

Jordan Rational Use of Drugs Strategy Development Workshop

21st-22nd September 2004, Dead Sea Valley / Jordan

Workshop Report by Salah Mawajdeh, Ken Harvey and Rania Bader.

Jordan, like all countries, is faced with a difficult problem; how to provide equitable, evidence-based and cost-effective health care within the capacity of a country's ability to pay. About 9% of the Jordanian GDP is spent on health with one third of this spent on medicinal drugs (a high proportion by international standards). One quarter of the drug expenditure is spent in the public sector with the remaining three quarters spent in the private sector. In addition, drug expenditure is growing at 17% per annum compared to a GDP growth of 3.3%. Because of this, the pharmaceutical sector is a high priority for the first phase of Jordanian health reform. Several consultants, including the World Health Organization (WHO) and the Australian Health Insurance Commission (HIC), had noted that while Jordanian National Drug Policy (NDP) was grounded in a published and endorsed policy document,¹ implementation, especially the rational drug use component (RDU), left much to be desired. To remedy this situation, the Jordanian Food & Drug Administration (JFDA) joined forces with WHO, the Australian HIC and the U.S. Agency for International Development Partners for Health Reform^{plus} (PHR^{plus}) to hold a strategy development workshop on RDU.

The two days workshop was organised by the JFDA. Invitations were issued by the Minister of Health (Eng. Saed S. Darwazah) to around 100 participants representing organisations from key sectors (Box 1). Prior to the workshop, participants were provided with background material including keynote presentations and a HIC policy paper² that outlined the history of RDU in Jordan, analysed its strengths, weakness, opportunities and threats, and provided an action plan for consideration.

The workshop was introduced by Dr. Ken Harvey. He noted that all countries have problems with RDU; that all can learn from each other, from WHO, and from other international agencies working in this area. He stressed the need for all sectors to be involved; government, health professionals, consumers and the pharmaceutical industry. Each had competing needs; only by working together could an outcome be achieved that was fair to all. It was pleasing that all these groups were represented in this workshop. Dr. Harvey listed a number of concerns about RDU in Jordan. These included evidence of excessive and wasteful prescribing but also of under treatment of certain diseases such as hypertension, increasing

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levels of antibiotic resistance, the escalating cost of valuable new drugs and the additional cost of preventable medication-related adverse events. Dr. Harvey noted that if RDU in Jordan continued to languish it was inevitable that the percentage of the health budget spent on pharmaceuticals will increase (to the detriment of other health services), patients will be increasingly harmed by unnecessary adverse events and antibiotic-resistance organisms, and Jordan's ability to earn income from medical tourism will diminish. He then introduced the workshop objectives:

- To review progress and revitalise the RDU component of Jordan NDP;
- Share local and international experience with respect to implementing RDU;
- Present local data relevant to RDU (including WHO indicators, drug utilisation data and information on antibiotic resistance);
- Discuss and prioritise the strategies suggested by participants and consultants to stimulate RDU in Jordan;
- Encourage organisations and individuals to commit to undertaking particular RDU activities.

Dr. Mohammed Khan (A/g representative of WHO in Jordan) then formally welcomed the Minister of Health, distinguished guests and participants to the workshop. He noted that WHO has excellent technical material and expert advisors in the area of RDU. WHO had brought a considerable amount of technical material to Jordan which they hoped workshop participants would find useful. In addition, they had provided several experts to present information about WHO activities during the program.

Dr. Dwayne Banks (Chief of Party) then described three main areas where *PHRplus* was working in Jordan. The National Health Accounts (NHA) project provided the government with a systematic method for tracking and estimating health care expenditures in Jordan and had found pharmaceutical expenditure to be around one third of health GDP. The Health Insurance Technical Assistance program focused on measuring the structure of health insurance provision in Jordan, as well as developing optimal contracting rules for the Health Insurance Directorate. The Hospital Decentralization program assisted decentralizing decision

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making within MOH hospitals in order to provide hospital directors with more control over their daily managerial decision making. *PHRplus* was also supporting the introduction of pharmaceutical inventory software, hospital accreditation and an update of the Jordan National Formulary and Essential Drug List.

Dr. Salah Mawajdeh (Director General, JFDA) reminded participants of the goal of Jordan NDP; “To develop, within the available financial and human resources, the potential that drugs have to improve and maintain the health of the population”. He noted that the JFDA had worked closely with the HIC on the pharmaceutical policy studies that were part of the larger Health Sector Reform Project supported by the World Bank. This workshop was one outcome of these policy studies and the JFDA was most appreciative of all those who had contributed to its planning and conduct.

Eng. Saed S. Darwazah (Minister of Health) formally opened the workshop and raised the conflict between two competing policy goals. The first was to make all new drugs quickly available on the Jordanian market in order to provide freedom of choice for health professionals and consumers. The second was to choose cost-effective therapy appropriate to the economic resources of the country. He noted that new drugs are not necessarily better but are always more expensive compared to older multi-sourced products. He was concerned that doctors too often switched to new products; and believed they required guidance (which was the task of this workshop).

Dr. Harvey then presented an outline of RDU activities in Australia. A small group of people concerned about antibiotic resistance initially created guidelines for antibiotic use, conducted antibiotic audits and targeted education at the gaps between what was recommended and what was actually practiced.³ These initiatives spread to other therapeutic areas and were eventually formalised as the Australian Quality Use of Medicines (QUM) Policy. A National Prescribing Service (RDU coordinating unit) was funded by the Australian government to support and encourage the development of QUM activities in both the public and private sector. Evaluation has shown that these activities have improved the prescribing, dispensing and

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consumption of medicinal drugs and been cost-effective. In short, spending money saved more money! Other countries have had similar experience.

Dr. Abdel Aziz Mahmoud Saleh (Special Advisor to the Regional Director for Medicines, WHO) presented, and made available to participants, the overall WHO Medicine Strategy for 2004-2007.⁴ He stressed that NDP should be an integral component of National Health Policy which, in turn, should be an integral component of National Socioeconomic Policy. He outlined the 5 priorities objectives of the WHO Medicines Strategy: policy, access, quality & safety and rational use. Dr. Saleh noted that the problem with RDU is not lack of technical knowledge which WHO has in abundance;⁵ rather it lies in the implementation. Problems include poor organization and management of health services at all levels, limited allocation of funds, relatively low salaries and working conditions of public employees and weakness of the health information system. Other challenges were globalisation and in particular FTA which had the potential to undermine health policy. He stressed that values remain crucial; in particular, health is a basic human right.

Mr. Lua'i Al-Khuzai (Country Manager, IMS) provided local data on drug utilisation from the Jordan Pharmaceutical Index (JPI). This commercial product estimates the national quantity of all pharmaceutical products sold through retail pharmacies. His data showed that drug consumption (units) was growing at 12% per annum compared to a population growth rate of 2.8% while drug expenditure in Jordanian Dinar (JD) was growing at 17% per annum compared to a GDP growth of 3.3%. He noted that antimicrobials account for the largest market share (23% by JD; 15% by unit) and foreign companies supplied 63% of the market (JD). His take home message was, "What gets measured gets improved".

Dr. Leone Coper (Consultant, HIC) reported on qualitative research conducted on Jordan consumers. A number of focus groups had revealed that doctor "shopping" was common; pharmacists were viewed primarily as dispensers of medicines (but were also used for the treatment of minor illnesses) and many consumers believed medicine was a "last resort" in treating illness; less so for those with chronic illness. Many misunderstandings about medicines were revealed such as, "60% of the sample believed more is known about side

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effects of newer, more expensive medicines”. Consumers also lacked knowledge about their own medicine. It was noted that doctors and pharmacists usually waited to be asked rather than letting consumers know what they needed to know about their medicines. Non-compliance was commonly reported. Only 47% of people interviewed with chronic conditions always took their medicine; 50% stopped taking medicine without notifying doctor or pharmacist. Many people had taken antibiotics over the last 12 months, especially for coughs, cold & flu; 19% had taken 3 or 4 courses, 8% 5 or 6 courses and 6% used antibiotics chronically. If an antibiotic was required 59% went to the doctor first; 25% asked the pharmacist which one to use; 16% asked pharmacist for a brand they know worked before (self selection).

Dr. Asem A. Shehabi presented local data on antibiotic resistance. He noted there had been a dramatic increase in penicillin resistance to *Streptococcus pneumoniae* (an important community pathogen causing meningitis, pneumonia, otitis media, etc) over recent years. High levels of antimicrobial resistance in urinary and faecal pathogens were also reported with similar rates of resistance occurring to antibiotics commonly used in both out-patients and in-patients (a reflection of high community use of antibiotics). There were also severe problems of antibiotic-resistant nosocomial infection in tertiary hospital neonatal and adult intensive care units. Dr. Shehabi noted that increasing antibiotic resistance required the use of newer, more expensive and sometimes more toxic antibiotics; it also raised the real danger that physicians will run out of effective antibiotics to treat certain infections. The data highlighted the need for antibiotic control policies.

Dr. Ken Harvey (Consultant, HIC) presented a local study on antibiotic use. In 1999, Dr. Sameer Ootom and colleagues at the Jordan University of Science & Technology evaluated drug prescribing practices in 21 randomly selected primary health care facilities in the Irbid governorate using WHO indicators. At least 30 prescriptions were analysed from each centre. They found the mean number of drugs prescribed to be 2.3; the mean percentage of drugs prescribed generically: 5.1%; the percentage of essential drug list (EDL) drugs prescribed: 93%; prescriptions involving injections: 1.2% and prescriptions involving antibiotics: 60.9%. The percentage of drugs prescribed generically was low by international standards and the

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percentage of prescriptions involving antibiotics very high. No other studies on antibiotic use could be found which raised the question as to why there was so little drug utilisation research in Jordan. Dr. Harvey noted that in other countries a number of common problems had been found. These included unnecessary prescribing of antibiotics for upper respiratory tract infections and, where antibiotics were indicated, unnecessary use of broad-spectrum, more expensive drugs rather than narrow-spectrum, more cost-effective drugs. In addition, inappropriate use of antibiotics for surgical prophylaxis was common including using antibiotics in clean surgery when host defences are unimpaired; the wrong choice of antibiotic (not targeting the likely contaminating organisms) and antibiotics started too late &/or continued too long. He doubted that Jordan was immune from such problems. Dr. Harvey reiterated Dr. Shehabi's concerns about antibiotic resistance by telling the story of the first patient treated with penicillin (Box 2).

Dr. Guitelle Baghdadi (EDM, WHO) introduced, and made available, the WHO Ethical Criteria for Pharmaceutical Promotion.⁶ While these were written in 1988 they were felt to be even more relevant today. Dr. Baghdadi emphasized the large amount of money spent on pharmaceutical promotion and its corresponding influence on the prescribing, dispensing and consumption of medicinal drugs. She advocated training health workers in critical appraisal of pharmaceutical promotion and introduced participants to the WHO drug promotion database as a useful educational resource.⁷ She raised a number of questions that needed to be answered. Is data on drug promotion available in Jordan (the amount spent on drug promotion vs. independent information)? How many violations have been found in the last few years? Were sanctions applied? Are students trained to analyse pharmaceutical promotion? Are there codes of conduct for health professionals and/or industry?

Finally, two presentations on Drug & Therapeutic Committees (DTC) were made. Dr. Abdel Aziz Mahmoud Saleh noted that a DTC in a hospital was responsible for implementing locally the same broad range of functions required under NDP, including establishing systems for the rational selection, use and monitoring of drugs. He introduced (and made available to participants) the WHO/MSH, Drug and Therapeutics Committees Manual - A Practical Guide⁸ and outlined its contents. The need for a clear administrative mandate for the DTC was stressed, as was the important role of pharmacists. This view was reiterated by Dr. Imad

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M. Treish (Chairman, Department of Pharmacy, King Hussein Medical Centre). The King Hussein Cancer Center had shown that not only could an effective DTC be set up in Jordan but it could also achieve cost-savings by RDU interventions (omeprazole was targeted).

The second day of the workshop commenced with a brief summary of the presentations made on day 1. Participants were then divided into 5 groups and asked to discuss a number of questions (Box 3), formulate a group response to each and present this to a plenary session of all participants in the afternoon.

All groups agreed that a national RDU Unit with responsibility for progressing RDU issues should be set up in Jordan. The strategies suggested are shown in Table 1.

Strategy	No of groups agreeing#
Update the National Drug Formulary / Essential Drugs List	5
Create Standard Treatment Guidelines	5
Create / Support DTC in all hospitals	3
Research / monitoring / quality assurance / field studies / health information system (data collection) for RDU	3
Training and education of health professionals and consumers / drug information & pharmacovigilance unit / pharmaceutical care unit	3
Regulation / monitoring of Ethical Pharmaceutical Promotion	2
Joint Procurement Directorate activity related in RDU	1

Table 1, Strategies suggested for the RDU Unit

One group recommended more than 5 strategies; some separated or combined updating the National Drug Formulary / Essential Drugs List.

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Considerable detail was provided by the groups as to how the various strategies proposed might be implemented while the suggestions offered regarding the RDU Unit structure (see Box 3) are shown in Table 2

	In what Institution should it reside?	What should be the administrative structure?	Where does the funding come from?	What is the RUD Unit's mandate?
Group 1	Joint Procurement Administration Independent Unit	Department under high level board of directors.	Initially international funding, later government public sector funding.	
Group 2	Independent JFDA MOH	1-Director Office. 1-Board of directors from Ministry of Health, JFDA, and Royal Medical Services.	Ministry of Health / JFDA / RMS	Need executive powers to implement different functions.
Group 3	Independent JFDA	Public and private sector	International donors. Running costs percentage of drug registration fees Support by the Ministry of Finance	Outside the Ministry of Health.
Group 4	JFDA	Director of the unit. Directorate plus 4 major units.	Stakeholders Ministry of Health JFDA International community	Outside the Ministry of Health.
Group 5	Independent JFDA	Administratively independent.	International institutions &/or within the health care public budget	Private sector but with some flexibility in the public sector.

Table 2, Suggestions regarding the RDU Unit structure

The workshop concluded with Dr. Harvey telling a final story (Box 3) and Dr. Mawajdeh thanking all participants for their input.

Subsequently, given the unanimous support from all sectors represented at the workshop an advisory committee (Table 3) has been set up under the auspices of the JFDA to establish the RDU Unit (initially within the JFDA) and decide on its infrastructure, personnel and functions.

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	Name	Organization
1	Dr. Salah Mawajdeh	Director General Jordan Food & Drug Administration
2	Dr. Reyad Al Okour	Director of Health Economics Ministry of Health
3	Dr. Muallam Qatarnah	Ministry of Health
4	Colonel Reham Al Natheef	Royal Medical Services
5	Dr. Dwayne Banks	PHR <i>plus</i>
6	Dr. Mohammed Khan	Acting Representative World Health Organization
7	Pharm. Maissa Al Saket	Director General Joint Procurement Administration
8	Dr. Zuhair AbuFares	Jordan Medical Association
9	Pharm. Taher Al Shakshir	Jordan Pharmaceutical Association
10	Dr. Ali Al Qaisi	Dean Of Faculty of Pharmacy Jordan University
11	Dr. Hala Al Reemawi	Jordan University of Science and Technology
12	Pharm. Rania Bader	HSRP/ World Bank Project

Table 3, RDU Unit Advisory Committee Members

Amman, Jordan, 24 October 2004

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Box 1. Organisations represented at Jordan RUD Workshop

- Australian Health Insurance Commission
- Drug Store Importers
- Drug Store Owners Association
- Food and Drug Administration
- Joint Procurement Administration
- Jordan Association of Pharmaceutical Manufactures
- Jordan Pharmaceutical Association
- Jordan Pharmaceutical companies
- Jordan University
- Jordan University of Science & Technology
- King Hussein Cancer Centre
- Ministry of Health
- National Society for Consumer Protection
- *PHRplus*
- Royal Medical Services
- World Bank
- World Health Organization

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Box 2. The first patient treated with penicillin.

He was a 43-year-old Oxford policeman who had nicked the corner of his mouth shaving. Facial and orbital cellulitis rapidly ensued followed by staphylococcal septicaemia and osteomyelitis. The patient was emaciated, moribund and had a high fever when the first injection of their scant supply of penicillin was given. After 24 hours the patient had markedly improved and was afebrile. On the fifth day they ran out of penicillin. The fever returned, the patient's condition rapidly deteriorated and he died. Autopsy showed the typical picture of staphylococcal pyaemia.

There are three observations to be drawn from this story, as relevant today as they were then. First, the devastating power of infection, which can strike healthy people down without warning. Second the miracle of antibiotics, which can bring people back from death's door. And finally, the horror and the impotence that comes from running out of antibiotics; a scenario that is likely to face us in the near future.

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Box 3. Topics for group discussion (3 hours available)

- Should there be a National RDU Unit with responsibility for progressing RUD issues in Jordan?
 - If no, how else might RDU be coordinated and facilitated?
 - If yes, outline five major strategies for the RDU Unit.
- For each RDU strategy (30 minutes each) establish an action plan that shows
 - what needs to be done.
 - who should do it.
 - what resources are needed.
 - the major activities undertaken as part of the strategy.
 - barriers and ways to overcome these barriers.
- Discuss the RUD Unit in terms of (30 minutes):
 - In what Institution (s) should it reside?
 - What should be the administrative structure (and to whom is it accountable)?
 - Where might the funding come from?
 - What is the RUD Unit's mandate?

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Box 4. A concluding parable

This is the story of a just man who went to the city of Sodom hoping to save the people from sin and punishment. He cried out in the streets and in the temples, urging people to change their ways. No one listened and no one responded but still the man cried out his message of hope, his promise of redemption. Then, one day, a child stopped in the street asking, “Why do you cry out when no one listens”?

And the man answered, “When I first came to the city I cried out hoping to change the people. Now I know that it is difficult to change them. If I continue to cry out today it is mainly to make sure that the people do not change me”.

And so it is with those of concerned about inappropriate drug use. We preach rational drug use and antibiotic conservation, not just to cure others of their craziness but also to preserve what is left of our own sanity. Not just to convince others but to rededicate ourselves.

My friends, it is my hope that this workshop has caused us to rededicate ourselves to the cause of rational drug use.

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