

From Policy to Practice: Options for USAID Technical Support to Jordan's Pharmaceutical System

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About SPS

The Strengthening Pharmaceutical Systems (SPS) Program strives to build capacity within developing countries to effectively manage all aspects of pharmaceutical systems and services. SPS focuses on improving governance in the pharmaceutical sector, strengthening pharmaceutical management systems and financing mechanisms, containing antimicrobial resistance, and enhancing access to and appropriate use of medicines.

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Acronyms

AMR	Antimicrobial Resistance
DfID	U.K. Department for International Development
EDL	Essential Medicines List
DTC	Drug and Therapeutics Committee
EMRO	Eastern Mediterranean Regional Office
GGM	Good Governance in Medicines Programme
HAI	Health Action International
HHC	High Health Council
HIC	Health Insurance Commission
HSS II	Health Systems Strengthening II Project
INRUD	International Network for Rational Use of Drugs
JAFPP	Jordan Association for Family Planning and Protection
JD	Jordanian Dinars
JDNF	Jordan National Drug Formulary
JPD	Joint Procurement Department
JFDA	Jordan Food and Drug Administration
JUH	Jordan University Hospital
JUST	Jordan University for Science and Technology
KAUH	King Abdullah University Hospital
KHCC	King Hussein Cancer Centre
MeTA	Medicines Transparency Alliance
MOH	Ministry of Health
MSH	Management Sciences for Health
NICE	U.K. National Institute for Health and Clinical Excellence
PHR ^{plus}	Partners for Health Reform ^{plus}
PTC	Pharmacy and Therapeutics Committees
RDL	Rational Drug List
RDU	Rational Drug Use
RMS	Royal Medical Services
RPM Plus	Rational Pharmaceutical Management Plus Program
NDPIC	National Drug and Poison Information Centre
RMS	Royal Medical Services
SPS	Strengthening Pharmaceutical Systems
STG	Standard Treatment Guidelines
UNRWA	United Nations Relief and Works Agency
USAID	United States Agency for International Development
WB	World Bank
WHO	World Health Organization

Executive Summary

The U.S. Agency for International Development (USAID) asked the Strengthening Pharmaceutical Systems (SPS) program, to visit Jordan to explore options for USAID technical support to the pharmaceutical sector in Jordan.

The SPS Consultant visited Amman, Jordan to conduct a rapid assessment of pharmaceutical sector strengthening activities, from 5-16 May 2010. This rapid assessment is based on interviews and meetings with selected stakeholders, including officials at the High Health Council, the Jordan Food and Drug Administration, The Ministry of Health, the Joint Procurement Department, the Supply Directorate, public hospitals, the Medicines Transparency Alliance, The World Health Organization, and the U.S. Agency for International Development. The consultant also compiled and reviewed available data, reports and journal publications.

The Consultant discussed and validated key findings, priority intervention areas and possible options for technical support activities with several key stakeholders prior to departure.

The SPS Program has identified the following options to strengthen the public pharmaceutical system:

1. Support to reduce inappropriate antibiotic surgical prophylaxis in selected hospitals
2. Support to revise the Rational Drug List by assisting in development of a strategy to revise the Rational Drug List
3. Support the Joint Procurement Department to analyze and use procurement data to document benefits and limitations of its procurements and as inputs to Rational Drug List revision.

The specific objectives, rationale, intervention strategy, expected outcomes, illustrative outcome indicators, and sustainability considerations are discussed for each option. Each of these options is a discrete intervention that can be developed and implemented within a one-year period. Two of these contribute to other interventions to achieve expected and measurable outcomes.

These proposed options are consistent with the National Health Strategy, build on existing structures and resources, build local capacity, complement, not duplicate, on-going initiatives, and leverage existing and potential resources.

Background

The World Health Organization and the Government of Jordan conducted an assessment of health system governance and accountability in the pharmaceutical sector, which resulted in the development of a framework document for a Good Governance of Medicine (GGM) program for Jordan. WHO approached the US Agency for International Development (USAID) Mission to support GGM program implementation.

USAID asked the Strengthening Pharmaceutical Systems (SPS) program, to visit Jordan to explore options for USAID technical support to the pharmaceutical sector in Jordan. The SPS Program is the follow-on to the Rational Pharmaceutical Management (RPM) Plus Program, and strives to build capacity within developing countries to effectively manage all aspects of pharmaceutical systems and services. In addition to the original mandate of RPM Plus to provide technical guidance and assist countries in improving the availability and use of medicines and other health commodities of assured quality in the public and private sectors, SPS has an expanded mandate and also focuses on improving governance in the pharmaceutical sector, strengthening pharmaceutical management systems and financing mechanisms, containing antimicrobial resistance, and enhancing access to and appropriate use of medicines.

The SPS Consultant visited Amman, Jordan to conduct a rapid assessment of pharmaceutical sector strengthening activities, from 5-16 May 2010. This rapid assessment is based on interviews and meetings with selected stakeholders, including officials at the High Health Council, the Jordan Food and Drug Administration, The Ministry of Health, the Joint Procurement Department, the Supply Directorate, public hospitals, the Medicines Transparency Alliance, The World Health Organization, and the U.S. Agency for International Development (Annex 1). The consultant also compiled and reviewed available data, reports and journal publications (Annex 2).

The SPS Consultant also discussed and validated key findings, priority intervention areas and possible options for technical support activities with several key stakeholders prior to departure.

Key Findings

Milestones in the Evolution of the Jordan Public Pharmaceutical Sector

Table 1 identifies selected milestones in the development of policy and system for rational selection and use of medicines.

Table 1. Key Milestones Achieved with World Bank (Health Sector Reform Project) and USAID (Health Sector Reform*plus* Project) Support

YEAR	POLICY, LEGISLATION, REGULATION	STRUCTURES	TOOLS
1996			Essential Drug List (EDL)
1998			Jordan National Drug Formulary (JNDF)
1999		Committees to promote rational drug use	
2001			EDL, 2 nd edition
2002	National Drug Policy		JNDF, revised (2 nd edition?)
2003	Rational Drug Use Strategy	Jordan Food and Drug Administration established Hospital Pharmacy & Therapeutics Committees	
2006		Joint Procurement Department established(2004)	JNDF 2006 version 1 published

On-going Donor-supported Initiatives

The Medicines Transparency Alliance (MeTA) is an international multi-stakeholder initiative to promote increased transparency in the supply of essential medicines to ensure equitable access for low-income populations. MeTA was established by the UK Department for International Development (DfID), in partnership with the World Health Organization (WHO) and the World Bank. Jordan became a MeTA pilot country in 2008. The MeTA work plan priority areas include capacity building of civil society, evidence based decision making for selection of medicines for the Rational Drug List, and encouraging best practice and improving rational use of medicines. To date, MeTA Jordan has supported the creation of national committees to develop a transparent process to pilot the development of evidence-based standard treatment guidelines (STG) for hypertension, adapting the UK National Institute for Clinical Excellence (NICE) approach.

In the early to mid-2000s, USAID had supported the pharmaceutical system through Rational Pharmaceutical Management Plus (RPM Plus) Program and the Partners for Health Reform*plus* Project. In collaboration with the World Health Organization (WHO), RPM Plus conducted an international training course on Drug and Therapeutics Committees, locally

organized by the Jordan University for Science and Technology (JUST). PHR*plus* assisted with organizational reforms that included the formation of the Jordanian National Drug Formulary (JNDF) Advisory Board, JNDF technical committees, and a Rational Drug Use unit at the Jordan Food and Drug Administration, and support for rational selection of medicines (Rational Drug List).¹

USAID currently supports Jordan's health sector with the recently launched Health Systems Strengthening II (HSS II) Project, implemented by Abt Associates.² HSS II works with the MOH to reduce fertility rates, improve women's health, family planning and reproductive health services, and facilitate access to health services and information. The five-year program will initially focus on improving the quality of services at selected hospitals through renovations, provision and installation of state-of-the-art medical equipment and furniture, and training hospital health care providers in maternal and neonatal health and emergency services. In a subsequent phase, HSS II will work on knowledge management at the MOH, improving the quality of primary healthcare, Safe Motherhood Services at hospital level, community health and family planning and reproductive health services, and further renovate, equip, and maintain health facilities and develop human resources.

Selection and Use of Medicines

Jordan's Essential Drug List (EDL) evolved into the Rational Drug List in 2006. Since then the number of medicines listed has increased from around 632 items to more than 1300, as at February 2010.

The system for adding and deleting RDL medicines consists of selection committees at three levels: a National RDL Committee, institutional committees, and hospital pharmacy and therapeutics committees. The National Committee chaired by the Minister of Health and comprised of representatives from the Jordan Food and Drug Administration (JFDA), Ministry of Health (MOH), Royal Medical Services (RMS), Jordan University Hospital (JHU) and other universities, the Joint Procurement Department (JPD). The JFDA serves as secretariat for this committee.

There are institutional Selection Committees in the Ministry of Health, the Royal Medical Services (RMS), Jordan University Hospital (JHU), King Abdullah University Hospital, and the King Hussein Cancer Centre. The Ministry of Health Clinical Pharmacy Department serves as secretariat for the MOH central committee. PTCs are established in each of the 28 Ministry of Health hospitals and in the 12 Royal Medical Services (RMS) hospitals. There is one each at the JHU, the KAUH, and the KHCC.

The process to introduce new medicines or replace obsolete items begins at the facility level, when physicians submit an application with supporting documentation to the hospital PTC. The hospital PTC discusses the application and sends its recommendation to the corresponding institutional medicines selection committee. At the institutional level, for example, Ministry of Health, the application is discussed and its own recommendation is

¹ Al-Halawani F, Qawwas AR. (2006) Promoting Rational Drug Use in Jordan. Bethesda, MD: The Partners for Health Reformplus Project/Abt Associates, Inc., February 2006.

² <http://www.abtassociates.com/page.cfm?PageID=12605&OWID=2109769220&CSB=1>

forwarded to the national committee. The National Committee reviews the application and decides on its Rational Drug List inclusion or deletion.

Although there is a clear well-established process to submit and process applications for additions or deletions, the review and evaluation of the merits of the application and its supporting evidence is seriously flawed. The original application materials are prepared by the interested pharmaceutical companies. There is apparently no independent and critical evaluation of the application's clinical merit and economic or budgetary implications, at any of the three levels where discussion takes place. While the new product's unit price is provided for the national level deliberations, there does not seem to be an analysis of budgetary implications.

Although the national committee has rejected some applications, it has approved more of them such that the net effect has been increase in Rational Drug List from less than 700 to 1,310 items over a three year period. Key informants have expressed the view that the Rational Drug List significantly exceeds the number of medicines that it should contain and that there is need for a critical revision that would result in a more appropriate list. The Jordanian MeTA committee and The World Bank have identified the review of the RDL as a priority.³

The JFDA conducted a study of antibiotic prescribing for prophylaxis in appendectomies, Caesarian sections, hernias and cholecystectomies in three hospitals: Prince Hamzeh Hospital (government), King Abdullah University Hospital (university), and Specialist Hospital (private). The study found overuse of antibiotics, predominant use of expensive second and third generation cephalosporin antibiotics in both low-risk clean and clean-contaminated operations, high cost of antibiotics used, and prolonged use for prophylaxis.⁴ The study hospitals are still formally unaware of these results and no interventions have been designed and implemented to improve the use of antibiotics and potentially contain antimicrobial resistance.

Other studies have documented the overuse and inappropriate use of antibiotics in primary care facilities and in hospital outpatient and emergency settings. In primary health care centers the percentage of encounters with a prescription for an antibiotic was 60.9% (range 46.7%-83.3%), which is very high compared with that observed in India (43%), Nigeria (48%), Zimbabwe (29%), Lebanon (17.5%) and Yemen (46%).⁵ In a RMS hospital outpatient and emergency setting, antibiotics were 35.6% (range 7.2%-73%) of the prescriptions.⁶

Procurement and Distribution of Medicines

The Procurement and distribution of medicines in public sector procurement involves the Joint Procurement Department on an annual basis for the Ministry of Health (MOH), the Royal Medical Services (RMS), Jordan University Hospital (JUH), King Abdullah University

³ NICE International. Report to DfID on NICE International Early Activity. February 2009.

⁴ Rational Drug Use Department. 2009. Rational antibiotic use targeting surgical prophylaxis at Jordanian hospitals. Jordan Food and Drug Administration Drug Directorate. Hashemite Kingdom of Jordan.

⁵ Otoom S, Batieha A, Hadidi H, Hasan M, Al-Saudi K. Evaluation of drug use in Jordan using WHO prescribing indicators. *Eastern Mediterranean Health J* 2002; 8(4&5).

⁶ Al-Niemat SI, Bloukh DT, Al-Harasis MD, Al-Fanek AF, Salah RK. Drug use evaluation of antibiotics prescribed in a Jordan hospital outpatient and emergency clinics using the WHO prescribing indicators. *Saudi Med J* 2008; 29(5):743-48.

Hospital (KAUH), and King Hussein Cancer Centre (KHCC), but each may procure as needed to address shortages.

With World Bank support a joint procurement by-law was passed in 2002, and the Joint Procurement Department established at the end of 2004. The JPD conducted its first tender in 2007 for anti-infection medicines (antibiotics, anti-HIV medications, and antituberculosis agents). The next tender included four therapeutic groups in 2008 and all 14 therapeutic groups in 2009. An assessment of the 2007 tender results reported an acquisition cost reduction of 2.4%, which increased to 8.9% after excluding one item from the analysis, concluding that joint procurement has potential to reduce expenditures.⁷

The JPD has not analyzed subsequent tenders, but its leadership has expressed strong interest in technical assistance to develop appropriate methodology to assess the benefits of the 2009 tender. This tender led to 714 awards to supply medicines for the five participating institutions, although not all the items went to each institution, but the majority going to the MOH and the RMS. The JPD is interested in exploring World Bank or other donor support for developing a prequalification and supplier performance monitoring system, as well as enhancing its information system to enable it to meet the challenges of expected increase in number of tenders.

Procured medicines are stored and distributed by the General Supply Directorate. Stocks are distributed on a monthly basis to health facilities. When service level is not fully met, this results in emergency requests. When stock outs occur, health facilities may issue prescriptions that are filled in the private sector. Community pharmacy filled prescriptions are paid by the national Civil Insurance Program (CIP) if the patient is enrolled. In turn, the CIP has apparently very limited presence in its respective institutional selection committee. Alternatively, the Supply Directorate may procure stock worth up to JD 20,000 to meet emergency needs.

Current JPD leadership is working on improving its forecasting to reduce stock out situations, by timely aggregation of data from JPD, prescriptions issued for private pharmacy dispensing, and other non-JPD procurement. Rejection of generic products is considered an important cause of expiries and obsolescence, and anticancer and cardiac medications are the most rejected ones.

A recent USAID/DELIVER Project assessment of transition from donated contraceptives to procurement by the government identified issues that negatively affected procurement, resulting in contraceptive stock outs. The report suggested that potential logistics technical assistance could include updating the logistics management information system with a newer version of the JSI PipeLine software and related training on the software and a supply chain course; assistance to JPD in developing a “framework” contract; and assistance to the MOH on long-term forecasting.⁸

⁷ Al-Abbad I, Qawwas A, Jaafreh M, et al. One-Year assessment of joint procurement of pharmaceuticals in the public health sector in Jordan. *Clinical Therapeutics* 2009; 31(6):1335-1344.

⁸ Hudgins T, Talafa H. 2010. Jordan: Transition from Donated Contraceptives to Government of Jordan Procurement. VA: USAID/DELIVER PROJECT, Task Order 1.

Pharmacovigilance and Medicines Safety

The Jordanian Pharmacovigilance Centre (JPC), established in 2001, has been a member of the WHO Programme for International Drug Monitoring since 2003 and is currently housed at the JFDA. The Jordanian program is based on voluntary reporting of suspected adverse reactions, which are analyzed and sent to the Uppsala Monitoring Centre in Sweden. The JPC also has conducted continuing education and medicines safety promotion activities, including publication of drug alerts and recall notices. There are two affiliated regional centers at Jordan University Hospital (JUH) and Jordan University for Science and Technology (JUST), but these are currently inactive. The Faculty of Medicine at Mutah University is planning to establish a pharmacovigilance center. The JPC operates under significant financial and human resource constraints. Although one pharmacist was trained in the WHO Uppsala Monitoring Centre in Sweden, she is now working in another MOH department, but still engaged in developing guidelines for ADR reporting at the MOH.

There is a National Drug and Poison Information Centre, located at the Jordan University Hospital. Established with World Bank funding, it was originally intended to also provide drug information services but is only limited to functioning as a poison information and prevention center. There is no national center for provision of independent drug information.

Options for USAID Technical Support

The SPS Program proposes the following options to strengthen the public pharmaceutical system:

Option 1: Support to reduce inappropriate antibiotic surgical prophylaxis

Option 2: Support to revise the Rational Drug List

Option 3: Support to analyze and use procurement data

The specific objectives, rationale, intervention strategy, expected outcomes, illustrative outcome indicators, and sustainability considerations are discussed for each option. Each of these options is a discrete intervention that can be developed and implemented within a one-year period. Two of these contribute to other interventions to achieve expected and measurable outcomes.

In identifying options for USAID technical support to strengthen Jordan's pharmaceutical system, the SPS Consultant was guided by SPS operational principles. The proposed options must be:

- consistent with the National Health Strategy
- build on existing structures and resources
- build local capacity
- complement, not duplicate, on-going initiatives, and
- leverage existing and potential resources

Consistency with National Health Strategy

The High Health Council is responsible for formulating general health policy in Jordan. One of the core principles is “controlling expenditure and efficiently using the available resources”, with strategic goals of “extending health insurance to all citizens, “ providing efficient, high-quality health care services in accordance with international standards”.⁹ The proposed technical support strategies are critical to support these stated core principle and strategic goals.

Building on existing structures and resources to strengthen the system

There are PTCs at each of the MoH hospitals, with varying degree of functionality and performance, relative to the appropriate use of medicines. There are clinical pharmacists at many of the hospitals, whose skills appear to be underused.

Building local capacity

Build capacity primarily through actual development and implementation of a “hands-on” active approach (learning by doing) rather than structured training sessions (e.g., workshops, seminars, courses). The proposed interventions will build capacity at both the central level (Jordan Food and Drug Administration, Joint Procurement Department, Ministry of Health

⁹ High Health Council. National Health Strategy General Framework 2008-2012. Undated.

Clinical Pharmacy Department) and the facility (hospital) level to effectively support rational use of medicines.

Complement on-going initiatives

The MeTA Jordan work plan, financially supported by DfID and The World Bank, with technical support of the United Kingdom's NICE and WHO, aims to (1) promote greater transparency and update the Rational Drug List through evidence based decision making for selection of medicines; and (2) encourage best practice and improve rational use of medicines through development and implementation of STGs. The WHO Good Governance in Medicines, is currently trying to mobilize funding for implementing its phase III program for Jordan. Table 2 summarizes how the proposed SPS work complements the MeTA interventions.

Leverage existing and potential resources

The USAID-funded HSS II is a potential source for future support and roll out of the intervention to improve the use of antibiotics for prophylaxis in Caesarian sections to other hospitals. It is unclear how much funding is available or will continue to support the other initiatives (through DfID and/or The World Bank).

Option 1: Support to reduce inappropriate antibiotic surgical prophylaxis

1. General Objective: Reduce the ineffective and inefficient use of medicines

1.1. Specific Objective: Develop and implement a model hospital-based approach to reduce inappropriate and wasteful use of antibiotics for prophylaxis in surgery

1.2. Rationale: The JFDA RDU unit study on prophylactic antibiotic use in three hospitals documented inappropriate and wasteful use of antibiotics. Two years later, the study results have not yet been communicated to involved hospitals, nor widely disseminated. PTCs are not fully functional, focusing mostly on medicines selection for the RDL, but not on interventions for improved use of medicines. This is an opportunity to develop a model approach and build PTC and hospital pharmacy department capacity to carry out multi-faceted interventions to improve the use of medicines at the facility level.

1.3. Intervention strategy: Work with the hospital pharmacy department to engage the Pharmacy and Therapeutics committee, the Departments of Surgery, Obstetrics and Gynecology, Anesthesiology, and Clinical Bacteriology and other relevant hospital stakeholders such as the Infection Control Committee, to review and adapt published international recommendations for prophylactic use of antibiotics. The process should result in PTC and respective departments' agreement on the prophylactic antibiotic regimen to be implemented as part of routine surgical and anesthesiology protocol, administering the antibiotic during the operation if there are no clinical contraindications detected during pre-operative screening. The Pharmacy Department will not fill any antibiotic prescriptions post-operatively unless the prescriber indicates that it is for a therapeutic (not prophylactic) indication. Prior to protocol implementation, the PTC and the pharmacy department will work with the relevant clinical departments to conduct an appropriate educational and informational campaign.

1.4. Expected Outcomes:

1.4.1. Enhanced capacity of hospital PTCs and pharmacy departments to develop and implement interventions to improve use of antibiotics

1.4.2. Improved quality of reproductive care in hospitals (use of antibiotics in Caesarean sections)

1.5. Illustrative outcome indicators

1.5.1. % reduction in use of antibiotic that is not the antibiotic of choice for prophylaxis

1.5.2. % reduction in unnecessary doses of antibiotic for prophylaxis

1.5.3. Estimated value of avoided unnecessary antibiotic doses

1.6. Rollout and sustainability considerations: The number of hospitals and surgical antibiotic prophylaxis protocols for pilot implementation will be based on funding availability. Sustainability and nationwide rollout will partly depend on (a) potential leveraging of Health System Strengthening II Project resources for nationwide rollout, (b) demonstration of economic benefits and active engagement of the MOH Health Insurance or health financing decision-makers. Many hospitals are staffed with enthusiastic and qualified professionals who can support these types of interventions, given appropriate guidance and support.

Option 2: Support to revise the Rational Drug List

2. General Objective: Improve access to essential medicines

2.1. Specific Objective: Develop a practical strategy to revise the Rational Drug List

2.2. Rationale: The RDL guides access and use of medicines in Jordan's public sector institutions. From an original listing of 630 medicines, the RDL has increased to 1,310 items. MeTA has included the updating of the RDL as a priority in its work plan. Considerable progress has been achieved in establishing new committees and processes for updating the list, and training has taken place to capacitate local experts in assessing scientific evidence for decision-making. There is potential for continued NICE technical support to Jordan for updating the RDL. Following the process undertaken to develop the essential hypertension STG, MeTA proposes to carry out a similar approach to revise the RDL, working with a therapeutic group, possibly cardiovascular agents. However, this approach of updating by working with selected therapeutic groups may take up considerable amount of time and be a slow process. Given the need to improve access to essential medicines in the public sector, a more pragmatic, yet rigorous, strategy is needed in the short to medium term. It may not be possible to undertake a process that will result in a RDL containing close to the number of items it had back in 2006. If this is the case, it may be reasonable to prioritize items in the RDL into "essential", "core" or medicines of "first choice" that would guide procurement and use in public sector facilities.

2.3. Intervention strategy: Work with MeTA and key stakeholders involved in the RDL process to develop a pragmatic strategy that could be implemented over a one-year period to quickly and comprehensively update (or prioritize items) the RDL. This strategy might include defining evaluation criteria, type and source of evidence to support decision-making, use of cost data, among others; process for compiling materials to support the RDL revision, and a timeline for the revision process. The output of the technical support intervention is a strategic plan and timeline for revising the RDL.

2.4. Expected Outcomes (if revision process is undertaken):

2.4.1. Revised RDL within 18 months

2.4.2. Enhanced spending on essential medicines

2.5. Illustrative outcome indicators

2.5.1. Percent (%) of RDL items designated as essential (revised list)

2.5.2. Number of different within-therapeutic class formulations designated as essential

2.5.3. Percent (%) JPD-procured items that are designated as essential (revised RDL or prioritized items)

2.6. Sustainability considerations: The strategic plan is only a roadmap for the RDL revision. It is unlikely that strategic plan implementation can make significant progress over the next 12 months, and given the need to properly engage key stakeholders, prepare other (financial and procurement) data inputs. Depending on the amount of internal or external pressure to increase the efficiency of public pharmaceutical spending to increase access to essential medicines in vulnerable populations, there will be sufficient motivation to develop and implement a strategy that prioritizes selection, procurement and use of essential medicines.

Option 3: Support to analyze and use procurement data

3. General Objective: Improve the selection and procurement of essential medicines

3.1. Specific Objectives:

3.1.1. Develop and implement a method to analyze and monitor the financial impact of JPD procurements

3.1.2. Document the benefits and limitations of joint procurement in Jordan

3.1.3. Use joint procurement data to support RDL revision and STG development

3.2. Rationale: The JPD was established to achieve efficiencies in public sector medicines procurement. Its first tender, limited to one group of medicines, reportedly achieved only a 2.4% savings. The JPD leadership was uncertain whether the analysis was carried out correctly and is looking for technical support to analyze procurement performance in the latest tender involving all the therapeutic groups for the five participating institutions. Besides the importance of objectively assessing the achievements of the joint procurement mechanism, the 2009 tender database contains data that can contribute to comparative medicine evaluations in updating the RDL and in developing STGs.

3.3. Intervention strategy: Work with the Joint Procurement Department to develop the methodology and indicators to monitor and evaluate the performance of the JPD and overall benefits and limitations of joint procurement. Assist the JPD in analyzing the 2009 tender database to prepare and present data that should be considered in revising the RDL and/or developing STGs. Assist the JPD in developing the necessary guidance and tools to carry out these analyses and present findings on a regular basis. Among others, outputs of the technical support will include reports of ABC (Pareto) analysis of the tender, comparative analyses within therapeutic groups, “what if” analyses of financial implications of therapeutic substitutions for RDL and STG evaluations; and guidance and practical tools.

3.4. Expected Outcomes¹⁰:

3.4.1. Improved efficiency of public pharmaceutical spending

3.4.2. Reduced redundancy in RDL items and their procurement

3.5. Illustrative outcome indicators

3.5.1. Number (no.) and percent (%) of medicines procured that are at least 10% cheaper than prices obtained by all participating procurement agencies separately

3.5.2. Average percentage (%) reduction in unit prices

3.5.3. Estimated value of savings achieved compared to cost of joint procurement operations

3.5.4. Number of different within-therapeutic class formulations procured

3.5.5. Average or median percent (%) reduction of RDL items procured

3.6. Sustainability Considerations: The development of written guidance and practical tools to conduct these analyses and the “hands-on” training of JPD staff will facilitate its “institutionalization”. This can also be supported by an effective communications strategy that includes the High Health Council, the Ministry of Finance and Health Insurance, and other pharmaceutical sector stakeholders.

¹⁰ These outcomes may not be achieved until the next procurement cycle takes place, after results of the above analyses have been effectively incorporated into the procurement process and/or the RDL revision.

The table shows the complementarity of the proposed SPS technical support interventions with the proposed MeTA work plan activities.

Table 2. Complementarity of Proposed SPS Technical Support with MeTA Initiative

Initiative	MeTA (DfID, World Bank, WHO)	USAID
Implementing partner	NICE	SPS
Development and implementation of Standard Treatment Guidelines (STG)	<p>National level interventions</p> <p>Process for engaging national stakeholders for STG development</p> <p>Technical support for assessing the scientific and pharmaco-economic evidence for STG development</p> <p>National STG for Hypertension and other diseases (e.g., diabetes)</p> <p>STG implementation strategy yet to be elaborated (?)</p>	<p>Facility level interventions</p> <p>Process for engaging relevant (facility) stakeholders for improving use of medicines</p> <p>Implementation of combined local interventions to improve use of medicines</p> <p>Reduction of inappropriate use of medicines, specifically antibiotics in surgical prophylaxis</p> <p>Linkage of hospital PTCs to institutional (MOH, RMS) and national committees for improving use of medicines</p>
Revising the Rational Drug List (RDL)	<p>Process for engaging national stakeholders for RDL revision</p> <p>Criteria for updating the RDL, including pharmaco-economic analysis</p> <p>Phased (?) therapeutic group revision approach to updating the RDL (e.g., starting with cardiovascular medicines and continuing with others)</p>	<p>Work with key stakeholders to propose a practical yet rigorous approach to revising the RDL</p> <p>Work with Joint Procurement Department (JPD) to analyze procurement data for economic input to support the RDL revision</p>

Selected SPS Technical Resources

The following pharmaceutical management specialists are available to support the proposed technical interventions on a short-term basis, as appropriate:

- David Lee, MD
- Mohan Joshi, MD
- Terry Green, Pharm.D
- Niranjana Konduri, MSci, RPh
- Helena Walkowiak, MPH, RPh

A local consultant, Arabic-language-speaking clinical pharmacist or related health professional, will be recruited to provide continuous on-going support in Jordan.

Ms. Reem Ghoneim, Arabic-language-speaking Administrative Coordinator, will provide administrative support, based in Arlington, VA.

Annex 1: Persons Interviewed and Schedule of Meetings

Persons Interviewed

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Schedule of Meetings

Tuesday 4 May 2010

Arrival in Amman

Wednesday 5 May 2010

1. 5th International Conference of the Royal Medical Services [Future Directions in Health Care (3-6 May 2010), King Hussein Bin Talal Convention Center, Dead Sea]

Thursday 6 May 2010

1. USAID/SSO [Laura Slobey and Ali Arbaj]
2. WHO/Jordan [Hashim A. Elzein Elmousaad (WHO Representative), Sana Naffa, Salah Gammouh]

Sunday 9 May 2010

1. Drug Directorate Director, Jordan Food and Drug Administration (JFDA)
2. World Health Organization (WHO)

Monday 10 May 2010

1. Ministry of Health (MOH) Clinical Pharmacy Department
2. Prince Hamzeh Hospital, Amman

Tuesday 11 May 2010

1. Joint Procurement Department (JPD)
2. MOH Drug Supply Department
3. JFDA Rational Drug Use Division

Wednesday 12 May 2010

1. Department of Chest Diseases and Health of Migrants, National Tuberculosis Control Program
2. Al-Basheer Hospital, Amman
3. Health System Strengthening (HSS II) Project

Thursday 13 May 2010

1. MOH Health Insurance
2. Health High Council
3. Medicines Transparency Alliance (MeTA) Jordan
4. National Drug and Poison Information Center, Jordan University Hospital

Sunday 16 May 2010

1. JFDA National Pharmacovigilance Unit
 2. JFDA Rational Drug Use Division
- Departure

Annex 2: List of Reviewed Publications and Reports

Medicines Policy

Ministry of Health Drug Directorate. National Drug Policy. (2002) Jordan: National Drug Policy Management & Implementation Department, Ministry of Health Drug Directorate, Hashemite Kingdom of Jordan, 2002.

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Hudgins T, Talafha H. (2010). Jordan: Transition from Donated Contraceptives to Government of Jordan Procurement. VA: USAID/DELIVER Project, Task Order 1.

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Al-Niemat SI, Bloukh DT, Al-Harasis MD, Al-Fanek AF, Salah RK. Drug use evaluation of antibiotics prescribed in a Jordan hospital outpatient and emergency clinics using the WHO prescribing indicators. *Saudi Med J* 2008; 29(5):743-48.

Yousef A-M, Al-Bakri A G, Bustanji Y, Wazaify M. Self-medication patterns in Amman, Jordan. *Arm World Sci* 2008; 30:24-30.

Yadav S. Status of adverse drug reaction monitoring and pharmacovigilance in selected countries. *Indian J Pharmacol* 2008;40 (supplement 1):S4S9.

Als bou M. Incidence of adverse drug reactions in-patients at Al-karak governmental hospital. 5th International Conference of the Royal Medical Services: Future Directions in Health Care. 3-6 May 2010. King Hussein Bin Talal Convention Center. Dead Sea, Jordan. Abstract 22, p.127.

Hadidi KA. Poisoning in Jordan: an analysis of three years data from Jordan National Drug and Poison Information Center.

Access to Medicines

Medicine Prices, Availability and Affordability in Jordan. (2007) Report of a survey conducted in 2004 in Amman, Irbid, Zarqa and Karak using the WHO /HAI price measurement methodology. August 2007.

Malpani R. All costs, no benefits: how the US-Jordan free trade agreement affects access to medicines. *J Generic Medicines* 2009;6(3):206-207.

Medicines Transparency Alliance and Good Governance in Medicines

Ajuluni M. (2007) Assessment of Health System Governance in Jordan. Amman, Jordan: World Health Organization Eastern Mediterranean Regional Office (EMRO) Division of Health System and Services Development (DHS), Health Policy and Planning Unit, January 2007.

Nuseirat A. (2007) Measuring Transparency to Improve Good Governance in the Public Pharmaceutical Sector. Amman, Jordan: Hashemite Kingdom of Jordan Jordan Food and Drug Administration, December 2007.

Bader R, Al-Samen TA. The Medicine Transparency Alliance, Process and Progress in Jordan. 5th International Conference of the Royal Medical Services: Future Directions in Health Care. 3-6 May 2010. King Hussein Bin Talal Convention Center. Dead Sea, Jordan .Abstract 227, pp. 129-130.

World Health Organization. Jordan Framework for Good Governance in the Pharmaceutical Sector.

Summary of MeTA Work Plan. Document provided by WHO. Undated.