for basic use; 2) there should be monitoring and supervisions after distribution of materials; 3) print more copies of materials and enlarge the region of delivery; 5) health departments at all levels should supervise and urge institutions to use these materials to continue to exert their effects.

7.7 Training for Infectious Diseases Prevention for Grassroots Health Workers

7.7.1 Provincial training for trainers

There are two rounds of provincial training workshops for trainers at four project provinces in May, 2004 to July, 2004 and May, 2005 to July, 2005. 12 training

workshops had been held at first round (2 in Ningxia and Qinghai each, and 4 in Xinjiang and Yunnan each) with 180 trainees (Ningxia more than 20 persons, Qinghai 38 persons, Xinjiang 62 persons and Yunnan 64 persons) who come from provincial CDCs, hospitals and universities. The main contents of workshops are participatory training skills, training workshop organization and schedule for county and township level, need assessment and effect evaluation. The result shows that the trainees of the workshops had learned how to apply participative training approaches for training basic health workers, including brain storm, roll playing, group discussion, case analysis, how to organize a county level training workshop and how to do needs assessment and effectiveness evaluation. The trainees had learned the points of participatory training and mastered the skills of participatory training by practicing, discussions and communications. These trainees were selected from provincial professionals with some working and teaching experiences in infectious diseases prevention. Training for trainers expanded the number of the trainers in carrying out training and promoted the capacities of the local institutions. Trainees thought that the courses were arranged orderly. The experts are plenty of professional knowledge and practical experiences. And the participatory training approaches could make the trainees think and analyze questions actively. The cases are representative and the knowledge is new and practical. The leaders and students all sang high praise for the training workshops.

After receiving TOT, many trainees as sub-training teachers sought after appropriate approaches and prepared courseware and cases carefully during the training for county and township level. They adjusted the contents and methods according to the characteristics and needs. For example, Professor Zhang Xu of Ningxia province prepared more than 10 coursewares for different trainees at grassroots. His teaching skills were promoted through more than 10 trainings. He got first award in the teaching competition of Ningxia medical hospitals. Teachers trainings prepared a strong team for each province.

The participants include prevention professionals and clinicians. It promoted communication between disease control and clinical medicine that would be helpful for cooperation between them in the future.

There were some problems that: 1) the abilities and teaching levels were great different among all teachers; 2) there are some difficulties of sustainable development and supports of teachers after this project, so the teaching level would de-

dined quickly if lack of practice.

Recommendation: 1) to choose right person to attend training as requirements; 2) the work of CDC workers and clinical workers are different, so the training should target at their own characteristics; 3) to enroll some competent trainers (as trainees at central level training) into the provincial CDC system and provide opportunities for them; 4) to hold some competitions of trainers to inspirit them to attend relative activities, in order to promote their teaching skills; 5) to supervise and provide training and relative supports to trainers in order to strengthen the training effects and maintain the whole level of trainers.

7.7.2 Training for health workers at county level

There were 82 pilot and extended training workshops in four project provinces (13 in Ningxia, 13 in Qinghai, 19 in Xinjiang and 32 in Yunnan). The participants were about 3,500 persons that covered all county CDCs (more than 540 persons in Ningxia, 628 persons in Qinghai, 864 persons in Xinjiang and 1,476 persons in Yunnan). It covered all provincial and county level CDCs. Ningxia and Qinghai provinces included all hospitals at county level (718 hospitals). Yunnan and Xinjiang included most of township health centers. The training took the case-orientated participatory training approaches. The key points of the training were the early identification, diagnosis, reporting of infectious diseases and skills on epidemic control. They taught such as the training of thoughts of infectious diseases diagnosis and flow of reporting and dealing with infectious diseases at township health institutions. The trainings established professional teams on responding infectious diseases and public health emergencies for each province. The county health workers abilities on infectious diseases diagnosis, treatment, field investigation, data analysis, report writing and training were promoted.

All provinces organized training workshops as requested by MOH-FLO. Each of all training workshops had its plan, budget, notice, directory, effect evaluation and conclusion.

Preparations of the workshops are satisfied. The trainers had plenty of experiences. The arrangement of courses is appropriate. The trainers prepared a numbers of cases and teaching facilities. The training workshops take the participatory approaches and field practices which make trainees attend and think actively. The contents are based on the local situation of the occurrence of infectious diseases and

public health emergencies, so trainees feel familiar to the cases selected. They could understand the contents easily and have deep impression of the knowledge.

Trainees were from county and lower level had learned their own responsibilities and know how to ask for help from superior institutions and how to cooperate with each other.

The training workshops combine with clinical diagnosis, treatment, epidemiological investigation and dealing which enlarged the trainees' views.

Trainees considered the workshops as well-organized. The arrangement of workshops are orderly. The contents are easy to understand. The participative make trainees actively discuss and think. Trainees learn more new knowledge and their mistakes in everyday work by discussing and communicating with each other and teachers. The effect evaluation of the workshops showed that the scores promoted distinctly after the workshops.

The basic health workers in Xinjiang province are about 60% minorities, so there is teaching them with 3 bilingual teachers. It is not only promoting the professional diathesis of minorities, but also promoting the whole level of responding emergencies in Xinjiang.

The main problems are: 1) several provincial project organizers are lack of experiences in program management, so some of the courses arrangement are not orderly and continuously; 2) several teachers didn't master the approaches of participatory training because of lack of experiences, so some of them applied the approaches by rote; 3) some of the teachers couldn't control the courses well; 4) the cooperation among teachers were not enough; 5) some courses without enough preparation, so the students couldn't attend actively.

Recommendations: 1) experienced persons would be appointed to master the course planning at provincial level; 2) to reinforce the training to trainers and choose competent persons as trainers; 3) the trainers should cooperate with each other; 4) the training should implement orderly without disturbance; 5) to strengthen the supervision of the basic trainings; 6) to add more little lectures to provide more information; 7) field practices should focus on the content of training; 8) the contents of training should be updated timely; 9) to make fine preparations for training, especially the time of preparing for lessons.

7.8 Field epidemiological training at provincial level

To promote the abilities of field epidemiological of provincial CDC health workers,

field epidemiological trainings were held during Oct. 2004-Oct. 2005. 20 traineer were selected by recommendation and selection. Each province had 5 students.

The training divide into 3 stages: 1) theoretic training for 1 month in Beijing including 46 units (160 periods). The main contents included basic knowledge of field epidemiological, field investigation skills, investigation and management of common public health emergencies, case analysis and practice. 28 experts were the teachers such as Zeng Guang, Yang Weizhong, Ray Yepp and Bob Fontaine etc. 2) practicing at their institutions. Each student should finish one field investigation and management or epidemiological theme investigation by themselves and finish the investigation reports. Teachers would give them some guidance. 3) program conclusion meeting were held in Beijing.

Trainers, trainees and leaders of the training workshops gave high appraisement to the planning, organization, management and effect. The project purpose is to promote the abilities of dealing with the public health emergencies of provincial CDC staffs as the requirements of strengthening the public health system building and human resources capacity building in western region. The project used for refers to the experience of Chinese Field Epidemiological Training. It takes the approach of case analysis and combines with learning and working. The design of the project is very scientific, rational, precise and with strong maneuverability. The teachers with plenty of academic knowledge and practical experience guided the practices for trainees. It was ensured the quality of teaching. The trainees were selected in the basis of their educational level, working experience and professional skills. They studied very hard and finished all training contents as planned. Their knowledge and skills has been greatly improved through the training. They had the abilities of designing survey plan, collecting information and analysising with statistics. They can write survey reports and deal with emergencies, and become the key persons of local health institutions. In the practice, they finished 17 survey reports by themselves or by cooperation. These reports get the average score of 15.2 (the full score was 20 and the highest score was 18.5).

17 persons from 20 trainees had attended the training for trainers. They became teachers of each provincial training workshop. Now they are the key persons in the program planning, organizing, managing and coordinating, such as Wang Xuewen, Liu Xiaoqiang, etc. After the training workshop, the trainees of Yunnan and Ningxia provinces as teachers and organizers, held field epidemiologic training workshops.

They taught other professionals at province, district and county levels.

After training, 18 students work in the area of infectious diseases prevention and emergency respondence. Their responsibilities were dealing with the outbreak of infectious diseases, unknown epidemics and public health emergencies. For example, Wang Xuewen of Qinghai responses to infectious diseases outbreaks and unknown epidemic situations. Liu Xiaoqiang is in charge of public health emergency respondence in Yunnan. They have raised a lot of valuable suggestions and are models of their colleagues. There was arsine poisoning happened in Qujing in Dec. 2004 and Chlorine Dioxide in Apr. 2005. 5 trainees of Yunnan province attended the investigation and dealing. They brought appropriate responding plan quickly and organized health workers to coordinate with each other, so the situation was quickly controlled.

Trainees had published 17 papers or investigation reports. The paper of 'Sustainability research on non poliomyelitis maintenance in Yuxi city' written by Wu Qiang gains the award of Yuxi city technological achievements in 2006. Mijiati attended the project of 'Research of Xijiang Uygur gene sequence of HIV'. Several trainees joined the compilation of 'Participatory training teaching plan of infectious diseases and acute poisoning for basic health workers' and 'Guideline for common infectious diseases and acute poisoning prevention and control'.

Attending field epidemiological training workshops and public health emergencies respondence have promoted the students' abilities in organizing, coordinating, designing, managing, analyzing, making decisions, investigating and teaching. By attending training workshops, health workers got more chances to exchange with others and enlarged their sights.

There are some problems that a few of trainees seldom get chance to attend investigation and management of public heath emergencies and their effects couldn't exert.

Recommendation are as following: 1) each province should ensure the students get enough chance to attend infectious diseases prevention; 2) to provide more chances and information for trainees to communicate with each other; 3) to provide more space and chances to exert their effects.

7.9 Health Educations on Infectious Diseases Prevention

7.9.1 Development, producing, distribution and use of **Teachers guidebook** and **Students handbook**

The process of developing and producing 'Responding guideline of infectious diseases and public health emergencies for teachers of primary school and middle school' and 'Guideline for students' is scientific and canonical. The two books are based on the requirements of teachers and students and passes through repetitious pre-tests, modifications and reviews, so the information of them are scientific, correct, applied and suitable.

Teachers guidebook is printed 140,000 copies. The copies are distributed to all middle schools and primary schools of each province. Each school got 4-5 books. Students handbook is printed 150,000 copies and distributed to the students of 4-6 grades in primary school and all students in middle school. Averagely, 10 students got 1 book. The distributing process got the supports of education departments. With reference to Teachers Guidebook for Preventing Common Infectious Diseases and Responding to Public Health Emergencies, Ministry of Education Compiled teachers guidebook. This manual has been distributed to each province of whole country.

Education sector thinks that the guidelines for teachers and students would help schools carry out health educations on infectious diseases prevention further. School masters and teachers are glad to have this kind of materials. They thought the contents of these two guidelines are comprehensive, simple and easy to understand which are fit for teachers and students. The guidelines have had their effects. Schools have paid more attention to infectious diseases and acute poisoning prevention. Now they can report the incidents of infectious diseases and poisoning as soon as possible. They carry out various activities by using the guidelines, such as class meeting, discussion, leaflets, broadcasting, designing webpage, writing diary and holding competitions, etc. They suggest as following: 1) to add reporting to education bureau in The flow chart of detecting and reporting infectious diseases happened in school to strengthen the cooperation of education department and health department; 2) education department should provide training for school masters, doctors and health workers with The flow chart of detecting and reporting infectious diseases happened in school as important contents; 3) to print more manuals to cover all schools of project provinces and extent to other provinces.

All 20 students who attended the focus group interview think that the students guideline with pictures is very good. They could understand the content easily. They think that it should be edited into various types so that more persons could get the information.

They think the guideline has some disadvantages and need to be improved, as following: 1) the paper is glistening which could make the pictures blurry that difficult to look. The surface of the paper is too smooth to write on it; 2) the guideline has no catalogue and it is difficult to find contents needed; 3) the design of cover is not attractive; 4) the points of each page are not striking; 5) the content of the guideline is not easy to remember; 6) there is few examples in reality; 7) the pictures of bacteria on the page 2 make readers uncomfortable, the pictures on the page 3 are too exaggerated, the pictures of cup and person on the page 4 are not as reality, the pictures on the page 11 are delusive that then couldn't understand, the pictures on the 17 page should change into other articles or animals, the meaning of 'each work' on page 19 is not clear; 8) there are some uncommon words which should add Pin Yin to make junior students understand. They suggest using these manuals to carry out all kinds of propagandas, such as class meetings, discussions, competitions, etc.

7.9.2 Provincial training workshop on health education of infectious diseases and public health emergencies

A provincial training workshop on health education of infectious diseases and public health emergencies was held in Sept., 2005 in Beijing. 13 representatives of each province attended the workshop including 10 infectious diseases prevention professionals and 3 health educators (Qinghai and Xinjiang).

Representatives consider that participatory teaching approach and the trainers are very good. The content of the workshop is necessary which could guide them in carrying out health educations in the future. Their abilities of making health education plan, developing health education materials, carrying out health education campaigns and communicating with mass medias are enhanced. They make draft frame work of the health education plan on responding infectious diseases and public health emergencies by group-discussions. After the workshop, each province made the plan in details. For example, Qinghai province has made 'Qinghai province information communication plan of public health emergencies', 'health education plan

of plague prevention' and 'health education plan of avian flu prevention'. They have established cooperative relationship with local media for conducting mass propagandas. They have used modern communication approaches, such as informal discussions and lectures, which the target groups would accept for health educations. Health educations has involved in the infectious diseases prevention not only in everydays work but also in emergencies as an important approach to respond and control the epidemic situation.

They wish that more and more educators would attend the training to help more in future work.

Suggestions are as following: there should be more health workers attending health education training workshop to ensure health education work sustainable.

7.9.3 Health education to the public

Health education programs are involved in the training curriculum for health workers at county level in the provinces of Ningxia, Qinghai and Xinjiang. Health workers have learned how to carry out a health education activity by using local resources.

But health education programs still can not play their roles enough. The reasons are as following: 1) health workers dodnt recognize the importance of health education and is lack of skills carrying health education campaigns; 2) without enough health educators who can attend infectious diseases prevention campaigns; 3) distribution of education materials dodnt assort the intervention and communication activities.

Recommendation are as following: 1) to strengthen the communication and cooperation between health education departments and CDCs and involve health education work into infectious diseases prevention and control; 2) to provide more person, material resources and finance to support health education for infectious diseases prevention; 3) to combine with programs to develop, produce and use health education materials. If communication activities are connected to distribution of manuals, the effects of these manuals would be better.

8. Acknowledgements

During the external evaluation, MOH-FLO leaders, central coordinator, program officers of central and provincial levels, training workshop trainees, health workers of

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Appendix

Appendix V. 1	Registration Form for the Members of ADB project Focus Group Investigation
Appendix V. 2	Person and Focus Group Investigation Syllabus
Appendix V. 3	Questionnaire for Trainees of ADB TA Provincial Field Epidemiological Training

CHAPTER VI POLICY RECOMMENDATIONS

As mentioned before, ADB worked closely and effectively with the PRC's health departments at all levels under the TA. After performing a RA and through dialogue with key informants, the TA identified several major challenges inhibiting disease control and prevention, especially in the poor, western region. The TA attempted to solve these problems through coordinated efforts involving multiple partners, while at the same time continuing to expand the interventions that had already been carried out. Both the RA and the intervention trials had identified that national policy improvement was a key issue, and it was agreed that further inputs were necessary for strengthening disease control and prevention, particularly in poor regions.

1. Background

After the outbreak of SARS in 2003, it became blindingly apparent that the country's system of disease control and prevention had deteriorated. In response, the Central Committee and State Council announced a three-year plan to rebuild the disease control and prevention system in order to control and prevent major diseases, including HIV/AIDS, tuberculosis, and schistosomiasis, which continue pose serious threats to public health.

Above all, it was agreed that infectious disease control and prevention is the primary public health issue of the future. Several major diseases that pose serious threats to public health have not been effectively controlled, including: hepatitis B, which still affects 120 million persons, nationwide; pulmonary tuberculosis, which affects at least 5 million Chinese, and of which one third cases have been confirmed to be highly infectious smear-positive; schistosomiasis persists, snail habitats are increasing, and the number of imported cases has been increasing in regions where the disease had once been eliminated, including Shanghai, Guangzhou and Zhejiang; and HIV/AIDS control and prevention has become an increasing burden, with 650,000 people currently living with HIV/AIDS. Moreover some diseases are re-e-

merging, including sexually transmitted diseases; some new diseases have been introduced and are becoming increasingly problematic, such as dengue fever; and new infectious diseases, such as avian influenza, are posing increasing threats. Preventable non-infectious diseases have also not been adequately controlled. For example, iodine deficiency disorders, which affect roughly 60 million people in 7 provinces. In addition, over 300 million people live with poor-quality drinking water and the coverage of ecological toilets has not yet reached 30%.

Secondly, the western regions are also those regions where infectious disease, endemic disease and parasitic disease co-exist. In addition, the pattern of disease in rural areas is going through a transition; infectious diseases are no longer the sole concern for disease control and chronic non-infectious diseases and injury are increasing concurrent with changes in life style and diet, rural industrialization, and town and township development. However, the capacity of rural health services pales in comparison with urban areas, and receive less than one-quarter of the funding of urban services. These factors, with the unbalanced disease control and prevention status across regions and urban-rural areas, make it difficult for rural health services to monitor epidemiological trends and burdens of complex diseases.

Thirdly, for a long time there has been no persistent or effective mechanism of input to disease control agencies, especially at grass roots levels, such as county level CDCs, particularly in poor and remote rural areas in PRC's western and central regions. In these regions, county CDCs and township hospitals are the front line for the practical response to an outbreak of a infectious disease. However, they are often unable to rapidly contain the outbreak as a result of inadequate infectious disease reporting, isolation and practical response, due to long term neglect and poor capacity.

As described in the second section of this chapter, China's disease control and prevention system also faces new challenges. These include a huge mobile population, an ageing population and changing disease patterns (e. g. the increasing burden of non-infectious disease). These issues, identified through dialogue with targeted local partners in the TA project (although they are beyond the scope of the project) are the subject of a request to the PRC to pay more attention them in future

work.

In recent years, and with persistent efforts of governments at all levels, there has been great progress in building the disease control and prevention system. However huge problems and challenges still exist. In light of this, this chapter will provide recommendations on the establishment of agencies and mechanisms related to disease control and prevention, as well as on enhancement of capacities for infectious disease control and prevention.

2. Challenges Facing Disease Prevention and Control

2.1 An Unsound Mechanism for Long Term and Overall Inputs Restrains Disease Control and Prevention

2.1.1 Unshaped concept of government administration of disease control and prevention. After SARS, all levels of governments have realized the significance of disease control and prevention, identified related policies and security interventions, and strengthened administration processes. It is obvious that the central government has paid much more attention to disease control and prevention, and has given stronger support to it than ever. However, problems persist, in particular, there is insufficient understanding of the importance of disease control and prevention among few local governments and among part of leadership. They have made only cursory efforts to put the work of disease control and prevention on the government agenda, and pay only slightly more attention to it. In emergency situations, governments react once they have occurred rather than focusing on prevention, and merely keep oral commitments once they passed.

2.1.2 Under the planned economy, thanks to government's strong administrative intervention, the public health agencies could implement some strategies related to public health according to plan, even if without sufficient funds. Whereas after shifting to a market economy, deregulation of the health industry and less fiscal support from the central government has led to degradation of the public health system. Although work conditions for disease control and prevention have stabilized to some extent through approaches such as issuing national bonds, loans and fund raising, long-term operation mechanism, with adequate assurances, has not taken shape.

Most local governments have not been able to ensure payment and welfare for staff nor funds for disease control agencies. Thus, a disproportionate amount of time is spent raising money to run the CDCs, rather than ensuring the implementation of disease control and prevention functions.

2.1.3 In rural areas, disease control and prevention is hindered by several factors, including a shortage of professionals, poor quality services, unstable staff teams, and poorly trained staff, resulting in the false delivery of many practical and effective interventions for disease control and prevention.

2.2 Current Work Conditions of Disease Control Agencies Do Not Meet the Social Requirement

2.2.1 The CDCs have spent several years developing new infrastructure, however this has focused on renovations and/or the construction of new buildings, such that they continue to lack some essential laboratory equipment and none are thoroughly equipped. Those that are better equipped, are perhaps those which were allocated from the central government for the project of "capacity building for disease control agencies at county level" in the 1980s. But most CDCs have just several tens of thousands of yuan to stock their laboratories and thus cannot even meet minimum standards, as described in the *Advisory Guidance on Laboratories Building of CDCs at Provincial, Prefecture and County Level*.

2.2.2 Equipping disease control systems with corresponding software and rapid response capacities against a variety of infectious diseases and emergencies should be prioritized. At present, disease control agencies lack a sound mechanism for responding to emergencies, including an incomplete network for epidemic surveillance and reporting, resulting in insufficient abilities to predict and evaluate disease outbreaks, their development and impact, as well as ineffective prediction and alarm systems. This is further hindered by weaknesses in practical epidemiological investigation and practical emergency response, especially in rapid detection and reporting of patients with infectious diseases.

2.2.3 In some areas, there has been little reform of disease control systems and thus management standards remains poor. Moreover there are weaknesses in techniques and management in localities, unbalanced development across regions and

urban-rural areas which also contribute to challenges in controlling the complex and dynamic nature of a variety of epidemics.

2.2.4 Practical epidemiological investigation is limited by poor technical capabilities among technicians and out-dated laboratory equipment and techniques. Human resource capacity building and related issues will become bottleneck factors in sustainable development and full-functioning of disease control and prevention.

2.2.5 At present, most disease control agencies suffer various staffing issues. For example, staff are weak in administering the dosage in direct observed treatment short course (DOTS) for the control of tuberculosis, early diagnosis, treatment and control of confirmed sexually transmitted diseases and HIV/AIDS patients, and immunization (see the box as below). Most medical staffs in disease control agencies are public health physicians, rather than clinicians, who, according to the regulations of the *Act on Professional Physicians in People's Republic of China*, do not have the right to prescribe pharmaceuticals, and cannot do early diagnosis, treatment and control of patients and suspected patients.

Data

According to the 2004 National Evaluation Report of Expanded Program on Immunization (EPI), in 74 of 273 counties (27%), the full course immunization rate for BCG, DPT, OPV, MV was under 85%; the number of counties in which the immunization rate for single vaccine was under 85% was: 11 counties for BCG, 33 for DPT, 28 for OPV, 37 for MV. The immunization rate for newborn HBV was under 85% in 72 counties and in 12 provinces, and the coverage rate of timely immunization for first dose of HBV was under 60% in 9 provinces. A more serious problem is that in some areas there is no immunization for polio and this has resulted in the spread of VDPV (vaccine-derived poliovirus).

2.3 Broader Problems and Requirements Posed by Economic Transition

Although these problems are considered to be beyond the scope of the TA for strengthening the capacity of infectious disease control and prevention in PRC's western region, evaluations and dialogues conducted during the TA showed that the disease control systems also have to build preparedness capacities corresponding with broader social requirements. For instance, there are three typical cases, as presented in the box as below.

Three Typical Cases

1. PRC is facing a radical change in its epidemic patterns. Previously, China's disease profile was dominated by infectious disease, but now chronic non-communicable diseases are becoming more common. Five types of disease, including cancer, cerebrovascular disease (CVD), heart disease, diseases of the respiratory system, and injury and poisoning, have become major diseases that threaten public health and safety. Nationwide, the number of citizens in both rural and urban areas who died from any of these five conditions, has accounted for over 80% of the total number of citizens. This is attributed to: rapid urbanization and industrialization, and associated unhealthy lifestyles; the task of controlling and preventing neurodegenerative diseases and bodily dysfunction of human has increased; psychological and mental illness has been increasing; newly emerged food-borne diseases, such as Escherichia coli 0157: H7; and over 10,000 new cases of pneumoconiosis are diagnosed each year —current patients total 440,000 —which is associated with the over 50 mines that carry this occupational risk. Hence, it follows that the public health issues posed by environmental pollution, injuries, and aging population need to be solved.

2. Increasing life expectancy and an aging population will lead to an accelerated rise in chronic disease. Urbanization and a growing mobile population challenge the current system and management mechanism of disease control and prevention. The old disease control and prevention system mainly relied on government intervention and public mobilization in the context of a planned economy instead of the services with the client-centered principal and the objective building the harmonious society to improve people health, and was not equipped to respond to the changing disease profile of the nation. Future development of the disease control system should focus on seeking ways to improve the delivery of public services, management, improve work efficiency and effectiveness of staff, and build feasible and sustainable models for the system.

3. The national mobile population has been increasing each year. However there are no management measures to deal with such a highly mobile population which compromises disease control and prevention system. The mobile population has seldom been accounted for by local financial departments, when formulating the budget for disease control and prevention and has never been regarded as one of factors in deployment of health professionals. Accommodating the health needs of the mobile population is an important, emerging issue and a significant weakness in the current system.

3. Key Recommendations for Strategies and Policy

During SARS, many of the problems in the PRC's disease control and emergency response system were exposed. It was agreed by government and health department leadership at all levels, as well as staff in medical units and disease control agencies, that the primary problem was unbalanced handling of priority functions, namely the absence of public services and misplaced disease control. For instance, the emphasis on treatment while neglecting prevention within society; emphasizing paid services whilst neglecting free ones, as well as emphasizing high paid services whilst neglecting low paid ones. These problems also exist in community-based health centers, township hospitals and village clinics.

Suggested strategies for dealing with these problems include: defining the government's primary duty to raise funds to ensure appropriate inputs (this is key to identifying criterion for the amount of inputs) to disease control agencies to ensure sufficient assistance to public services which at present can not be provided at prices that cover their costs; ensure adequate and corresponding payment for disease control staffs (this key to guarantee proper staff allocation and wages); and increase service efficiency through enhancement of management and reform of the mode of inputs (this is key to undertaking reforms in the management system and mechanism). If these measures can be addressed, disease control agencies should be able to begin focusing on providing free public services instead of paid services, therefore shifting the focus back to prevention, back to providing free treatments, and improving low paid services, thus returning balance to priority functions and enabling the delivery of public functions. Based on our observations of the gradual improvement of the operation mechanism for payment of health services and the health insurance system, it should be possible for the CDCs to provide public functions.

3.1 Strengthen Agencies' Capacities, Establish Effective Mechanism for the Smooth Operation

3.1.1 Strengthen governments' administration of disease control and prevention, improve appropriate mechanism of government inputs.

Owning to the non-exclusive quality, the public health services are delivered by nobody voluntarily as a kind of public goods under the context of planned economy, thus the government must take on responsibility for funding the CDCs, as well as or-

ganization, administration and support of their public functions. The emphasis on the concept of public goods from government along does not necessarily result in effective fulfillment of disease control and prevention functions. In fact, it has been the government's long term neglect of public health services in the past 20 years which has resulted in the absence of public services being delivered by disease control agencies. Thus fiscal commitments by local governments are essential for enabling the delivery of public services.

3.1.2 Enhance stability and efficiency in government's fiscal inputs

Governments functions in fund raising should firstly ensuring appropriate and stable inputs, and secondly ensure efficient inputs. Three problems compromise the efficiency of governments to raise funds: (1) inadequate amount of inputs; (2) irregular fiscal inputs; and (3) single mode of fiscal inputs, which is usually lack of the encourage mechanism.

3.1.3 Establish a mechanism for stable and appropriate inputs

A mechanism for stable and long term fiscal inputs should be established in order to obviate the irregular fiscal inputs. For example, the increase of fiscal input to public health should be in synchronism with fiscal expenditures. This mechanism has never been shaped until now.

3.2 Improve the Status of Personnel in Disease Control Agency, Strengthen the Capabilities of Health Staff at Grass Roots for Infectious Disease Control and Prevention

3.2.1 Reform the staffing system, stabilize and attract high quality personnel

With the functions clarified, the personnel requirement plan identified, and enhanced efficiency of the agencies, priority should be given to provide a better working environment for staff within disease control agencies, in order to create an environment which nurtures staff fidelity and attracts high quality personnel.

In view of the current overemphasis on medicine instead of prevention in Chinese society and the fact that the economic and social level of disease control staff is lower than clinical staff (even when not technically qualified), some new strategies

must be introduced, such as competitive salary and welfare mechanism for technicians, in order to ensure that the average payment level of professionals in disease control and prevention agencies are same as those working in medical units at least.

There is also a need to employ systems which demand that staff working in certain positions have adequate qualifications, and staff not possessing the minimum qualifications be prohibited from carrying out work for which they are not qualified. Recruitment should be carried out competitively, and follow admission requirements regarding qualifications and skills. Technically unqualified persons should be forbidden from recruitment into disease control agencies, in order to create a secure environment which attracts high quality personnel. At the same time, it should make arrangements for deployment of those staff that cannot meet the admission qualifications and post requirements.

3.2.2 Strengthen staff training

Particularly for staff working at grass roots levels, it is important to strengthen their practical epidemiological response to infectious disease. It is impractical (and impossible) to pass all knowledge about infectious disease to staff through one round of short term training. However, the targeted short term training is aimed at teach grass roots level staffs to manage practical response to infectious disease in several key aspects, including: early disease diagnosis and reporting; basic practical interventions, e.g. quarantine, protecting high risk people, sampling and collecting basic information, practical disinfection etc; and cooperating with professionals from higher level agencies, in order to plan the management of a infectious disease outbreak.

The TA has developed a series of participatory training programs on communicable control and prevention, which were practical, feasible and effective, especially for staff working at grass roots levels in the western region.

Practical training on epidemiological investigation (PTEI) for key staff from CDCs at provincial and prefecture level has allowed more key staff to be able to manage practical epidemiological investigations and responses to infectious disease, and to

meet the requirements for practical control of infectious diseases at the local level. It is important for the PTEI to adhere to the principles of combining theoretical study and practical methods, and emphasize the translation of theory into practice to enable effect control of infectious disease.

3.3 Enhance Infectious Disease Control in Mobile Populations

In view of the growing mobile population, it is becoming increasingly urgent to call on every sector to pay attention to the issue of infectious disease control among mobile populations. The SARS epidemic, tuberculosis and HIV/AIDS have demonstrated that inefficient inputs and a poor management system, coupled with ignoring infectious disease control and prevention among mobile populations will have an adverse effect on local infectious disease control. Thus there is an urgent need to establish an effective mechanism to respond infectious disease in mobile populations, including an effective mechanism for administration of mobile populations according to their habitant, reasonable and effective inputs, and maintaining close collaboration with disease control agencies in the regions where mobile people originated.

Further health education on infectious disease control and prevention is needed among key groups, to raise their awareness of infectious disease control and prevention, whilst also developing health education strategies for infectious disease and public health emergencies, for the purpose of ensuring their ability to rapidly respond to health education requirements once infectious diseases begin to spread.

To sum up, in order to effectively respond to the spread of infectious diseases and other public health emergencies, there is an urgent need for the establishment of an effective input mechanism and system; a mechanism for the management, cultivation and employment of quality personnel, especially the enhancement of staff capabilities at the grass roots level; and while still regarding the western region as a crucial area for inputs.

APPENDIXES

Appendix I. 1 National Statistics on SARS Pandemic (by 10am, May 1,2003)

Region	Diagnosed SARS cases		Of which Medical workers		Those Discharged from hospital		Deaths		Suspected SARS cases	
	New	Total	New	Total	New	Total	New	Total	New	Total
Beijing	122	1,553	20	288	10	100	7	82	96	1,415
Tianjing	12	61	3	26	0	0	0	3	9	87
Hebei	8	56	0	7	0	0	0	4	30	92
Shaanxi	8	307	1	66	3	25	1	10	20	136
Neimenggu	27	154	4	20	0	2	2	11	25	224
Liaoning	0	1	0	0	0	0	0	0	0	4
Jilin	2	9	0	2	0	0	1	1	2	4
Heilongjiang	0	0	0	0	0	0	0	0	1	3
Shanghai	0	2	0	0	0	0	0	0	6	12
Jiangsu	0	1	0	0	0	0	0	0	2	5
Zhejiang	0	3	0	0	0	0	0	0	0	3
Anhui	0	7	0	0	0	0	0	0	2	4
Fujian	0	3	0	0	1	2	0	0	0	0
Jiangxi	0	0	0	0	0	0	0	0	0	2
Shandong	0	1	0	0	0	0	0	0	0	1
Henan	1	13	0	1	0	0	0	0	2	18
Hubei	0	3	0	1	0	0	0	0	3	16
Hunan	0	6	0	0	0	5	0	1	0	4
Guangdong	7	1,412	0	342	5	1,206	0	51	37	196
Guangxi	0	18	0	0	0	8	0	3	0	2
Chongqing	0	0	0	0	0	0	0	0	0	6
Sichuan	0	12	0	0	0	3	0	2	1	20
Shaanxi	0	8	0	0	0	0	0	0	8	29
Gansu	0	3	0	0	0	0	0	1	0	2
Ningxia	0	5	0	0	0	0	0	1	0	5
Xinjiang	0	0	0	0	0	0	0	0	0	1
Total	187	3,638	28	753	19	1,351	11	170	244	2,291

Appendix I. 2 PRCS Fund for SARS

(Including international organization project offering loan or grant, and national donation initiatives organized and managed by MOH)

No.	Fund source	For the use of	Amount (Yuan)	Note
1	MOF	Cure SARS patients, medical equipment procurement, health staff subsidies, SARS medicine and materials preparation, key technologies research and development	2 billion	
2	MOF	Special SARS fund for national CDC	0.33 billion	
3	MOF	Special SARS fund for ministry-related hospitals in Beijing	55 million	Including: Hospitals under Chinese Academy of Medical Sciences (Fuwai hospital, Peking union medical college hospital, Cancer hospital, Plastic surgery hospital); and Peking University hospitals (Peking University First Hospital; Peking University People's Hospital; Peking University Third Hospital)
4	SDRC	Special fund for strengthening national CDC	2.9 billion	
5	SDRC	For strengthening national CDC (first stage)	0.6 billion	0.6 billion for first phrase, 0.4-0.5 billion for second and third each

No.	Fund source	For the use of	Amount (Yuan)	Note
6	SDRC	Capacity building of public health emergency response	0.8 billion	(Without final confirmation)
7	Communities	SARS donation (fund and materials)	0.12 billion	Of which was a fund of 5 billion
8	Japan s JICA project	SARS disinfection materials	1.2 million USD	Under preparation
9	WHO	Practical instruction by experts on SARS prevention and control	0	Neither western region had been visited, nor plans to visit western region was made
10	WB	SARS emergency project based on loan	13 million USD	First stage (under preparation)
11	ADB	SARS emergency project based on grant	2 million USD	Under preparation
12	Sub-central financial departments	Special fund for SARS prevention and control	0.8 billion	Province and sub-province financial departments

Data source: 1. The 1st-11th info was from MOH s Department of Planning and Finance by telephone (Division of Planning and Pricing; Division of Finance and Property; Division of Capital Construction and Equipment), International cooperation department (bilateral division, multi-lateral division), MOH-FLO. Deadline was April 30, 2003.

2. The 12th info was from *People s Daily* April 24, 2003. Deadline was April 22, 2003.

Appendix I. 3 Basic Situation in the Target Provinces

The four provinces, Yunnan, Qinghai, Ningxia and Xinjiang, located in PRC's western region. It is a place featured not only by harsh natural environment which brought frequent calamities, but also undeveloped economy and poor health condition, thus maintaining least capabilities in response to severe epidemic. Yunnan and Xinjiang are border provinces of PRC, bordering with more than ten countries against quite a long territorial line. For a total of 72 million people in the four target provinces (autonomous region), a variety of ethnic minority population occupies a proportion of 42%, including Uighur, Hui, Tibetan, Tu, Mongolian, Salar. For a total of 286 counties in the four target provinces, poor counties at national or provincial level account for 50%, whilst poor people accounting 46% of the total, with the fact that farmer's annual income is less that 2,000 Yuan (RMB) per capital. Details could be seen in Table 1.

Table 1 Basic situation in the four target provinces

	Yunnan	Qinghai	Ningxia	Xinjiang	Total
Area (square km)	39.4	72.1	5.2	160	276.7
Population (10 thousand)	4,240	528	563	1,876	7,207
Minority proportion (%)	33	55	35	61	42
Poor population					
Amount (10 thousand)	2,270	197	304	524	3,295
Proportion (%)	54	37	54	28	46
Number of Counties of which:	129	43	23	99	294
National level	73	15	8	27	123
Provincial level	5	10	3	3	21
Farmer's annual income per capital (Yuan RMB)	1,533	1,300	1,078	1,861	<2,000

There were 280 thousand health professionals in the four target provinces. Except for provincial capital cities and some major cities, in the vast agricultural and pasturing areas, it fell extremely want of health human resources and advanced technologies (see table 2). As a result of a lack of sufficient fund for system building of disease control, there still remained backward equipments, weak technical sup-

port, least training and knowledge renew among doctors and technical staffs.

Table 2 Health resources in five target provinces

	Yunnan	Qinghai	Ningxia	Xinjiang	Total
Total Health professionals (person)	133,155	22,000	27,924	97,476	280,555
Health professionals in agricultural and pasturing areas (per 1000 citizens)	2.53	1.90	3.97	2.47	1.90～3.97
Number of CDCs (unit)	147	59	27	207	440
Number of Beds (per 1000 citizens)	1.60	2.4	2.43	3.51	1.60～3.51

On April 29, 2003, for the four target provinces, imported SARS cases, suspected or diagnosed, had been found in Ningxia and Xinjiang provinces, of which, 5 SARS patients (including 1 death) and 3 suspected cases was reported in Ningxia province, whilst 1 suspected case was reported on April 29 when 2 other cases were placed on observation status in Xinjiang province. In Yunnan province, while 27 cases, which were served as the objects of medical study, were placed in quarantine and provided with treatment and observation, no one SARS patients was confirmed by diagnosis and no case suspected; nor that in Qinghai province. Hence the four target provinces respectively were either in the situation with no imported case or at the early stage of imported SARS.

Due to a large number of exported and imported labors, and quite a portion of those people that worked and studied in SARS areas return back, a potential threat of SARS epidemic remained in the four provinces. Ningxia province, because of bordering Inner Mongdia and Beijing (severe epidemic area), and convenient traffic conditions, it faced with tough challenge in SARS prevention and control. For Xinjiang and Qinghai provinces, which were featured by poor basic sanitation and medical condition, backward equipment, and low population density in the vast areas, once SARS spreads, these areas will be severely jeopardized. Yunnan, which had been a famous travel destination, since no SARS case was reported to date there, in which still remained increasing number of the tourist to Yunnan. As a re-

sult, high population density (the majority of people lived around dam areas which accounted 6% of the total area of the province) has been kept in some areas, hence making epidemic, once it occurs, easy to spread, bringing high risk of local epidemic.

In order to effectively block the imported contagious SARS, every provincial health bureau and disease control agencies had taken on SARS prevention and control under the lead of the local government. Provincial SARS leading groups were respectively founded, followed by drafting relevant policies, management provisions, and emergency plans, as well as organizing provincial surveillance network, developing targeted training. For Yunnan province, the provincial government had urgently raised a special fund of 30 million (Yuan RMB) for SARS prevention and control. For Xinjiang province, 25 designated hospitals for SARS cases and 102 quarantine stations had been founded.

All the four target provinces featured by poor economy, weak foundation of disease prevention and control, whilst a large number of ethnic minority population and poor residents, and insufficient materials in response to SARS. Once SARS spreads through the broad poor rural areas, it would face with a great difficulty in SARS treatment and control, hence would lead to a consequence that could not bear to imagine. To date the crucial task should be focused on enhancing staff training, controlling carriers of contagious disease, block possible transmission routes, and cure SARS patients, which no doubt needed assistance and support from all round efforts, including international organizations.

Appendix I. 4 PRCs Strategic Framework of SARS Response and Budget

(First draft, by MOH-FLO, simply for discussion) May 1st, 2003

	Content description	Fund needed and sources (10 thousand dollars)			Priority *
		Government budget	WB loan	International grant	
Objectives	1. Immediate objective: quickly control the spread of epidemic, lessen the number of SARS patients, enhance cure rate, and reduce mortality. 2. Medium objective: improve SARS emergency response, and comprehensively strengthen capabilities for surveillance, prevention and control. 3. Long objective: strengthen and reform public health system, advance coordinated research capacity, solidify fruits of SRAS prevention and control.				
Components	1. Establish mechanism for leading, cooperation and administration			100	
	2. Strengthen epidemiological surveillance and reporting system		4,300	240	
	3. Control virus carriers.		9,120	4,380	
	4. Block transmission routes.		750	300	
	5. Protect the public.		1,300	700	
	6. International cooperative research on pathogenesis, epidemiology, medicine, and immunology.		220	50	
	Total Budget:		15,690	5,770	

	Content description	Fund needed and sources (10 thousand dollars)			Priority *
		Government budget	WB loan	International grant	
Initiatives	1. Establish mechanism for lead, cooperation and administration				
	(1) ep up all level leading centers (classified into 3 types of events, under two level, central and provincial, administration)	√			1
	(2) Sep up offices taken on developing channels, coordinating systems and maintaining operations	√			1
	(3) Organize and assign supervisal and technical teams as needed	√		80	1
	(4) Public inquiry and information	√			2
	(5) Develop policy, and refine emergency response draft plan	√		20	2
	(6) Print materials	√			3
	(7) Communication and traffic facilities	√			1
	(8) Other logistic support system (medicine, materials storage, and transport)	√			2

	Content description	Fund needed and sources (10 thousand dollars)			Priority *
		Government budget	WB loan	International grant	
	2. Strengthen epidemiological surveillance and reporting system				
	(1) trengthen detection and reporting system, ascertain the certain persons who took responsibility in each unit, compile work manual, and work on the basis of day-to-day report.	√	200		1
	(2) Strengthen SARS surveillance, increase surveillance stations.	√	100		1
	(3) Extend the available public health network to county level, improve digital transmission, communication facilities and software	√	500		2
	(4) Maintain and renew the MOH SARS website and distribute in time to the public	√			2
	(5) Analyze information, submit weekly dynamic analysis report and prediction	√		20	1
	(6) Develop communication and cooperation mechanism with international organization and bilateral partners	√		20	1
	(7) Capacity building for disease control agencies at central, provincial and prefecture level in surveillance, communicable disease prevention and control (civil work, equipment, vehicles)	√	3,000		3
	(8) Human resource development in disease control agencies (training, reform human resource system, enrich professionals)	√	500	200	3

	Content description	Fund needed and sources (10 thousand dollars)			Priority *
		Government budget	WB loan	International grant	
	3. Control virus carriers				
	(1) stablish special fever clinics in all medical units, and centralize the treatment of SARS patients in designated hospitals.	√			1
	(2) Reconstruct, expand hospitals and departments for infectious disease.	√	1,000	100	1
	(3) Establish temporary centers for SARS diagnosis and treatment.	√			1
	(4) Establish quarantine beds or centers for suspected cases for further observation.	√			1
	(5) Health staff training on diagnosis and treatment.	√	100	50	1
	(6) Establish quarantine stations at above prefecture level cities cut by major traffic lines, such as railways, roads, waterway, or with major airports located in.	√			1
	(7) Emergency procurement, provide medical equipment, medicine and consumable materials.	√	4,500	1,500	1
	(8) Provide ambulances.	√	1,000	700	1
	(9) Provide financial assistance to all SARS patients that had no medical insurance for free diagnosis and treatment, to suspected cases for quarantine and observation.	√	2,500	2,000	1

	Content description	Fund needed and sources (10 thousand dollars)			Priority *
		Government budget	WB loan	International grant	
	(10) rack and visit those who were discharged from hospitals, and analyze.			20	3
	(11) Implement the provisions of dealing with the remains of SARS patients and the funeral, monitor the implementation.	√	20	10	2
	4. Block transmission routes				
	(1) ncourage and instruct family disinfection.	√	200	100	1
	(2) Public places, public traffic facilities disinfection.	√	500	200	1
	(3) Mark and disinfect occurred places.	√			1
	(4) Mark and isolate contaminated or half contaminated areas in hospitals.	√			1
	(5) Register and track high contacts.	√	50		1
	(6) Quarantine implemented at airports, stations, docks, ports, borders.	√			1
	(7) Quarantine implemented at and around major epidemic areas.	√			1
	(8) Enhance monitoring and strictly implement provision of medical waste management.	√			1
	(9) Enhance quality control and management of blood for clinical use.	√			2

	Content description	Fund needed and sources (10 thousand dollars)			Priority *
		Government budget	WB loan	International grant	
	5. Protect the public				
	(1) ublic health education: develop, print and disseminate materials on self-protection, propagandize at large self-protection knowledge.	√	200	300	1
	(2) Mobilize the public to relax nearby, decrease the activities of going outdoor, travel and meeting.	√			1
	(3) Enhance latrine clean management, provide water source and facilities for the use of cleaning.	√	100		2
	(4) Enhance quality monitoring and protection of water source.	√			2
	(5) Improve management of public waste.	√			2
	(6) Enhance sanitation management of restaurants and cafetoriums.	√			2
	(7) Open SARS hot line for public inquiries at all level disease control agencies.	√		200	1
	(8) Sep up psychological consultant stations at hospitals and schools, answer questions, reduce scares, and treat psychological illness.	√		200	2
	(9) Strengthen capacity building of health education facilities in rural areas (rebuild operational rooms, equipment, training).	√	1,000		3

	Content description	Fund needed and sources (10 thousand dollars)			Priority *
		Government budget	WB loan	International grant	
	6. International coordinated research on pathogenesis, epidemiology, medicine and immunology				
	(1) athogenesis coordinated research	√	100		1
	(2) Epidemiology coordinated research.	√	100	50	1
	(3) Anti-SARS medicine (including Chinese herb medicine) coordinated research	√			2
	(4) Immunology coordinated research and vaccine development.	√			3
	(5) Exchange information and extend achievements.	√	20		1

* Priority: 1 Most priority; 2 Priority; 3 General priority.

Appendix I. 5 Project s Logical Framework

Aim	Strategies	Objectives	Components	Initiatives	Evaluation indicators
SARS control and prevention in the four western provinces of PRC.	1. Rapid detection and grasp of SARS epidemic; control of virus carrier.	1. Capacity building and improvement of SARS surveillance of provincial CDCs.	A. SARS surveillance	1. Staff training. 2. Needed equipment procurement. 3. Improvement of surveillance system.	1. Frequency of training classes (times). 2. Attendance (persons, person-weeks). 3. Item and number of equipment procured. 4. Progress of improvement of surveillance system. 5. Frequency and utilization of SARS surveillance reports.
	2. Strengthen health management and staff capabilities in response to public health emergency in target localities.	2. Augmented capabilities of public health emergency response	B. Capacity building for emergency response	4. Staff training. 5. Needed equipment procurement. 6. Formulation and improvement of emergency response plan and procedure.	6. Frequency of training classes (times). 7. Attendance (persons, person-weeks). 8. Item and number of equipment procured. 9. Progress of implementation of emergency response plan and procedure. 10. Response for new imported SARS cases and new local SARS cases.

Aim	Strategies	Objectives	Components	Initiatives	Evaluation indicators
	3. Block of possible routes of SARS transmission.	3. Raising of public awareness of SARS and self-protection.	C. Health education	7. Campaign materials on SARS control and prevention compiled, printed, and disseminated. 8. Minority language version of campaign materials translated and disseminated among minority groups. 9. Mass media campaign for SARS and control and prevention. 10. Needed equipment procurement.	11. Set of materials disseminated. 12. Set of education materials disseminated to ethnic minorities. 13. Times of SARS education programs playing via mass media. 14. Item and number of equipment procured. 15. SARS knowledge acquired by the public.

Appendix I. 6 Equipment Procurement List

Unit : US dollar

	Unit price	Yunnan		Qinghai		Ningxia		Xinjiang		ToTal	
		Number	Total	Number	Total	Number	Total	Number	Total	Number	Total
A component :	**Subtotal**		**90,000**		**60,000**		**60,000**		**90,000**		**300,000**
Infrared thermometer	3,600	12	43,200	8	28,800	8	28,800	12	43,200	40	144,000
Light protective dressing	750	24	18,000	16	12,000	16	12,000	24	18,000	80	60,000
General protective dressing	5	240	1,200	160	800	160	800	240	1,200	800	4,000
Pulmonary function test apparatus	6,000	3	18,000	2	12,000	2	12,000	3	18,000	10	60,000
Blood-gas analyzer	800	12	9,600	8	6,400	8	6,400	12	9,600	40	32,000
B component	**Subtotal**		**120,000**		**80,000**		**80,000**		**120,000**		**400,000**
Hand-held nebulizer	5	30	150	20	100	20	100	30	150	100	500
Autoclave sterilizer	1,200	6	7,200	4	4,800	4	4,800	6	7,200	20	24,000
Ultraviolet disinfecting lamp (mobile)	85	30	2,550	20	1,700	20	1,700	30	2,550	100	8,500
6-channel ECG	3600	3	10,800	2	7,200	2	7,200	3	10,800	10	36,000
Bedside X-ray machine	7,500	6	45,000	4	30,000	4	30,000	6	45,000	20	150,000

Unit : US dollar

	Unit price	Yunnan		Qinghai		Ningxia		Xinjiang		Total	
		Number	Total	Number	Total	Number	Total	Number	Total	Number	Total
Oxygen outlet	1,800	6	10,800	4	7,200	4	7,200	6	10,800	20	36,000
Multi-parameter monitor	6,000	3	18,000	2	12,000	2	12,000	3	18,000	10	60,000
Ventilator (non-invasive)	8,500	3	25,500	2	17,000	2	17,000	3	25,500	10	85,000
Component	**Subtotal**		**90,000**		**60,000**		**60,000**		**90,000**		**300,000**
Laptop computer	2,500	6	15,000	4	10,000	4	10,000	6	15,000	20	50,000
Disk	5	300	1,500	200	1,000	200	1,000	300	1,500	1,000	5,000
Printer	300	6	1,800	4	1,200	4	1,200	6	1,800	20	6,000
Copy machine	3,000	9	27,000	6	18,000	6	18,000	9	27,000	30	90,000
Electrograph	300	9	27,000	6	1,800	6	1,800	9	2,700	30	9,000
Imprinter	5000	6	30,000	4	20,000	4	20,000	6	30,000	20	100,000
Multimedia projector	4,000	3	12,000	2	8,000	2	8,000	3	12,000	10	40,000
Total			**300,000**		**200,000**		**200,000**		**300,000**		**1,000,000**

Appendix I. 7 Budget and Allocation

Table 1 Allocation by three components

Components	Training		Equipment		Technical assistance and management		Total	
	Thousand dollars	Proportion (%)	Thousand dollars	Proportion (%)	Thousand dollars	Proportion (%)	Thousand dollars	Proportion (%)
A. Strengthen surveillance system	20	5	30	10	10	5	60	30
B. Strengthen emergency response	20	10	40	25	20	10	80	40
C. Health education	10	10	30	15	20	10	60	30
Total	50	25	100	50	50	25	200	100

Table 2 Allocation by four target provinces

	Training		Equipment		Technical assistance and management		Total	
	Thousand dollars	Proportion (%)	Thousand dollars	Proportion (%)	Thousand dollars	Proportion (%)	Thousand dollars	Proportion (%)
Yunnan	15	25	30	50	15	25	60	30
Qinghai	10	25	20	50	10	25	40	20
Ningxia	10	25	20	50	10	25	40	20
Xinjiang	15	25	30	50	15	25	60	30
Total	50	25	100	50	50	25	200	100

Appendix I. 8 Timetable of Project Implementation

	2003									2004			
	4	5	6	7	8	9	10	11	12	1	2	3	4
1. Formulation of project proposal													
2. ADBs deliberation and approval													
3. Establishment of distinct account													
4. Project set-up													
5. Equipment procurement													
A component													
6. Surveillance criteria developed													
7. Surveillance training													
8. Surveillance retraining													
9. Technical monitoring and evaluation													
B component													
10. Development of SARS emergency response plan													
11. Staff training													
12. Staff retraining													
13. Technical monitoring and evaluation													

	2003									2004			
	4	5	6	7	8	9	10	11	12	1	2	3	4
C component													
14. Campaign materials on SARS control and prevention compiled, printed and disseminated													
15. Mass media campaign for SARS control and prevention													
16. Campaign video on SARS control and prevention played at designated places													
17. Technical monitoring and evaluation													
18. Completion report													

Appendix II. 1

ASIAN DEVELOPMENT BANK **TAR: PRC 37228**

PROPOSED
TECHNICAL ASSISTANCE
TO THE
PEOPLE'S REPUBLIC OF CHINA
FOR
COMBATING SEVERE ACUTE
RESPIRATORY SYNDROME
IN THE WESTERN REGION

May 2003

CURRENCY EQUIVALENTS

(as of 5 May 2003)

Currency Unit - Yuan (CNY)

CNY1.00 = $0.121

$1.00 = CNY8.277

The exchange rate of the yuan is determined under a floating exchange rate system. In this report a rate of $1.00 = CNY8.277 is used.

ABBREVIATIONS

ADB	-	Asian Development Bank
IEC	-	Information, Education, and Communication
MOF	-	Ministry of Finance
MOH	-	Ministry of Health
NGO	-	Non Government Organization
PIU	-	Project Implementation Unit
PRC	-	People's Republic of China
SARS	-	Severe Acute Respiratory Syndrome
SDRC	-	State Development and Reform Commission
TA	-	Technical Assistance
TOR	-	Terms of Reference
WHO	-	World Health Organization

NOTES

(i) The fiscal year (FY) of the Government coincides with the calendar year.

(ii) In this report, "$" refers to US dollars.

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I. INTRODUCTION

The emerging severe acute respiratory syndrome (SARS) epidemic, thought to have emanated from Guangdong Province of the People's Republic of China (PRC) in late 2002, accelerated and spread to other areas of the PRC and then beyond, due to SARS' high infectivity and the lack of knowledge about its epidemiology. Other factors included high population density in initially affected areas, the mobility of large portions of PRC's population, and notably the inadequacy of surveillance and response mechanisms in the face of a dramatic new threat to public health. According to Ministry of Health (MOH) statistics, by 13 May 2003, 25 provinces and province-level autonomous regions (henceforth provinces) had confirmed cases of SARS, with 262 deaths reported nation wide. Of the cumulative total of 5,086 PRC cases (comprising two-thirds of the global total), nearly one fifth were reported health staff among witch.

Working with the World Health Organization (WHO) since February 2003, the PRC has acknowledged the need for greater transparency and responsiveness. The Government has adopted more focused action on address the SARS crisis- mobilizing domestic resources and seeking international assistance-and has pledged to rebuild surveillance mechanisms and the preventive health system in the medium term. The Government is also taking steps to address the threat of a spiraling epidemic in the poorer Western Region, which is least equipped to respond to SARS, particularly in rural areas and among the poor and other vulnerable groups. On 23 April 2003, the Government submitted a request to the Asian Development Bank (ADB) for emergency technical assistance (TA) to combat SARS in at-risk Western Region

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① This is reflected in MOH and interministry directives and public announcements. Two funds (totaling nearly $600 million equivalent) being mobilized by the Ministry of Finance and the State Council focus on ensuring free SARS treatment for rural residents and the urban poor, and bolstering disease cortrol agencies in interior provinces.

② International experience from past epidemics indicates that remote and insular communities may be at heightened risk due to relative immunological isolation.

provinces. Communications between ADB, MOH, and the Ministry of Finance (MOF), including a tripartite video conference, confirmed agreement on the overall objectives, general content, and principles guiding the TA, including the need for (i) urgent processing; (ii) flexibility in design and implementation; (iii) close collaboration with WHO and other organizations, including non-government organizations (NGOs), mobilizing to fight SARS; and (iv) alignment with emerging frameworks for coordinated efforts between the Government and funding agencies. Appendix I gives a project framework for the TA for combating SARS in the Western Region.

II. ISSUES

Overall progress in national health indicators masks the need for concerted Government efforts in the public health sector; supportive reforms and engagement of external funding agencies are also critical. Increased investment and emphasis on equity in allocation are needed to rebuild the public health system, particularly to augment (i) the rural health system, (ii) surveillance and preventive services, and (iii) provision of access to quality primary health care among the poor. Underinvestment—especially in primary health care and prevention and control of infectious diseases—and a shift in responsibilities for funding basic social services to provincial and sub-provincial levels have had marked effects in the poorer Western Region. A simultaneous shift of the cost burdens of health care to households has increasingly strained access to preventive and other basic health services among the

③ Listing in *ADB Business Opportunities* has been waived due to the emergency nature of the assistance provided.

④ The TA is consistent with recommendations of the ADB SARS Response Task Force, which endorsed emergency support to the PRC. Mitigating SARS socioeconomic impacts also promotes ADB priorities for PRC and the region.

⑤ The dismantling of commune-based rural health care at the onset of economic reforms in the late 1970s led to a collapse of previously extensive disease surveillance, mass immunization, and health education mechanisms.

rural poor and migrant workers, who are not covered by urban social insurance mechanisms. Fee imposition has notably suppressed demand for preventive services (e.g., immunizations), while a bias toward curative treatment (reflecting both public investment and implicit incentives facing providers) led to declines in fiscal and human resources devoted to disease surveillance.

Marked weaknesses in the public health system in the Western Region, on top of overall lower levels of development, underscore the need for rapid action to prevent a full-blown SARS epidemic. This is recognized by the Government, which has already established the Leading Group on SARS (chaired by the Vice-Premier, concurrently the Minister of Health), and the international community. Several bilateral and multilateral agencies are responding to requests for assistance, with the United Nations Development Programme (backed by WHO technical expertise) now acting as focal point. At the same time, a consensus is emerging on the need to coordinate immediate efforts aimed at containing SARS and to ensure that these feed into (i) strengthening more general epidemic surveillance and emergency response capacities in the near term, as a national and global public good; and (ii) more systematic, sustained action to address underlying factors, such as gaps in the public health system and governance issues.

III. THE PROPOSED TECHNICAL ASSISTANCE

A. Purpose and Outputs

The TA's goal is to effectively contain SARS in the Western Region, preventing cross-border transmission and developing capacity for rapid epidemic detection and

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⑥ The Second National Health Services Survey of 1998 revealed substantial declines in population coverage under social insurance schemes, while ADB research notes a that "health services in the PRC have a strong and increasing urban bias." (ADB. 2002. *The 2020 Project: Policy Support in the People's Republic of China*. Manila)

⑦ The draft National SARS Control Strategy highlights the Western Region, the rural poor, and migrant workers.

⑧ A forum on 2 May 2003 confirmed the need for timely and flexible action by ADB, and designated the World Bank as the focal point for medium-long term action. Appendix 2 outlines external agency responses as of 15 May 2003.

response.

Toward this goal, the TA seeks to help contain the outbreak of SARS in the target provinces by strengthening local capacities for SARS prevention, surveillance, management, and mitigation, with a particular emphasis on quick action to protect front-line medical workers, the poor, and other at-risk groups. This will be accomplished within a framework of close collaboration with other domestic and international partners. Lessons collected will be shared widely, to contribute to dialogue on measures to address public health system challenges, and present new models.

The TA will build capacities of provincial and local governments and health units to plan and implement comprehensive programs to combat SARS, and will provide urgently needed equipment and supplies, focusing on identification and prevention efforts. In addition to training for front-line health staff (vital to containing SARS), information, education, and communication (IEC) campaigns will raise public awareness of SARS and key prevention measures. Support will be linked to efforts combining relevant ministries, NGOs, community groups, the private sector, and international organizations, and will be provided through services and related facilities required to implement the TA and achieve capacity building objectives. The equipment and supplies to be funded are (i) part of an integrated package for capacity strengthening; (ii) required for implementing the expertise transferred via consulting services and training for (a) epidemic surveillance systems and analysis; (b) screening, protection, and quarantining; and (c) IEC; and (iii) protection for health staff involved in SARS diagnosis and treatment.

The Government has identified Ningxia, Qinghai, Xinjiang, and Yunnan provinces for direct assistance under the TA, based on population characteristics including poverty and inclusion of minority groups, local health resources, patterns in current and expected SARS prevalence, and coverage under other international assistance. Xinjiang and Yunnan are doubly critical as economic and transport corridors linking the PRC to Central Asia and Mekong regions. Visibly effective SARS control programs are critical to keeping borders open and secure from SARS transmission.

⑨ These provinces have a total population of roughly 72 million people.

The TA is guided by the principles of timeliness and effectiveness in response. Flexibility is incorporated in the design and implementation arrangements in light of substantial uncertainties in the way the SARS epidemic will unfold in the Western Region. The TA will provide 4 broad outputs: (i) sound provincial plans to address SARS; (ii) strengthened epidemiological surveillance systems; (iii) augmented emergency response capabilities; and (iv) increased public awareness of SARS and self-protection measures through effective, multimode information and health education delivery mechanisms.

B. Methodology and Key Activities

Assessment and Planning. In light of the difficulty of diagnosing SARS and the resource constraints plaguing local health systems in the Western Region, current statistics may underreport the seriousness of the SARS epidemic in these provinces. Moreover, SARS transmission dynamics are not well understood, particularly for cases now emerging in rural areas. Dialogue with WHO and other relevant organizations, augmented by focused field evaluations if needed, will be important to assess current conditions and likely rural transmission dynamics. The TA will assist target provincial governments to assess (i) the overall readiness of provincial and sub-provincial health systems to respond to SARS, identifying key shortfalls; (ii) resource availability, including human resources, equipment (e.g., for diagnosis, transport, and waste management), and basic supplies; and (iii) provincial capacity to implement a comprehensive plan, ranging from surveillance to IEC. These will support establishment of sound plans for combating SARS in each province that (i) build on strategy elements already in place; (ii) are formulated in alignment with both local context and frameworks developed by the Leading Group on SARS, WHO, and other relevant bodies; and (iii) support periodic monitoring to facilitate adjustments in response to changes in the SARS situation, and to capture lessons that may be used to strengthen epidemic response in other provinces.

Epidemiological Surveillance. The TA will work with provincial health bureaus and disease control agencies, with technical support from MOH, WHO, and other national and international agencies, to enhance epidemiological surveillance systems in the target provinces. Based on assessed capacities and constraints (e.g., in system coverage and data quality, equipment, training, and operational budg-

ets), the TA will help (i) develop a system improvement framework for affecting needed changes, (ii) identify and procure urgently needed equipment; (iii) develop and provide targeted training, focusing on disease control staff at provincial, prefecture, and county levels, as well as on-site and sentinel staff responsible for epidemiological reporting. While addressing the immediate threat of SARS, the framework will provide the basis for a comprehensive surveillance system to address future threats.

Emergency Response Systems. In parallel with the development of provincial plans for addressing SARS, the TA will assist in compiling effective, comprehensive emergency response plans covering (i) coordination in key areas requiring intragovernment reaction (e.g., borders as a key control point for epidemics); (ii) mechanisms for immediate detection and alert, and coordination between emergency response staff, local clinics, and hospitals; (iii) emergency medical care and triage, including medical transport and quarantine procedures; (iv) hospital based medical care and patient management (isolation, disinfection, diagnosis, treatment, and reporting), (v) exposure management, including protection for health personnel at all levels; (vi) infection control precautions for households, the workplace, and hospitals; (vii) safety in specimen collection, handling, and final processing; and (viii) overall system management, coordination, and supervision capacity.

The TA will draw on local human resources, WHO, other international organizations, local and international NGOs, local medical universities, and training institutions to develop and provide training courses to meet requirements of the emergency response system, particularly for front-line health staff. Capacity building will prioritize managers and staff at hospitals and other institutions designated for SARS treatment and response. Early training efforts will also cover other key groups, including local government officials responsible for plan implementation. Modes of classroom and on-the-job training will be chosen to flexibly meet needs, with tailored materials and mechanisms (e.g., to disseminate key safe practices to workers charged with disinfection of public places). Based on needs assessment and dialogue with other national and international agencies, the TA will also provide nee-

ded equipment and personnel protection supplies[瑠]. Impact analysis will also help to ensure new methods are put into practice.

Information, Education, and Communication. The TA will assist target provinces in formulating and implementing IEC strategies to effectively disseminate key information such as (i) SARS symptoms, characteristics, and risk factors; (ii) SARS prevention for individuals, households, and institutions (e.g., schools and workplaces); (iii) existing control mechanisms and available health services; (iv) public rights to cost-free treatment[瑠]; (v) social responsibility; and (vi) advice for people who may have been exposed (including by family members). These will be linked to national-level initiatives, but will also build on local efforts, in order to address province-specific needs. Multiple delivery modes for IEC will include local newspapers and other printed material, television, and radio, and will seek to mobilize existing social institutions (e.g., village committees, schools, etc.). Action plans will include targeted efforts for reaching high-risk groups and the hard-to-reach (e.g., ethnic minorities). The TA will assist in materials development, training, social mobilization, provision of key equipment, and IEC implementation.

C. Cost and Financing

The total cost of the TA is estimated at $3.0 million equivalent. ADB will contribute $2.0 million, financed on a grant basis by ADB's TA funding program, and the Government will contribute roughly $1.0 million equivalent (Appendix III). As part of an integrated support package, ADB will finance an estimated $600,000 in urgently required equipment and supplies.

D. Implementation Arrangements

The Executing Agency will be the Foreign Loan Office of MOH. Joint MOH-MOF guidance will ensure consistency and complementarity between the TA and other domestic and foreign-assisted initiatives. A central project implementation unit (PIU) will compile a profile of SARS burdens and readiness in the four western

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瑠 This may include protective clothing and related supplies and diagnosis and treatment equipment for designated hospitals, such as portable mobile x-ray machines (for safe deployment in SARS wards) and respirators.

瑠 These rights are laid down in a MOF-MOH joint declaration, issued on 30 April 2003.

provinces, and will propose to ADB (i) an emergency package of urgently needed equipment and materials, based on recommendations from WHO[瑏] and the State Development and Reform Commission; and (ii) allocation of resources and materials across provinces. Provincial PIUs will report to the central PIU and be set up within health bureaus of the selected provinces to (i) oversee day-to-day implementation; (ii) ensure coordination with provincial-level bureaus, offices, and other relevant organizations affected by or addressing SARS locally; and (iii) facilitate sharing of information and lessons learned within and among the provinces.

Given key uncertainties in the evolution of SARS in the Western Region and in national and external resource mobilization, implementation must be flexible, with timely inputs tailored to periodically assessed needs. Expertise, equipment, and supplies will be provided within the framework of government and external responses, balancing (i) efficiency; (ii) responsiveness to province-specific needs; (iii) strategic consistency (e.g., between provincial and national action plans); and (iv) inter-partner information sharing, capacity for quick concerted action, and optimal use of very limited human resources deployable to SARS responses in the PRC.

TA implementation arrangements will provide flexibility to allow adjustment in the terms of reference (TOR) of consultants, duration, and schedule of expert inputs. In dialogue with MOH, ADB will recruit one domestic consultant as TA coordinator for all target provinces, with auxiliary international and/or domestic consultants selected to meet identified needs and in-province capacities[瑐]. Consultants will be engaged as individuals, in accordance with ADB's *Guidelines on the Use of Consultants* and other arrangements satisfactory to ADB for the engagement of domestic consultants. In dialogue with MOH, ADB may consider direct selection of qualified domestic and/or international organizations, local institutions, and/or short-term resource persons, where justified by efficacy, efficiency, and/or urgency in completing activities such as training and development and dissemination of targeted

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瑏 WHO has drafted a list of emergency responses for SARS in the PRC.

瑐 Indicative TOR for expert inputs appear in Appendix IV. Specific qualifications, TOR, and criteria for assessing auxiliary consultant services (estimated to total $250,000 equivalent) will be determined in concert with WHO.

IEC materials.

Flexible procurement arrangements are needed to allow timely response to urgent and evolving needs. Otherwise agreed by ADB, the central PIU will conduct all procurement in accordance with ADB's *Guidelines for Procurement*. To expedite delivery, direct purchase may be used to procure the agreed emergency package. The TA coordinator will assist the central PIU in compiling subsequent proposals for equipment and consumable supplies integral to the TA's comprehensive support program. Procurement between $100,000 and $500,000 will use international shopping with an abbreviated bidding period; procurement valued below $100,000 will employ direct purchase. Indicative procurement categories are shown in Appendix 4. To ensure timely provision of goods and services, an advance payment facility will be established for each province (under distinct bank accounts), in accordance with ADB's *Guidelines for Disbursement of Technical Assistance Grants*, and subject to terms laid out in the letter establishing the facility.

The TA will be implemented from May 2003 to May 2004. In light of the unpredictable evolution of the SARS epidemic, frequent reviews (including a midterm review) will carefully assess implementation arrangements and approaches, with appropriate adjustments instituted.

IV. THE PRESIDENT'S RECOMMENDATION

The President recommends that the Board approve the provision of technical assistance not exceeding the equivalent of $2,000,000 on a grant basis to the Government of the People's Republic of China for Combating Severe Acute Respiratory Syndrome in the Western Region.

Appendix 1 TECHNICAL ASSISTANCE FRAMEWORK

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
Goal severe acute respiratory syndrome (SARS) effectively contained in Western Region and cross-border transmission prevented, feeding into maintained capacity for rapid epidemic detection and response.	In-region infection rates sharply down from peak levels, and no crossborder transmission.	Ministry of Health (MOH) statistics by-province. World Health Organization (WHO) statistics and dialogue.	
Purpose SARS outbreaks in target provinces preempted, contained, and reversed, with strengthened local capacities to prevent, diagnose, manage, and mitigate the SARS epidemic front-line medical workers, the poor, and other at-risk groups protected by focus on	Technical assistance (TA) contributes to common Government-funding agency framework, and shows progress on targets to be jointly agreed. In-region infection rates leveled off or down from peak levels (after initial rise, partly reflecting better reporting). Health staff protected (currently 20% of recorded	MOH statistics by province (currently include share of health staff cases), and improved information collection and sharing. WHO statistics and information-sharing and dialogue among funding agencies. Consultant field visits and reports.	Assumes a critical early launch of TA activities; timely, flexible implementation; and maintained collaboration with funders, MOH, and other agencies. Risk of external mitigating factors, virus mutation, etc.

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
quick action comprehensive capacities built within a framework of close collaboration with partners , and lessons collected and shared widely.	SARS cases in the Peoples Republic of China) . Effective interagency coordination observed. Lessons disseminated via various modes.		
Outputs: 1. Sound provincial plans to address SARS. 2. Strengthened epidemiological surveillance systems. 3. Augmented emergency response capabilities . 4. Increased public awareness of SARS and self-protection measures .	Workable plans drafted and implemented. Circulation of up-to-date data, reflected in publicly observed actions. Observed coordinated action spanning agencies. Targeted information, education, and communication (IEC) campaigns, first focusing on key groups at risk.	Information compilation by central project implementation unit (PIU) . Consultant field visits and reports.	Assumes building blocks in health and related sectors; transparency. Risk loss of government buy-in over time or breakdown in interagency collaboration and coordination with national-level directions.

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
Activities: **1. Assessment and Planning** a. Rapid assessment of SARS situation, local needs and capacities. b. Expert advice. c. Dialogue with various government and other key stakeholders, creating comprehensive and coordinated plans. **2. Epidemiological Surveillance** a. Expert advice guides action plan formulation. b. Provide needed equipment and implement system changes. c. Targeted training, with materials developed. **3. Emergency Response Systems** a. Expert advice guides strategy formulation. b. Capacity building, with follow-up assessment.	Province overview and selection by late May 2003. Early-phase provincial needs assessment and draft plans by 15 June 2003. System planning starts in June 2003; first workshop (key provincial staff) by end of July 2003; Cascade training to key staff in prefectures and counties in August 2003, with phase-2 training started; core system online by October 2003. Same timetable. First wave of IEC with new materials disseminated by June 2003.	Information compilation by central PIU. Consultant field visits and reports. Draft plans reviewed by the Asian Development Bank (ADB). Training impact assessments. MOH reports, including on information flows. Consultant field visits. Training impact assessments. MOH reports, including on links between detection and reaction. Consultant field visits. Public visibility. Consultant field visits. Feedback from community groups.	Assumes building blocks in health and related sectors; local governments open, and committed to changes and action. Risk loss of buy-in over time or breakdown in inter-agency collaboration and coordination across subprovincial levels.

Design Summary	Performance Indicators/Targets	Monitoring Mechanisms	Assumptions and Risks
c. Intragovernment coordination mechanisms refined and formalized. d. Needed equipment. **4. IEC** a. Expert advice guides development of targeted IEC strategies covering multiple key groups. b. Roll-out of enhanced public information and health education for SARS, with follow-up assessment. c. Refinements as needed.			

Note: Final design, implementation mechanisms, and targets to be refined based on provincial assessments and dialogue with government and international agencies, in the interest of effective collaboration and complementarity.

Appendix 2 RESPONSES OF FUNDING AGENCIES TO SEVERE ACUTE RESPIRATORY SYNDROME (SARS)

(as of 15 May 2003)

Asian Development Bank (ADB)	The proposed technical assistance (TA) responds to a proposal submitted by Ministry of Finance (MOF) and Ministry of Health (MOH). The TA fits within the regional Action Plan to Address the outbreak of Severe Acute Respiratory Syndrome (SARS) in Asia and the Pacific and an ADB-WHO memorandum of understanding (being prepared). Implementation will seek complementarity and direct collaboration with donors, nongovernment organizations, etc. ADB and the Boao Forum for Asia co-sponsored a special forum on SARS and the regional economy (Beijing, 13-14 May 2003). ADB's resident mission in the PRC will be proactive in coordinating external funding agencies, and will facilitate linkages of the TA to short-term and longer term initiatives, and with World Health Organization (WHO) technical expertise in the People's Republic of China (PRC).
World Bank	Currently discussing an emergency program based in part on elements that are covered under two on-going health projects that deal with infectious diseases. The World Bank has stressed to MOH and MOF that, rather than dealing with funding agencies individually, they should define a broader program, possibly in phases, under which all agencies wanting to assist could select elements, ensuring consistency. The World Bank will serve as focal point of a coordinated response to longer term issues, and is now working with MOH and WHO on a broad program outline. To meet immediate needs, the World Bank plans to reallocate $5 million to $15 million from its two ongoing health projects, which have implementing units in place and work in several SARS-affected provinces. The World Bank will also assist Beijing and Guangdong, and hopes to complete reallocation in 1-2 weeks. The World Bank will also restructure several other projects to release more funding ($5 million to 15 million) which may take about 3-4 weeks, and could include other affected provinces. Finally, the World Bank is at a preliminary stage in assessing the need and timing for a new operation or supplemental loan.

United Nations Development Programme (UNDP)	Received requests from Beijing Municipality for technical support to handle communications and for the Leading Group on SARS, which may ask for assistance to evaluate needs in rural areas and particular provinces. Fully supports efforts at a coordinated response, and will serve as focal point for short-term emergency assistance (with WHO); hosted two meetings of an extended United Nations Disaster Management Team to brief the funding community.
World Health Organization (WHO)	Providing broad technical support and advice on SARS to the PRC (and other member states). Building Government s technical capacity to deal with SARS, covering epidemiology, surveillance, contact tracing, hospital infection control, treatment, travel advice, laboratory training, research, assessment of SARS country and provinces, and assessment of the economic cost of SARS (with the International Monetary Fund, World Bank, and the ADB), will continue to play an important role in the overall coordination of external technical support and an advisory role in overall United Nations Disaster Management Team and funding agency response to SARS (overall needs, technical equipment, communication, etc.), also providing information to embassies about SARS. Provincial assessment and support teams fielded in Beijing and Guangdong, and in Hebei and Guangxi (with MOH). Additional teams being mobilized for (i) Henan, with UNICEF; (ii) Anhui, likely with Médecins Sans Frontières; and (iii) assisting the PRC s national Center for Disease Control.
Australia and Australian Agency for International Development (AusAID)	Received request from Ministry of Commerce (MOC) on 30 April 2003 for financial support for an unspecified quantity of medical equipment including respirators, respiratory monitors, ambulances, X-ray machines, disposable protection (gowns, gloves, glass, and masks), and pneumatic pumps. This is now being considered in the context of a coordinated response. Provided $774,000 equivalent to the Western Pacific Regional Office of WHO for regional SARS activities (including in the PRC), and will provide $387,000 equivalent in medical equipment to the PRC.

Canada and Canadian International Development Agency (CIDA)	Examining what criteria might be used to respond to a request. Health is not a sector of concentration under CIDA's current country programming framework, but CIDA is willing to support a multi-agency coordinated approach to address medium to long-term issues facing the public health system, also considering the possibility of assistance to the WHO team.
European Union	Willing to consider requests for assistance through its humanitarian program.
Germany	The German Government will make available up to €10 million in grant funds. The first batch of goods is under preparation and expected to arrive in the week of 9 May 2003. Transport (Frankfurt-Beijing) for this delivery is provided free of charge by Lufthansa. The PRC request comprises (i) 140 mobile X-ray machines; (ii) 480 respirators; (iii) 10 blood-gas analyzers; (iv) 120,000 isolation clothes, including 30,000 for repeated use; and (v) 20 air sterilizers. Assessing how much of this can be financed by the grant.
India	Donating funds and/or medical supplies; details not available
Italy	Italian Cooperation has received a general request from MOC for financial support to buy medical equipment, ambulances, masks, gloves, gowns etc. It is reviewing the possibility of a project that includes acquisition of some goods and materials, TA and health education. It is thinking of integrating the TA into its Human Resources development program that is currently being carried out with MOH and with health offices of 12 western provinces. A bilateral grant initially of about €1 million may be allocated in this first phase.

Japan	The Japanese Government has received a request for grant aid from the Ministry of Science and Technology and MOH. The Japanese Government provided medical instruments through JICA on 28 April 2003, valued at approximately $1.8 million equivalent and covering: (i) personal protective equipment for medical use including coveralls, goggles, and masks; (ii) basic laboratory equipment such as portable biohazard box and portable centrifuge; (iii) blood sampling instruments; (iv) specimen storage and shipping materials including infectious substance shipper and bio-freeze; (v) medications such as Ribavirin IV, Tamiful, and Rivavirin capsules; and (iv) miscellaneous items like first aid kits, and digital auxiliary thermometers. Japan will soon dispatch doctors and officials to the Japan-China Friendship Hospital in Beijing, and will donate medical supplies worth Y 1.9 billion.
Republic of Korea	Donating funds and/or medical supplies; details not available
Sweden	Sweden is currently looking into the possibility of augmenting the WHO office in the PRC with additional disease control expertise from Sweden. Has not received any request from the PRC Government on assistance to address the SARS issue, but would be interested in such requests and coordination from the external funding community.
Switzerland	Considering possible contribution, and awaiting PRC clarification of needs by region/province.
UK Department for International Development (DFID)	In principle, DFID will participate in a coordinated response to SARS in support of PRC authorities. Any money to be provided will be a parallel contribution of grant funds. A contribution of $5 million is probable. The key priority now is to get a clearer idea of what the PRC wants and how it might be delivered. Requires WHO involvement.

US and United States Agency for International Development (USAID)	USAID has provided $500,000, to be used by the Red Cross Society of PRC to purchase protective gear and medical products (gowns, masks goggles, thermometers, etc.). The US embassy in Beijing will monitor procurement. The contribution builds on scientific and epidemiological support from US researchers working in the PRC and elsewhere since early March. Source: ADB Resident Mission in the PRC and Social Sectors Division, East and Central Region Department.

Appendix 3 COST ESTIMATES AND FINANCING PLAN ($1,000)

Item	Foreign Exchange	Local Currency	Total Cost
A Asian Development Bank Financing[a]			
1. Consultants (including international and domestic travel)	200.0	100.0	300.0
2. Equipment[b]	450.0	150.0	600.0
3. Capacity Building and Workshops (includes materials development and supplies)	150.0	350.0	500.0
4. Surveys, Assessment, and Monitoring	0.0	150.0	150.0
5. Miscellaneous Administration and Support Costs	0.0	50.0	50.0
6. Contingencies	150.0	250.0	400.0
Subtotal (A)	**950.0**	**1,050.0**	**2,000.0**
B Government Financing			
1. Office Accommodation, Training and Other Venues, and Local Transport	0.0	60.0	60.0
2. Remuneration and Per Diem of Counterpart Staff	0.0	40.0	40.0
3. IEC operating budget for dissemination	0.0	50.0	50.0
4. SARS fund mobilization in target provinces[c]	0.0	850.0	850.0
Subtotal (B)	**0.0**	**1,000.0**	**1,000.0**
Total	**950.0**	**2,050.0**	**3,000.0**

IEC = information, education, and communication; SARS = severe acute respiratory syndrome

[a] Financed by the ADB TA funding program.

[b] Emergency package and other equipment and supplies integrally linked to comprehensive TA support (Appendix 4).

[c] Includes provision for diagnosis and treatment for the poor, operating budget for broadcast-based campaigns, etc.

Source: Asian Development Bank estimates.

Appendix 4 OUTLINE TERMS OF REFERENCE FOR CONSULTANTS AND INDICATIVE PROCUREMENT PACKAGING

A. Terms of Reference

The central Government has already begun to mobilize resources to respond to the severe acute respiratory syndrome (SARS), including establishing the Leading Group on SARS, amassing funding (including some targeted toward the poor and interior regions), and dialogue with multiple national and international agencies toward developing an overarching framework. Within the Western Region, individual provinces are, to varying degrees, mobilizing responses, and in some cases, elements of action plans are in place. However, there has not been widespread coordination of provincial efforts with national authorities, across neighboring provinces, or across agencies within provinces.

In coordination with relevant government and international agencies (to ensure consistency with and contribution to national-level strategies), the technical assistance (TA) will provide expert advice, working with provincial authorities in health and other key sectors to establish or augment comprehensive and concrete provincial plans (including estimated costs and clear delineation of responsibilities for implementation and budgeting, coordination mechanisms, etc.). Rapid assessment of needs and capacities at the start of the TA (followed by periodic review and targeted investigation throughout period covered) will be critical to (i) inform provincial action plans; (ii) guide formulation and implementation of surveillance, emergency response, and information, communication, and education (IEC) campaigns components under the TA; and (iii) ensure feed-in to medium-term efforts to strengthen general capacities in these areas within local health and related sectors.

TA Coordinator (domestic consultant; 12 person-months, including an estimated 120 days in-field during multiple visits to the Western Region). Reporting to the central project implementation unit and working closely with the project implementation units (PIUs) in the selected provinces, the coordinator will facilitate implementation of the TA in target provinces, ensuring full communication and dovetailing of efforts across all administrative levels, and with other active national and international agencies. Other specific tasks include the following:

(i) iaise with relevant focal points for other domestically and internationally funded SARS initiatives.

(ii) n close dialogue with the Asian Development Bank (ADB) and consultation with the World Health Organization (WHO), assist the central PIU in assessing needed equipment and supplies that are integrally linked to the TA s comprehensive program (complementing capacity building, personnel protection, and IEC efforts). This will include identification of (a) provincial capacity to determine local needs; (b) sources, costs, and means of procurement; (c) distribution to and within target provinces, and related logistics; and (d) training and other needed investments to ensure apt usage. Follow up to ensure timely delivery, deployment, and appropriate use.

(iii) ssist PIUs in each target province to formulate a comprehensive and concrete action plan, including cost estimates, implementation and coordination across agencies and administrative levels, and budget planning. Consider existing local models (e.g., community-based approaches employed in Beijing) and lessons learned, as relevant to Western Region contexts.

(iv) rovide guidance and assistance to all PIUs related to plan achievement, and facilitate communication and information sharing.

(v) rovide concise updates every two weeks, and quarterly reports to ADB. Updates should report progress and identify challenges and propose resolutions.

The coordinator will also identify to the central PIU and to ADB specific expertise inputs needed, as well as appropriate mechanisms for carrying out key activities under the TA. These recommendations will be formulated in close consultation with WHO (particularly with regard to specific qualifications and terms of reference and other international and domestic organizations as appropriate. Similarly, ADB will seek external validation of consultant inputs via dialogue with WHO and other partners, for quality control and consistency with broader initiatives.

The coordinator will be the team leader and take overall responsibility for any auxiliary consultants or individual resource persons mobilized, and will monitor and liaise with domestic and/or international organizations and local institutions selected to carry out activities. An indicative outline of expert inputs follows, grouped by broad outputs.

Assessment and planning will include the following:

(i) Collection of existing data, additional surveys, research, and analytical work needed to compile needed information encompassing key areas such as (a) capacities for rapid and effective collection and analysis of epidemic data; (b) current activity and latent capacity for information dissemination within the health system and to the general public; and (c) public behavior, attitudes, and awareness, as well as various dimensions of community readiness—with a particular emphasis on rural areas with less access to information—and possibilities to mobilize local organizations for SARS awareness, prevention, etc.

(ii) Identification of additional information needed to design the remaining TA outputs; and

(iii) Follow-up monitoring and assessment of plan implementation (including deployment of equipment and linkages to training), efficacy, and proposal of needed refinements.

Epidemiological surveillance will include the following:

(i) Additional focused on assessment of needs and capacities (e.g., analysis of rural transmission dynamics);

(ii) Assistance to the government in (a) formulating a framework (including system coverage, data collection and analysis, equipment and training needs, operational budget planning, etc) extendable beyond SARS; and (b) identifying and mobilizing key hospitals/health centers/laboratories, and inventorying equipment and supplies;

(iii) Networking of diagnostic facilities in the Western Region; (iv) identification of priority equipment and supplies, based on WHO and State Development and Reform Commission (SDRC) guidelines;

(iv) Development of focused training curricula and material;

(v) Provision of training, and follow-up impact assessment; and

(vi) Monitoring of adequacy and efficacy of quarantine efforts, and planning for

(vii) additional mobilization as needed.

Emergency response systems will include the following:

(i) Additional focused assessment of needs and capacities in this subsector (e.g., identifying risk factors facing hospital staff and other front-line personnel);

(ii) ormulation of a provincial implementation plan, with early prioritization of urgently needed capacities and key and high-risk groups, followed by more peripheral groups;

(iii) evelopment of focused training curricula and materials for key groups of (a) local government, and (b) personnel, including safety and efficacy in key operations (e.g., early detection, border control, community infection control, transport and quarantine, clinical management, laboratory systems, and human and environmental safety in disposal of health supplies);

(iv) omplementary information dissemination mechanisms to reach at-risk health staff—as with structured trainings, presenting operational guidelines (with clear prescriptive instructions) for staff self-protection from infection, as well as staff supervision, and systematic hospital- and clinic-level monitoring;

(v) dentification of priority equipment and supplies, based on WHO and SDRC guidelines;

(vi) training and follow-up impact assessment; and

(vii) planning for sustainable skills transfer to local education and training centers after the TA.

Information, education, and communication will include the following:

(i) assessment of public behavior, attitudes, and awareness;

(ii) prioritization of various groups (may include community-level health-related workers) and content (e.g., awareness, self-protection, access to treatment, and social responsibility, including steps for symptomatic cases), and identification of appropriate, targeted media and communication modes and other social mobilization strategies;

(iii) ormulation of a provincial IEC master plan aligned with national strategies, including costed delivery approaches and concrete plans to mobilize required financial and human resources;

(iv) dentification of priority equipment and supplies, based on WHO and SDRC guidelines;

(v) workshops and capacity building;

(vi) evelopment of IEC materials for provincial and community-based campaigns; and

(vii) ampaigns and dissemination of material, impact assessment, and refine-

ment —monitoring should also cover budgeting from Government contribution, and propose means of ensuring post-project sustainability of IEC tools for broader health issues.

In addition, the consultant team will, in dialogue with WHO and other international and domestic actors, periodically assess the (i) appropriateness of TA interventions taken, including process-oriented elements; (ii) linkages to evolving national strategies; (iii) the role of local and national governance; (iv) emerging policy recommendations; and (v) prospects for strategic investments and other forward-looking action needed to enhance the performance of the health system on a sustainable basis, drawing key lessons from the SARS case on the importance of adequate surveillance and other facets of preventive health as public goods. This may include workshops and other structured activities at key junctures (e.g., midterm review).

B. Indicative Procurement Packaging

Procurement is shown in Table A4.

Table A4: Outline of Procurement

Description Number of contracts	Amount	Base Cost ($)	Procurement Mode
A. Emergency Equipment Package[a]	1-3	300,000	DP
B. Other			
1. Epidemiological Surveillance Systems[b]	4-8	100,000	DP
2. Emergency Response Capabilities[c]	4-8	100,000	DP
3. Information and Education Campaign[d]	4-8	100,000	DP/IS
Total	**13-27**	**600,000**	

Key: DP = direct purchase; IS = international shopping.

All procurement will be (i) based on World Health Organization and State Development and Reform Commission recommendations; (ii) integrally linked to the technical assistance's comprehensive program, complementing capacity building, personnel protection and information, education, and communication efforts; and (iii) subject to Asian Development Bank's approval. Base costs exclude price and physical contingencies.

[a] Immediately needed surveillance-related and other equipment (e.g., screening apparatuses, di-

agnostic equipment, mobile X-ray units for use within SARS-designated wards, disinfection equipment, etc.) and consumable supplies to protect front-line staff and prevent transmission in high-risk areas (e.g., masks, gloves, gowns, goggles, disinfectants, etc.).

[b] Additional equipment needed for provincial surveillance systems, based on assessed needs.

[c] Based on needs assessment, additional diagnostic and treatment equipment and supplies; may include vital check equipment, respirators, mobile X-ray units, blood chemical analyzers, protective supplies for front-line staff, etc.

[d] Based on needs assessment, may include laptop and/or desktop computers, printers, hardware and software for multimedia design and display, printers and copy machines, etc.

Source: Asian Development Bank estimates.

Appendix III. 1 Focused Synopsis for the Rapid Assessment of SARS Response and Preparedness in Xinjiang and Yunnan

I. BACKGROUND

In response to a request from the Chinese Government, the Asian Development Bank (ADB) approved in late May 2003 an emergency technical assistance (TA) for Combating Severe Acute Respiratory Syndrome (SARS) in the Western Region. Due to socioeconomic conditions and weaknesses in preventive public health systems, these provinces and autonomous regions (henceforth, simply provinces) were least equipped to respond to SARS, particularly in rural areas and among the poor. In close collaboration with the Foreign Loan Office of the Ministry of Health (MOH-FLO, the executing agency), the TA was designed to flexibly respond to evolving threats and opportunities. It aims to address the immediate threat posed by SARS, while also building critical, longer term capacities in the public health system. The TA's 4 broad outputs are: (i) sound provincial plans to address SARS; (ii) strengthened epidemiological surveillance systems; (iii) augmented emergency response capabilities; and (iv) increased public awareness of SARS and self-protection through multi-mode information and health education delivery mechanisms.

ADB and MOH-FLO agreed on the need for a first-pass rapid assessment (RA) to provide a basic understanding of the current SARS context and coping mechanisms in the Western Region. This situation analysis will inform planning for TA interventions. Xinjiang and Yunnan were selected for RA visits, as key borders for Central Asia and the Mekong Region. They are also representative of a range of challenges facing Western Region provinces, including Qinghai and Ningxia, the TA's other 2 target provinces.

II. OVERVIEW OF THE RAPID ASSESSMENT

The team consisted of 2 MOH-FLO officials and 4 domestic and international consultants with expertise in preventive public health, surveillance and infection control,

① This paper reflects the views of the authors and not necessarily those of the PRC Ministry of Health or the Asian Development Bank.

clinical management of SARS, and epidemics and local response. The team visited Xinjiang and Yunnan from 4-23 July 2003, and collected information via 3 principal means: (i) multi-agency discussions with local authorities; (ii) site visits to centers for disease prevention and control (CDCs) at the provincial to county levels, hospitals, airports, rail stations, educational institutions, border crossings, etc.; and (iii) interviews with front-line SARS response staff. These drew heavily upon a checklist provided by the World Health Organization (WHO), refined to the Western Region context. Site visits also included photographic recording.

III. KEY FINDINGS AND PRIORITIES FOR ACTION

Overall, the RA indicated a very strong local government response, generally beginning in late April. The team observed some important strengths in both recent approaches and preventive capacities now in place. However, the team also found several key shortfalls obstructing effective and efficient response to SARS, and undercutting preparedness for prevention and control of other infectious diseases. Based on these capacities and challenges, the team identified 5 broad areas for priority action by government (at various levels) and international partners, including some items for possible support under the TA. These are outlined below, generally in order of increasing specificity.

The team views these findings to be representative of needs in other Western Region provinces, and (given this focus) complementary to WHO country-level recommendations.

(1) Provincial Planning for SARS Prevention and Control

Strengths/capacities

Strong government role at different levels (e.g., SARS leading groups);

Huge financial commitment (e.g., 340 million RMB across administrative levels in Yunnan);

Multi-sectoral coordination, leading to broad community response to SARS; and

Especially proactive response observed in Yunnan, which sent local CDC staff and clinical doctors to study Guangdong outbreak even before identified as SARS.

Shortfalls/needs

Pre-existing weaknesses in basic preventive health capacities, and inequitable health resource distribution; SARS-type response neither cost-effective nor sustainable, and an epidemic striking first in rural/poor localities would be difficult to detect and stop;

Provincial SARS prevention and control plans largely copied from national plan and from Guangdong and Beijing, without adaptation to fit local context, capacities, and needs;

Lack of rapid response mechanism for public health emergencies; response to SARS (driven by dramatic lessons of delayed action in Beijing and Guangdong) was only achieved at very high cost, and is unlikely to be repeated for most health threats;

Society-wide overreaction in some aspects (e.g., excessive and ill-targeted disinfection, isolation, and observation); and

Top-down "information overflow" (e.g., 100+ official documents from central level, 100s more from provincial level) decreased usefulness to health staff and the public.

Recommendations for priority action

Develop province-specific technical plans for preventing and controlling SARS and other infectious disease, in view of provincial context (including existing capacities and needs). For sustainability and cost-efficiency, these must include clear planning for a two-track approach of (i) maintained vigilance, supported by increased (and more efficiently and equitably allocated) investment in public health; and (ii) what WHO terms as "surge capacity", with stand-by mechanisms in place to allow immediate emergency response.

Planning for the latter should streamline epidemic tracking and management under the responsibility of the CDC system, eliminating parallel information flows and processing. It is also critical to establish a system to ensure documentation and other information that are parsimonious and targeted to user-specific needs in future crises, to avoid the "information overflow" observed in the case of SARS.

To ensure that measures developed by national and sub-national CDCs are implemented at the community level, provincial plans must embed mechanisms to

ensure that multi-sectoral coordination and responses to future public health crises at each level are evidence-based and scientific, rather than subject to political factors.

Starting at the provincial level, conduct seminars and other forms of advocacy for policy makers and relevant officials in health and other government agencies to improve their grasp of key public health issues.

To guide provincial planning, discuss comparative local responses to SARS, overall preparedness, and specific response mechanisms via: (i) a national seminar involving key decision-makers representing the health bureau and one or more other SARS leading group member from poorer provinces; and then (ii) province-level seminars for multi-sectoral decision-makers, public health officials, and infectious disease experts.

Key entry points to Western Region provinces pose a special case for rationalizing and coordinating responses to health risks, particularly where mechanisms need to link national and local entities on both sides of international routes. Provide advice and capacity building to improve coordination and decrease effort duplication, and provide key hardware (e.g. infrared fever screening equipment) in border customs, airports, etc.

(2) Information, Education, and Communication (IEC) and Training Materials

Strengths/capacities

Various IEC materials developed, adapted, and adopted by provincial and prefecture governments for distribution to different levels;

Medical staff supported public information campaigns (e.g., posters, hotlines, websites);

Some IEC materials targeted minority populations (e.g., materials in Xinjiang also in Uyghur language; some materials observed in Yunnan translated into Jingbo); and

Nationally-developed training materials found in Xinjiang prefecture-level hospitals.

Shortfalls/needs

No systematic assessment by local governments of general public's SARS awareness or IEC effectiveness, coverage, and targeting issues; no feedback

into IEC campaign design;

Where given, local SARS training often relied on materials from national levels; appropriateness, targeting in content and delivery mode, and efficacy not assessed; training coverage of rural and poor localities and border areas appears problematic.

Recommendations for priority action

There is a broad need to review IEC and training approaches used within the Western Region. This should assess quantity (including coverage) and quality aspects of:

IEC materials and approaches—key dimensions include: (i) the degree to which IEC campaigns have been deliberately targeted to key groups and specific objectives; (ii) other coverage issues, including equity in reaching vulnerable populations; (iii) appropriateness and overall efficacy in raising awareness, "demystifying" SARS, and changing behaviors; (iv) linkages to staff training, advocacy to local government leaders, and other initiatives.

Training—key dimensions include (i) coverage of competency areas/fields by SARS-specific trainings and pre-SARS general health-related capacity building; (ii) degree of targeting in training content (see above) and delivery modes; (iii) numbers/shares of various staff trained in formal and informal modes; (iv) coverage issues (e.g., ability to reach staff from rural and poor localities); (v) quality of content and relevance to Western Region conditions and target trainees; (vi) appropriateness of delivery modes (e.g., inclusion of follow-up trainings and other reinforcement) and overall effectiveness; and (vii) linkages to broader health sector initiatives, such as the provision of new equipment/facilities.

Input findings from these reviews into new IEC programs on infectious disease prevention and risk factors, as well as shaping various trainings proposed herein.

(3) Epidemic Surveillance, Reporting, and Response Capacities

Strengths/capacities

CDCs at each level mobilized for epidemic investigation and management; CDCs well organized at higher levels;

Alongside existing system of monthly infectious disease reports, established dai-

ly (at least) reporting from a 24 hour, 7 day/week SARS office set up in CDCs at each level, to ensure timely information flow to upper levels;

Close CDC-hospital collaboration on diagnosis of possible SARS cases; and

Expanding a pilot study, Yunnan is installing a simple infectious disease data entry device in all hospitals, beginning at the township level; this has expedited reporting.

Shortfalls/needs

Parallel SARS epidemic information chains (e.g., reports from rail stations passed up through both health and rail hierarchies) duplicative; may confuse data and response;

Particularly at the township level, weak hospital capacities to report infectious diseases (a key role); in-hospital reporting units need to be formalized and reinforced; and

Limited epidemiological management capacities and facilities in CDCs at different levels; insufficient practical training, knowledge, skills, and equipment.

Recommendations for priority action

Strengthen the quantity and quality of practical training, prioritizing county-level CDC staff responsible for in-field epidemiological investigation and hospital staff tasked with clinical diagnosis. Expert advice might support ongoing development of a national framework for training of trainers (TOT) in the CDC system. Later assistance could develop and conduct training tailored to CDCs in Western Region counties and selected prefectures, in view of financial and human resource constraints they face.

The same TOT program can also provide targeted training to strengthen infectious disease control capacities of CDCs in those localities, focusing on preparedness. Mastery of effective infectious disease control measures (e.g., appropriate protocols for disinfection, observation, isolation, transportation, personal protection, etc.) are key to ensuring rapid and proper reaction to public health emergencies. The SARS experience can provide a focus, but training should extend to broader preparedness. It should include exercises, and be periodic and/or backed up by informal continual education.

Within all hospitals at all levels, set up or strengthen a unit/department responsi-

ble for infectious disease reporting, as a firm foundation of the surveillance and report system. Overall, the most urgent priority is support for township-level hospitals (which play a similar role to CDCs at that level) to (i) establish/strengthen such units, and (ii) augment basic epidemic identification and analytical capacities. TOT workshops (see above) can help to develop needed support materials (e.g. cue cards for discerning conditions with similar symptoms) and follow-up reinforcement by video and other appropriate modes.

To improve the accuracy and timeliness of information flows in the infectious disease report system, an early (and very cost-effective) priority is to install infectious disease case-reporting devices (see above) in hospitals at all levels.

At the same time, broader dialogue is needed on (i) possible rationalization in the national system of data processing and analysis functions at each level; and (ii) updating the current "check-box" reporting system (e.g. by including symptoms) to allow more flexibility and verification of local diagnoses, along with related training and support materials. Limited pilots might be conducted in a small number of counties or prefectures. After assessing needs and solutions, basic computer/ICT hardware could be provided where needed to CDCs at those levels. Hardware should be minimalist (i.e. low cost and appropriate to level-specific data analysis needs), and training and support materials should ensure staff capacity to perform basic tasks using the national standard disease reporting software.

Where needed, vehicles and basic equipment should be purchased to ensure that each provincial level CDC has a minimum of one dedicated vehicle for in-field epidemiological investigation and epidemic verification.

(4) Hospital/Clinic Preparedness

Strengths/capacities

National MOH guidelines on clinical protocols for SARS essentially adopted at all levels;

SARS hospitals/wards at provincial level generally well-structured, with necessary respiratory support equipment;

Fever clinics observed in hospitals at all levels, though widely varying in quality; Xinjiang had separated fever clinics; and

Some training on handling of SARS cases, self-protection, and transportation of

possible cases quickly mobilized at each level, with support from next higher level.

Shortfalls/needs

Huge variation in fever clinic structure, equipment/supplies, and staff readiness: weaker at lower levels; some county hospitals use self-made protective gear; fever clinics in Yunnan counties often mixed with other outpatient departments;

Insufficient practical training and clinic capacity in handling SARS cases; staff interviews at various levels indicated inadequate operational knowledge on SARS (two drivers responsible for SARS transportation were the lone exceptions); and

Some sub-provincial hospitals have SARS wards, but improper in layout and poorly equipped (e.g., short on mobile X-ray machines, and ICUs lack respiratory support devices).

Recommendations for priority action

TOT should expand mastery of treatment and staff self-protection. First-stage training (likely in Beijing or Guangdong) should build a team of trainers drawn from lead hospitals in Western Region provinces. Content can be adapted from existing (national) training on SARS, with senior experts from affected Eastern areas as training facilitators, field visits to a SARS hospital (s) in the host city, demonstrations, and lectures. However, careful design of curriculum and activities must ensure relevance to Western Region provinces and prefectures. In the second stage, TOT participants will be mobilized to conduct in-province training. This may be held in each provincial capital or other accessible location, but should prioritize doctors from prefecture-level hospitals. As with CDC training (above), pre-crisis exercises may help to cement operational knowledge.

Advocate to officials on the need to establish a standardized (separate) fever clinic in each county- and prefecture-level general hospital, in order to prevent nosocomial SARS infection (and possible further transmission to the community).

Establish one fever clinic (with basic supplies and training for staff protection) in each county that conforms to structural, equipment, and management standards set by MOH. Most urgent priority should be given to border counties that currently lack such a facility.

Ensure that at least one general hospital in each prefecture has a ward capable of treating SARS or similar diseases.

Provide equipment such as mobile X-ray and respiratory support equipment to strategically located prefecture and county-level hospitals (e.g., in population centers, international borders, etc.).

(5) Transportation of SARS and Possible SARS Cases

Strengths/capacities

Some form of plan in place at each level for transport of possible SARS cases;

Medical transport staff assigned to SARS-related duties have received training and personal protection supplies; drivers well informed compared to other interviewees; and

Kunming city (Yunnan) has ample mechanism and ambulance for SARS cases.

Shortfalls/needs

Low awareness among sub-provincial health officials of the importance of planning for transportation of possible SARS victims;

Staff safety procedures/awareness weakest at the hospital arrival/triage stage; and

Very poor transportation facilities (ambulance and necessary equipment) in Xinjiang, even in Urumqi and especially in less urban areas.

Recommendations for priority action

Advocate to officials at the prefecture and county levels on the significance of proper transportation of possible SARS cases.

Train relevant personnel on procedures for transporting SARS and suspect cases, including staff protection, with some priority on hospital arrival/triage protocols.

Some provinces (e.g., Xinjiang) may lack ambulances suitably equipped to handle SARS or other highly contagious diseases. Given resource constraints, ambulance deployment should prioritize emergency centers in the highest population density area(s).

IV. CONCLUSION

This synopsis outlines key findings of RA field investigations in Xinjiang and Yunnan under the ADB-supported TA, and identifies five broad areas as priorities for action in the Western Region by government (at various levels) and international partners. It is hoped that these findings can advance multi-partner dialogue on such support.

Appendix IV. 1 Events of PRC-ADB Project TA4118 in Yunnan

1. National training

1. 1 From Oct. to Nov. of 2004, in order to further improve the ability on acute infectious disease control in project province, according to the demand of MOH, they organize the national experts to conduct training to provincial and prefecture CDC staff in advanced field epidemiology. Liu Xiaoqiang and Xu Wen from YNCDC, Liu Hong from Kunming CDC, Wu Qiang from Yuxi CDC, and He Lifang from Qu Jing CDC, all attend this training.

1. 2 On Sep. 26th-28th of 2005, FLO conduct a provincial training of IEO and experience communication on infectious disease and emergent public health events response in Beijing, Tian Ziying, Yang Jianbin and He Jibo from Yunnan Health Bureau and YNCDC attend this training.

1. 3 On Oct. 9th-13th of 2005, FLO conduct ADB capacity building project on field epidemiological training of provincial and prefecture CDC, Liu Xiaoqiang, Xu wen from YNCDC, Liu Hong from Kunming CDC, Wu Qiang from Yuxi CDC, He Lifang from Qujing CDC, all attend this training.

2. Provincial training

2. 1 On Oct. 27th-30th of 2004, we held a training workshop in Shangri-La of Di Qing. The teachers consist of YNCDC, No. 1 affiliated hospital of Kunming medical college, have trained 45 students, who are from three counties CDC and part of township hospitals director of prevention and health care department. The training is related to the field infectious disease and emergent public health events response, cholera s prevention and control, hepatitis A prevention and control, epidemic cerebrospinal meningitis and epidemic encephalitis B prevention and control, viral hepatitis prevention and control, TB prevention and control, new occuring epidemic disease prevention and control, etc. Based on the requirement of the participants, the training workshops have also organized field visit to county CDC and township hospital to learn their good practice and share information in the field, and participated an actual case analysis which was happened and managed by related instituted visited, these practical case analysis helped the participants to think more

practically and improved the participants' practical skills.

2.2 On Nov. 20th-24th of 2004, we held a training workshop in Chengjiang of Yu Xi. The teachers consist of YNCDC, No. 1 affiliated hospital of Kunming medical college, Yuxi CDC, have trained 50 students, who are from eight counties' CDC and part of township hospital's director of prevention and health care department. The training is related to the field infectious disease and emergent public health events response, TB prevention and control, viral hepatitis prevention and control, measles prevention and control, typhoid prevention and control, new occuring epidemic disease prevention and control, etc. Based on the requirement of the participants, the training workshops have also organized field visit to county CDC and township hospital to learn their good practice and share information in the field, and participated an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants' practical skills.

2.3 On Dec. 19th-25th of 2004, we held a training workshop in Gejiu of Honghe. The teachers consist of YNCDC, No. 1 affiliated hospital of Kunming medical college, Honghe CDC, have trained 47 staffs, who are from thirteen counties' CDC and part of township hospital's director of prevention and health care department. The training is related to the field infectious disease and emergent public health events response, measles prevention and control, TB prevention and control, viral hepatitis prevention and control, poisoning prevention and control, etc. Based on the requirement of the participants, the training workshops have also organized field visit to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants' practical skills.

2.4 On Jan. 5th-10th of 2005, we held a training workshop in Jianshui of Honghe. The teachers consist of YNCDC, No. 1 affiliated hospital of Kunming medical college, Honghe CDC, have trained 47 staffs, who are from thirteen counties' CDC and part of township hospital's director of prevention and health care department. The training is related to the field infectious disease and emergent public health events response, cholera prevention and control, measles prevention and control, hepatitis A prevention and control, TB prevention and control, viral hepatitis prevention and control, poisoning prevention and control, etc. Based on the require-

ment of the participants, the training workshops have also organized field visit to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants' practical skills.

2.5 On Jan. 15th-21th of 2005, we held a training workshop in Mangshi of Dehong. The teachers consist of YNCDC, No. 1 affiliated hospital of Kunming medical college, Dehong CDC, Simao junior medical school, have trained 45 staffs, who are from six counties' CDC and part of township hospitals' director of prevention and health care department. The training is related to the field communicable disease and emergent public health events response, typhoid prevention and control, measles prevention and control, tsutsugamushi disease prevention and control, malaria prevention and control, the plague prevention and control, etc. Based on the requirement of the participants, the training workshops have also organized field visit to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related instituted visited, these practical case analysis helped the participants to think more practically and improved the participants' practical skills.

2.6 On May. 29th-June. 3th of 2005, we held a training workshop in Mile of Honghe. The teachers consist of YNCDC, No. 1 affiliated hospital of Kunming medical college, Honghe CDC, Honghe prefecture hospital, have trained 50 staffs, who are from thirteen counties' CDC and part of township hospitals' director of prevention and health care department. The training is related to the field infectious disease and emergent public health events response, typhoid prevention and control, measles prevention and control, tsutsugamushi disease prevention and control, malaria prevention and control, epidemic cerebrospinal meningitis and epidemic encephalitis B prevention and control, poisoning prevention and control, etc. Based on the requirement of the participants, the training workshops have also organized field visit to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants' practical skills.

2.7 On July. 10th-14th of 2005, we held a training workshop in Wenshan. The

teachers consist of YNCDC, Wenshan CDC, Honghe prefecture hospital and Wenshan prefecture hospital, have trained 45 staffs, who are from eight counties CDC and part of township hospital s director of prevention and health care department. The training is related to the field infectious disease and emergent public health events response, typhoid prevention and control, measles prevention and control, tsutsugamushi disease prevention and control, malaria prevention and control, epidemic cerebrospinal meningitis and epidemic encephalitis B prevention and control, poisoning prevention and control, etc. Based on the requirement of the participants, the training workshops have also organized field visit to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants practical skills.

2.8 On July. 17th-21th of 2005, we held a training workshop in Chuxiong. The teachers consist of YNCDC, Chuxiong CDC, Chuxiong prefecture hospital, have trained 45 staffs, who are from ten counties CDC and part of township hospitals director of prevention and health care department. The training is related to the field infectious disease and emergent public health events response, typhoid prevention and control, measles prevention and control, tsutsugamushi disease prevention and control, malaria prevention and control, epidemic cerebrospinal meningitis and epidemic encephalitis B prevention and control, poisoning prevention and control, etc. Based on the requirement of the participants, the training workshops have also organized field visit to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants practical skills.

2.9 On July. 24th – 28th of 2005, we held a training workshop in Simao. The teachers consist of YNCDC, Yunnan provincial institute for parasitic disease control, Simao CDC, have trained 45 staffs, who are from ten county CDCs and part of township hospital s director of prevention and health care department. The training is related to the field infectious disease and emergent public health events response, typhoid, malaria, the plague, diarrhoea, etc. Based on the requirement of the participants, the training workshops have also organized field visit to county

CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants' practical skills.

2.10 On July. 7th-11th of 2005, we held a training workshop in Wenshan. The teachers consist of YNCDC, Yuxi CDC, Wenshan CDC, Wenshan prefecture hospital, Wenshan junior medical schod, have trained 45 staffs, who are from ten counties' CDC and part of township hospital's director of prevention and health care department. The training is related to the field infectious disease and emergent public health events response, typhoid, malaria, the plague, diarrhoea, etc. Based on the requirement of the participants, the training workshops have also organized field visit to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants' practical skills.

2.11 On Aug. 14th-18th of 2005, we held a training workshop in Zhaotong. The teachers consist of YNCDC, Zhaotong CDC, No. 1 hospital of Zhaotong, have trained 45 staffs, who are from eleven counties' CDC and part of township hospital's director of prevention and health care department. The training is related to the field infectious disease and emergent public health events response, typhoid, viral hepatitis, TB, poisoning prevention and control, etc. Based on the requirement of the participants, the training workshops have also organized field visit to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants' practical skills.

2.12 On Aug. 21th-25th of 2005, we held a training workshop in Qujing. The teachers consist of YNCDC, No. 3 hospital of Kunmimg, Qujing CDC, Qujing junior medical school, have trained 45 staffs, who are from nine counties' CDC and part of township hospital's director of prevention and health care department. The training content relate to the field infectious disease and emergent public health events response, the plague, common diarrhea, varicella, herpes zoster, typhoid, hepatitis A, etc. Based on the requirement of the participants, the training workshops have

also organized field visit to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants practical skills.

2.13 On Sep. 4th-8th of 2005, we held a training workshop in Chuxiong. The teachers consist of YNCDC, Chuxiong prefecture hospital, Chuxiong CDC, have trained 45 staffs, who are from ten counties CDC and part of township hospitals director of prevention and health care department. The training content relate to the field infectious disease and emergent public health events response, the plague, common diarrhea, varicella, herpes zoster, typhoid, hepatitis A, poisoning prevention and control, etc. Based on the requirement of the participants, the training workshops have also organized field visit to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants practical skills.

2.14 On Sep. 11th-15th of 2005, we held a training workshop in Lincang. The teachers consist of YNCDC, No. 3 hospital of Kunming, Lincang CDC, Lincang junior medical school, Simao junior medical school, have trained 45 staffs, who are from eight counties CDC and part of township hospitals director of prevention and health care department. The training content relate to the field communicable disease and emergent public health events response, common diarrhea, typhoid, malaria, etc. Based on the requirement of the participants, the training workshops have also organized field visit to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants practical skills.

2.15 On Sep. 19th-23th of 2005, we held a training workshop in Dali prefecture. The teachers consist of YNCDC, Yunnan provincial Institute for endemic disease control, Dali CDC, Dali prefecture hospital, have trained 45 staffs, who are from twelve counties CDC and part of township hospitals director of prevention and health care department. The training content relate to the field infectious disease

and emergent public health events response, common diarrhea, epidemic cerebrospinal meningitis and epidemic encephalitis B, endemic sudden death, human-animal disease, etc. Based on the requirement of the participants, the training workshops have also organized field visit to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants practical skills.

2.16 On Sep. 26th-30th of 2005, we held a training workshop in Simao prefecture. The teachers consist of YNCDC, Yunnan provincial institute for parasitic disease control, Simao CDC, Simao prefecture hospital, Simao junior medical school, have trained 45 staffs, who are from ten counties CDC and part of township hospitals director of prevention and health care department. The training content relate to the field infectious disease and emergent public health events response, common diarrhea, typhoid, malaria, trichinosis, etc. Based on the requirement of the participants, the training workshops have also organized field visit to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants practical skills.

2.17 On Oct. 17th-21th of 2005, we held a training workshop in Lijiang prefecture. The teachers consist of YNCDC, No. 1 affiliated hospital of Kunming medical college, Lijiang CDC, Simao prefecture hospital, Lijiang junior medical school, have trained 45 staffs, who are from five counties CDC and part of township hospitals director of prevention and health care department. The training content relate to the field infectious disease and emergent public health events response, typhoid, malaria, HIV, hepatitis B, etc. Based on the requirement of the participants, the training workshops have also organized field visit to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants practical skills.

2.18 On Oct. 24th-28th of 2005, we held a training workshop in Baoshan prefecture. The teachers consist of YNCDC, No. 1 affiliated hospital of Kunming medical

college, Yunnan provincial institute for parasitic disease control, Baoshan CDC, Baoshan prefecture hospital, have trained 45 staffs, who are from five counties CDC and part of township hospital s director of prevention and health care department. The training content relate to the field infectious disease and emergent public health events response, measles, typhoid, malaria, HIV, hepatitis B, etc. Based on the requirement of the participants, the training workshops have also organized field visit to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants practical skills.

2.19 On Dec. 7th-11th of 2005, we held a training workshop in Nujiang prefecture. The teachers consist of YNCDC, No. 3 hospital of Kunming, Honghe prefecture hospital, Nujiang CDC, Simao junior medical school, have trained 45 staffs, who are from five counties CDC and part of township hospital s director of prevention and health care department. The training content relate to the field infectious disease and emergent public health events response, measles, typhoid, malaria, common diarrhea, hepatitis B, flu and avian-flu, etc. Based on the requirement of the participants, the training workshops have also organized field visit to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants practical skills.

2.20 On Dec. 14th-18th of 2005, we held a training workshop in Kunming. The teachers consist of YNCDC, No. 3 hospital of Kunming, Kunming CDC, No. 1 affiliated hospital of Kunming medical college, have trained 45 staffs, who are from fourteen counties CDC and part of township hospital s director of prevention and health care department. The training content relate to the field communicable disease and emergent public health events response, measles, typhoid, malaria, common diarrhea, hepatitis, flu and avian-flu, etc. Based on the requirement of the participants, the training workshops have also organized field visiting to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more

practically and improved the participants' practical skills.

2.21 On May. 15th-19th of 2006, we held a following training workshop in Xishuangbanna prefecture. The teachers consist of Honghe prefecture hospital, Simao CDC, Simao junior medical school, Xishuangbanna CDC, have trained 45 staffs, who are from three counties' CDC and part of township hospital's director of prevention and health care department. The training content relate to the field infectious disease and emergent public health events response, the plague, malaria, common diarrhea, hepatitis, Hansen's disease, TB, etc. Based on the requirement of the participants, the training workshops have also organized field visiting to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants' practical skills.

2.22 On May. 15th-19th of 2006, we held a following training workshop in Dali prefecture. The teachers consist of Yunnan provincial Institute for endemic disease control, Dali prefecture hospital, Dali CDC, have trained 48 staffs, who are from twelve counties' CDC and part of township hospital's director of prevention and health care department. The training content relate to the field infectious disease and emergent public health events response, measles, HIV, flu and avian-flu, poisoning prevention and control, etc. Based on the requirement of the participants, the training workshops have also organized field visiting to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants' practical skills.

2.23 On May. 22th-27th of 2006, we held a following training workshop in Dehong prefecture. The teachers consist of No. 1 affiliated hospital of Kunming medical college, Dehong prefecture hospital, Dehong CDC, have trained 45 staffs, who are from five counties' CDC and part of township hospital's director of prevention and health care department. The training content relate to the field communicable disease and emergent public health events response, measles, HIV, diarrhea, viral hepatitis, poisoning prevention and control and typhoid, etc. Based on the requirement of the participants, the training workshops have also organized field visiting to county CDC and township hospital to learn their good practice and share information

in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants practical skills.

2.24 On May. 23th-27th of 2006, we held a following training workshop in Lincang prefecture. The teachers consist of No. 3 hospital of Kunming, Lincang CDC, Lincang junior medical school, have trained 50 staffs, who are from eight counties CDC and part of township hospital s director of prevention and health care department. The training content relate to the field infectious disease and emergent public health events response, the plague, measles, malaria, TB, etc. Based on the requirement of the participants, the training workshops have also organized field visiting to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants practical skills.

2.25 On May. 23th-27th of 2006, we held a following training workshop in Baoshan prefecture. The teachers consist of YNCDC, Banshan CDC, Baoshan junior medical school, have trained 45 staffs, who are from Baoshan counties CDC and part of township hospital s director of prevention and health care department. The training content relate to the field infectious disease and emergent public health events response, flu and avian flu, cholera, malaria, fungus poisoning, unknown pheumonia, etc. Based on the requirement of the participants, the training workshops have also organized field visiting to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants practical skills.

2.26 On May. 21th-25th of 2006, we held a following training workshop in Simao prefecture. The teachers consist of Yunnan provincial institute for parasitic disease control, Simao CDC, Simao junior medical schod, Honghe prefecture hospital, have trained 45 staffs, who are from Simao ten counties CDC and part of township hospital s director of prevention and health care department. The training content relate to the field infectious disease and emergent public health events response, the plague, typhoid, malaria, trichina, measles, etc. Based on the requirement of the participants, the training workshops have also organized field visiting to county

CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants' practical skills.

2.27 On May. 29th-June. 2th of 2006, we held a following training workshop in Zhaotong prefecture. The teachers consist of YNCDC, Zhaotong CDC, Zhaotong prefecture hospital, have trained 45 staffs, who are from eleven counties' CDC and part of township hospital's director of prevention and health care department. The training content relate to the field infectious disease and emergent public health events response, diarrhea, typhoid, TB, measles, viral hepatitis, etc. Based on the requirement of the participants, the training workshops have also organized field visiting to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related instituted visited, these practical case analysis helped the participants to think more practically and improved the participants' practical skills.

2.28 On May. 29th-June. 2th of 2006, we held a following training workshop in Wenshan prefecture. The teachers consist of YNCDC, Wenshan CDC, Honghe prefecture hospital, Wenshan prefecture hospital, Wenshan junior medical school, have trained 45 staffs, who are from eight counties' and forty-seven township hospital's director of prevention and health care department. The training content relate to the field infectious disease and emergent public health events response, diarrhea, cholera, typhoid, measles, the plague, etc. Based on the requirement of the participants, the training workshops have also organized field visiting to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants' practical skills.

2.29 On June. 5th-9th of 2006, we held a following training workshop in Kunming prefecture. The teachers consist of YNCDC, No. 1 affiliated hospital of Kunming medical college, Kunming CDC, No. 3 hospital of Kunming, have trained 45 staffs, who are from fourteen counties' and forty-seven township hospital's director of prevention and health care department. The training content relate to the field infectious disease and emergent public health events response, common diarrhea, flu

and avian flu, measles, viral hepatitis, poisonous food, etc. Based on the requirement of the participants, the training workshops have also organized field visiting to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants practical skills.

2.30 On June. 5th-9th of 2006, we held a following training workshop in Qujing prefecture, meanwhile, ADB project official, MOH-FLO vice director and other project official, Guangxi and Guizhou Health Bureau and CDC s staffs go to view and emulate. The teachers consist of YNCDC, Qujing CDC, Kunming CDC, Simao junior medical schod, Honghe prefecture hospital, have trained 48 staffs, who are from nine counties and twenty-two township hospital s director of prevention and health care department. The training content relate to the field infectious disease and emergent public health events response, common diarrhea, flu and avian flu, measles, viral hepatitis, poisonous food, etc. Based on the requirement of the participants, the training workshops have also organized field visiting to county CDC and township hospital to learn their good practice and share information in the field, and participated in an actual case analysis which was happened and managed by related institutes visited, these practical case analysis helped the participants to think more practically and improved the participants practical skills.

3. Project Monitoring and Evaluation

3.1 On Oct. 17th-21th 2005, Zhu Baoduo and Wang Liqiu from MOH-FLO go to Lijiang to visit the training workshop and to guide how to use the participatory method to the class, meanwhile, they arrange concretely for the field visiting and provide a lot of gold advice and suggestion.

3.2 On Dec. 17th-18th 2005, Duan Mingyue and Wang Liqiu from MOH-FLO go to Yuanjiang of Yuxi prefecture to supervise and have an informal discussion with the staffs that have been to the training workshop. There are more than ten staffs who attend the meeting and express their opinions and change during the work. Finally, it achieves the anticipated purpose.

Appendix IV. 2 Table of Project Outlet of Yunnan Training

Prefecture	No. of training students	County covering rate (%)	Township covering rate (%)
Yuxi	135	100.0	100.0
Honghe	145	100.0	100.0
Wenshan	140	100.0	100.0
Simao	135	100.0	100.0
Xishuangbanna	51	100.0	100.0
Baoshan	90	100.0	100.0
Dehong	90	100.0	100.0
Nujiang	45	100.0	100.0
Diqing	45	100.0	100.0
Lincang	95	100.0	78.4
Chuxiong	95	100.0	66.0
Dali	90	100.0	56.0
Lijiang	45	100.0	56.0
Zhaotong	90	100.0	52.0
Kunming	90	100.0	47.8
Qujing	95	100.0	46.8
Total	1,476	100.0	72.4

Appendix IV. 3 Events of PRC-ADB Project TA 4118 in Qinghai

1. Activity participated by the project officers and experts

1. 1 Field survey in Oct 2003

1. 2 The first training for trainers in Jun 2004

1. 3 Pilot participatory training in Sept 2004

1. 4 The second training for trainers in May 2004

1. 5 Field supervision and inspection in Jun 2005

2. Equipment

2. 1 A vehicles for field epidemiological investigation, 9 laptop computers, 9 multi-media projectors, 1 digital video camera, 5 digital cameras.

2. 2 Personal protective equipment: 126 gowns, 1,000 pairs of glove, 5 electronic temperature detectors, 1,000 masks, 500 goggles

3. Training

3. 1 Training of trainers: 2 training courses, 80 trainers received training.

3. 2 Training targeting county CDC and township hospital staff: 13 training courses, 625 trainees received training from 54 CDC (100%) and 386 township hospitals (94%).

3. 3 Practical training on Epidemiological investigation: 5 trainers received training; Training on development of the IEC materials: 4 people received training.

4. Textbook for training

4. 1 4,356 Handbooks of Common Infectious Diseases and Acute Poisoning Prevention and Control.

4. 2 2,290 Photo banks for common infectious diseases and STEs.

4. 3 170 Protocol of Participatory Training for Training of Trainers on Infectious Diseases and Acute Poisong Prevention and Control by Grassroots Medical Staff, 170 demonstration CD-ROM

4. 4 50 infectious diseases reporting cards.

4. 5 3,000 Flow Chart for the Diagnosis and Management of the Acute Infectious Diseases by Grassroots Medical Staff.

5. IEC materials for school (targeting poverty county)

1,200 teacher s guidebooks, 18,000 student s handbooks

Appendix IV. 4 Ningxia SDRF Training List

Time	Site	No. of Trainees	No. of Provincial Teachers	No. of Provincial Project Officers	No. of Prefectural Health Bureau Staff	No. of County Government Staff	No. of County Health Bureau Staff
2004. 05. 30-06. 03	Qingtongxia	40	2	2	2	2	2
2004. 09. 01-04	Pingluo county	40	2	2	1	1	1
2004. 11. 16-19	Guyuan city	42	2	2	1		1
2004. 11. 22-25	Helan county	42	2	2		1	1
2005. 07. 04-09	Zhongning county	42	2	2	1	1	1
2005. 07. 11-15	Hongsipu	45	2	2			1
2005. 07. 20-24	Xixia district	40	2	2	1	1	1
2005. 07. 25-29	Huinong district	42	2	1	1		1
2005. 08. 01-05	Yuanzhou district	45	2	1	1	1	1
2005. 11. 21-24	Xiji county	44	2	1	1	1	1
2005. 11. 15-18	Zhongwei city	40	2	1	1		
2006. 05. 28-31	Yanchi county	40	2	1	2	1	1
2006. 06. 01-04	Haiyuan count	40	2	2	1	1	2

Appendix IV. 5 Events of PRC-ADB Project TA 4118 in Xinjiang

1. TOT of TA 4118. In order to successfully develop the training targeting health-care professionals of the county CDC and township hospitals, the Foreign Load Office of the MoH and the BoH determined to hold regional and prefectural trainings. On June 8-12 2004 and June 13-17 2004, two rounds of teachers trainings were delivered as planed respectively in Urumqi and Karshigar and some well-known experts on infectious diseases and epidemiologists were invited to give lectures during sessions and 62 healthcare professionals from 15 prefectures attending the training sessions.

Targeting the adult education features, the trainings focused on organization, models of the participatory teaching methods and the case study, to enable the trainees to understanding the key points of the participatory teaching and the differences with the traditional teaching methods, thus to further development of the following training project targeting the needs of the grassroots healthcare workers. During the training, the trainees actively participated in discussion and teaching activities. During the training, the instructors tracked closely the process of case study, group discussion, and encourage the trainees to find out problems and manage to solve them by themselves, thus facilitating problem solving and increasing the self-confidence of the trainees and laying foundations for the future trainings.

2. "ADB Xinjiang teachers training session on the infectious diseases response": From April 17-23 2005, two training sessions were delivered in Urumqi targeting the teachers trained for intensifying the teaching skills. During session, several well-known experts in infection and epidemiology were invited to deliver lectures and the ADB officials also attended the sessions. Sixty-one professionals of preventive and clinical doctors from fifteen prefectures and cities attended the sessions. The session conducted intensified training and discussion on teaching methods, contents and efficacy. Through training and discussion, further to enhance the training skills among trainers and promote use of the participatory teaching methods in the future training and improve the training effectiveness.

3. Translation, printing and distribution of the *Handbook of Common Infectious Diseases and Acute Poisoning Prevention and Control*. In light of ethnic groups popu-

lously inhabited region in Xinjiang, 60% of grassroots healthcare workers are minorities with low Chinese proficiency and hard to read the Chinese version of manual. In order to promote use of manuals for the grassroots healthcare workers, approved by the ADB, regional eight ethnic translators and experts were organized to have completed translation of the manual from Chinese into Uygur version, and gave them out towards the medical professionals of 96 CDCs and township hospitals of 15 prefectures in Xinjiang. From the general response of the grassroots healthcare workers, they basically consider the manual a very useful tool for the practical works.

Appendix IV.6 List of PRC-ADB Project in Xinjiang

No.	File content and number	Time issued	Issuing agency
1	Notice about holding ADB granted piloting training on the common infectious diseases and acute poisoning control towards the county-level and township-level healthcare workers No. 67 Xinweijikongfa[2004]	2004-08-22	Bureau of Health of Xinjiang Uygur Autonomous Region
2	Notice about holding ADB granted training on the common infectious diseases and acute poisoning response towards the county and township healthcare workers No. 163 Xinweijikongfa[2004]	2004-10-18	Bureau of Health of Xinjiang Uygur Autonomous Region
3	Notice about holding ADB granted training on the common infectious diseases and acute poisoning response towards the county and township healthcare workers No. 108 Xinweijikongfa[2004]	2004-12-29	Bureau of Health of Xinjiang Uygur Autonomous Region
4	Notice about holding ADB granted regional teachers training session on the common infectious diseases and acute poisoning response No 38 Xinweijikongfa[2005]	2005-04-08	Bureau of Health of Xinjiang Uygur Autonomous Region

No.	File content and number	Time issued	Issuing agency
5	Notice about holding ADB granted training on the common infectious diseases and acute poisoning response No. 59 Xinweijikongfa[2005]	2005-06-28	Bureau of Health of Xinjiang Uygur Autonomous Region
6	Notice about holding ADB granted training on the common infectious diseases and acute poisoning response No. 117 Xin wei ji kong fa [2005]	2005-09-07	Bureau of Health of Xinjiang Uygur Autonomous Region
7	Notice about holding ADB granted piloting training on the common infectious diseases and acute poisoning response towards the county and township healthcare workers No. 75 Xin wei ji kong fa [2005]	2005-09-28	Bureau of Health of Xinjiang Uygur Autonomous Region
8	Official letter about distribution of training materials on the infectious diseases No. 86 Xin wei ji kong han zhi[2005]	2005-10-31	Xinjiang CDC
9	Notice about holding training session on the infectious diseases control and prevention No. 2 Xin wei zhuan fa(2006)	2006-01-09	Bureau of Health of Xinjiang Uygur Autonomous Region
10	Official letter about distribution of training materials on the infectious diseases No. 40 Xinjikonghangzi	2006-04-11	Xinjiang CDC

Appendix V. 1 Registration Form for the Members of ADB Project Focus Group Investigation

date _____ site _____

Name	Institution	Gender	Age	Headship	The title of a technical post	Educational background	Major	fixed number of year of working	signature

Appendix V. 2 Person and Focus Group Investigation Syllabus

1. Investigation syllabus for central coordinator

Condition of program planning, management and implementation

How to coordinate with relative department and local government?

What kinds of work have been done? What were the impact and effects?

The main impacts of the program to the infectious diseases prevention and capacity building in western region.

The main outputs.

Program achievements.

Improvements and suggestions.

2. Investigation syllabus for national experts

The main tasks involved in.

How to carry out the task? What kinds of data were there?

What were the outputs?

Which kind of effects did the tasks have to the infectious diseases respondence and capacity building?

What are your thoughts or experiencs regarding the project?

What were the achievements?

Improvements and suggestions

3. Investigation syllabus for provincial project officer

Condition of program planning, management and implementation.

The management of files

What kinds of activities have been carried out? What effects did these activities have on the provincial infectious diseases prevention planning, mechanism establishment, infectious diseases surveillance and reporting system establishment?

The main outputs and impacts.

The effects of teachers and main groups.

The distribution and use of equipments.

The distribution and use of manuals and communication materials.

What are your thoughts or experiencs regarding the project?

Improvements and suggestions.

4. Investigation syllabus for infectious diseases prevention officer in provincial CDC

What activities that CDC involved?

What effects did these activities have on the provincial infectious diseases prevention planning, mechanism establishment, infectious diseases surveillance and reporting system establishment?

The effects of teachers and main groups.

The distribution and use of equipments.

The distribution and use of manuals and communication materials.

What were the achievements?

Improvements and suggestions.

5. Investigation syllabus for provincial teachers

What trainings did you attend (including date, site and entrepreneurs)? What skills did you learn? What kinds of feelings did you have? What knowledge and skills did you hope to learn?

What trainings did you attend as a teacher? How did you apply the knowledge and skills that learned from these trainings? What problems did you have? Experience?

What infectious diseases prevention work did you attend? The typical cases?

What help did the trainings bring to you?

What manuals and materials did you see? How to evaluate them? What were the suggestions to improve them?

What were the effects that the program had on local infectious diseases prevention?

What are your thoughts or experiencs regarding the project?

Improvements and suggestions.

6. Investigation syllabus for former students of county/ township level trainings

What trainings did you attend (including date, site and entrepreneurs)? What skills did you learn? What kinds of feelings did you have? What knowledge and

skills did you hope to learn?

What infectious diseases prevention work did you attend? The typical cases?

What help did the trainings bring to you?

What manuals and materials did you see? How to evaluate them? What were the suggestions to improve them?

What were the effects that the program had on local infectious diseases prevention?

What are your thoughts or experiencs regarding the project?

Improvements and suggestion.

7. Investigation syllabus for students of county/township level trainings

What knowledge and skills did you learned?

How to evaluate the organization and management for the training?

How to evaluate the teachers?

How to evaluate practice and spot review?

What are your thoughts or experiencs regarding the project?

What knowledge and skills did you hope to learn?

What manuals and materials did you see? How to evaluate them? What were the suggestions to improve them?

What were the effects that the program had local infectious diseases prevention?

Improvements and suggestion.

8. Investigation syllabus for manager or teacher

Did you see this teachers' guidebook? When did your school get this guidebook? How many? Who send this guidebook to you? Did you register? Who kept and use these guidebook?

Have you seen this guidebook? What did you learn from it? What can't you understand? How to improve?

Did you use this guidebook? How to use it? What kinds of help did it have for you and your school's infectious diseases prevention?

Did you see the students' handbook? When did your school get this handbook? How many? Who send this handbook to you? Did you register?

How did the students use it? Did they like it? What suggestions did they give?

What suggestions did you give to the infectious diseases prevention of your

school ?

9. Investigation syllabus for students

Did you see the students handbook ? Where did you see ?

Have you seen this handbook ? What did you learn fro mit ? What can t you understand ? How to improve ?

Do you like this handbook ? What are good ? What are not good ?

Would you like recommend this handbook to others ? Did you tell about this handbook to your family and friends ?

How did you use it in school and class ? Were there some relative activities have been carried out ?

What suggestions did you have on the infectious diseases prevention of your school ?

Appendix V. 3 Questionnaire for Trainees of ADB TA Provincial Field Epidemiological Training

Code □□□

1. Baseline

Name _____ Institution _____

Headship _____ The title of a technical post _____ Department _____

Major _____ Fixed number of year of working _____years

2. Learning situation of field epidemiological training

2.1 What knowledge and skills did you learn through training?

2.2 How do you evaluate the organization, teachers level, teaching skills and services of the training workshop?

2.3 Contents and results of field practice.

2.4 How do you consider this training workshop?

2.5 The successful experience of the training.

2.6 What are the suggestions to improve the training workshop?

2.7 What equipments did the workshop give you? Now who keep and use these equipments?

3. Condition of students (Who participated the teachers training to fill this form)

3.1 The date and site of teachers training.

3.2 What did you learn from the training?

3.3 How do you evaluate the organization, teachers level, teaching skills and services of the training workshop?

3.4 How do you consider this training workshop?

3.5 The successful experience of the training.

3.6 What are the suggestions to improve the training workshop?

4. Condition of teachers (Who participated the teachers training to fill this form)

4.1 The date, students number and site of teachers training.

4.2 What kind of role did you play in your class? (organizer, coordinator, practice and so on)

4.3 Application of skills and approaches.

4.4 How do you evaluate the training workshop?

4.5 How do you consider this training workshop?

4.6 The successful experience of the training.

4.7 What are the suggestions to improve the training workshop?

5. Situation of participation of infectious diseases prevention and control

5.1 What activities related to infectious diseases prevention and control did you attend after training?

5.2 Which aspects did you think that you got promoted?

5.3 Which need be improved?

5.4 Typical cases which you have done related to infectious diseases prevention and control.

6. Outputs related with the program (including literature and articles).

7. What kinds of effects did ADB program bring to you, your institution and your district on capacity building of infectious diseases prevention and control (mechanism establishment, ability on responding infectious diseases, infectious diseases surveillance and reporting system, health education and so on)?

8. Achievements of the program

9. Suggestions of the program

Events of PRC-ADB Project TA 4118: Combating SARS in the Western Region

1. In May, 2003, the PRC and ADB signed agreement on the TA 4118-PRC.
2. In June, 2003, started the TA 4118-PRC.
3. In July, 2003, recruited international and internal exports to go to Xinjiang Uighur Autonomous Region and Yunnan Province to implement rapid assessments (RA).
4. In October, 2003, completed the procurement of first batch of protective materials and equipments, including protective dressing, respirator, latex glove, blinkers, infrared thermometer, and autoclave sterilizer.
5. In November-December, 2003, held national and provincial seminars on strategy of control and prevention of SARS and communicable disease in Beijing and the four target provinces.
6. During December, 2003-June, 2004, organized national and provincial experts to compile the *Handbook of Common Infectious Diseases and Acute Poisoning Prevention and Control*, which was then published by Peking University Medical Press (PUMP), with a total of 35,000 volumes printed and distributed.
7. In February, 2004, procured a Nissan vehicle for each target provincial CDC for the use of practical epidemiological investigation, combining with other equipments including laptops, digital vidcons, cameras and etc.
8. In February, 2004, developed trial training for prevention and control of communicable disease and acute poisoning for grassroots health staff (of county level CDCs and township hospitals) in Changji, Xinjiang Region and Xishuangbanna, Yunnan Province.
9. During February, 2004-December, 2005, organized national and provincial experts to develop the *Protocol of Participatory Training for Training of Trainers on Infectious Diseases and Acute Poisoning Prevention and Control by Grassroots Medical Staff* and corresponding CD-ROM, and distributed a total of 1000 sets.
10. During May-July, 2004, and May-July, 2005, held two rounds of trainers training in four target provinces, which comprised a total of 12 training classes, fostered more than 180 trainers at provincial and prefecture level for participatory

training for all target provinces.

11. During July, 2004-May, 2005, procured and distributed training equipments to target provinces, including one laptop and one multi-media projection for each prefecture.

12. During July, 2004-December, 2005, organized national experts to compile the *Flow Chart for the Diagnosis and Management of the Acute Infectious Diseases by Grassroots Medical Staff*. And then for which, after it was taken as a trial, 300,000 volumes was printed in March, 2006, and distributed to all level CDCs throughout the nation.

13. During July, 2004-June, 2006, developed extended training for county level staff for prevention and control of communicable disease and acute poisoning. During the training, a total of 84 classes had been organized, including the trail classes, namely more than 4000 health staff had been trained.

14. During August, 2004, organized disease control staff from target provinces to participate in *International Forum on Avian Influenza Prevention and Control* held in Beijing.

15. During August, 2004-May, 2005, organized national experts to compile the *Adolescent combating infectious disease by healthy behavior-student brochure* and the *Coping infectious disease and public health emergencies in school-teachers brochure*, and 150,000 volumes of the former and 140,000 volumes of the latter were separately distributed.

16. In October, 2004, organized national experts to compile the *Photo Bank of Common Infectious Diseases and Sexually Transmitted Diseases*, which was then published by Peking University Medical Press (PUMP), with a total of 2000 volumes printed.

17. During October, 2004-October, 2005, organized practical training on epidemiological investigation (PTEI) for key disease control staff at provincial and prefecture level, and fostered 20 key practical epidemiological investigators against communicable disease for the four target provinces.

18. In August 2005, the *Handbook of Common Infectious Disease and Acute Poisoning Prevention and Control* was developed in Uighur language by related units in Xinjiang Region, and 5000 volumes was printed and distributed.

19. In September, 2005, the *Adolescent combating infectious diseases by healthy behavior-student brochure* and the *Coping infectious diseases and public health*

emergencies in school-teachers brochure were developed in Mongolian language, and 40,000 volumes was printed and distributed.

20. In September, 2005, the Seminar on Strategic Planning for Health Education Campaign for Infectious Diseases Prevention and Control for Provincial Health Education Staff was held, with participants of 25 provincial staff responsible for health education or communicable disease prevention and control from Beijing, Shanghai, target provinces and other related provinces in western region.
21. In December, 2005, the Meeting on Project Review and Lessons Exchange was held, with participants of 28 representatives from target provinces and related international organizations.
22. In December, 2005-March, 2006, organized the second publication of the Handbook of Common Infectious Diseases and Acute Poisoning Prevention and Control and the Photo Bank for Common Infectious Diseases and Sexually Transmitted Diseases. And for them, a total of 22,000 volumes were printed and distributed to county level CDCs and township hospitals in 8 provinces in western region and other regions.
23. In June, 2006, organized joint training for grassroots staff for communicable disease prevention and control in Qujing, Yunnan provinces, and invited disease control staff and township diagnosticians and physicians for communicable disease from Guangxi and Guizhou provinces to attend the joint training to view the participatory training method.
24. In June, 2006, recruited experts from China-CDC health education institute to provide an external assessment, and deliver report by early July.
25. In June, 2006, started to compile the Project Summary and Review, which was printed in December.

领导参与项目

卫生部、财政部、亚行、世界卫生组织等多部门领导，中央专家，项目主要领导，管理人员和专家在项目总结交流会上

卫生部贷款办朱宝铎主任在青海交流会上讲话

卫生部贷款办刘运国副主任在云南省曲靖市培训班开幕式上讲话

前卫生部贷款办蔡纪明副主任
和国际专家在新疆进行快速评估

亚行项目经理宋思年先
生在新疆培训班上讲话

项目协调员王立秋先
生在丽江培训班上讲话

卫生部贷款办朱宝铎主任、
段明月副处长、亚行项目经
理宋思年及相关专家参加流
行病学培训班开幕式

项目省开展活动

云南省西双版纳州培训班人员合影

云南曲靖市培训班授课现场

云南省红河州培训班开幕式

云南省培训班上学员角色扮演

云南省培训班上学员发言

青海省第七期培训班开幕式

青海省培训班上教师指导
学员传染病报告卡的填写

青海省培训班上小组讨论

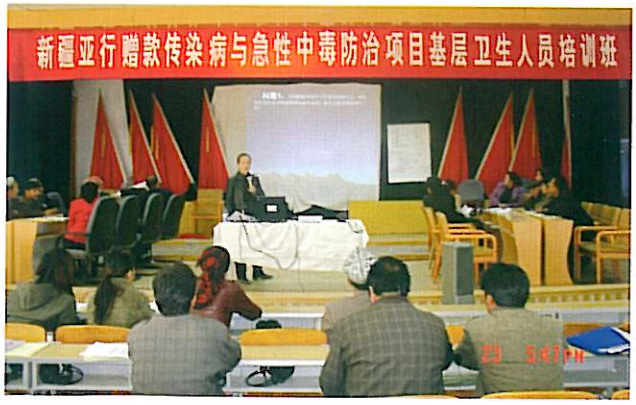
青海省培训班上学
员介绍小组讨论结果

宁夏自治区中卫市培训班开幕式

宁夏自治区培训班现场练习

宁夏自治区培训班上小组讨论

宁夏自治区培训班学员进行疫情调查



新疆培训班全景

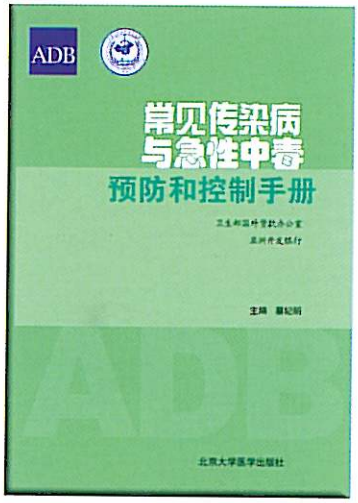
新疆培训班经验交流

新疆现场实习

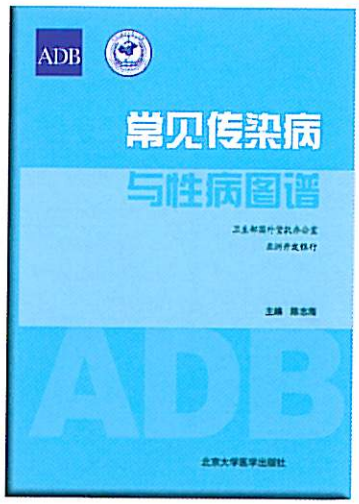
新疆培训班上小组讨论

新疆培训班上学员角色扮演

项目产出

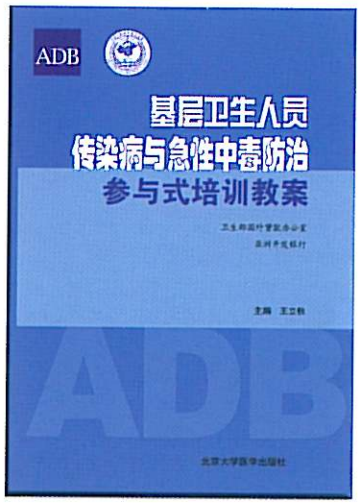


常见传染病与急性
中毒预防和控制手册

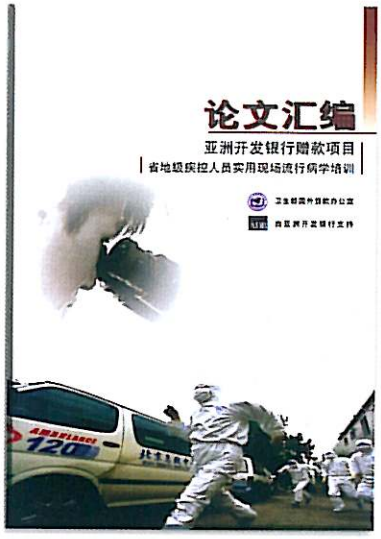


常见传染病与性病图谱

参与式教学方法演示光盘



基层卫生人员传染病与急性
中毒防治参与式培训教案



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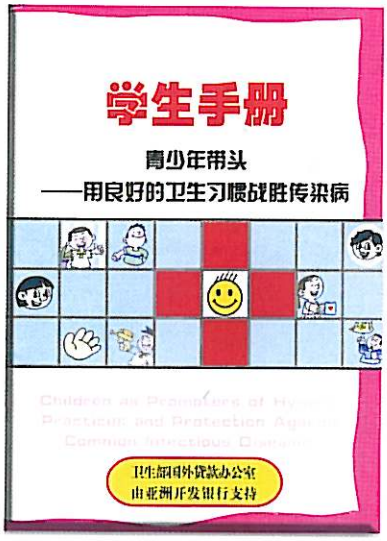
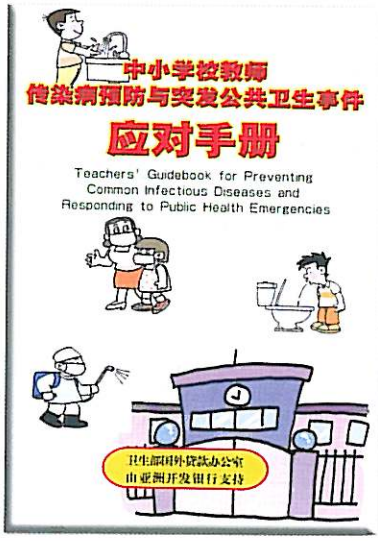
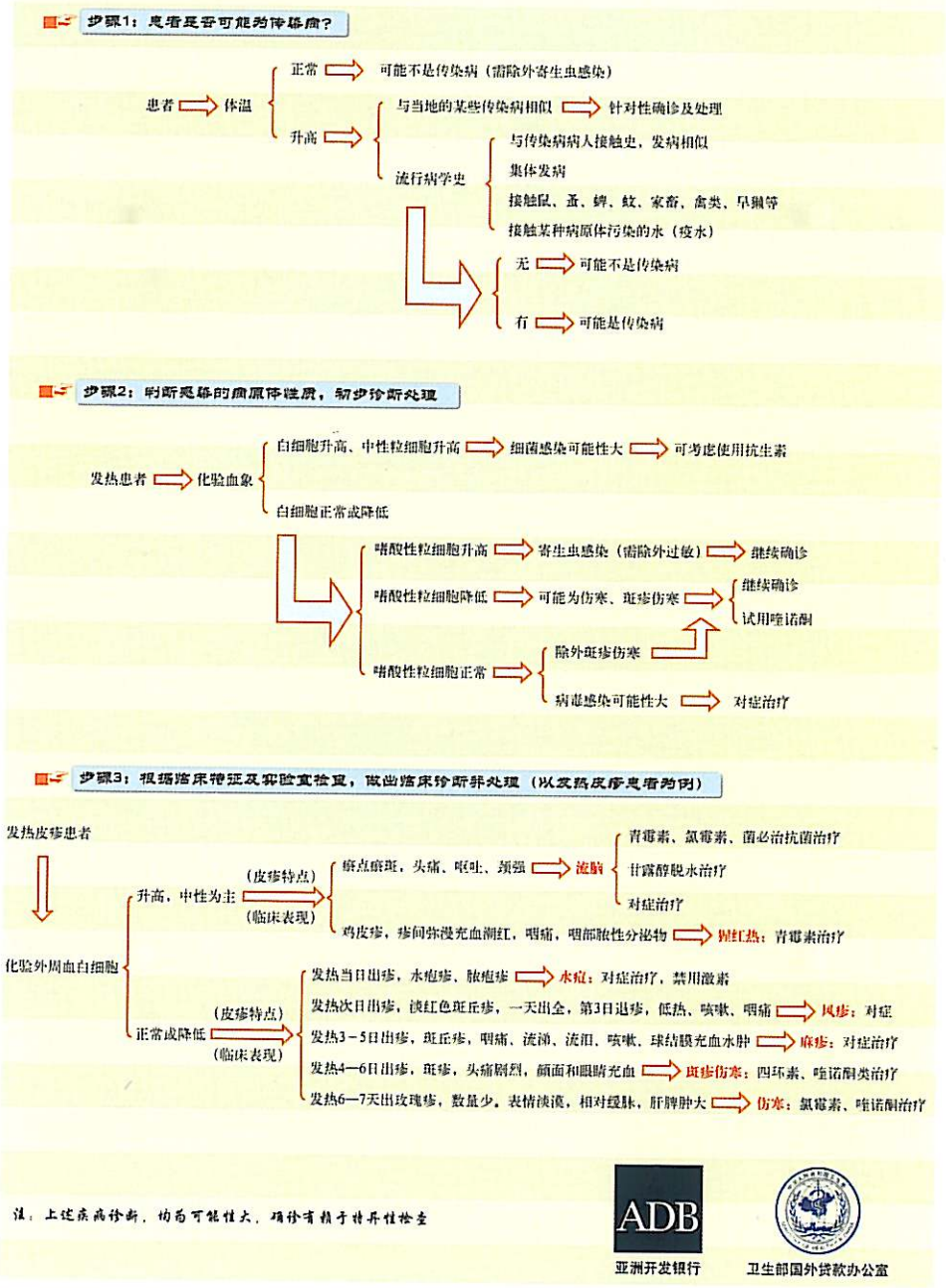


青少年带头—用良好的卫生习惯战胜传染病学生手册



中小学教师传染病预防与突发公共卫生事件应对手册

基层医务人员急性传染病诊断思路与处理流程图



基层医务人员急性传染病诊断思路与处理流程图

卫生部贷款办简介

卫生部国外贷款办公室（简称卫生部贷款办）是中华人民共和国政府应卫生事业改革和发展的需要而设立的卫生贷款项目管理机构，主要负责争取和利用国际金融组织与双边政府的各种资金，支持我国卫生事业的发展；引进国外的先进技术及管理方法，促进我国与国际金融组织和双边政府在卫生领域里的交流与合作。

卫生部贷款办的宗旨是：利用外资，为促进卫生事业发展的改革服务，为提高人民健康水平服务。

卫生部贷款办的业务范围主要包括：负责世界银行及其他国际金融组织卫生贷款项目的管理和协调，负责双边政府和非政府卫生贷款的管理和协调，负责与贷款有关赠款项目的管理和协调；负责联络国外有关机构和组织，募集赠款并组织实施，支持老少边穷地区的医疗卫生事业发展；负责其他外资项目管理；提供与项目管理相关的中介服务，如：项目的财务管理、设备采购、技术咨询，组织开展与项目有关的课题研究等；开展国外和国内的培训服务及与项目管理有关的服务；拓展经营性业务，开展其他融资、合资合作项目及相关活动。

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亚洲开发银行简介

亚洲开发银行（简称亚行）致力于提高亚太地区人民生活质量，尤其是那些每天生活费不到2 美元的19 亿贫困人口。亚行是一家多边开发型金融机构，其所有权属于64 个成员体，其中46 个来自亚太地区，18 个来自世界其他地区。亚行的目标是建设一个没有贫困的亚太地区。亚行的使命是帮助其发展中成员国减少贫困，改善生活条件，提高生活质量。亚行追求的战略议程包括可持续经济增长、全面的社会发展以及通过良好治理实现政策和制度有效性等内容。此战略的三大相互交叉的主题包括：发展民营经济，促进区域合作和保护环境可持续性。

亚行帮助其发展中成员国的主要手段包括政策对话、贷款、技术援助、赠款、担保和股权投资。亚行平均每年的贷款总额达到60 亿美元；技术援助赠款达到1.8 亿美元。

亚行成立于1966 年。中华人民共和国于1986 年加入亚行。亚行总部设在马尼拉，在全球共有26 个办事处，有来自近50 个国家的2000 多名职员。

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