

Initiation of Antimicrobial Resistance Country-Level Implementation Pilot in Zambia, March 2–13, 2004: Trip Report

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Abstract

The introduction and widespread use of antimicrobial agents has contributed to the significant decline in the morbidity and mortality from infectious diseases. However the health gains achieved are seriously threatened by a rapidly growing problem of antimicrobial resistance (AMR), including multi-drug resistance. In recognition of the potentially devastating global impact of growing drug resistance, USAID began investing several years ago in activities to both better understand the factors contributing to AMR and how best to contain AMR. A priority investment was made for the WHO to develop, in conjunction with global experts, a consensus document on the priority interventions for containing AMR, and the existing research gaps in need of being addressed. A follow-on effort is the provision of funding to USAID AMR partners, who were given the charge of devising a step-wise approach to assist missions and countries with assessing the current status of AMR activities, problems, and resources, and catalyzing an initial response by local stakeholders.

After pulling together relevant tools and background materials, a small team of these AMR partners traveled to Zambia in July 2003 to explore the possibility of initiating a pilot activity of this step-wise guidance and response process. The trip demonstrated strong local concern and interest in AMR. A follow-on visit to actually initiate the pilot work was planned, and this trip report describes the visit that was made. The main objectives were to brief and obtain guidance from USAID/Zambia and related USG officials; conduct an initial stakeholder meeting of interested key groups and/or individuals; and initiate next steps with local partners including the identification of a working group that can move the process forward. This trip report describes the activities carried out during the visit and recommendations made by the team.

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Key Words and Terms

Antimicrobial Resistance, Drug Resistance, AMR containment

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ACRONYMS

| | |
|--------------------|--|
| AED | Academy for Educational Development |
| AIDS | acquired immunodeficiency syndrome |
| AMR | antimicrobial resistance |
| APUA | Alliance for the Prudent Use of Antibiotics |
| ARCH | Applied Research in Child Health |
| ARI | acute respiratory infections |
| ART | antiretroviral therapy |
| ARV | antiretroviral |
| BU | Boston University |
| CBoH | Central Board of Health |
| CDC | Centers for Disease Control and Prevention |
| CHANGE | The Change Project [AED] |
| CHAZ | Christian Health Association of Zambia |
| The Emergency Plan | Presidential Emergency Plan for AIDS Relief |
| GFATM | Global Fund to Fight AIDS, Tuberculosis, and Malaria |
| GH | Bureau for Global Health [USAID] |
| GP | general practitioner |
| GRZ | Government of the Republic of Zambia |
| HIV | human immunodeficiency virus |
| ITG | Integrated Treatment Guidelines |
| JICA | Japan International Cooperation Agency |
| LDHMT | Lusaka District Health Management Team |
| MAP | World Bank Multi-country AIDS Program |
| MSH | Management Sciences for Health |
| NAC | National AIDS Council |
| NMCC | National Malaria Coordination Committee |
| OTC | over the counter |
| PMTCT | Preventing Mother-to-Child Transmission |
| RFCC | request for country clearance |
| RPM Plus | Rational Pharmaceutical Management Plus [MSH] |
| STI | sexually-transmitted infection |
| TB | tuberculosis |
| TDRC | Tropical Disease Research Center |
| UNICEF | United Nations Children's Fund |
| USAID | United States Agency for International Development |
| USG | United States Government |
| UTH | University Teaching Hospital |
| WHO | World Health Organization |
| ZIHP | Zambia Integrated Health Project |

BACKGROUND

The use of antimicrobial drugs has greatly contributed to the decline in morbidity and mortality due to infectious diseases over the past half-century. This achievement is being undermined by the rapidly growing problem of Antimicrobial Resistance (AMR). Infectious diseases, such as tuberculosis (TB), sexually-transmitted infection (STIs), acute respiratory infection (ARI), malaria, dysentery, and human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) are becoming increasingly difficult and expensive to treat, particularly in developing countries where resources are limited and infection rates are high. The increased morbidity, mortality, and treatment costs associated with resistant infections are seriously impacting infectious disease prevention and control efforts worldwide.

As global initiatives, such as the Global Fund to Fight AIDS, TB, and Malaria (GFATM), the World Bank Multi-country AIDS Program (MAP) and the U.S. Government (USG) Presidential Emergency Plan for AIDS Relief (“The Emergency Plan”), increase the flow of drugs to developing countries, there is increasing urgency to confront the potential for the accelerated development of resistance. Critical investments must be made in raising awareness about AMR, ensuring the proper management of these increased quantities of drugs, and monitoring their use.

As a fundamental component of the United States Agency for International Development (USAID) Infectious Disease Strategy, USAID supported the development by the World Health Organization (WHO) of the *Global Strategy for Containment of AMR*. The strategy, released in 2001, represents global consensus on priority interventions. The overall recommendation of the strategy is that packages of interventions are needed to truly contain AMR. As a logical next step, USAID Bureau of Global Health (USAID/GH) asked a group of its AMR partners [The Change Project (CHANGE), Rational Pharmaceutical Management Plus (RPM Plus), Alliance for the Prudent Use of Antibiotics (APUA), Applied Research in Child Health (ARCH), Harvard Policy Group] to create a stepwise process for countries interested in operationalizing the recommendations of the WHO Strategy. A request was made to create a systematic assessment and prioritization process for countries to follow to best address their individual AMR challenges. USAID/GH proposed piloting this process in one country for an extended period of time (3-5 years), so as to provide a sufficient quantity of operational evidence for other missions to learn from and make their own AMR investments.

As a first step, a small team traveled to Zambia in July 2003 to explore the country level interest in the problem of drug resistance.* The trip confirmed there was much concern at the local level in addressing AMR and the urgency felt by many in light of the impending arrival of increased amounts of drugs via the multiple global initiatives.

The July visit recommended that if USAID/Zambia and the Government of the Republic of Zambia (GRZ) were comfortable with the proposed approach, a team would return to more formally initiate the process. A primary objective would be to identify an on-the-ground group to champion the process, engage an expanded group of relevant stakeholders, and carry out a more in-depth situation analysis. The current follow-up visit was made to move this process forward.

* Joshi M., Pollock N., and Sommer M. 2003. *Exploratory Visit for the Antimicrobial Resistance Country-Level Implementation Pilot in Zambia, July 6–18, 2003: Trip Report*. Submitted to the U.S. Agency for International Development by the Rational Pharmaceutical Management Plus Program. Arlington, VA: Management Sciences for Health.

Purpose of Trip

Marni Sommer, Pharmaceutical Management Advisor, USAID/GH, Susan Zimicki, Director, Change Project/ Academy for Educational Development (AED), and Mohan P. Joshi, Project Manager for AMR at RPM Plus/Management Sciences for Health (MSH), traveled to Lusaka, Zambia to initiate the coalition-building and evidence-gathering steps of an approach for initiating a package of interventions aimed at building advocacy and action to contain antimicrobial resistance. The team was in Zambia from March 2-13, 2004.

Scope of Work

The scope of work for the team:

- Meet with USAID officials in Zambia Mission to discuss the objectives for the visit.
- Discuss logistics and coordination of planned activities with Oliver Hazemba, the resident representative of RPM Plus/MSH, and Caesar Mudondo, temporary local consultant hired by AED for the current AMR activities.
- Review results of document review and preliminary stakeholder interviews done by Mr. Mudondo.
- Plan and facilitate, with local partners, the first meeting of AMR Stakeholders.
- Work with selected partners to begin the next steps in the process including tool adaptation, data-gathering, advocacy and a tentative timeline for the process.
- Debrief the USAID Mission

ACTIVITIES

1. Meet with USAID Mission officials to discuss the objectives for the visit

The team met with Barbara Hughes, Dr. Abdirahman Mohamed, Dr. Dyness Kasungami, Perry Mwangala and Shanda Steimer on March 3rd. USAID/Zambia invited the Centers for Disease Control and Prevention (CDC) and other relevant USG agencies in Zambia to participate in the meeting but they were not available. Ms. Sommer briefed the Mission officials on the proposed activity and presented the draft “action guide” prepared by the USAID AMR partner group—The Change Project, RPM Plus, ARCH, and APUA. She also handed out the WHO Global Strategy for Containment of AMR. Highlighting the findings of last year’s exploratory visit, Ms. Sommer described the strong level of local concern and interest in AMR in Zambia and the existing foundations and activities that are already underway and supportive of AMR containment. The team presented the objectives for the current visit and presented the tentative list of participants invited for the AMR Stakeholders Meeting scheduled for March 5th.

Key comments from Abdirahman Mohamed:

- As The Emergency Plan activities move forward in Zambia, there is acute concern and need for human capacity building and resistance prevention initiatives.
- There is increased local concern, particularly following an article in a local Zambian newspaper last month that mentioned the possibility of some drug-resistant HIV strains in one of the provinces.

Key comments from Barbara Hughes:

- There is the potential for greatly increased amounts of drugs for HIV/AIDS to arrive in the country soon. There is a need for extra care and responsibility when such large volumes of drugs are being distributed and used.
- The mission is greatly concerned with the potential for widespread resistance, and is hoping that the proposed AMR activity will help to move forward the advocacy and activity in Zambia about ensuring the appropriate use of the drugs.

Other issues that were discussed:

- The need for advocacy to create a heightened awareness about the dangers of AMR
- A combination of AMR interventions and sustained effort will be required for attaining good impact.
- The current AMR containment effort would be a value added activity to The Emergency Plan and the Mission is supportive of the activity.

2. Discuss logistics and coordination of planned activities with Oliver Hazemba, the resident representative of RPM Plus/MSH, and Caesar Mudondo, temporary local consultant hired by AED for the current AMR activities

The team discussed with Mr. Hazemba and Mr. Mudondo the proposed logistics and coordination of activities essential for moving forward the activity during this visit. The

group noted the importance of the following approach:

- Need for the local Zambians and partners to be the leaders in the meeting and in the future process of moving the activity forward.
- Different stakeholders may have disease-specific perspectives on the problem of AMR. It is important to sensitize them to the range of factors contributing to AMR. It is also important to bring stakeholders together so they can appreciate how AMR is an across-the-board issue affecting all stakeholders. Such an approach establishes commonalities and builds coalitions.
- Emphasize adequate documentation of the steps involved in launching the AMR containment program in Zambia so that it will be a valuable and easy-to-follow guide for other countries to replicate/adapt.

3. Review results of document review and preliminary stakeholder interviews done by Caesar Mudondo

Mr. Hazemba, Mr. Mudondo, and the team reviewed and summarized the findings of recent stakeholder interviews and desk/document reviews done by Mr. Mudondo in February and early March 2004. The key findings are:

- Existence of problem acknowledged by most people
- Need for urgent action to prevent problem from becoming unmanageable
- Some activities/interventions but overall not enough
- Costly not to do anything
- Not enough information to deal with problem effectively
- Local data exists but needs collating/analyzing
- Most people prepared to be part of process to develop and implement interventions
- AMR – a responsibility for large group of people/ institutions – GRZ, health professionals, public, et cetera.

4. Plan and facilitate, with local partners, the first meeting of AMR Stakeholders

A two-hour stakeholders meeting was held on the March 5th at the MSH office in Lusaka. The agenda, outline, and the process of facilitation of the meeting were discussed and decided in advance. Annex 1 includes the PowerPoint slides that were used to facilitate the meeting.

Twenty-four participants, representing the Central Board of Health (CBoH), Lusaka District Health Management Team (LDHMT), School of Nursing, School of Medicine, Antiretroviral Therapy (ART) Center, National Malaria Coordination Committee (NMCC), Zambia Integrated Health Project (ZIHP), Christian Health Association of Zambia (CHAZ), Madison Health Insurance, University Teaching Hospital (UTH) Microbiology Laboratory, Chest Diseases Laboratory, AED, MSH, WHO, and USAID attended the meeting.

The objectives of the meeting were:

- To share views on Zambian AMR issues
- Begin building a coalition among people concerned about AMR (stakeholders)
- Propose and gain consensus on the process/next steps in Zambia

The meeting was facilitated mainly by Mr. Hazemba and Mr. Mudondo, aided by Ms. Sommer. Drs. Zimicki and Joshi kept the minutes. About 10 minutes were spent on an introduction to the problem, including the findings of the July 2003 visit by the AMR team and the recent stakeholder interviews. Significant time was spent discussing the current Zambian situation, particularly the AMR-related problems, contributing factors, and interventions. The latter part of the meeting was devoted to the proposed AMR containment pilot process and possible next steps in Zambia. Professor Chintu from UTH summed up and closed the meeting. A copy of the PowerPoint slides presented at the meeting was distributed to all the participants. A table/matrix with an initial stakeholder list was distributed also to the participants with a request for feedback. The ultimate aim is for the coalition of interested stakeholders to expand and become representative of all dimensions relevant for AMR containment within Zambia.

The key issues/concerns/suggestions that emerged during the presentation and discussion were:

- Some key problems mentioned were: very high chloroquine resistance (about 50 percent), more than 50 percent *Strep. pneumoniae* resistant to cotrimoxazole (UTH data), high antibiotic use for cases of watery diarrhea (Indicator Study, 2002).
- Some key factors mentioned as contributing to AMR were: irregular availability of essential drugs in the public sector, drug quality issues, poor prescribing and dispensing practices, non-compliance on the part of the patients, unrestricted over-the-counter (OTC) availability of antibiotics, unlicensed drug vendors, illegal inflow of drugs from bordering countries, lack of diagnostic facilities, lack of trained health workers.
- Some existing interventions mentioned were: Integrated Treatment Guideline (ITG) for frontline health workers in Zambia; implementation of new malaria policy; CHAZ drug supply management training.
- There was discussion on the issue of how much local data is necessary to initiate activity/interventions. The general observation was that we should start acting with whatever data we have, but aim at getting more data if needed as the process moves forward. If there is need for some additional data collection, it should be done. But it is perhaps better not to spend too much time, e.g. years, doing data collection. The group concluded that much useful local data already exists but there is a need to collate and analyze it. In addition, some disease-specific activities can be designed (even if there are no local data) after careful literature review of the existing data/information from elsewhere, especially those from neighboring countries with

similar problems and patterns.

- Presentation of the main elements of the proposed country AMR containment process (developed by USAID with support of partners) – identifying a local working group (champion group); situation analysis and data gathering by the group; identifying and engaging key players or stakeholders (coalition building); conducting a large stakeholders workshop (consensus workshop) to identify and prioritize interventions based on the highest level of local relevance and feasibility and also critical information gaps that need to be addressed; and monitoring and evaluation of the implemented interventions.

At the end of the meeting, there was consensus on the fact that AMR is an issue that needs to be addressed urgently in Zambia. The suggested country AMR containment approach was appreciated as an appropriate way forward. The Zambia APUA chapter coordinator suggested that APUA would be an appropriate champion group, but the larger group felt the initial champion group needed a more ‘broad-based’ representation.

The meeting was successful in bringing stakeholders from various sectors to one location. It generated discussion and a combined voice regarding the need for AMR containment activities in Zambia. The lesson learned was that such meetings are extremely useful in generating coalition, networking, commonalities, and advocacy for AMR.

5. Work with selected partners to begin the next steps in the process including data-gathering and advocacy

- Mr. Hazemba and Mr. Mudondo, together with the team, drew up a tentative list of the AMR Advocacy Working Group (the champion group) members to be proposed to Dr. D.V.C. Mtonga, Director of Clinical Care and Diagnostic Services, Central Board of Health (CBoH) for consideration. The list included:
 - Professor Chifumbe Chintu, Dr. D.V.C. Mtonga, Ms. Ernst Mwape, Mr. Oliver Hazemba, Mr. Caesar Mudondo, Dr. James Mwansa, Dr. J.C.K. Chisanga, Dr. Naawa Sipilanyambe, Ms. Mubiana Macwan’gi, and Ms. Ann Zulu.
- The team also developed a draft scope of work for the local AMR Working Group to be suggested to Dr. Mtonga. The SOW included the following:
 - ⇒ Move forward AMR advocacy process over the next four to six months, from March to August 2004
 - ⇒ Attend a series of meetings and/or workshop days (about one per month) at crucial decision-making points in the process
 - ⇒ Review and provide comments on tools, collected information, and data analysis as needed
 - ⇒ Participate in the meetings/workshops to be conducted during the process:
 - Introduction to concept/process (2 hours)
 - Discussion/review of data analysis plan and data collection tools (1 day)

- Discussion/review of findings (1 day)
 - Determine if more data/information is needed (if more data to be collected, 1 or 2 additional discussion meetings will be needed)
 - If no more information needed, discuss recommendations
 - Planning for the Consensus Workshop (2 to 3 hours or more)
- ⇒ Participate in the Consensus Workshop
- ⇒ Review outcomes of the Consensus Workshop

- The team, along with Mr. Hazemba and Mr. Mudondo, met with Dr. D.V.C. Mtonga on March 9, 2004 to brief her on the proposed working group participant list, draft SOW and provide feedback on the stakeholders meeting. Dr. Motonga was especially supportive of the activity. She iterated the need to coordinate the efforts of different institutions and to involve the private sector as well when moving forward with the process.

- On March 11, 2004, the team met with the proposed participants of the AMR Advocacy Working Group. Although all were invited, some could not attend the meeting. Those who attended were Professor Chintu, Ms. Mwape, Dr. Mwansa, and Dr. Chisanga, Mr. Hazemba, and Mr. Mudondo. The discussion focused on the way forward concerning the AMR activities in Zambia. All the stakeholders expressed their enthusiasm and willingness to contribute to the planned activities.

- The team along with Mr. Hazemba and Mr. Mudondo:
 - Reviewed and refined the data collection tools, including the pharmaceutical assessment tools
 - Reviewed the draft action guide and its possible reorganization
 - Discussed hiring consultant(s) for data gathering and analysis, including possible future roles/activities for Mr. Mudondo
 - Discussed the potential budget requirements for the next four to six months to carry out the planned activities
 - Discussed the tentative timelines for different activities during the coming four to six months
 - data collection (document review and stakeholder interviews) expected to be completed by May 8, 2004
 - data analysis expected to be completed by end of May 2004
 - large stakeholder workshop (consensus workshop) expected to be held in July or August

6. Debriefing with the USAID Mission officials

The team, along with Mr. Hazemba and Mr. Mudondo, met with Dr. Abdirahman Mohamed and Dr. Dyness Kasungami on March 11, 2004 and briefed them about the in-country progress, including the meeting with Dr. Motonga. Drs. Mohamed and Kasungami were supportive and provided the following suggestions:

- As the activities move forward, keep high level officials informed and engaged so that their continued support and cooperation is ensured

- Take into account both urban and rural set-ups while planning activities in future
- Keep Mark Shields (CDC) informed

Collaborators and Partners

- The MSH Regional Technical Advisor, Mr. Oliver Hazemba, was the key local counterpart for the team. He supported the team throughout the visit with advice on local stakeholders, key organizations to keep engaged, the planning and conducting of the stakeholders meeting, and the appropriate way forward in the Zambian context. He also provided working and meeting space at the Lusaka MSH Office during the entire period of stay of the team.

Another important collaborator working throughout with the team was Mr. Caesar Mudondo, the temporary consultant hired by AED for the AMR work. His activities included doing stakeholder interviews, co-facilitating the March 5 Stakeholder Meeting, and participating in all the discussions and further planning of the AMR activities.

- The team met with Dr. Mtonga, Director of the Clinical and Diagnostic Services at the CBoH. She is highly supportive of the AMR activity.

The invitation for the March 5 AMR Stakeholders Meeting was drafted by the team but sent by CBoH and signed by Dr. V. Mukonka. After the meeting, a thank you letter was sent to the participants by Dr. Mtonga.

CBoH subsequently sent appointment letters and terms of reference to the members of the AMR Advocacy Working Group. The appointment letter was signed by the Director General, Dr. Ben Chirwa. It will be critically important to have CBoH intimately engaged as the central collaborator as activities move forward.

- Annex 2 gives the list of collaborators met during the March 5 Stakeholders Meeting. These collaborators are from a range of institutions, have different sets of expertise and can substantially contribute to the AMR process.
- The members of the team sat as observers during the APUA Zambia Chapter business meeting. The APUA members present were Dr. James C.L. Mwansa, Dr. Lungwini Muungo, Ms. Ruth Gembue, Mr. Chipupu Kandela, Mr. Zulu Wamemba, Ms. Marjorie Kabinga, and Mr. Oliver Hazemba. Dr. Catherine Mukuka (Paediatrician and Chair of the Drug & Therapeutics Committees at the Lusaka District Health Management Team) and Mr. Caesar Mudondo were also present in the meeting.

The APUA Zambia Chapter was formally established in January 2004 and this organization will be one of the key players for AMR activity.

- During the discussion with the USAID Mission and other individuals, the team received guidance about other important bodies/organizations that should be engaged in the future. These included the Ministry of Health, the National AIDS Council (NAC), CDC, United

Nations Children's Fund (UNICEF), Japan International Cooperation Agency (JICA), the Zambia Medical Association, the Pharmaceutical Society of Zambia, and the pharmaceutical industry. As the activities move forward, it will be crucial to keep these collaborators informed and engaged.

NEXT STEPS

Immediate Follow-up Activities

- Further refine the stakeholder interview tools (including the pharmaceutical assessment tools) and send to Mr. Mudondo.
- Coordinate with Mr. Hazemba and Mr. Mudondo to:
 - analyze the information obtained during the stakeholder interviews done in February and early March 2004
 - work out the timeframe for the next series of data/information gathering and analysis
 - work out a tentative budget for activities planned for the next four to six months.
- Work out between AED and RPM Plus which of the expenses each of these two organizations will cover for carrying out different activities over the next four to six months
- Provide guidance and direction to Mr. Mudondo as he begins the next series of document review and stakeholder interviews.

Recommendations

- Continue and scale-up the advocacy and momentum recently gained concerning drug resistance issues in Zambia by planning and carrying out further activities without delay. Aim for further information gathering and analysis to end by coming May and aim at holding the large stakeholders workshop (consensus workshop) by July or August this year so that the current momentum continues and grows.
- Continue to hire Mr. Caesar Mudondo as temporary consultant for the coming months. His scope of work can include regular communication and coordination with Mr. Hazemba and the U.S. team, further document review, local adaptation of interview tools, contacting and interviewing additional key informants, data analysis, and assistance to the on-the-ground Working Group in planning the consensus workshop.
- Utilize MSH office as the secretariat for further AMR activities and continue to seek advice from Mr. Oliver Hazemba on all key issues and activities.
- Document in detail “all the key steps in moving forward the AMR containment process in Zambia” so that it can work as a useful “model” from which other countries can learn. Organize the steps sequentially so that it can serve as an “easy-to-use guide” for other countries when they try to implement AMR activities in their own situations.
- Explore the possibility for a meeting of potential donors before the consensus workshop planned for coming July/August to discuss future support by different collaborating

partners to the AMR containment process in the country. Such a meeting could potentially be called and coordinated by the USAID Mission in Zambia.

- Work further on the draft “Action Guide” to reorganize and simplify it.

ANNEX 1: AMR STAKEHOLDERS MEETING OF MARCH 5, 2004: MEETING FACILITATION SLIDES

AMR Stakeholders Meeting

March 5, 2004
Lusaka, Zambia

Meeting Objectives

- To share views on Zambian AMR issues
- Begin building a coalition among people concerned about AMR (stakeholders)
- Propose and gain consensus on the process/next steps in Zambia

Disease Burden and AMR Levels

| Infectious Disease | Global Deaths (2001) | Cases/Year | Illustrative Drug and Resistance Levels | Resistance to Multiple Drugs |
|--------------------|----------------------|--------------|---|------------------------------|
| ARI | 3,947,000 | | Penicillin: 12-55% | Yes |
| HIV/AIDS | 2,866,000 | 5.3 mil | Antiretrovirals: ??? | Yes |
| Diarrheal Disease | 2,001,000 | 1.5 bil (<5) | Cotrimoxazole: 5-95% | Yes |
| TB | 1,664,000 | 8.8 mil | Isoniazid: 2-39% | Yes |
| Malaria | 1,124,000 | 300 mil | Chloroquine: 30-50% | Yes |
| Gonorrhea | 2,000 | 333 mil. | Penicillin: up to 98% | Yes |

Total : 11,604,000

Sources: 2002 World Health Report and WHO reports

Impact of AMR

- Increased morbidity & mortality & cost
- Example:
 - Treatment of MDR TB:
 - 100 times more costly
 - treatment duration much longer
 - cure rate much lower

Global Initiatives Increase the URGENCY

- Global Fund to fight AIDS, TB & Malaria
- U.S. Presidential Initiatives (PMTCT and PEPFAR)
- Other initiatives that will increase inflow of drugs

Key Findings of July 2003 Exploratory AMR Visit (1)

- Major concern over resistance to Chloroquine, ampicillin and tetracycline
- Inadequate resistance data, sharing of information, and interaction among key players
- Unrestricted availability of drugs in the private sector
- Limited drug regulatory capacity
- High level of interest and support for AMR containment activities and advocacy
- But so far no overall systematic process of addressing AMR problem

Key Findings of July 2003 Exploratory AMR Visit (2)

Illustrative list of existing and planned activities supporting AMR initiatives:

- Existence of National Drug Policy (NDP)
- Ongoing effort towards enacting a new “Pharmacy & Medicines Bill”
- Initiative towards starting Pharmacovigilance Program with AMR as a component
- Implementing a new Malaria treatment policy with “correct use” and “compliance” as an important component
- USAID support to rational use activities, CDC support to TB laboratory surveillance, and JICA support to Virology Laboratory

Stakeholder Interviews (Feb – Mar 2004)

- Existence of problem acknowledged by most people
- Need for urgent action to prevent problem becoming unmanageable
- Some activities/interventions but overall not enough
- Costly not to do anything
- Not enough information to deal with problem effectively
- Local data exists but needs collating/analyzing
- Most people prepared to be part of process to develop and implement interventions
- AMR – a responsibility for large group of people/ institutions – GRZ, health professionals, public, etc.

The Zambia Situation

For Discussion:

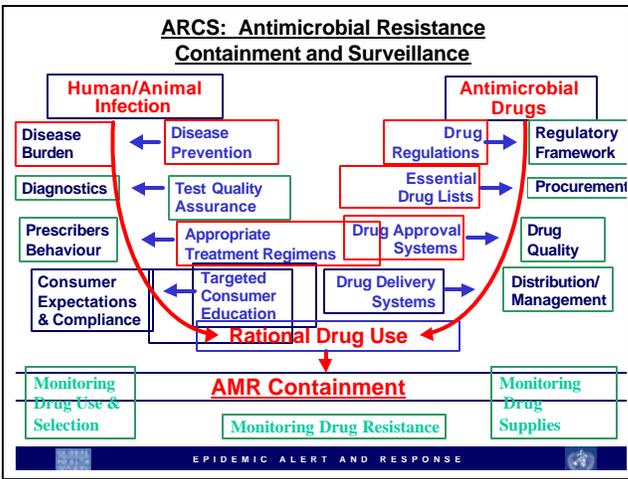
- What do we know?
- What are the limitations of the knowledge?
- What are the knowledge gaps?

The Zambia Situation: Illustrative Problems

- Very high level of CQ resistance (about 50%)
- >50% *Strep. pneumoniae* resistant to co-trimoxazole (UTH data)
- High antibiotic use for cases of watery diarrhea in Lusaka (Indicator study, 2002)

The Zambia Situation: Illustrative Contributing Factors

- Irregular availability of essential drugs in the public sector
- Anecdotal reports of poor drug quality
- Widespread over the counter availability of antimicrobials
- Poor prescribing and dispensing practices



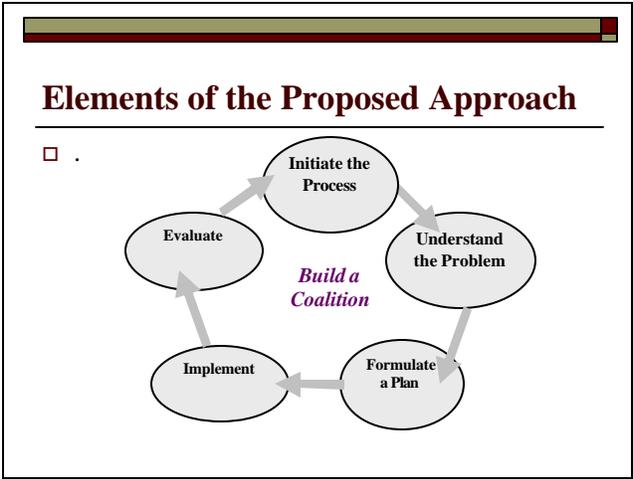
Zambia Situation: Illustrative Existing Interventions

- ITG for frontline health workers
- Implementation of new malaria policy
- CHAZ drug supply management training

Zambia Interventions

Discussion Questions:

- What are other existing interventions?
- What are other possible interventions?
- Is there sufficient information to determine feasibility and set priorities?
- How much data is needed before you can act?



Next Steps

- What are the next steps?
- Who needs to be involved and when?

**ANNEX 2: LIST OF PARTICIPANTS AT THE AMR STAKEHOLDERS MEETING
HELD ON MARCH 5, 2004 AT MANAGEMENT SCIENCES FOR HEALTH OFFICE,
BULUWE ROAD, WOODLANDS, LUSAKA**

| <i>Name</i> | <i>Designation, Organization</i> |
|--------------------|---|
| Abdi Mohamed | Child Survival/Malaria, USAID Mission/Zambia |
| Caesar Mudondo | Temporary Consultant, AED |
| Catherine Mukuka | Pediatrician and DTC Chair, Lusaka District Health Management Team (LDHMT) |
| Chifumbe Chintu | Professor of Pediatrics & Child Health and Consultant Hematologist & Oncologist, University Teaching Hospital (UTH), Lusaka |
| Chipupu Kandeke | Pharmaceutical Manager, Christian Health Association of Zambia (CHAZ) |
| Dyness Kasungami | Reproductive Health Advisor, USAID Mission/Zambia |
| Eddie Limbambala | Disease Prevention and Control Officer, WHO, Zambia |
| Ernst Mwape | Registrar, Pharmacy & Poisons Board, MoH, Zambia |
| James Mwansa | Microbiologist, UTH and Coordinator, APUA/Zambia |
| John Niraba | Microbiology Laboratory, UTH |
| Lungwani T. Mungo | Head of Pharmacy, School of Medicine, University of Zambia (UNZA) |
| Mubiana Macwan'gi | Research Advisor, Zambia Integrated Health Project (ZIHP), Lusaka |
| Margaret Maimbolwa | Principal Tutor, Lusaka School of Nursing, UTH, Lusaka |
| Marjorie Kabinga | Claims Administrator, Madison Health Insurance, Lusaka |
| Marni Sommer | Pharmaceutical Management Advisor, USAID/GH/HIDN/HSD, USA |
| Michael Macdonald | Resident Advisor Malaria, National Malaria Control Center (NMCC) |
| Mohan Joshi | Project Manager for Antimicrobial Resistance, RPM Plus/CPM/MSH, USA |
| N. Zulu | ART Center, UTH, Lusaka |
| Oliver Hazemba | Regional Technical Advisor, RPM Plus/MSH, Zambia |
| Pascalina Chanda | Operational Research Officer, National Malaria Control Center |
| Ray Handema | Virologist, ART Center, UTH, UNZA |
| Ruth Tembwe | Chest Diseases Laboratory |
| Susan Zimiki | Director, The Change Project/AED, USA |
| Zulu Wamemba | Medical Officer, UTH, Lusaka |

ANNEX 3: REQUEST FOR COUNTRY CLEARANCE (RFCC)

SUBJECT: GH/HIDN/HS: REQUESTS TRAVEL CONCURRENCE TO ZAMBIA UNDER THE AED/CHANGE PROJECT (HRN-A-00-98-00044-00), MSH/RPM PLUS PROGRAM (HRN-A-00-00-00016-00).

TEXT:

1. GH/HIDN/HS, ACADEMY FOR EDUCATIONAL DEVELOPMENT (AED) AND MANAGEMENT SCIENCES FOR HEALTH (MSH) REQUEST CONCURRENCE FOR TRAVEL BY MARNI SOMMER (PHARMACEUTICAL MANAGEMENT ADVISOR, GH/HIDN/HS), SUSAN ZIMICKI (CHANGE PROJECT DIRECTOR) AND MOHAN JOSHI (SENIOR TECHNICAL ADVISOR, ANTIMICROBIAL RESISTANCE, RPM PLUS) TO ZAMBIA, ARRIVING ON/ABOUT MARCH 2, 2004 AND DEPARTING ON/ABOUT MARCH 12, 2004.

2. MARNI SOMMER HAS USAID SECURITY CLEARANCE; SUSAN ZIMICKI AND MOHAN JOSHI DO NOT HAVE USAID SECURITY CLEARANCE.

3. PURPOSE OF TRAVEL IS TO INITIATE THE COALITION-BUILDING AND EVIDENCE-GATHERING STEPS OF AN APPROACH FOR INITIATING A PACKAGE OF INTERVENTIONS AIMED AT BUILDING ADVOCACY AND ACTION TO CONTAIN ANTIMICROBIAL RESISTANCE. WHILE IN ZAMBIA THE GROUP WILL:

- 1) MEET WITH ABDI MOHAMED AND IF AVAILABLE, BARBARA HUGHES AND DYNES KASUNGAMI AT USAID/ZAMBIA TO DISCUSS AND FINALIZE OBJECTIVES FOR THE VISIT (MARCH 3)
- 2) REVIEW RESULTS OF DOCUMENT REVIEW AND PRELIMINARY STAKEHOLDER INTERVIEWS DONE BY CAESAR MUDONDO (CONSULTANT). DEVELOP A PRESENTATION FOR A FIRST MEETING OF STAKEHOLDERS. (MARCH 3-4)
- 3) MEET WITH STAKEHOLDERS. (MARCH 5)
 - a) COME TO A FINAL DECISION CONCERNING FOCUS CONDITIONS AND DRUGS
 - b) IDENTIFY INFORMATION GAPS
 - c) DECIDE ON NEXT STEPS FOR DATA-GATHERING AND ADVOCACY
- 4) WORK WITH SELECTED PARTNERS TO BEGIN THE DATA-GATHERING AND ADVOCACY PROCESSES. (MARCH 8-12)

4. ANTICIPATED CONTACTS IN COUNTRY INCLUDE USAID/ZAMBIA, OLIVER HAZEMBA (MSH/RPM PLUS), CAESAR MUDONDO (CHANGE CONSULTANT), MOH, REPRESENTATIVES OF APUA GROUP, OTHER POTENTIAL STAKEHOLDERS. CONTACTS ARE AWARE OF THIS PROPOSED TRAVEL AND HAVE AGREED TO BE AVAILABLE.

5. TRAVEL IS BEING FUNDED BY GH.

6. NO MISSION SUPPORT IS REQUESTED.

7. MARNI SOMMER AND/OR DR. ZIMICKI AND JOSHI WILL CONTACT MISSION ON ARRIVAL TO ARRANGE BRIEFING AND/OR DEBRIEFING.

8. WE APPRECIATE MISSION ASSISTANCE IN THIS MATTER. PLEASE ADVISE MISSION COMMENTS, CONCURRENCE TO MARNI SOMMER, GH/HIDN/HS, MSOMMER@USAID.GOV, (202) 712-1722 AND/OR TONY BONI, GH/HIDN/HS, ABONI@USAID.GOV, (202) 712-4789, WITH A COPY TO TODD FISK, CHANGE (TFISK@AED.ORG) AND GRAEME RAMSHAW, RPM PLUS (GRAMSHAW@MSH.ORG). THANK YOU FOR YOUR ATTENTION TO THIS REQUEST.