



Antimicrobial Resistance Basic Research Methodologies Workshop

Lusaka, Zambia
October 25-28, 2005

Submitted by :
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Acronyms

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Acronyms

AMR	Antimicrobial Resistance
APUA	Alliance for Prudent Use of Antibiotics
CIDRZ	Centre for Infectious Diseases in Zambia
MSH	Management Sciences for Health
NGOs	Non Governmental Organizations
RPM	Rational Pharmaceutical Management
TDRC	Tropical Diseases Research Centre
UNZA	University of Zambia
UTH	University Teaching Hospital
WHO	World Health Organization
ZHWSR	Zambia Health Workers For Social Responsibility
ZMK	Zambian Kwacha

Acknowledgements

The APUA Zambia Chapter thanks the APUA International for the support rendered to host the AMR Basic research Methodologies Training workshop. We cordially acknowledge RPM Plus Program for the support that it has given the chapter since its inception. Special thanks for Dr. Anibal Sosa for the leadership and being a practical mentor. Professor Iruka Okeke and John Stelling, we sincerely thank you for making it to Lusaka and your time. Your mastery in training and passion in AMR were an inspiration to all. Above all, the enthusiastic participants made the process a memorable event and we thank you for being there for the Chapter.

Background

Antibiotics are becoming ineffective against many bacterial agents due to gradual development of resistant against antibiotics. Meanwhile research and development of newer antimicrobial agents has to being on the same pace. In such a situation, in order to reduce anti-microbial resistance and improved public health by enhancing knowledge about prudent use of antibiotics, the 'Alliance for the Prudent use of Antibiotics - Zambia' was established as a non-political and non-profit making organization.

In pursuance and advocacy for increased involvement and capacity to designed and conduct research the Chapter planned and implemented the first Antimicrobial Resistance Basic Research Methodologies Training Course from October 25-29, 2005, Lusaka Zambia. The training was organized by the International Alliance for Prudent Use of Antibiotics, Rational Pharmaceutical Management Plus Program in collaboration with Ministry of Health and Central Board of Health.

Purpose of the Training

In 2004, the Chapter called for submission of research papers. A number of papers were submitted and the executive selected two that were submitted to the International APUA for sponsorship. None of the two submissions were accepted for sponsorship. The Zambia Chapter in collaboration with APUA International decided to design and conduct the first Antimicrobial Resistance Basic Research Methodologies Training Course in 2005 to increase the capacity of its members and health professionals with a background in clinical sciences, pharmacy, public health, epidemiology, infectious diseases, infection control and microbiology.

Workshop Overview

The Zambia APUA Chapter working in collaboration with RPM Plus and APUA International designed a training program, budgeted and sort for financial support from APUA International and RPM Plus. The Chapter advertised course through using fliers and letters to health institutions and individuals.

The training course was designed to focus on the impact of antimicrobial resistance and practical approaches for promoting rational use and

preservation of antimicrobial agents. For effective delivery, training was strategically programmed into three parts

Part 1

Introduction:

- AMR in Africa: status, containment and research needs,
- overview of the resistance problem,
- resistance in key endemic and high-burden pathogens,
- highlight mycobacterium tuberculosis, HIV, Plasmodia and diarrheal pathogens
- known contributors to resistance and
- examples of research needs laboratory, clinical and behavioral
- Designing and implementing a research project

Part 2

WHONET

- How is resistance detected and measured
- How us antimicrobial use detected and measured
- How is data collected and disseminated

Part 3

Seeking research finding

Research documentation and accountability

Dissemination research findings

Research continuity

Local research challenges

Design and Methods

The highly participatory course will consist of:

- Presentations
- Discussions
- Small group activities
- Field visits

In the nutshell the AMR training was based on materials developed by APUA in collaboration with WHO, and allowed for exchange of experiences and ideas among participants, adding in-dept to the learning process. The organizers, facilitators and participants made it a success.

Methodology

For effective learning, the faculty prepared and presented power point materials, hand outs, Video, computer simulations and program. Both group discussions for problem solving research design and lecture methods were applied. In addition, the participants had an opportunity to have field experience at the University Teaching Hospital laboratories.

Financial Report

Annex 4, shows an expenditure report of the Antimicrobial Resistance Basic Research Methodologies Training at MSH (25 - 29 Oct 2005). The US\$3500 equivalent ZMK15,015,000.00. The funds were used for daily participants travel, stationary, meals venue and outside services. The total expenditure was ZMK11,853,130.00 remaining with a balance of ZMK3,161,870.00 which was retained for the Chapter operations (see itemized report in appendix # 4).

Collaborators and Partners

The course was conducted in collaboration Central Board of Health, Rational Pharmaceutical Management Plus. As result, the participants were drawn from various institutions and disciplines. Representation was acknowledged from WHO, Tropical Diseases Research Centre (TDRC), University of Zambia, University Teaching Hospital, Pharmaceutical Regulatory Authority, Non Governmental Organization (NGO) as such as Centre for Diseases Research in Zambia, Zambia Health Workers For Social Responsibility and private sector.

The faculty was invited from APUA International, WHO, RPM Plus will served as trainers, included Professor Iruka Okeke, Ph.D, Assistant professor of Biology & Branco-Weiss Fellow of the Society Science Haverford College, PA, USA and John Stelling, MD, MPH from WHO collaborating Centre for Surveillance of Antimicrobial Resistance Boston, MA, USA

Next Steps

The training generated a lot of interest in AMR research among the participants as a result participants and the APUA Chapter members proposed follow up these activities.

Immediate Follow up Activities

The workshop participants were requested to prepare research proposals for the Zambia Chapter to review and adopt for the 2006/7 workplan.

The Chapter will develop an annual workplan that will not only focus on advocacy activities but engage in AMR research to provide evidence for future activities. In the long run, in addition to evidence provided by the International

APUA Chapter and networking, the chapter will use the information for advocacy, training and promotion on prudent use of antibiotics.

Recommendations

1. To enable the Zambian Chapter implement its proposed workplan, the International Chapter should assist to advocate, solicit for international funding of proposals and collaborative research
2. APUA should encourage exchange visits of Zambian counterparts with other chapters or institutions researching in AMR.

Annex 1

**Antimicrobial Resistance Basic Research Methodologies Training
October 25-28, 2005
Lusaka, Zambia**

DAY 1

- | | |
|---------------|--|
| 8:30 - 9:00 | Registration |
| 9:00 - 9:15 | Welcome and introductions - James and Oliver |
| 9:15 - 10:00 | Antimicrobial resistance: Biological basis and public health consequences - John |
| 10:00 - 10:45 | Antimicrobial resistance in community pathogens - Iruka |
| 10:45 - 11:00 | Break |
| 11:00 - 11:45 | Antimicrobial susceptibility testing - Iruka |
| 11:45 - 12:00 | Disk susceptibility testing: Step by Step (CLSI videotape) |
| 12:00 - 1:30 | Lunch |
| 1:30 - 2:15 | Risk factors for resistance in developing countries (Iruka) |
| 2:15 - 3:00 | Strategies for the containment of antimicrobial resistance (John) |
| 3:00 - 3:15 | Break |
| 3:15 - 3:45 | WHONET Overview (John) |
| 3:45 - 4:00 | Discussion of course objectives, interests, and priorities |

Annex 2

Antimicrobial Resistance Basic Research Methodologies Training October 25-29, 2005 Lusaka, Zambia

The Zambia Alliance for Prudent Use of Antibiotics Chapter will host an Antimicrobial Resistance Basic Research Methodologies Training Course from October 25-29, 2005, Lusaka Zambia. The training is organized by the International Alliance for Prudent Use of Antibiotics, Rational Pharmaceutical Management Plus Program in collaboration with Ministry of Health and Central Board of Health.

Who Should Attend?

The course is designed for participants with a background in clinical sciences, pharmacy, public health, epidemiology, infectious diseases, infection control and microbiology. Those interested in containment of antimicrobial/drug resistance and improved management of infectious diseases are invited to apply.

Course focus

The training course will focus on the impact of antimicrobial resistance and practical approaches for promoting rational use and preservation of antimicrobial agents. The training has been strategically programmed into three parts

Part 1

Introduction:

- AMR in Africa: status, containment and research needs,
- overview of the resistance problem,
- resistance in key endemic and high-burden pathogens,
- highlight mycobacterium tuberculosis, HIV, Plasmodia and diarrheal pathogens
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- examples of research needs laboratory, clinical and behavioral
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Research continuity

Local research challenges

Design and Methods

The highly participatory course will consist of:

- Presentations
- Discussions
- Small group activities
- Field visits

The AMR training will be based on materials developed by APUA in collaboration with WHO, and will allow for exchange of experiences and ideas among participants, adding in-dept to the learning process.

Faculty

The team of experts from APUA International, WHO, RPM Plus will serve as trainers, They include:

Professor Iruka Okeke, Ph.D.

Assistant professor of Biology & Branco-Weiss Fellow of the Society Science

APUA Scientific Advisor

Haverford College, PA, USA

Email: iokeke@haverford.edu

John Stelling, MD, MPH

WHO collaborating Centre for Surveillance of Antimicrobial Resistance

Boston, MA, USA

Email: stelling@rics.bwh.harvard.edu

Fees and Application

The course is free. Each participant will receive a CD-ROM with all materials.

Participants lunch will be provided and local transport within Lusaka.

Travel from outside Lusaka, accommodation and incidental expenses are the responsibility of the individuals and sponsoring organizations. For those coming out of Lusaka, the local Organizing Committee can help to arrange for hotel

accommodation at your own cost. Participants should arrive in Lusaka, on 24th October , 2005.

Places for 20 participants will be available; selection will be based on prior experience, interest in promoting antimicrobial resistance, and ability to implement such programs in their own environment

Deadline for Application

Applications are due no later than October 15, 2005. Because the course is limited for 20 participants, applicants are encouraged to apply early.

For further information, please send an email Mweemba Muvwimi at cdl@zamnet.zm, with a copy to James Mwansa at jclmwansa@yahoo.ca and Oliver Hazemba, ohazemba@msh.org

Annex 3

List of Participants

No	Full Names	Profession / Organization	Telephone	E-mail Address
1	Dr. Agnes Bungoni Chomba	<i>Medical Officer</i> Clinic 3 University Teaching Hospital	096 - 662618	agnesbungoni@hotmail.com
2	Dr. James C.L. Mwansa	<i>Microbiologist</i> University Teaching Hospital APU, Zambia Chairman	095 - 459201	jclmwansa@yahoo.ca
3	Mr. Caesar Mudondo	<i>Pharmacist</i> Unicare Pharmaceuticals Lusaka	096 - 751206	caesarmud@yahoo.com
4	Dr. Yassa Pierre	<i>Head of Dermatology</i> University Teaching Hospital	097 - 496894	yassapeter@yahoo.co.uk
5	Mr. Oliver Hazemba	<i>Pharmacist</i> MSH / RPM Plus	261614	ohazemba@msh.org
6	Peter Songolo	<i>Medical Officer (DPC)</i> WHO Zambia	255322	songolop@zm.afro.who.int
7	Linda Sikakwa Mabumba	<i>Biomedical Scientist</i> University Teaching Hospital	097 - 806194	lindasikakwa@yahoo.com

No	Full Names	Profession / Organization	Telephone	E-mail Address
8	John Mwaba	<i>Biomedical Scientist</i> University Teaching Hospital	095 - 920771	jmwaba@yahoo.com
9	Allan Chonde	<i>Lab Technologist</i> Tropical Diseases Research Centre (TDRC)	096 - 665973	chondeallan@yahoo.com
10	Bobby Malilwe	<i>Lab Scientist</i> Tropical Diseases Research Centre (TDRC)	097 - 857464	bobmali9@yahoo.com
11	Mutale Nsofwa	<i>Med. Lab Technologist</i> Tropical Diseases Research Centre (TDRC)	096 - 941673	nsofwam@yahoo.com
12	Angela Musamba	<i>Pharmacy Technologist</i> Centre for Infectious Diseases Research (CIDRZ)	097 - 798740	angelam@cidrz.org
13	Agnes Nkhoma	<i>Pharmacy Technologist</i> Centre for Infectious Diseases Research (CIDRZ)	097- 330475	agnes@cidrz.org
14	Muyamwa Mainga	<i>Pharmacy Technologist</i> <i>Inspector</i> Pharmaceutical Regulatory Authority	096 - 450708 220429	muyamainga@yahoo.com pharmacy@coppernet.zm

No	Full Names	Profession / Organization	Telephone	E-mail Address
15	Dr. Lukwesa Musyani	<i>Medical Lab Scientist</i> <i>Medical Doctor</i> University Teaching Hospital	096 - 450089	clmusyani@yahoo.com
16	Dr. Lungwani Muungo	<i>HOD Pharmacy / Pharmacy</i> Unza Zambia	097 - 775473	lumuungo@yahoo.co.uk
17	Dr. Mwansa Munkanta	<i>Molecular Immunologist</i> University Teaching Hospital	096 - 621669	munkantamwansa@yahoo.co.uk
18	Kelly Mwayengo	<i>Lab Technologist</i> Corpmed	097 - 886665	kwayengo@yahoo.com
19	Iruka Okeke	<i>Academic Microbiologist</i> Haverford College / APUA	+ 1(610) 896 - 1470	iokeke@haverford.edu
20	John Stelling	<i>Doctor</i> APUA	+1(617) 732 - 7388	jstelling@rics.bwh.havarford.edu
21	Dr. Robert Mtonga	<i>Doctor Researcher Activist</i> Zambia Health Workers For Social Responsibility	097-842922	zambia@icbl.org
22	Dr. B. Munalula	<i>Lecture</i> UNZA School of Medicine	097 - 775703	bmunalula@zamnet.zm

Annex 4

Antimicrobial Resistance Basic Research Methodologies Training at MSH (25 - 29 Oct 2005)

SNO	DATE	NAMES	SURNAMES	ORGANISATION	Transport Refund daily	RATE/ DAY	AMOUNT TRAVEL	Office Supplies	TOTAL AMOUNT
1	2810/2005	Linda S	Mabumba	UTH	4	50,000.00	200,000.00		200,000.00
2	2810/2005	Dr. Lukwesa	Musyani	UTH	4	50,000.00	200,000.00		200,000.00
3	2810/2005	Caesar	Mudondo	Unicare	4	50,000.00	200,000.00		200,000.00
4	2810/2005	Dr. Robert	Mtonga	ZHWSR	4	50,000.00	200,000.00		200,000.00
5	2810/2005	Bobby	Maliilwe	TDRC	4	50,000.00	200,000.00		200,000.00
6	2810/2005	Chonde	Allan	TDRC	4	50,000.00	200,000.00		200,000.00
7	2810/2005	Mutale	Nsofwa	TDRC	4	50,000.00	200,000.00		200,000.00
8	2810/2005	Angela	Musamba	CIDRZ	4	50,000.00	200,000.00		200,000.00
9	2810/2005	Agnes	Nkoma	CIDRZ	4	50,000.00	200,000.00		200,000.00
10	2810/2005	Muyamwa	Mainga	PRA	4	50,000.00	200,000.00		200,000.00
11	2810/2005	Dr. Peter	Songolo	WHO	4	50,000.00	200,000.00		200,000.00
12	2810/2005	Dr. Pierre	Yassa	Unza Zambia	4	50,000.00	200,000.00		200,000.00
13	2810/2005	John	Mwaba	UTH	4	50,000.00	200,000.00		200,000.00
14	2810/2005	Dr. James	Mwansa	UTH	8	50,000.00	400,000.00		400,000.00

SNO	DATE	FNAMES	SURNAMES	ORGANISATION	Transport	RATE/	AMOUNT	Office	TOTAL
15	2810/2005	Dr. Lungwani	Muungo	Unza Zambia	4	50,000.00	200,000.00		200,000.00
16	2810/2005	Dr. Bungoni	Chomba	UTH	3	50,000.00	150,000.00		150,000.00
17	2810/2005	Dr. Mwansa	Munkanta	UTH	1	50,000.00	50,000.00		50,000.00
18	2810/2005	Kelly	Mwayengo	Corpmed	4	50,000.00	200,000.00		200,000.00
19	2810/2005	Louise	kalusa	MSH	4	50,000.00	200,000.00		200,000.00
20	2810/2005	Rose	Malunga	MSH	4	50,000.00	200,000.00		200,000.00
21	2810/2005	Arnold	Shamwaka	MSH	4	50,000.00	200,000.00		200,000.00
22	2810/2005	Oliver	Hazemba	MSH	4	50,000.00	200,000.00		200,000.00
23	2810/2005	Stationery	Fajoy General	Dealers			-	378,000.00	378,000.00
24	2810/2005	Taj Pomdzi	venue	meeting			-	720,000.00	720,000.00
25	2810/2005	Shoprite	Drinks, Biscuits				-	801,630.00	801,630.00
26	2810/2005	lunch	Royal Karibu	25 pax			-	4,893,500.00	4,893,500.00
27	2810/2005	Taxis	Talk time				-	160,000.00	160,000.00
28	28/10/2005	Louise	Outside Services				-	500,000.00	500,000.00
								TOTAL EXP	11,853,130.00
Opening Balance day 1								TOTAL CASH	15,015,000.00
Closing Balance								BALANCE	3,161,870.00

