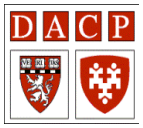
Noguchi Memorial Institute for Medical Research



Department of Ambulatory Care and Prevention

Medicines and Insurance Coverage (MedIC) Initiative
Course on Medicines Policy Analysis in Health Insurance Systems
Accra, Ghana
16 to 25 November 2008

Organized by
The WHO Regional Office for Africa, the Noguchi Memorial Institute for Medical Research in collaboration with WHO and the Ministry of Health in Ghana, and the WHO Collaborating Center in Pharmaceutical Policy at the Department of Ambulatory Care and Prevention of Harvard Medical School and Harvard Pilgrim Health Care

COURSE REPORT

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WHO Collaborating Center in Pharmaceutical Policy
by
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January 2009


World Health Organization Africa
Course in Pharmaceutical Policy Analysis & Health Insurance
Venue: Executive Hostel GIMPA, Greenhill, Legon Accra, Ghana,

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ACRONYMS

ART	**Antiretroviral Treatment**
CCPP	**WHO Collaborating Center in Pharmaceutical Policy, Boston**
DACP	**Department of Ambulatory Care and Prevention**
DPRG	**Drug Policy Research Group**
DRG	**Diagnosis-related group**
GIMPA	**Ghana Institute of Management and Public Administration**
HMS	**Harvard Medical School**
HPHC	**Harvard Pilgrim Health Care**
INRUD	**International Network for the Rational Use of Drugs**
MedIC	**Medicines and Insurance Coverage Initiative**
MeTA	**Medicines Transparency Alliance**
MSH	**Management Sciences for Health**
NHIA	**Ghana National Health Insurance Authority**
NHIF	**National Health Insurance Fund (Tanzania)**
NHIP	**National Health Insurance Program (Uganda)**
NHIS	**National Health Insurance Scheme (Nigeria)**
NMIMR	**Noguchi Memorial Institute for Medical Research**
POLMED	**Police's Medical Aid Scheme (South Africa)**
SPS	**Strengthening Pharmaceutical Systems**
WHO	**World Health Organization**
WHO AFRO	**WHO Regional Office for Africa**

EXECUTIVE SUMMARY

The first African *MedIC Course in Pharmaceutical Policy Analysis for Health and Insurance Systems* brought together 25 participants from governments, health insurance schemes, and international organizations from of six African countries in Accra, Ghana, from 16 to 25 November, 2008. The course was part of the major international Medicines and Insurance Coverage (MedIC) Initiative (http://www.whoccpp.org/research/medic.asp), which aims to give policy makers in developing and transitional countries the tools to design, implement, and evaluate evidence-based medicines coverage policies. MedIC is led by the World Health Organization Collaborating Center in Pharmaceutical Policy in Boston (WHO CCPP, www.whoccpp.org), a leader in the global effort to improve access to and use of medicines through effective medicines policies in governments and health insurance systems.

During the highly interactive 9-day course, participants from Ghana, Kenya, Nigeria, South Africa, Uganda, and Tanzania worked in small cross-country groups to answer questions such as: Why extend coverage for medicines in health insurance programs? What are the advantages and disadvantages of specific medicines policies? What is the best way to design, implement, and manage a formulary? How can routine medicines data be used to develop evidence-based policies? How can insurance programs evaluate changes in medicines coverage? What are the best measures for routine monitoring of medicines policy effects? As country teams, participants developed innovative policy interventions to improve medicines use and health outcomes in their systems, immediately applying the materials discussed during the course to their settings.

The World Health Organization Regional Office for Africa, with funding from the U.K. Department for International Development and the European Community; the World Health Organization Country Office in Accra; the Noguchi Memorial Institute for Medical Research at the University of Ghana; the Ghana National Health Insurance Authority and the Republic of Ghana Ministry of Health; the Medicines Transparency Alliance (MeTA); the Police's Medical Aid Scheme of South Africa (POLMED); Strengthening Pharmaceutical Systems (SPS) and Management Sciences for Health (MSH); and the Department of Ambulatory Care and Prevention (DACP) at Harvard Medical School and Harvard Pilgrim Health Care supported the Ghana MedIC Course.

As part of the MedIC Initiative, the WHO CCPP intends to work with country groups on implementing the policy evaluation projects developed during the Ghana MedIC Course. Following the successful course in Ghana, the WHO CCPP is planning a MedIC course for Southern African countries and a French-language course for francophone countries, in addition to courses in Latin America and Asia, pursuing its goal to work with health insurance programs across the world to improve the health of the poor, through sound medicines coverage policies.

INTRODUCTION

Background

Access to essential medicines to treat acute and chronic illnesses is a major problem in African countries, especially among the poor. In many countries, public health systems are weak and have limited resources to ensure regular access to essential medicines, and most medicines are purchased in the private sector. High costs are responsible for high out of pocket expenditures and limited access to medicines. Failure to use medicines when they are needed can lead to preventable morbidity and mortality, catastrophic episodes of illness that increase impoverishment, and large-scale losses to health systems and employers. Insurance programs that cover medicines can play a key role in extending access to high risk populations and in encouraging more transparent, economical, and effective use of medicines.

Health insurance programs are an increasingly important type of health sector financing in African countries. Insurance models include national tax-funded social insurance, large employer-based health insurance programs and smaller community-based health insurance schemes. Rationalizing pharmaceutical benefits within insurance programs can be a scaleable and sustainable way to improve medicines access, affordability, and use. Evidence-based medicines coverage helps health insurance programs gain most health value for their health care investments. While insurance coverage for all medicines is important in Africa, coverage of antiretrovirals (ARV) will pose particular challenges when global funding for these medicines ends.

Multiple stakeholders including international and national donor agencies, large national and multinational companies, health insurance programs, and civil society partners aim to improve affordable access to cost-effective medicines. Health insurance programs offer an environment within which to assess equity in medicines access, use, and cost for defined populations; capacity to intervene on a system level; and in many countries, a feasible mechanism to spearhead private sector activities to improve access and use. To achieve these outcomes, health insurance programs need to make evidence-based decisions. Evidence-based policymaking requires development of appropriate conceptual frameworks and enhancement of specific technical skills to ask and answer policy-relevant questions using routinely collected or ad-hoc data.

To strengthen global capacity in medicines policy analysis, the HMS Department of Ambulatory Care and Prevention (DACP) is leading the Medicines and Insurance Coverage (MedIC) Initiative on behalf of the Boston World Health Organization Collaborating Center in Pharmaceutical Policy (WHOCCPP, www.whoccpp.org). As part of the MedIC Initiative, DACP partners with international and country institutions to offer unique modular Courses in Medicines Policy Analysis.

Medicines and Insurance Coverage (MedIC) Initiative Courses in Africa

The WHO Geneva, the WHO Regional Office for Africa and the WHO CCPP in Boston, USA have begun to conduct region-specific MedIC Courses in Africa to strengthen capabilities for evidence-based policy decision making in government, private, and community-based health insurance systems. MedIC courses are designed to train health care leaders and analysts in identifying problems in medicines access and use, and in designing,

implementing, and evaluating medicines benefit policies in health systems. Courses are tailored to the needs of a particular region or group of organizations. MedIC Course participants and facilitators address a broad range of questions that arise when making evidence-based medicines policy decisions, including:

- Why extend coverage for medicines in health insurance programs?
- How can ARV medicines be covered by health insurance programs?
- Which groups of enrollees benefit most from expanded medicines coverage?
- What are the advantages and disadvantages of specific medicines policies?
- What is the best way to design, implement, and manage a formulary?
- How can routine medicines data be used to develop evidence-based policies?
- How can insurance programs evaluate changes in medicines coverage?
- What are the best measures for routine monitoring of medicines policies?

The MedIC Initiative proposes to conduct at least two sets of MedIC courses in Africa. In Phase 1, we have developed a 9-day MedIC Course for Anglophone countries with emerging or existing national and/or private health insurance systems. The first Anglophone African Course included participants from Ghana, Kenya, Nigeria, South Africa, Tanzania, and Uganda). In Phase 2, we will adapt materials for Francophone countries with community-based health insurance schemes (for example Benin, Burkina Faso, Burundi, Cameroon, Côte d'Ivoire, Congo, Guinea, Mali, Mauritania, Niger, Rwanda, Senegal, Chad, and Togo). The courses build on the successful inaugural MedIC Course held in Manila, Philippines, in 2007 (http://www.whoccpp.org/training/medic2007/course_overview.asp).

MedIC courses are primarily intended for policy makers, analysts, actuaries, and others involved in making medicines benefit decisions for health insurance programs in Africa. We especially seek teams of 3-5 participants from individual health insurance programs committed to active policy assessment and implementation after the course. Others interested in pharmaceutical policy issues in health systems will also benefit from the courses. To allow for effective group work, the maximum number of participants per course is limited to 40.

MedIC courses consist of brief lectures, small and large group case discussions, and hands-on analyses of health insurance program data. Importantly, the courses provide an opportunity for participants to focus on specific medicines policy issues relevant to their systems, and to develop a post-course plan to implement and evaluate a policy intervention to improve key health outcomes. Participants enhance their own skills and increase the capability of their health insurance systems to identify problems in medicines access and use, and to design, implement, and evaluate cost-effective medicines coverage policies. Participants interact with counterparts in other health insurance schemes and build networks for sharing tools and experiences regarding medicines coverage policies and analysis.

An important pre-course activity is the completion of the WHO CCPP MedIC Health Insurance Survey by health insurance programs interested in participating in the courses. Survey responses serve to tailor the courses to participant organizations' needs and form the basis for discussions of approaches to medicines coverage and data that exist in different systems.

Anticipated Benefit to Participating Countries and Systems

Insurance systems should be central players in promoting pharmaceutical system transparency in many countries by exercising effectively the different active purchasing levers that they control, which include product selection and formulary development, price negotiations with pharmaceutical suppliers, transparent procurement, health provider and pharmacy contracting, paying for performance, unbiased information to health providers and members, and economic incentives to encourage use of the most cost-effective medicines.

In the MedIC courses, country participants identify key questions related to pharmaceutical policy decision making in their own systems; acquire the skills to collect or extract and analyze the data to answer these questions; conceptualize and develop frameworks for appropriate policy interventions; and begin to plan implementation and monitoring of these interventions. In this process, country participants develop materials for locally relevant case studies of policy interventions to improve medicines policy decision making and pharmaceutical sector transparency.

ARV medicines pose a particular challenge to medicines coverage decision making in African countries. MedIC courses in Africa include discussions of research and policy needs for long-term sustainability of HIV/AIDS care.

MedIC Courses in Africa are expected to help strengthen the collaboration between African countries involved in the Medicines Transparency Alliance (http://www.medicinestransparency.org/); facilitate connections of country health insurance systems with WHO National Program Officers and country partners in charge of the pharmaceutical sector; and create a network of health insurance programs for sharing local experiences and tools for improving access to better health care for the poor.

Activities and Timetable

We have conducted the first Phase 1 MedIC course for Anglophone countries in Accra, Ghana, from 16 to 25 November 2008. The Course took place at the Ghana Institute of Management and Public Administration (GIMPA). A team of international course organizers from the Boston WHOCCPP and local course organizers from the Noguchi Memorial Institute for Medical Research in Accra, Ghana implemented the course. This report details the content, products, and participant evaluations of the first African MedIC course.

Following the highly successful MedIC course in Ghana, we are planning a second Anglophone MedIC Course for Southern African countries and a first Francophone MedIC course.

Ghana MedIC Course Design

Conducted in English, the 9-day highly interactive MedIC course consisted of brief lectures, small and large group case discussions and small group hands-on analyses of health systems data. Participants presented characteristics of health insurance financing of medicines in Ghana, Kenya, Nigeria, South Africa, Tanzania, and Uganda. In country teams, participants selected a specific medicines policy issue in their system, and developed a post-course strategy to design, implement, and/or evaluate a medicine policy intervention to improve key outcomes.

Course discussions centered on the following key themes:

Setting the Scene
- Medicines access and use: Significance, problems, and determinants
- Health insurance systems and medicines issues in participating countries
- An insurance framework for influencing medicines access and use
- Availability and use of data in health systems and insurance programs

Core Tools
- Medicines coverage policy options
- Standard treatment guidelines
- Formulary decision making
- Designing a minimum benefit package

Data for Decision Making
- Medicines coverage policy objectives and performance evaluation
- Evaluating changes in medicines coverage policies

Working with Data
- Assembling data from different sources
- Detecting and solving data problems
- Organizing medicines and diagnosis data
- Analyzing data and disseminating policy findings

Data to Policy
- Routine monitoring systems in insurance programs
- Implementing medicines policy change

In addition, facilitators presented on special topics, including the WHO perspective on medicines financing and access; a comparison of health insurance financing of medicines in the United States and Ghana; medicines coverage policy decision-making in Austria; and medicines policy decision making in Ghana. A subgroup of participants discussed next steps in the development of the WHO/MeTA household survey on access to, use, and affordability of medicines.

Course Materials

Ghana MedIC course materials included a Participant Guide with recommended and required readings for each session; PowerPoint slide presentation copies; and materials for small group activities (including case descriptions, excel data sets, data analysis instructions, and solutions to data analysis problems). Participants received a CD with all course materials. Materials will also be available at the WHO CCPP website (www.whoccpp.org).

Course Preparations

Dr. Anita Wagner from the WHO CCPP served as the International MedIC Course Director. Dr. Daniel Kojo Arhinful at Noguchi Memorial Institute for Medical Research led the local course organizing team. Mr. Abayneh Desta of the WHO Regional Office for Africa served as the WHO representative on the organizing teams. He secured core and scholarship funds for the course and organized the completion of MedIC Health Insurance surveys in participating countries. Preparatory activities also included the following:

- Course announcements on the e-drug global pharmaceutical list server and through WHO Geneva, WHO regional offices, international insurance networks, individual health insurance programs, and international development organizations.
- Scholarship funding proposals to WHO global, regional, and national offices; the UK Department for International Development; and other international donors working on medicines policy issues
- Local arrangements including organization of teaching facilities, hotel accommodation, transport, catering, and social events
- Collation and analysis of MedIC health insurance surveys
- Dissemination of slide templates for health insurance system presentations and key readings to participants prior to the course

Logistics

The MedIC course took place at the Ghana Institute of Management and Public Administration (GIMPA) in Accra, Ghana. Two social events were part of the course: A dinner on the third day of the course and a group visit on the sixth day of the course to Kakum National Park and the United Nations World Heritage site Cape Coast Castle in Central Region of Ghana.

Twenty five participants from Ghana, Kenya, Nigeria, South Africa, Tanzania and Uganda attended the Course. Thirteen facilitators from Austria, Gabon, Ghana, Malawi, the Republic of Congo, South Africa, and the U.S. participated throughout the nine days.

COURSE DESCRIPTION

A brief description of the MedIC Course follows. Annex 1 provides course facilitator biographies; Annex 2 lists course participant contact details; Annex 3 contains the detailed schedule for the week; Annex 4 contains the objectives, outline, and suggested readings for each session; Annex 5 briefly describes participants' country group projects; Annex 6 presents session and overall course evaluation results; Annex 7 includes participants' statements about the course; and Annex 8 lists suggested steps to build upon the momentum generated by the MedIC Course.

Course Opening

The MedIC Course formally opened with a dinner reception on Sunday, 16 November 2008.

On the ***first day***, participants conducted the "Gallery of Experts" activity, an introductory ice-breaker to elicit the wealth of knowledge and resources available to the group through the participants and facilitators. Participants and facilitators interviewed each other in pairs and produced a poster describing their partners. Individuals' descriptions remained posted throughout the course week.

Session 1 introduced the crucial role of medicines in curing disease and preventing morbidity and mortality. We discussed the interplay of stakeholders in the pharmaceutical sector and a behavioral framework for thinking about use of medicines and described common intervention strategies to improve their use. These issues were discussed in the context of the complex political, social, economic, and ethical aspects of health and health care. Key policy recommendations were also presented from the 2004 International Conference on Improving Use of Medicines.

Participants then presented characteristics of health insurance systems in their countries, including key medicines issues faced by these systems.

During *Session 2* we discussed the economic impact of medicines on overall health expenditures and on catastrophic household expenditures for the poor. We then summarized medicines financing options and highlighted the role of medicines coverage in health insurance systems. A framework of the functions and processes that can be used to manage medicines coverage within an insurance system was presented, and a discussion followed regarding how this framework applies to participating organizations.

In each session throughout the course, participants worked in small groups to discuss a case or analyze data. These groups were formed so that participants' country, gender, affiliations, and background were balanced. In addition, participants assembled in country groups throughout the course to work together to develop a policy analysis or intervention on an important issue in their health systems or insurance programs. Participants received an outline and a slide template for their presentations of country group project on the last day of the course.

In the morning of the ***second day***, *Session 3* focused on the availability and use of data in health systems and insurance programs. The objective of this session was to characterize the types of data that often exist in health systems and insurance programs and to illustrate their potential uses. Participants reviewed the compiled results from the MedIC Health Insurance Survey which was completed by country participants prior to the course and which had asked health insurance systems to indicate which data exist routinely in their systems, and in which form. We also discussed the limitations of routinely available data and the need for, advantages, and disadvantages of ad-hoc data collection, giving examples of data from two existing household surveys on medicines access and use.

Following this discussion, we provided a tutorial on how to use Excel to analyze and display data, focusing on the use of pivot tables and charts. To illustrate ways in which insurance data can be used for policy analysis, participants analyzed data from a health insurance program to explore utilization patterns and inpatient costs of care for different groups of members admitted for treatment of hypertension.

In *Session 4*, we provided an overview of medicines policy options. After describing policy options available to insurance systems and governments and considering their strengths and limitations, participants discussed the possible intended and unintended effects, from the points of view of different stakeholders in the system, of a policy to include newer, more expensive antiretroviral medicines in a health care organization's formulary.

Toward the end of the day, participants assembled in their country groups to identify potential policy approaches, rationales for a selected approach, and possible intended and unintended effects of a policy in response to a medicines issue they had identified in their systems.

In *Session 5* on the ***third day***, we focused on the rationales for and the use of standard treatment guidelines. We outlined a process for developing a standard treatment guideline and discussed ways in which this experience could be applied within each participant's country setting.

In small cross-country groups, participants developed a plan to establish and implement a standard treatment guideline for malaria care in a teaching hospital.

Session 6 focused on formulary decision making as a key medicines policy option. We discussed the information and processes needed to develop evidence-based formularies as well as the need for assuring transparency in values underlying formulary decisions. Participants discussed the case of an insurance program's formulary decision and a pharmaceutical manufacturer's reaction. Participants were asked to decide whether they

would admit an expensive medicine that is equally effective as already covered products to an insurer's formulary and to defend their decision.

The third day concluded with a group dinner at Villa Victoria.

On the ***fourth day,*** *Session 7* introduced the key objectives of medicines coverage policies and programs and outlined strategies for evaluating the performance of policies in relation to these objectives. We defined performance domains and indicators to measure those: access to medicines, affordability of medicines for patients and systems, clinical appropriateness of prescribing, adherence to therapy, achievement of clinical targets, and patient satisfaction and defined performance measures. In small groups, participants considered the objectives of an outpatient medicines coverage policy, potential unintended policy impacts, and ways to measure intended and unintended policy effects.

Session 8 focused on designing a minimum benefits package to assure basic medicines needs of a population are met. We reviewed the South African experience with legislating and implementing prescribed minimum benefits (PMBs) in the private health insurance market. In small cross-country groups, participants considered how they would define a "minimum benefit".

Session 9 focused on methods for evaluating the effects of medicines policy changes over time, highlighting the advantages of quasi-experimental "interrupted time series" designs over cross-sectional assessments. In small country project groups, participants designed an evaluation strategy for the policy intervention they had chosen for their systems.

On the ***fifth day*** of the course in *Session 10*, we discussed issues that arise when assembling data from different sources for pharmaceutical policy analysis. We presented the issues faced by the local course organizers in assembling data from the Ghana National Health Insurance Authority (NHIA), with particular attention to issues that arise when patient-level utilization data are not computerized and diagnosis information is not present on claims. We also discussed why and how to sample records for policy evaluation and routine monitoring. In small groups, participants worked with 500 de-identified records from the NHIA, assessing completeness of data, identifying outpatient cases and cases treated from malaria, and calculating key medicines use indicators.

In *Session 11*, we focused on identifying key issues that arise when extracting, organizing, and analyzing insurance program data. We discussed common data problems and how they distort results if not taken into consideration. We used spreadsheet-based analyses to assess data patterns, explore reasons for unexpected data patterns, and establish rules to resolve data inconsistencies. In an extensive small group activity, participants organized, summarized, and evaluated three datasets for errors using Excel pivot charts and tables and shared findings with the large group.

The second social activity occurred on the ***sixth day*** of the Course, during which we traveled as a group to visit the Central Region.

On the ***seventh day***, in *Session 12*, we discussed the need for standardized coding of medicines, diagnosis, and procedure information. We presented examples of internationally available systems to organize medicines into chemical groups and therapeutic categories, and discussed how to classify diagnoses and symptoms into meaningful health problem groups. In small groups, participants used de-identified data from the Ghana National Health Insurance Scheme to group claims by disease category, using diagnosis information and drug category codes.

In *Session 13*, we described the process of conducting longitudinal policy evaluations, interpreting results, and disseminating key information for decision making to policy makers.

We worked through excel-based pivot charts and tables to create visual displays and summaries of data over time, and then discussed ways in which such displays of data can be interpreted in light of design strengths and weaknesses.

In small groups, using Excel pivot tables and chart, participants analyzed a data set (n=30,000 observations) of dispensings from a large hospital to evaluate the impacts of a mandatory generic dispensing policy. Participants suggested possible interpretations of the findings; considered data limitations that may have distorted interpretation of the results; identified key policy recommendations; and present a graphic summary to communicate the most important results to policy makers, along with their own policy recommendations.

On the ***eighth day***, in *Session 14*, we discussed the rationale and options for monitoring medicines use and expenditures using routine data in health systems or insurance programs, matching the frequency of monitoring and indicators to be monitored to the need for decision making in health insurance systems. We discussed displays of data for routine monitoring of change over time within systems.

In *Session 15*, we discussed issues in implementing a medicines policy change. We assembled a panel of stakeholders in the recent change to case-based payment in the Ghana NHIA. Panel members came from the Ghana Ministry of Health, academia, consumer groups, the NHIA, and industry. The panel discussion highlighted the real life perspectives of each group and the constraints under which each stakeholder group operates in a policy implementation process.

On the ***final day*** of the Course, in *Session 16*, each country group presented the results of their week-long collaborative project and received input from course participants and facilitators. Country group projects are described in Annex 5.

The course concluded with a wrap-up session in which participants evaluated the course, shared their impressions of which aspects of the course worked well for them, and which aspects of the course could be improved, and how they would wish to move forward jointly, building upon the momentum and network created by the MedIC Course. Annex 6 summarizes session and overall evaluation results and lists participants' suggestions for course improvements. Annex 7 includes participants' statements about the course. Annex 8 lists participants' suggestions for next steps.

Contributors and Funders

The MedIC Course on Medicines Policy Analysis in Health and Insurance Systems was developed by Anita Wagner and Dennis Ross-Degnan of the WHO Collaborating Center in Pharmaceutical Policy (WHO CCPP) in Boston, USA. The WHO CCPP consists of the Drug Policy Research Group at the Department of Ambulatory Care and Prevention of Harvard Medical School and Harvard Pilgrim Health Care and the Center for International Health and Development at Boston University School of Public Health.

The following colleagues at the WHO CCPP and elsewhere contributed to the development of the course materials:

Jeffrey Brown, João Carapinha, Joyce Cheatham, Amy Johnson, Richard Laing (WHO Geneva), Michael Law, Sarah Lewis, Connie Mah Trinacty, Michael Reich (Harvard School of Public Health), Sheila Reiss, Jim Sabin, Russell Teagarden (MedCo Health Solutions, Inc.), Brenda Waning, Catherine Vialle-Valentin, Frank Wharam, and Fang Zhang.

The WHO Program in Medicines Policy and Standards, Geneva, and the Department of Ambulatory Care and Prevention of Harvard Medical School and Harvard Pilgrim Health Care have supported the development of the MedIC course materials.

We gratefully acknowledge the following supporters of the MedIC Course on Medicines Policy Analysis in Health and Insurance Systems in Accra: The World Health Organization Regional Office for Africa, with funding from the U.K. Department for International Development and the European Community; the World Health Organization Country Office in Accra; the Noguchi Memorial Institute for Medical Research at the University of Ghana; the Ghana National Health Insurance Authority and the Republic of Ghana Ministry of Health; the Medicines Transparency Alliance (MeTA); the Police's Medical Aid Scheme of South Africa (POLMED); Strengthening Pharmaceutical Systems (SPS) and Management Sciences for Health (MSH); and the Department of Ambulatory Care and Prevention (DACP) at Harvard Medical School and Harvard Pilgrim Health Care.

We thank the following individuals for their diligent work organizing this course: Edith Andrews Annan, Daniel Kojo Arhinful, Ruth Ayanful, Abayneh Desta, Kwesi Eghan, Augustina Koduah, Martha Gyansa-Lutterodt, Sarah Lewis and Mai Manchanda.

ANNEX 1: COURSE FACILITATORS

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During the past fourteen years, Mr. Acheampong has been involved in healthcare working for health insurance companies, pharmaceutical companies, health insurance regulatory agencies, and a major teaching hospital.

Prior to joining NHIA, Mr. Acheampong developed contracting and marketing strategies to market pharmaceutical products to hospitals and health insurance companies. Prior thereto, Mr. Acheampong worked for health insurance companies where he managed provider networks, and developed and managed drug formularies.

Mr. Acheampong has a Master of Science degree in Health Policy and Management from Harvard School of Public Health, specializing in health financing, insurance, and international health. He did graduate work in Business Management at Yale School of Management, and has a Bachelor of Arts degree in Urban Studies and Health Economics from Brown University.

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Dr. Daniel Kojo Arhinful is a Research Fellow at the Epidemiology Department at the Noguchi Memorial Institute for Medical Research (NMIMR), a constituent of the College of Health Sciences of the University of Ghana. He holds a doctorate in Medical Anthropology from the Amsterdam School for Social Science Research, University of Amsterdam. His previous training was in Sociology from the University of Ghana. Dr. Arhinful's career has mainly involved principal roles as health social scientist into research on health and social problems of national and international importance. His key areas of research specialization are social health insurance where he wrote his doctorate thesis, social security and migration, use of medicines, chronic illness in African communities and maternal health. He collaborates in research work with local and foreign scientists and organizations and involved in supervision of post graduate students and training of research staff. He is a founding member and secretary of the International Network for Rational Use of Drugs (INRUD) –Ghana and a member of the country working group of the WHO/HAI/MOH Africa regional collaboration on access to medicines. Among his current research projects is "*Reaching the poor in Ghana's National Health Insurance* which aims to design and evaluate interventions to stimulate enrollment of the poor in Ghana's National Health Insurance.

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Anna Bucsics has a medical degree from the Karl-Franzens-University of Graz, Austria (Europe). Her postgraduate training and research work was at the Department of Experimental and Clinical Pharmacology, University of Graz in neuropharmacology. She passed the Special Examination ("Besondere Fachprüfung") qualifying for managerial positions within the Austrian Social Insurance system with excellent results (highest grade).

She worked as a consultant for the Main Association of Austrian Social Security Institutions and as auditor for pharmaceutical expenditures at the Viennese Social Health Insurance Fund.

Currently, she is Vice Department Head, Department of Pharmaceuticals, Main Association of Austrian Social Security Institutions. In this position, she is responsible for the management of applications for inclusion into the "Heilmittelverzeichnis" (catalogue of medicines) and "Erstattungskodex" (list of reimbursable medicines).

She is an instructor at the Center of Financial Services and Public Utility Management, University of Vienna and occasional lecturer at the Vienna School of Clinical Research.

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Malawian, fluent in English and French**, Dr. Moses Chisale** is a French trained Pharmacist (1986). After a short community pharmacy practice in Montbard, France, he was Hospital Pharmacist then Principal Hospital Pharmacist at Queen Elizabeth Central Hospital, Blantyre, Malawi (1987-1992). He also taught Pharmacology at the Medical Assistants Training School. He did a University Certificate in Pharmacology at the Lariboisiere Saint Louis School of Medicine, University of Paris VII with a concurrent attachment in the Department of Pharmacology of Cochin Hospital in Paris.

Since April 1993, he is the Regional Advisor for WHO Essential Medicines Program in the African Region. He is principally involved in providing technical advice and direct technical assistance to countries for the development and implementation of various aspects of national medicine policies (management, access / supply, quality assurance, rational use). He spearheaded the production of Guidelines for the formulation, implementation, monitoring and evaluation of national drug policies in 2001 (currently being revised). He has in particular provided direct technical assistance for the development and / or implementation of national medicines policies in the following countries: Angola, Benin, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Equatorial Guinea, Gabon, Ghana, Gambia, Kenya, Lesotho, Malawi, Mauritania, Niger, Republic of Congo, Rwanda, Seychelles, Sierra Leone, Swaziland and Togo. In 2000 he initiated and continues to publish the AFRO Pharmaceuticals Newsletter. He led a team of experts to produce the AFRO Training Manual on the Management of Drugs at Health Centre Level in 2001 (now being revised) as well as the first Guidelines for the Prevention and Clinical Management of Snakebite in Africa between 2005 and 2008 (pending publication). Currently he is also focal point for the implementation of the Good Governance for Medicines Program in the African Region.

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Mr. Desta is a graduate Pharmacist with a Masters in health economics. Mr. Desta has assumed various positions in the Ministry of Health, nongovernmental and international organizations in his home country, Ethiopia and overseas. Mr. Desta has more than two decades of work experience in the area of essential medicines. Since 2001, Mr. Desta has been working as a Technical Officer in the Regional Program for Essential Medicines, Division of Health Systems and Services Development at the WHO Regional Office for Africa in Brazzaville, Republic of Congo.

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Dr. Alexander Nii Oto Dodoo is a Senior Research Fellow and the Acting Director at the Centre for Tropical Clinical Pharmacology & Therapeutics (CTCPT) of the University of Ghana Medical School. He undertook his undergraduate (B. Pharm. degree) at the University of Science and Technology, Kumasi Ghana and his postgraduate training (M.Sc. and Ph.D.) at the Department of Pharmacy, King's College London. UK. Dr Dodoo worked as a Senior Scientist at Roche Discovery Welwyn, UK from 1996-1998 and as a community pharmacist in England in 1999.

His main research interests are in pharmacovigilance including safety monitoring of vaccines, anti-malarials and anti-retrovirals. He is the President of the Pharmaceutical Society of Ghana and also President of the Pharmacy Information Section of the International Pharmaceutical Federation and the co-Chairman of the Ghana Chapter of the Medicines Transparency Alliance (MeTA). He a member of the Executive Committee of the Intentional Society of Pharmacovigilance and a Member of the Advisory Committee on Focus on Artemisinin-based Combination Therapy (FACT) of the DNDi. He has been involved in writing and editing the Standard Treatment Guidelines of Ghana since 2000.

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Mr. Eghan is currently serving as Senior Technical Advisor /Country Manager for the Management Sciences for Health (MSH) Project in Ghana. MSH is a health development organization based in Arlington, VA, USA.

He is also currently a board member of the National Health Insurance Authority of Ghana (NHIA) and the Chairman of Tariffs and Medicines the sub committee of the NHIA

Prior to this role, Mr. Eghan served as the Country Director for Family Health International (FHI) in Ghana where he managed and provided leadership for all of FHI's activities in Ghana from May 2006 till April 2007. As FHI Country Director, he provided leadership for the DFID/Ghana Aids Commission, National Aids Control/Treatment Accelerated Program (TAP), IMPACT, and the Rainbow Network projects aimed at increasing access to HIVAIDS treatment in Ghana Comprehensive HIV care, support and treatment in the private sector in Ghana. He has over 15 years experience in pharmaceutical service industry, health finance/insurance management, private marketing and distribution of pharmaceuticals and private-public partnerships in the health sector. He was the primary facilitator in the development of a key national policy; the National Health Insurance Policy Framework and the Health Insurance Act of Ghana. Mr. Eghan has also been directly involved in development of National malaria policy of Ghana where he is currently a board member.

Previously as Field Program Manager for the Management Sciences for Health's Strategies for Enhancing Access to Essential Medicines (MSH_SEAM) Project in Ghana (2001-2005) he lead in the development and implementation of the essential medicines private franchise network in rural Ghana and the strengthening of the health systems of the Catholic Health Services as well strengthen the public sector regulator of pharmaceutical services in Ghana: Pharmacy Council. He has also conducted training programs and advocacy initiatives with health workers in conjunction with the Ministry of health. He has been involved in several designs and implementation of the assessment in the private and public health sectors in rural and peri-urban Ghana. He was a member of the joint MSH-JSI implementation planning team on the recently launched President Bush Malaria Initiatives –PMI in Ghana.

Mr. Eghan holds a Masters degree in Business Administration and Bachelor degree in Pharmacy.

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Dr. Asbu is Health Systems Advisor at the WHO Country Office in Malawi. He has a Ph.D. in health economics from the University of Cape Town, South Africa. In his current capacity, he advises the Country Office and government on a wide range of issues in health systems and health economics including health system policy and planning, issues of health financing; human resources for health; health information and research; and poverty and health. His main areas of research include the measurement of efficiency in health care using frontier techniques, analysis of equity in health and health care, health financing and economics of disease control.

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Mrs. Martha Gyansa-Lutterodt is a Pharmacist with over 20 years experience in district health systems and a Health Policy Analyst. She is currently Head of Ghana National Drugs Programme – a Pharmaceutical Sector Development Programme - of the Ministry of Health established with funding from the Development Partners. She obtained her B Pharm degree at the University of Science and Technology Kumasi Ghana, a Post- graduate Certificate in Health Management and also MA in Health Management Planning and Policy at the University of Leeds, UK.

Mrs. Gyansa-Lutterodt managed the introduction of a comprehensive national drug policy in Ghana and coordinated the production and dissemination of Ghana's Standard Treatment Guidelines and Essential Medicines List with the 6th edition review in progress. She also managed, coordinated and has been involved in most Pharmaceutical sector surveys in Ghana. She has had a vast experience in promoting rational use of medicines in Ghana.

As one of the drafters of Ghana's Health Policy, believes in evidence based policy decision making and also moving health policies into practice that provides sustainable outcomes especially for the most vulnerable.

She was one of the participants of the maiden MedIC course in Manila, Philippines in 2007.

David Ofori-Adjei, MD

Dr. David Ofori-Adjei is Professor of Tropical Clinical Pharmacology; and Medicine and Therapeutics at the Centre for Tropical Clinical Pharmacology, University of Ghana Medical School. He is a former Director of Noguchi Memorial Institute for Medical Research at the University of Ghana, Legon. His interests include the promotion of the rational use of drugs both at the national and international level, pharmacotherapy of tropical diseases especially malaria, schistosomiasis and buruli ulcer; pharmacogenetics and clinical trials. He has played a major role in the selection of essential medicines, the preparation of therapeutic guidelines as well as malaria control in Ghana. He has worked on WHO expert panels and working groups related to medicines (selection of essential medicines, drug use statistics methodology and adverse drug events reporting). Presently, he is the Chair of the Coordinating Committee of the National Malaria Control Programme, the team leader of a group assisting the National Health Insurance Authority improve medicines use, Editor-in-Chief of the Ghana Medical Journal, the Country Coordinator of the International Network for the Rational Use of Drugs (INRUD) in Ghana and member of the Advisory Council of the Clinical Division of IUPHAR. He is also the Co-chair of the Ghanaian-Dutch Collaboration on Health Research and Development, represents the West African Health Organization (WAHO) on the Developing Country Coordinating Committee of the European and Developing Countries Clinical Trial Partnership and chairs the Clinical Trials Review Committee of the Ghana Food & Drugs Board.

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Dr. Ross-Degnan is Associate Professor at the Department of Ambulatory Care and Prevention (DACP) at Harvard Medical School (HMS) and Director of Research at Harvard Pilgrim Health Care. He holds a doctorate in health policy and management from the Harvard School of Public Health. Dr. Ross-Degnan's career has focused primarily on improving health systems in the US and developing countries, including research on the effects of pharmaceutical policies, factors underlying appropriate use of medicines, interventions to improve quality of care, and applied research methodology in low resource settings. In 1990, he co-founded the International Network for Rational Use of Drugs (INRUD), a global network of academics, health managers, and policymakers involved in developing and testing interdisciplinary interventions to improve use of medicines. In recognition of these efforts, he was awarded the 2005 HMS Klaus Peter International Teaching Award. He has consulted extensively with the World Health Organization on issues related to access to and appropriate use of medicines, and pharmaceutical sector monitoring and evaluation. Dr. Ross-Degnan also co-directs the World Health Organization Collaborating Center on Pharmaceutical Policy which is based jointly at DACP and the Boston University Center for International Health and Development.

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Tienie graduated from the University of Stellenbosch and obtained an M.B., Ch.B. in 1981. He practiced as a GP until 1997 after which he joined JCI Ltd for three years as hospital manager and later also as medical schemes manager of the group. In 2000 he obtained an MBA at the University of Potchefstroom (North West University).

In 2001 he formed a healthcare risk management company, Tri-Health. The latter company subsequently merged with two companies to form The Health Monitor Company. He started Health Econometrix (Pty) Ltd in 2006 and was appointed as the first CEO of the company. In 2007 he successfully transformed the company to a black empowered company (Health Econometrix & Outcomes Research (Pty) Ltd (heXor)) through the sale of 40% of shares to Holisizwe Holdings (Pty) Ltd.

Tienie is an extraordinary professor at North West University, school of pharmacy and an external moderator of the School of Pharmacy of North West University. In this role he is lecturing, assisting and advising in research projects related to pharmacoeconomics to PhD and Masters students. He is currently President of ISPOR South Africa and is a member of ISPOR International.

Tienie consulted with many medical schemes, pharmaceutical companies and employers around healthcare strategy and health economics and has presented research on several topics around health and pharmacoeconomics.

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Dr. Vialle-Valentin is a physician and endocrinologist, trained and licensed to practice in France. She holds a Master degree in Health Care Management from the Harvard School of Public Health. She has 18 years of experience in pharmaceutical research and development, mostly in the USA. She was a recipient of the 2007 Pyle Fellowship in the Harvard Medical School Pharmaceutical Policy Research Group. She is currently Research Associate and Epidemiologist in the Department of Ambulatory Care and Prevention (DACP) at Harvard Medical School and Harvard Pilgrim Health Care.

Dr. Vialle-Valentin's research is centered on generating evidence about equity in access to medicines in developing countries through the development of a medicines survey measuring access to and use of medicines. She is a member of the global Medicines and Insurance Coverage (MedIC) Initiative led by Drs. Ross-Degnan and Wagner; her insurance research focuses on medicines insurance coverage in community-based health insurance plans.

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Dr. Wagner conducts research to inform evidence-based policy decisions intended to improve access to and use of medicines for vulnerable populations in the United States and particularly in developing countries. Her teaching activities focus on building capacity in insurance systems to design, implement, and evaluate medicines benefit policies. For the WHO Collaborating Center in Pharmaceutical Policy, she co-leads the global Medicines and Insurance Coverage (MedIC) Initiative.

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ANNEX 3: DETAILED PROGRAM

Sunday 16 November

4:00P – 5:30P Arrival and registration

Evening Welcome reception

Monday, 17 November

08:30 – 09:00 Course objectives and overview

09:00 – 10:00 Gallery of experts

10:00 – 10:30 Coffee break

10.30 – 11.30 *Session 1*: *Medicines access and use: Significance, problems, and determinants*

Activity 1: Determinants of medicines access and use

11:30 – 12:30 Presentations by participating health insurance systems

12.30 – 13:30 Lunch

13:30 – 14:30 Presentations by participating health insurance systems (cont.)

14:30 – 15:30 *Session 2: An Insurance framework for influencing access and use*

Activity 1: A functional framework for medicines coverage in insurance systems

15:30 – 16:00 Coffee break

16:00 – 17:00 *Session 2:* (cont.)

Activity 2: Identifying a key medicines policy issue

17:00 – 17:30 Team project work: Target key medicines issue(s)

Tuesday, 18 November

08:30 – 09:00 Key points from Day One

09:00 – 10:00 *Session 3*: *Availability and use of data in health and insurance systems*

Activity 1: Availability of data in insurance systems

10:00 – 10:30 Coffee break

10:30 – 11:30 *Session 3:* (cont.)

Activity 2: Impact of providing only inpatient coverage for hypertension

11:30 – 12:30 Activity 3: Exploring determinants of medicines problems

12.30 – 13:30 Lunch

13:30 – 15:30 *Session 4*: Medicines coverage policy options

	Activity 1: Expanding medicines coverage – policy goals and potential effects
15:30 – 16:00	Coffee break
16:00 – 17:00	*Session 4:* (cont.)
	Activity 2: Possible approaches to address identified medicines problems
17:00 – 17:30	Team project work: Identify policy options

Wednesday, 19 November

08:30 – 09:00	Key points from Day Two
09:00 – 10:00	*Session 5*: *Standard treatment guidelines*
	Activity 1: Develop a plan to establish and implement a STG
10:00 – 10:30	Coffee break
10.30 – 11.30	*Session 5:* (cont.)
11:30 – 12:30	*Session 6*: *Formularies and generics policies*
	Activity 1: Formulary decision making and the pharmaceutical industry
12.30 – 13:30	Lunch
13:30 – 15:30	*Session 6:* (cont.)
	Activity 2: Formulary decision about an expensive medication
15:30 – 16:00	Coffee break
16:00 – 17:00	Special Topic: Health insurance and medicines access – Perspective and roles of the WHO
17:00 – 17:30	Team project work: Decide on performance measures
19:00 – 21:00	Course Dinner

Thursday, 20 November

08:30 – 09:00	Key points from Day Three
09:00 – 10:00	*Session 7*: *Medicines coverage policy objectives and performance evaluation*
	Activity 1: Outpatient coverage for hypertension medicines
10:00 – 10:30	Coffee break
10:30 – 11:30	*Session 7:* (cont.)
11:30 – 12:30	*Session 8: Designing a minimum benefits package*
	Activity 1: Developing prescribed minimum benefits in your country
12.30 – 13:30	Lunch

13:30 – 14:30 *Session 8:* (cont.)

14:30 – 15:30 *Session 9: Evaluating changes in medicines coverage policies*

Activity 1: Designing a policy evaluation in your system

15:30 – 16:00 Coffee break

16:00 – 17:00 *Session 9:* (cont.)

17:00 – 17:30 Team project work: Decide on data needs

Friday, 21 November

08:30 – 09:00 Key points from Day Four

09:00 – 10:00 *Session 10*: Assembling data from different sources

10:00 – 10:30 Coffee break

10:30 – 12:30 *Session 10:* (cont.)

12.30 – 13.30 Lunch

13:30 – 15:30 *Session 11*: Detecting and solving data problems

Activity 1: Identifying and solving problems in dispensing data

15:30 – 16:00 Coffee break

16:00 – 17:00 *Session 11*: (cont.)

17:00 – 17:30 Team project work: Design intervention study

Saturday, 22 November

09:00 – 17:30 Group Visit to Central Region

Sunday, 23 November

08:30 – 09:00 Key points from Day Four

09:00 – 10:00 *Session 12*: Organizing medicines and diagnosis data

10:00 – 10:30 Coffee break

10:30 – 11:30 *Session 12:* (cont.)

11:30 – 12:30 *Session 13: Analyzing data and disseminating policy findings*

Activity 1: Analyzing the effects of a generic dispensing policy

12.30 – 13.30 Lunch

13:30 – 15:30 *Session 13*: (cont.)

15:30 – 16:00 Coffee break

16:00 – 17:00 Special Topic: Medicines policy in European health insurance systems

17:00 – 17:30 Team project work: Design analysis plan

Monday, 24 November

08:30 – 09:00 Key points from Day Five

09:00 – 10:00 *Session 14*: Routine monitoring systems

Activity 1: Designing routine medicines policy monitoring in your system

10:00 – 10:30 Coffee break

10:30 – 11:30 *Session 14:* (cont.)

11:30 – 12:30 *Session 15: Implementing medicines policy change*

Activity 1: Implementing an outpatient medicines benefit

12.30 – 13.30 Lunch

13:30 – 14:30 *Session 15*: (cont.)

14:30 – 15:30 Special Topic: Policy development in Ghana-MOH & NHI

15:30 – 16:00 Coffee break

16:00 – 17:30 Team project work: Finalize presentation

Tuesday, 25 November

08:30 – 09:00 Key points from Day Six

09:00 – 10:00 *Session 16: Country group presentations*

10:00 – 10:30 Coffee break

10:30 – 11:30 *Session 16* (cont.)

11:30 – 12:30 *Session 17: Review of course*

12.30 – 13.30 Lunch

13:30 – 14:30 Evaluation & Conclusion of the MedIC Course

ANNEX 4: SESSION BRIEFS

Course Overview and Gallery of Experts

The purpose of this session is to formally introduce trainers and participants through a process by which each individual assembles key information about a fellow classmate and presents this information in a "Gallery of Experts."

Objectives

The main objectives of this session are to provide an overview of the course and to introduce participants and facilitators to each other. The gallery of experts will also begin to build a foundation for experience sharing and group development.

Preparation

This is a group activity and requires a poster presentation that includes a personal life history and field(s) of interest specific to each course participant.

Session 1: Medicines access and use: Significance, problems, and determinants

Objectives

This session will introduce the crucial role of medicines in curing disease and preventing morbidity and mortality. We will discuss a behavioral framework for thinking about use of medicines and describe several common intervention strategies to improve their use. These issues will be discussed in the context of the complex political, social, economic, and ethical aspects of health and health care. We will also present some key policy recommendations from the 2004 International Conference on Improving Use of Medicines.

Outline

- Roles of medicines in society
- Case discussion of consumer access to prescription medicines in pharmacies and potential policy problems
- Pharmaceutical sector framework and behavioral perspective
- Determinants of medicines use by health providers and consumers
- Overview of intervention strategies to change medicines use behavior

Readings (key readings in bold)

Laing RO, Hogerzeil HV, Ross-Degnan D. Ten recommendations to promote improved use of medicines in developing countries. Health Policy Plan 2001; 16(1): 13-20.

Policies and Programmes to Improve Use of Medicines: Recommendations from ICIUM 2004 (http://www.icium.org/icium2004/ Accessed September 2007). See especially the following sets of recommendations: 8. Economic issues: pricing; 11. Generic prescribing and dispensing; 14. Insurance coverage; 18. Medicines use in the private sector 25. Improving hospital prescribing.

Discussion Questions

1. What factors influence medicines use in your country and what are major problems in the way they are used?
2. How effective are current policies and programs to influence prescribing and dispensing by health providers and use of medicines by consumers?

3. What opportunities exist in your system for implementing tailored interventions to improve key problems in medicines use?

Session 2: An insurance framework for influencing medicines access and use

Objectives

The first objective of this session is to discuss the economic impact of medicines on overall health expenditures and on catastrophic household expenditures for the poor. We will then summarize medicines financing options and highlight the role of medicines coverage in health insurance systems. We will present a framework of the structures and processes that can be used to manage medicines coverage within an insurance system, and discuss how this framework applies to participating organizations.

Outline

- Importance of medicines in health care and risk protection
- Medicines financing options
- Medicines coverage in insurance programs
- Functional framework for designing and managing medicines coverage policies

Readings (key readings in bold)

Academy of Managed Care Pharmacy. Maintaining the affordability of the prescription drug benefit: How managed care organizations secure price concessions from pharmaceutical manufacturers. (http://www.amcp.org/amcp.ark?p=AAAC630C Accessed September, 2007)

Academy of Managed Care Pharmacy. Academy of Managed Care Pharmacy. Pharmacy benefit communication grid. (http://www.amcp.org/amcp.ark?p=AA8CD7EC Accessed September, 2007).

Goff VV. Pharmacy benefits: New concepts in plan design. National Health Policy Forum Issue Brief No.772. Washington, DC; George Washington University: 2002.

Kaiser Family Foundation. Prescription drug trends. September 2008. (http://www.kff.org/rxdrugs/upload/3057_07.pdf. Accessed November, 2008)

McIntyre D, Thiede M, Dahlgren G, Whitehead M. What are the economic consequences for households of illness and of paying for health care in low- and middle-income country contexts? Social Science & Medicine 2006; 62: 858–865.

Seiter A, Lakshminarayanan R. Pharmaceuticals: Cost containment, pricing, reimbursement. HNP Brief. No. 7. Washington DC; The World Bank: August 2005.

Discussion Questions

1. How are medicines financed in your health care system?
2. Are the poor able to obtain access to essential medicines in your health system?
3. How are medicines covered in your health system or insurance program?
4. What structures and processes does your health system or insurance program use to manage medicines coverage?
5. Which are the key medicines coverage issues facing your health care system or insurance program?

Session 3: Availability and use of data in health systems and insurance programs

Objectives

The objectives of this session are to characterize the types of data that often exist in health systems and insurance programs. Existing data can include information on enrollees, patients, providers, medicines, episodes of hospital care, outpatient visits, and procedures. To illustrate the ways in which these types of data can be employed for policy analysis, we will use data from a health insurance program to explore utilization patterns and costs of care for members hospitalized to treat hypertension.

Outline

- Comparison of data available in the systems of course participants with a comprehensive list of possible data elements
- Use of data to quantify problems in medicines coverage and use
- Example: Analysis of inpatient claims data to quantify a potential medicines coverage problem
- Collecting ad hoc data to study a problem in depth

Readings (key readings in bold)

Chapter 29. Investigating drug use. In: Quick JD. Managing drug supply: The selection, procurement, distribution, and use of pharmaceuticals. West Hartford, CT: Kumarian Press, 1997; 431-449.

Chan KA et al. Development of a multipurpose dataset to evaluate potential medication errors in ambulatory care settings. AHRQ 2005.

Enwere OO, Falade CO,Salako BL. Drug prescribing pattern at the medical outpatient clinic of a tertiary hospital in southwestern Nigeria. Pharmacoepidemiology and Drug Safety 2007; 16(11):1244-9.

International Network for Rational Use of Drugs. How to use applied qualitative methods to design drug use interventions (draft). Chapter 1: Overview of Methods. (http://www.inrud.org/documents/How_to_Use_Applied_Qualitative_Methods.pdf)

Jollis JG, Ancukiewicz M, DeLong ER, Pryor DB, Muhlbaier LH, Mark DB. Discordance of databases designed for claims payment versus clinical information systems: Implications for outcomes research. Ann Intern Med. 1993; 119: 844–850.

Meremikwu M, Okomo U, Nwachukwu C, Oyo-Ita A, Eke-Njoku J, Okebe J, et al. Antimalarial drug prescribing practice in private and public health facilities in South-east Nigeria: a descriptive study. Malaria Journal 2007;6: 55.

Strom BL. Overview of Automated Databases in Pharmacoepidemiology. In Strom BL, ed. Pharmacoepidemiology, Fourth Edition. Chichester: John Wiley & Sons Ltd, 2005, 219-222.

Zhao Y, Ash AS, Ellis RP, et al. Predicting pharmacy costs and other medical costs using diagnoses and drug claims. Med Care 2005;43:34-43.

Rothberg AD, Walters L, van Schoor J, Green R. Analysis of paediatric prescribing profiles in two health-funding systems. South African Medical Journal = Suid-Afrikaanse Tydskrif Vir Geneeskunde 1996; 86(6): 672-4.

Discussion Questions

1. Which types of data tend to exist in most health and insurance systems? What are their strengths and weaknesses?
2. Which data would be needed to describe a key medicines problem in your system? Could you obtain these data?

Session 4: Medicines coverage policy options

Objectives

In this session, we will apply a behavioral framework to understand interventions to improve access to and use of medicines in health delivery systems or insurance programs. We will discuss the rationale, strengths, and unintended effects of various policies and program options.

Outline

- Case discussion of expanding antiretroviral treatment in Africa
- Insurance policy and program options to improve access to and use of medicines
- Studying intended and unintended policy effects

Readings (key readings in bold)

Aaserud M, Dahlgren AT, Kösters JP, Oxman AD, Ramsay C, Sturm H. Pharmaceutical policies: effects of reference pricing, other pricing, and purchasing policies. Cochrane Database of Systematic Reviews 2006, Issues 2. Art. No.: CD005979.

Goff V. Pharmacy Benefits: New Concepts in Plan Design. NHPF Issue Brief No.772. National Health Policy Forum. Washington DC; George Washington University: March 8, 2002.

Hoadley J. Cost-containment strategies for prescription drugs: Assessing the evidence in the literature. Kaiser Family Foundation, March 2005. Available at: http://www.kff.org/rxdrugs/7295.cfm.

Murphy RA, Sunpath H, Kuritzkes DR, Venter F, Gandhi RT. Antiretroviral therapy-associated toxicities in the resource-poor world: the challenge of a limited formulary. The Journal of Infectious Diseases 2007; 196 Suppl 3: S449-56. doi: 10.1086/521112. (background reading for Activity 1)

Nguyen A. What is the range of policy options that can be used to promote the use of generic medicines in developing and transitional countries? Draft for review and comment, 2007.

Rothberg AD, Blignault J, Serfontein CB, Valodia B, Eekhout S, Pels LM. Experience of a medicines reference-pricing model. South African Medical Journal = Suid-Afrikaanse Tydskrif Vir Geneeskunde 2004; 94(3): 183-8.

Schneeweiss S. Reference drug programs: Effectiveness and policy implications. Health Policy 2007; 81:17-28.

Shojania KG, Grimshaw JM. Evidence-based quality improvement: the state of the science. Health Aff (Millwood). 2005 Jan-Feb;24(1):138-50.

Walley T, Mossialos E. Chapter 10: Financial incentives and prescribing. In: Mossialos E, Mrazek M, Walley T, editors. Regulating pharmaceuticals in Europe: Striving for efficiency, equity and quality. European Observatory on Health Systems and Policies Series. Open University Press: 2004, 177-196. Available at http://www.euro.who.int/eprise/main/WHO/Progs/OBS/Publications/20040527_2.

Discussion Questions

1. What are some key issues in your system in access to or use of medicines?
2. What challenges do systems face in determining which medicines to cover and how to reimburse for medicines?
3. How can a health system or insurance program influence medicines access, use, and costs?

Session 5: Standard Treatment Guidelines

Objectives

The objectives of this session are to describe the rationale for and uses of standard treatment guidelines. We will also outline a process for developing a standard treatment guideline and discuss ho you might apply this experience within your setting.

Outline

- Describe the rationale for implementing standard treatment guidelines
- Outline the process for developing a standard treatment guideline
- Discuss the development of a new STG for malaria in a hospital with the application of a priority-setting framework.

Readings (key readings in bold)

Mulligan J, Mandike R, Palmer N, Williams H, Abdulla S, Bloland P, et al. The costs of changing national policy: lessons from malaria treatment policy guidelines in Tanzania. Tropical Medicine & International Health 2006; 11(4): 452-461.

Martin DK, Hollenberg D, MacRae S, Madden S, Singer P. Priority setting in a hospital drug formulary: a qualitative case study and evaluation. *Health Policy 2003; 66*(3): 295-303. doi: 10.1016/S0168-8510(03)00063-0.

Nsimba, S. E. D. Assessing prescribing and patient care indicators for children under five years old with malaria and other disease conditions in public primary health care facilities. The Southeast Asian Journal of Tropical Medicine and Public Health 2006;37(1): 206-14.

Holloway K, Green, T. Managing the formulary process. Chapter 3 in Drug and Therapeutics Committees: A Practical Guide. World Health Organization, 2003.

Discussion Questions

1. What are the clinical and economic benefits of standard treatment guidelines?
2. What information is required to develop an evidence-based standard treatment guideline?

3. What practical steps are needed to develop and implement a standard treatment guideline in a specific health system?

Session 6: Formulary decision making

Objectives

The objectives of this session are to discuss the policies and processes needed to develop evidence-based formularies in health delivery systems and individual health institutions. We will describe the responsibilities of those making formulary decisions, training requirements, ways to minimize conflicts of interest, and processes to make sound formulary decisions. We will also describe methods to make transparent the values that underlie formulary decisions.

Outline

- Case discussion of an insurance program's formulary decision and a pharmaceutical manufacturer's reaction
- Formulary policy options and their expected effects
- Processes for formulary decision making
- Transparency in values underlying formulary decisions

Readings (key readings in bold)

Academy of Managed Care Pharmacy. The AMCP format for formulary submissions, version 2.1. A format for submission of clinical and economic data in support of formulary considerations by health care systems in the United States. Academy of Managed Care Pharmacy, April 2005.

Coalition Working Group. Principles of a sound drug formulary system. Academy of Managed Care Pharmacy, October 2000. Available at http://www.amcp.org/.

Dillon MJ. Chapter 6. Drug formulary management. In Navarro RP. Managed Care Pharmacy Practice. Aspen Publishers; Gaithersburg, MD: 1999, 145-165.

Holloway K, Green T. Managing the formulary process. Chapter 3 in Drug and Therapeutics Committees: A Practical Guide. World Health Organization, 2003.

Chapter 10. Managing drug selection. In: Quick JD. Managing drug supply: The selection, procurement, distribution, and use of pharmaceuticals. West Hartford, CT: Kumarian Press, 1997; 121-136.

Savelli A, Schwarz H, Zagorski A, Bykov A. Develop Drug Formulary List. Stage II In: Manual for the Development and Maintenance of Hospital Formularies. Management Sciences for Health, 1996. Retrieved September 9, 2008, from http://erc.msh.org/mainpage.cfm?file=2.2.htm&module=dtc&language=English

Sullivan SD, Lyles A, Luce B, Grigar J. AMCP guidance for submission of clinical and economic evaluation data to support formulary listing in U.S. health plans and pharmacy benefit management organization. J Managed Care Pharmacy 2001;7:272-282.

Teagarden RJ. Pharmacists, ethics, and pharmacy benefits. Am J Pharmaceutical Education 2003;67: Article 28, 1-6.

Teagarden RJ. Prior authorization in prescription drug benefit management: An apologia. Hospital Pharmacy 2004;39:493-498.

Teagarden RJ, Daniels N, Sabin JE. A proposed ethical framework for prescription drug benefit allocation policy. J Am Pharm Assoc 2003;43:69-74.

Discussion Questions

1. How are formulary decisions made in your system
2. What values played a role in a recent formulary decision in your system?

Session 7: Medicines coverage policy objectives and performance evaluation

Objectives

This session explores the key objectives of medicines coverage policies and programs, and considers strategies for measuring the performance of a health delivery or insurance system in relation to these objectives. Possible performance domains may include equitable access to medicines, affordable medicines cost for patients and systems, clinical appropriateness of prescribing, adherence to therapy, achievement of clinical targets, or patient and provider satisfaction.

Outline

- Case study: Building the case for coverage of outpatient medicines for patients with hypertension in Freedonia
- Identifying the domains of intended policy effects
- Defining criteria for useful performance measures
- Mapping performance measures within policy domains
- Identifying data and operationalizing performance measures
- Uses of performance measures for policy evaluation, routine monitoring, or performance-based contracting

Readings (key readings in bold)

Boller C, Wyss K, Mtasiwa D, Tanner M. Quality and comparison of antenatal care in public and private providers in the United Republic of Tanzania. Bulletin of the World Health Organization 2003; 81(2): 116-122.

Carapinha J. The Value of Medicine in Improving the Quality of Care. South African Family Practice 2006;48(10):6-10.

Friedman YM, Hanchak NA. Chapter 9. Pharmacy program performance measurement. In Navarro RP. Managed Care Pharmacy Practice. Gaithersburg, MD: Aspen Publishers, 1999.

Katz A, Soodeen R-A, Bogdanovic B, De Coster C, Chateau D. Can the quality of care in family practice be measured using administrative data? HSR: Health Services Research 2006; 41(6): 2238-54.

NCQA. Desirable attributes of HEDIS® measures. NCQA, 1998. Available at http://www.ncqa.org/programs/hedis/desirable%20attibutes.html.

Selected sections from The Health Plan Employer Data and Information Set (HEDIS®) Volume 2, Technical Specifications, NCQA, 2008.

Discussion Questions

1. In your system, which stakeholders would be interested in assessing system performance in the area of medicines coverage, and why?
2. Which policy domains and performance areas related to medicines coverage would be the most important to assess in your system?
3. Which aspects of medicines coverage could you assess using routinely collected data in your system?
4. Which performance measures might be the most useful to compare across different health systems and insurance programs?

Session 8: Designing a minimum benefits package

Objectives

The objective of this session is to review the South African experience with legislating and implementing prescribed minimum benefits (PMBs) in the private health insurance market. We will discuss the principles and practices applicable to developing a prescribed minimum benefits package. We will also discuss how you would apply the concept of PMBs within your country.

Outline

- Development of prescribed minimum benefits in South Africa
- Principles and practices applicable to PMBs
- Applying PMBs within your country

Readings (key readings in bold)

Taylor B, Taylor A, Burns D, Rust J, Grobler P. Prescribed minimum benefits – quagmire or foundation for social health reform? SAMJ 2007; 97(6): 446-450.

Council for Medical Schemes. Chapter 4: PMB Review Consultation Document. Department of Health and Council for Medical Schemes. September 2008.

Discussion Questions

1. What is considered a minimum benefits package?
2. What principles should be considered when developing minimum benefits packages?
3. Discuss how establishing a minimum benefits package might improve access to care or clinical outcomes your setting.

Session 9: Evaluating changes in medicines coverage policies

Objectives

The objective of this session is to discuss methods that can be used to evaluate the effects of medicines policy changes over time. We will illustrate the strengths and weaknesses of different policy evaluation designs.

Outline

- Discussion of policy evaluation designs – pre-post versus longitudinal studies, use of different types of control groups
- Designing and implementing a policy evaluation – defining study objectives; study group selection; data collection; study time frame; planning for analysis

Readings (key readings in bold)

Cook TD, Campbell DT. Chapter 5. Quasi-Experiments: Interrupted time-series designs. In Cook TD, Campbell DT. Quasi-Experimentation. Design and Analysis Issues for Field Studies. Boston: Houghton Mifflin Company, 1979.

Kanavos P, Ross-Degnan D, Fortess E, Abelson J, Soumerai SB. Chapter 5. Measuring, monitoring, and evaluating policy outcomes in the pharmaceutical sector. In: Mossialos E, Mrazek M, Walley T, editors. Regulating pharmaceuticals in Europe: Striving for efficiency, equity and quality. European Observatory on Health Systems and Policies Series. Open University Press: 2004, 177-196. Available at http://www.euro.who.int/eprise/main/WHO/Progs/OBS/Publications/20040527_2.

O'Malley AJ, Frank RG, Kaddis A, Rothenberg BM, McNeil BJ. Impact of alternative interventions on changes in generic dispensing rates. HSR: Health Services Research. 2006; 41(5): 1876-94.

Perera R, Heneghan C, Yudkin P. A graphical method for depicting randomised trials of complex interventions. British Medical Journal 2007; 334:7585 (127-129). (reading for Activity 1)

Ray W. Policy and program analysis using administrative databases. Ann Intern Med 1997;127:712-718.

Shojania KG, Grimshaw J. Evidence-based quality improvement: The state of the science. Health Affairs. 2005; 24(1): 138-150.

Soumerai SB, Ross-Degnan D, Fortess EE, Abelson J. A critical analysis of studies of state drug reimbursement policies: Research in need of discipline. Milbank Quarterly 1993; 71(2): 217-252.

Discussion Questions

1. What is the structure (administrative, geographical, different member populations) of your insurance system and of its routine data systems?
2. What is the potential for designing controlled or longitudinal policy evaluation studies in your setting?
3. Who would be the audience for a policy evaluation in your system and what would they most like to know about the impact of medicines policies?

Session 10: Assembling data from different sources

Objective

The objective of this session is to describe some of the practical aspects and problems of assembling data from different sources within an insurance system for use in pharmaceutical policy analysis. An example will be presented of the issues faced in gathering prescribing data within the Ghana National Health Insurance Scheme to prepare for this course. The

discussion will particularly focus on issues that arise when patient-level utilization data are not computerized.

Outline

- Brief description of data sources, data collection processes, and resulting data structures
- Challenges in assembling, cleaning, analyzing, and interpreting data
- Sampling data from health care systems

Readings (key readings in bold)

INRUD and WHO Action Programme on Essential Drugs. How to investigate drug use in health facilities: selected drug use indicators. (DAP Research Series N°7. WHO/DAP/93.1) World Health Organization; Geneva: 1993. Chapter 3: Study design and sample size, pp.25-31.

Tamblyn R, Lavoie G, Petrella L, Monette J. The use of prescription claims databases in pharmacoepidemiological research: The accuracy and comprehensiveness of the prescription claims database in Quebec. Journal of Clinical Epidemiology 1995; 48 (8): 999-1009.

Discussion Questions

1. What are key issues in assembling data from various data sources in your systems?
2. What are the implications of missing data (e.g., diagnosis, amount dispensed) and lack of precise codes for diagnoses, medicines, and procedures?
3. What recommendations about data recording and quality checking would you make for health insurance programs in your country that want to use data for policy evaluation?

Session 11: Detecting and solving data problems

Objective

The objectives of this session are to identify some of the key issues that arise when extracting, organizing, and analyzing insurance program data. We will illustrate how to identify and deal with common data problems that may distort results if not taken into consideration. These data problems include changing populations; missing data; extreme values; seasonal variation in medicine use; inconsistent units of measurement; different dosage forms; pre-policy effects; lag periods following policy implementation; and changing codes. We will use spreadsheet-based analyses to assess data patterns, explore reasons for unexpected data patterns, and establish rules to deal with inconsistencies.

Outline

- Common data issues and how they influence results
- Identifying data issues using frequencies of cross-sectional data and longitudinal displays of data patterns
- Resolving common data issues

Readings (key readings in bold)

Lin CC, Lai MS, Shy CY, Chang Sc, Tseng FY. Accuracy of diabetes diagnosis in health insurance claims data in Taiwan. J Formos Med Assoc 2005; 104:157-163.

Maclure M, Nguyen A, Carney G, Dormuth C, Roelants H, Ho K, Schneeweiss S. Measuring prescribing improvements in pragmatic trials of educational tools for general practitioners. Basic Clin Pharmacol Toxicol. 2006; 98(3):243-52.

Platt R. Speed bumps, potholes, and tollbooths on the road to panacea: making best use of data. Health Aff (Millwood) 2007; 26:w153-5.

Tyree BT, Lind BK, Lafferty WE. Challenges of using medical insurance claims data for utilization analysis. Am J Med Quality 2006; 21(4): 269-75.

Discussion Questions

1. In which ways can routine data from a health care or insurance system be incorrect or misleading?
2. What are some of the known or suspected data problems in your setting and what steps have been taken to address these problems?
3. What are the potential effects of different types of data problems on interpreting policy analysis results?

Session 12: Organizing medicines and diagnosis data

Objectives

The objective of this session is to highlight the need for standardized coding of medicines, diagnosis, and procedure data. Standardized codes are required to organize the data conveniently for defining problems, evaluating the impacts of interventions, and for routine monitoring. We will show examples of how to organize medicines into equivalent chemical groups and therapeutic categories, and how to classify diagnoses and symptoms into meaningful health problem groups.

Outline

- Rationale and requirements for coding systems of medicines, diagnoses, and procedures
- Description of commonly used coding schemes
- Linking text information to standardized codes

Readings (key readings in bold)

Description of the ATC/DDD System. WHO Collaborating Center for Drug Statistics Methodology, Oslo. Available at http://www.whocc.no/atcddd/.

Chapter 46. Computers in drug management. In: Quick JD. Managing drug supply: The selection, procurement, distribution, and use of pharmaceuticals. West Hartford, CT: Kumarian Press, 1997; 728-746.

Unauthorized Guide to Multum's Lexicon. Cerner Corporation, 2005. Available at http://www.multum.com/LexGuide.pdf.

Discussion Questions

1. Which coding systems are commonly used to classify medicines, diseases, and procedures? Which systems are currently used in the systems of course participants?
2. How would you identify cases of diabetes if you had only medicines data; only diagnosis data; and medicines, diagnosis, and procedure data?
3. How would you identify cases of malaria in children, in adults?

Session 13: Analyzing data and disseminating policy findings

Objective

The objective of this session is to describe the process for conducting a longitudinal policy evaluation, interpreting the results, and disseminating key information to decision making to policy makers.

Outline

- Setting up longitudinal data for analysis
- Using excel-based pivot charts and tables to create visual displays and summaries of data over time
- Interpreting results in light of design strengths and weaknesses
- Summarizing results and making evidence-based recommendations for policy change

Readings (key readings in bold)

Brufsky JW, Ross-Degnan D, Calabrese D, Gao X, Soumerai SB. (1998) Shifting physician prescribing to a preferred histamine-2-receptor antagonists. Medical Care, 36, 321-332.

Ross-Degnan D, Soumerai SB, Fortess EE, Gurwitz JH. (1993) Examining product risk in context. Market withdrawal of zomepirac as a case study. JAMA, 270, 1937-1942

Soumerai SB, Avorn J, Ross-Degnan D, Gortmaker S. (1987) Payment restrictions for prescription drugs under Medicaid. Effects on therapy, cost, and equity. N Engl J Med, 317, 550-556.

Soumerai SB, Ross-Degnan D, Gortmaker S, Avorn J. (1990) Withdrawing payment for nonscientific drug therapy. JAMA, 263, 831-839.

Wagner AK, Soumerai SB, Zhang F, Ross-Degnan D. Segmented regression analysis of interrupted time series studies in medication use research. J Clin Pharm Therapeutics 2002; 27:299-309.

Wagner AK, Ross-Degnan D, Gurwitz JH, Zhang F, Gilden DB, Cosler L, Soumerai SB. Effect of New York State regulatory action on benzodiazepine prescribing and hip fracture rates. Ann Intern Med 2007; 146:96-103.

Weinberg M, Fuentes JM, Ruiz AI, et al. Reducing infections among women undergoing cesarean section in Colombia by means of continuous quality improvement methods. (2001) Arch Intern Med, 161, 2357-2365.

Discussion Questions

1. What questions arise when conducting policy analyses?
2. Who should be involved in interpreting findings from policy evaluations?
3. What are the most useful strategies for communicating results to policy makers?

Session 14: Routine monitoring systems in insurance programs

Objective

The objectives of this session are to discuss the rationale for and design of monitoring systems using routine data on medicines and other health services use in health systems or insurance programs. Participants will identify possible domains of performance measurement, how to operationalize performance indicators, data needs, and use of performance data for management decisions

Outline

1. Reasons for routine monitoring, including strategic planning, performance assessment, and fraud detection
2. Discussion of which performance indicators to monitor, which data can contribute to these indicators, and how, for whom, and how frequently the resulting monitoring data should be presented
3. Templates to report data from routine monitoring systems

Readings

Friedmann YM, Hanchak NA. Chapter 9. Pharmacy Program Performance Measurement. In Navarro RP. Managed Care Pharmacy Practice. Gaithersburg, MD: Aspen Publishers, 1999, 199-220.

Selected sections from The Health Plan Employer Data and Information Set (HEDIS®) Volume 2, Technical Specifications, NCQA, 2008.

Sokol L, Garcia B, Rodriguez, J, West M, Johnson K. Using data mining to find fraud in HCFA health care claims. Top Health Inf Manage 2001;22:1-13.

Discussion Questions

1. Which performance indicators would be relevant to different stakeholders in your system?
2. In which format would they need to see performance data to be able to act on them?

Session 15: Implementing medicines policy change

Objectives

The objectives of this session are to discuss how to implement a medicines policy change in a health delivery system or insurance program. We will focus on understanding which stakeholders need to be involved, how to elicit their perspectives, and how to engage them in the process. We will also discuss system needs for implementing a policy change and mechanisms for communicating policy changes effectively to all stakeholders.

Outline

- Political, social, and systems requirements for successful policy change
- Discussion of systematic analysis of policy content, positions and power of major stakeholders, opportunities and obstacles to policy change, and strategies for change

Readings (key readings in bold)

Glassman A, Reich MR, Laserson K, Rojas F. Political analysis of health reform in the Dominican Republic. Health Policy and Planning 1999;14:115-126.

Huff-Rousselle M, Akuamoah-Boateng J. The first private sector health insurance company in Ghana. The International Journal of Health Planning and Management 1998; 13(2): 165-75.

Kumaranayake L, Mujinja P, Hongoro C, Mpembeni R. How do countries regulate the health sector? Evidence from Tanzania and Zimbabwe. Health Policy and Planning 2000; 15(4): 357-67.

Reich MR. The politics of health sector reform in developing countries: Three cases of pharmaceutical policy. Health Policy 1995:32:47-77.

Roberts MJ, Hsiao W, Berman P, Reich MR, eds. Chapter 4. Political Analysis and Strategies. In: Roberts MJ, Hsiao W, Berman P, Reich MR, eds. Getting Health Reform Right. A Guide to Improving Performance and Equity. Oxford: Oxford University Press, 2004:61-89.

Shretta R., Walt G, Brugha R, Snow R. A political analysis of corporate drug donations: the example of Malarone(R) in Kenya. Health Policy Plan 2001; 16(2): 161-170.

Thomas S, Gilson L. Actor management in the development of health financing reform: health insurance in South Africa, 1994-1999. Health Policy and Planning 2004; *19*(5): 279-91.

Discussion Questions

1. Who are the key stakeholders with respect to medicines issues in your country as a whole, as well as in your health system or insurance program?
2. What concerns would your stakeholders have about changes in the specific medicines policy you have been considering in this course?
3. What systems are in place for communicating effectively with stakeholders about policy changes in your setting?

Session 16: Country group presentations

Objective

The objective of this session is for participants to present the projects developed during the course on a priority medicines issue facing their health or insurance system, and to receive constructive input from other participants.

Please use the slide template provided for the presentation of your group project in the framework outlined below.

Framework for Presentations on Key Medicines Policy Issues

Domain	Questions to Consider
Problem	What is the key medicines policy problem you have decided to address?
Causes	What are possible causes for the problem?

Domain	Questions to Consider
Stakeholders	Who has an interest in the problem and what are their positions?
Previous Actions	What has been done about the problem so far? What have been the outcomes?
Proposed Policy Change	Which policy change(s) do you suggest?
Evaluation of Proposed Policy Change	How would you evaluate the proposed policy change(s)? • Which evaluation design would you use and why? • Which are the most important data elements you would need, and where would you obtain them? • How would you define key outcome indicators?
Implementation Plan	How would you implement the policy (approach, timing, duration)? How would you consider stakeholder interests?
Disseminating Results	How, to whom, and when would you disseminate the results of your policy evaluation?

ANNEX 5: BRIEF DESCRIPTIONS OF COUNTRY GROUP PROJECTS

Ghana – Evaluating DRG-Based Payment in the NHIA

The Ghana National Health Insurance Authority (NHIA) recently changed payment from fee-for-service to payment based on diagnosis-related groups (DRGs). Fee-for-service and DRG-based payment differ in the incentives they offer to care providers and systems.

The proposed interrupted time series study will evaluate changes in aspects of quality of care of tracer conditions (malaria and hypertension) that may have occurred following the introduction of DRG-based payment. Key quality of care indicators will include documented history of present illness, key vital signs (temperature, blood pressure, weight), laboratory test taking (blood smear for parasites), and number of medicines prescribed per visit. Outpatient records for patients with tracer diagnoses in selected primary and secondary level facilities will be sampled monthly for 12 months before and 12 months after DRG implementation. Key outcome indicators will be graphically displayed over time and analyzed using segmented regression analyses and other techniques.

The proposed study will provide crucial information to the Ghana NHIA and Ghana Ministry of health on quality of care effects of the recently implemented insurance system payment changes.

Ghana – Policy Changes to Alleviate Reimbursement Delays in the NHIA

Reports exist of delays in and cuts to reimbursement by district mutual health insurance schemes to facilities. Delays in and cuts to expected reimbursement may lead to stock outs of medicines, lack of appropriate care at facilities, and lack of trust in the system. Potential reasons for delayed and insufficient reimbursement are likely multifactorial and may include complicated claims forms, lack of resources to complete claims properly, delayed submission of claims by the facility, lack of resources to process claims, and insufficient funds at the district scheme level.

In the proposed multi-method study, the team will (a) retrospectively evaluate the duration and completeness of claims submission and reimbursement; (b) assess, through interviews and focus groups, reasons at the facility and district mutual health insurance scheme for perceived submission and reimbursement delays, and (c) based on findings from the retrospective and qualitative study phases, the team will design and pilot test in a sample of facilities policy interventions to improve claims reimbursement processes. Such interventions may include a simplified claims form, sampling of claims for vetting (instead of vetting all claims), and training personnel at the facility and district mutual health insurance level in claims form completion and processing, respectively. Process changes will be evaluated using an interrupted time series study of key indicators (percent claims reimbursed within 60 days of submission; percent claims reimbursed at 40% of charges upon submission; percent claims rejected; average duration between submission and payment; and others) and qualitative assessments of stakeholder perceptions of process changes.

The proposed study will provide crucial information to the Ghana NHIA on a key aspect of its operation, reimbursement of facilities for care provided.

Kenya – Improving Access to Outpatient Health Care Services

Lack of coverage of outpatient care, perceived low quality of care in the public sector, and high cost of care and medicines in the private sector lead to lack of access to and affordability of care, particularly for chronic conditions. To increase affordability of care, specifically affordability of medicines for chronic conditions, the Kenyan National Health Insurance Scheme plans to pilot an outpatient benefit package.

Using a controlled interrupted time series design, the proposed study will evaluate the impact on quality of care for patients with two tracer conditions, diabetes and hypertension, of the pilot outpatient benefit implementation. Key outcome indicators, drawn from outpatient and inpatient visit records, pharmacy records, and claims, will include frequency of outpatient visits and hospitalizations, clinical parameters (blood pressure, glucose level), drug use indicators (including average number of medicines per prescription, percent generic prescribing), average claims payments, and monthly new member enrolment.

The proposed evaluation will provide crucial data to the Kenya National Health Insurance Scheme on the effects of a pilot roll-out of outpatient coverage. These data will help the scheme adjust the outpatient coverage package as needed before scale up to country-wide implementation.

Nigeria – Evaluating Quality of Care

Nigeria is in the process of expanding its National Health Insurance Scheme (NHIS). However, perceptions of low quality of care for NHIS enrollees exist, which may make expansion of the scheme difficult. Multiple factors could be responsible for perceptions of low quality of care, including incentive structures (capitated pre-payment to providers), lack of monitoring of quality of care and lack of enforcement of policies and guidelines for appropriate care.

In this two-phase study, the team proposes to assess, in Phase 1, quality of care both quantitatively and qualitatively. Based on results from Phase 1, the team will design interventions to improve quality of care. In Phase 1, the team will compare diagnosis, prescribing, referral, laboratory testing, stock out, and cost of medicines information among public and private facilities, for patient enrolled in NHIS and for non-NHIS patients with tracer conditions (diabetes and acute respiratory infections).

The proposed evaluation will provide crucial information to the Nigerian NHIS as it plans to expand its membership.

South Africa – Improving Uptake of Antiretroviral Treatment in POLMED

The current coverage in South Africa does not match the prevalence of patients who need antiretroviral treatment (ART), a problem that leads to unnecessary suffering, morbidity, mortality, and losses in productivity for employers. Among members of POLMED, which insures those employed by the South African Police Services, HIV/AIDS prevalence is not known. However one might assume that it is similar to the South African population average of about 16%. If the latter holds true, it is known that only a small percentage of these infected POLMED members receive ART. Likely causes for lack of ART coverage in South Africa include fear of discrimination, lack of knowledge, and possible insufficient ART program coordination and implementation through POLMED.

This longitudinal intervention study will pilot test collaboration between POLMED and employers to include peer educators in awareness campaigns and encourage employers to conduct HIV counseling and testing among employees. Key indicators will include monthly numbers of POLMED members newly enrolled in ART programs, monthly numbers of dropouts, and total number of POLMED members in ART programs per month.

The study will provide important information to POLMED on strategies to close the gap between need for and actual care provided to members with HIV/AIDS.

Tanzania – Use of NHIF Reimbursement Funds in Public Health Facilities

Public health facilities operating under the Tanzania National Health Insurance Fund (NHIF) lack medicines. Potential causes for inadequate stocks may include failure to use NHIF funds

for medicines procurement, cumbersome procurement procedures, lack of control over funds at the facility level, inadequate monitoring of processes, and inadequate staff training.

This two-phase study will explore reasons for inadequate medicines supply in NHIF facilities through semi-structured interviews to explore perceptions of key stakeholders in the NHIF, the Ministry of Health, among medicines suppliers, and facilities (clinicians, patients). Based on identified causes, the team will design and implement policy interventions. Key quantitative indicators include percent NHIF funds spent on medicines; frequency and duration of stockouts, percent of prescribed medicines that were dispensed, percent prescriptions consistent with recommendations of the Essential Drugs List and standard treatment guidelines.

This important assessment will inform the Tanzania NHIF about a key component of their benefit package, availability of essential medicines.

Uganda – Evaluating Access to Medicines

Inappropriate medicines use is a multi-factorial problem in Uganda. In the summer of 2009, Uganda plans to implement a National Health Insurance Program (NHIP) which is expected to improve medicines supply and appropriate prescribing at the health facility level.

The proposed study will evaluate care seeking, prescribing, and dispensing behavior and availability of medicines in public and private facilities prior to and following the implementation of the NHIP, evaluating changes in key indicators over time and comparing changes in NHIP and non-NHIP facilities. Key outcome indicators include percentage of prescriptions for tracer conditions consistent with standard recommendations; percentage of prescribed medicines dispensed on site; and percentage of days on which key drugs are out of stock.

This evaluation will provide crucial information as Uganda rolls out its NHIP.

ANNEX 6: COURSE EVALUATIONS

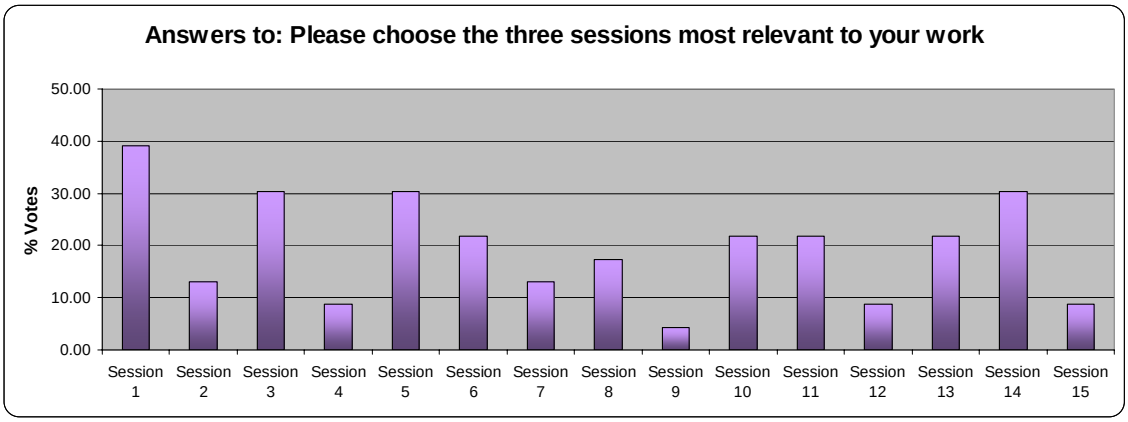
Summary of Session Evaluations

Participants evaluated each MedIC Course session. The following table summarizes session evaluation results.

Characteristic rated*	Session Number														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Objectives clearly defined	7.9	7.9	7.9	8.1	8.1	7.6	6.6	8.2	7.6	8.1	8.1	7.3	7.9	8.1	8.1
Amount of material appropriate	7.9	7.6	8.0	7.8	8.0	7.5	6.5	8.3	7.5	7.8	8.1	7.6	7.9	7.8	7.9
Depth appropriate	7.5	7.7	7.6	7.7	8.2	7.4	6.6	8.2	7.3	8.0	8.1	7.3	7.8	7.8	8.0
Participant guide clear and useful	7.7	6.8	7.6	7.7	7.9	7.4	7.1	8.0	7.6	8.0	8.1	7.3	7.8	7.8	7.7
AV materials clear and useful	8.1	7.5	7.8	7.7	8.2	7.4	6.4	7.8	7.2	7.9	8.4	7.4	7.8	8.1	7.6
Information helpful in my work	8.1	8.0	8.2	7.8	8.1	7.9	7.2	8.2	7.5	7.9	8.4	7.8	7.9	8.3	7.8
Instructor clearly explained	8.3	8.0	7.9	8.0	8.5	7.8	6.5	8.3	7.3	8.1	8.3	7.5	7.8	8.2	7.9
Instructor's management of the class (9=excellent)	8.0	7.8	7.6	8.2	8.4	7.8	5.9	8.4	7.3	7.9	8.2	7.5	8.0	8.0	8.3
Session length just right (% yes)	72.2	83.3	92.9	81.0	88.0	91.7	82.6	91.7	94.4	90.9	88.0	70.0	93.8	86.4	82.61

* 9=strongly agree, unless noted otherwise

Participants identified the three sessions most relevant to their work. The Figure below illustrates that more conceptual (session 1), as well as tools-oriented (sessions 3, 5, and 6), and data driven sessions (sessions 10, 11, 13, 14) were rated as highly relevant to participants' work.



Summary of Overall Course Evaluations

On the last day of the MedIC Course, participants evaluated the course overall. Results are summarized below.

Characteristic rated	Average Rating
Objectives clearly defined (9=strongly agree)	6.0
Defined objectives achieved (9=strongly agree)	7.8
Amount of material covered appropriate (9=strongly agree)	8.0
Depth of coverage of the material appropriate (9=strongly agree)	7.9
Information will be helpful in my work (9=strongly agree)	8.3
Overall, I would say the quality of the instruction was (9=excellent)	7.4
Training facilities (9=very satisfied)	6.8
Pace of the course (9=very satisfied)	6.7
Style and format of the sessions (9=very satisfied)	7.4
Instructional materials (9=very satisfied)	7.3
Length of the training course (9=very satisfied)	6.3
Difficulty level of the training course was just right (%yes)	72.4
Small and large group exercises were very useful (%yes)	87.0
This course was valuable and I will recommend it to my colleagues (%yes)	96.0

Participant Suggestions for the MedIC Course

Below we list participant responses to "please give us your recommendations for improving this training course". Generally, the MedIC Course was well received (see Appendix 7) and recommendations for changes focused on it's intensity.

- The course was too congested and flow from one session to another sometimes failed. Could be better to give fewer sessions and let the group synthesize with information given via breaks (coffee, lunch or an energizing exercise).
- There should be a direct link between the course reading material and specific session. The reading material should reinforce what was covered, to serve as illustration.
- More activities outside the classroom should be included. Conducting academic sessions outside the classroom should be awarded.
- A follow-up of this course would be beneficial, so that we can evaluate the outcome of the research work.
- Provide relaxation by combining/clustering sessions together. Allow Sundays off.
- Participants should be asked in advance to come with their laptops.
- If possible, increase more real life sessions. Blend better extra-curricular activities such as site-seeing. Provide more social events within the course.
- More extra curricular activities in line with the course such as visits to facilities would be desirable to reduce fatigue.
- The course should have been structured in such a way that participants will have at least half a day off to organize themselves and, perhaps, shop.
- Can the course be reduced to 6.5 days? Disseminate follow-up actions by countries to create further interest.
- Very satisfied.
- Please advise participants to come to the course with their laptops.
- Sundays should be off – for attending church.
- Please restructure the course topic to reflect what the course really is, to attract more people.
- Efforts should be made to simplify the theoretical aspects of the course (i.e. making the course more practical).
- Extend the course over a two week period rather than 10 days.
- Setting early climate stage for attendance and participation by making reference to previous training course dynamics.
- Very participative.
- Get in contact with the health insurance schemes beforehand with details of the course, depth of material and relevancies.

ANNEX 7: PARTICIPANT STATEMENTS ABOUT THE MEDIC COURSE

(alphabetically by last name of participant)

"This special course has benefited me a lot. The presentations on the availability and use of data in health and insurance systems, designing minimum benefit package, medicine coverage policy options, possible approaches to address identified medicines problems, to mention a few has a lot of benefits to me. The presentations from member countries, the experiences that were shared more especially how various countries started with the NHIS programme, where they have reached and the way forward was wonderful. I there entreat staff of various insurance schemes in Africa to part-take in this course next time it is available."

Vivian Addo-Cobbiah
Provider Services Coordinator
National Health Insurance Authority
Accra, Ghana

"As Medicines adviser in the WHO country office the course equipped me with the skills to support the country to use routine medicines data to develop evidence based policy decisions, to monitor and evaluate the impact of policies on equity, affordability, quality of care for successful health outcomes. The usefulness of this course should be promoted for many more staff of insurance schemes in Africa."

Edith Andrews Annan
National Professional Officer
World Health Organization
Accra, Ghana

"The course was great. During the various sessions, presentations and discussions, it was evident that there are glaring gaps in defining, designing and implementing medicines benefits packages by various social health insurance programmes. The course was timely for us (NHIF Kenya) and definitely will add a lot of value as we prepare for the introduction of outpatient benefits package. More of similar courses will real strengthen the social insurance programmes in Africa."

Robert Arasa
Manager, Business Development and Research
National Hospital Insurance Fund
Nairobi, Kenya

"If you're a professional in a health or health insurance system then, the MedIC initiative course is a "must attend" course for you. This course has been an eye-opener for me and has boosted my confidence level to great heights. It was thrilling! Come maximize your potential. The MedIC Initiative course - a repository of knowledge!"

Gertrude Dorcas Laryea
Pharmacist-in-Charge
Maamobi Polyclinic, Ghana Health Service
Accra, Ghana

"The MedIC course provided an opportunity for stakeholders in Ghana to work closely together to improve supply chain management of medicines for a sustainable national health insurance programme. The relevant topics provoked lively discussions, and the course created a definite momentum for clarifying and resolving complex problems in essential medicines management. We appreciated the participation of course facilitators in discussions with stakeholders which occurred immediately after the course, and which helped us to define the next steps in this process."

Daniel Kertesz
Representative
World Health Organization
Accra, Ghana

"The MedIC course was a wonderful experience. I learned a lot about policy implementation and evaluation important in my advocacy work and the training on data analysis was very crucial in the studies being conducted on medicines access."

Denis Kibira
Survey Manager/Medicines Advisor
HEPS – Uganda, Coalition for Health Promotion and Social Development
Kampala, Uganda

"Making sense out of the data/information we have has been a challenge but thanks to MedIC course I can now analyse and make lots of sense out of the routine data collected."

Rose Marwa
Head Pharmaceutical Services Unit
National Health Insurance Fund (NHIF)
Dar es Salaam, Tanzania

"It was a wonderful experience being part of (the MedIC Course) in Accra; it has made a medical/medicines practioner out of me an actuarial scientist."

Christopher S. Mshelia
Senior Manager (Actuarial Services)
National Health Insurance Scheme
Abjua, Nigeria

'Pharmaceutical Policy Development and Implementation Monitoring are some of the responsibilities in my division and thus the MeDIC Course was very appropriate since as our country prepares to introduce a Social Health Insurance mechanism, I will be able to contribute using the knowledge gained during the course."

Mary Njeri Mucheru
Deputy Chief Pharmacist
Ministry of Medical Services
Nairobi, Kenya

"This course introduced to me the basic concepts in health insurance, but more importantly the skills to deal with data to guide medicines policy options within health insurance

schemes. [I am] Very grateful to Abayneh for encouraging us in this direction and also the Harvard and Ghana team for the excellent course."

Joseph Mwoga
WHO Country Medicines Advisor
Kampala, Uganda

"All indications are that the South African government will introduce health insurance in one form or the other after more than 5 years of intense discussions. The course opened my eyes to the need for all senior programme managers in the country's various health departments, especially those in finance and pharmaceutical services, to participate in a similar course, understandably with content and format relevant and suited to the South African situation. There is no better time than the immediate future to start preparations for such a course. I also take away from the course a tool that will be of immense assistance to me forever – the Pivot charts and tables!"

Bada Pharasi
Deputy Regional Technical Advisor
Strengthening Pharmaceutical Systems (SPS)
Management Sciences for Health (MSH)
Pretoria, South Africa

ANNEX 8: SUMMARY OF DISCUSSION ON STEPS FOLLOWING THE COURSE

During the last session of the MedIC Course, participants and facilitators brainstormed on ways to build upon the network created during the MedIC Course and continue joint information exchanges and collaboration. Specific suggestions were to find ways to:

- Support the continued development and implementation of country project proposals.
- Establish a communication platform for exchanges of experiences, materials, tools, and technical assistance related to policy decision making on medicines coverage in insurance systems.
- Make sure that information from the MedIC Course is communicated to key stakeholders in participating countries, including country ministries of health and the leadership of national health insurance programs, through briefing memos, sharing of the MedIC Course report, and national meetings on topics covered in the MedIC Course.