

Situational Analysis for the Virtual Pharmaceutical Management Program in Uganda

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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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CONTENTS

Acronyms.....	iv
Acknowledgements.....	v
Executive Summary	1
Findings.....	1
Recommendations.....	1
Program Design	2
Next Steps	2
Background.....	3
Overview.....	3
Study Participants	3
Survey Instruments	3
Analysis and Next Steps	3
Overview of the Week	4
Findings.....	4
Survey Respondents.....	4
Health Facilities	5
Computer & Internet Resources.....	5
Internet Cafes	5
Perceived Training Needs and Motivation	6
Modes of Training.....	6
Potential Barriers to Participation	7
Survey Methodology.....	7
Other Findings	7
The HIV [e]ducation Program in Uganda.....	7
Recommendations.....	8
Program Design	8
Participants.....	9
Planning	9
Content.....	9
Facilitation	9
Certification	10
Next Steps.....	10
Annex 1: Scope of Work for Fiona Nauseda, VPMP Assessment Uganda.....	11

ACRONYMS

DH	District Hospitals
HC IV	Health Centre IVs
IDI	Infectious Disease Institute
MSH	Management Sciences for Health
MTP	Monitoring, Training, and Planning
NGO	Non-Governmental Agency
RRH	Regional Referral Hospitals
SPS	Strengthening Pharmaceutical Systems
VPMP	Virtual Pharmaceutical Training Program

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I would like to thank the Infectious Disease Institute (IDI) for their support and assistance during the Virtual Pharmaceutical Training Program field assessment. In particular, I would like to thank Francis Kalemeera, Robinah Lukwago, and Pamela Nangobi who incorporated me into the IDI national survey team.

In addition, I would like to thank Saul Kidde and the rest of the MSH Uganda staff for their assistance in making my participation in the assessment possible.

EXECUTIVE SUMMARY

The Institute for Infectious Disease Control (IDI) and Management Sciences for Health (MSH) conducted a field assessment the week of February 8 – 14, 2009 to determine the feasibility of implementing a Virtual Pharmaceutical Training Program (VPMP) with health care workers in Uganda.

The proposed Virtual Pharmaceutical Training Program would build upon MSH's previous experience teaching the Monitoring, Training, and Planning (MTP) Approach in face-to-face trainings. The vision for the VPMP is to scale-up the delivery of the MTP to a national and then regional level.

Two teams traveling around the country carried out the national survey with a representative sampling of Regional Referral Hospitals (RRH), District Hospitals (DH) and Health Centre IVs (HC IV) in each of Uganda's five main administrative regions.

The study participants were health care workers who are involved in pharmaceutical management, including Pharmacists, Nurses, Nursing Assistants, Midwives and Pharmacy technicians, and the heads of clinics or officers in-charge at the selected health facilities.

Findings

Health care workers who are responsible for pharmaceutical management in Uganda have a wide range of knowledge and skills, training, and experience.

Health facilities' infrastructure and resources vary greatly depending on their type (NGO versus public sector), size (larger Referral Hospitals versus small health centers) and geographic location.

Recommendations

The recommendations in this report are based on the initial findings and should be revisited once the results of the national survey are disseminated.

The initial findings revealed some significant challenges to offering a Virtual Pharmaceutical Training Program (VPMP) focused on the Monitoring, Training, and Planning (MTP) Approach. Careful selection of the target audience, determining the right combination of learning methodologies and delivery methods, allocating the resources necessary to providing follow-up to outlying participants, and piloting the program before scaling up its delivery will all be critical to the Program's success.

Given the disparity in resources (human and infrastructure) between the health facilities, the VPMP may require multiple approaches to meet the audiences' needs. These approaches may include first piloting the Program with referral and district hospitals, creating different learning tracks based on the participants' knowledge and skills, and incorporating regularly scheduled follow-up phone calls and visits with participants in the more remote facilities.

Please see the full list of recommendations, which are divided into the categories of program design, participants, planning, content, facilitation, and certification on page 10.

Program Design

- Develop a **blended learning program** that combines **different learning methodologies** (e.g., performance support tools, self instructional tutorials, facilitated workshops) and **delivery methods** (e.g., print, e-mail, telephone, face-to-face etc.)
- **Conduct the initial face-to-face workshops in each district or region** to do as much of the training “on-site” as possible, rather than having participants travel to Kampala.
- **Limit the use of web-based learning** in the program. Seek alternatives such as USB Memory Sticks or CD-ROMs (depending on the final results from the survey regarding existing infrastructure.)
- Conduct **further research in using mobile technology** as a means of delivering the program.
- **Plan for regular follow-up** with the participants, including scheduled phone calls and on-site visits as necessary.
- Provide the participants with the **program materials in multiple formats**, including **print**.

Next Steps

1. Review and discuss the pending findings from the national survey.
2. Identify a workplan, incorporating steps from the specified recommendations.
3. Identify the Program development team.

BACKGROUND

Overview

The Institute for Infectious Disease Control (IDI) and Management Sciences for Health (MSH) conducted a field assessment the week of February 8 – 14, 2009 to determine the feasibility of implementing a Virtual Pharmaceutical Training Program (VPMP) with health care workers in Uganda.

The proposed Virtual Pharmaceutical Training Program would build upon MSH's previous experience teaching the Monitoring, Training, and Planning (MTP) Approach in face-to-face trainings. The vision for the VPMP is to scale-up the delivery of the MTP to a national and then regional level.

IDI and MSH conducted the national survey at a representative sampling of Regional Referral Hospitals (RRH), District Hospitals (DH) and Health Centre IVs (HC IV) in each of Uganda's five main administrative regions.

Study Participants

The study participants were health care workers who are involved in pharmaceutical management, including Pharmacists, Nurses, Nursing Assistants, Midwives and Pharmacy technicians, and the heads of clinics or officers in-charge at the selected health facilities.

Survey Instruments

The assessment was conducted around the country by two teams, using the following tools, both of which had previously been pre-tested and revised.

1. **Individual assessment questionnaires** for health care workers to determine:
 - their experience and training in pharmaceutical management
 - perceived training needs
 - preferred training methods
 - level of computer knowledge and skills
 - barriers and proposed solutions to participating in computer based training

2. **Observational checklist/interview guide** for heads of the health facility to determine:
 - IT infrastructure and resources
 - perceived gaps in computer knowledge and skills
 - staff training needs
 - preferred training methods
 - barriers and proposed solutions to participating in computer based training

Analysis and Next Steps

The IDI team will review, code, and enter the results of the survey into Epi-Info version 6.01.

Subsequent to the national (external) analysis, IDI will be conducting an internal analysis to determine if it has the resources and infrastructure necessary to support the VPMP.

Once the data has been finalized, the results will be distributed and used to inform the design of the VPMP.

Please see the forthcoming final report “Situational analysis of computer based training for health workers involved in pharmaceutical management in Uganda” for more details regarding the survey.

OVERVIEW OF THE WEEK

Monday	Introductory Meetings: <ul style="list-style-type: none">• Saul Kiddie, MSH representative in Uganda• Francis Kalemeera, IDI Travel to Rukungiri to meet up with IDI team
Tuesday	Conduct assessment: <ul style="list-style-type: none">• Kambuga Hospital (GOV)• Nyakibaale Hospital (NGO)• Kikoni Health Center• Mbarara Hospital (Ref)
Wednesday	Conduct assessment: <ul style="list-style-type: none">• Ntwetwe Health Center IV, Kiboga• Bukomero Health Center IV, Kiboga• Lwamata Center III, Kiboga• Kigoba Hospital (District)
Thursday	Conduct assessment: <ul style="list-style-type: none">• Kiwoko Hospital Travel to Kampala
Friday	Meetings: <ul style="list-style-type: none">• Debriefing with Francis Kalemeera, IDI• Debriefing with Robinah Lukwago, IDI• Meeting with Marcia Weaver, Interact• Meeting with Nadine Pakker, Interact• Meeting with Priscilla Omwangangye, IDI• Debriefing with Saul Kidde, MSH

FINDINGS

The following findings are based on visiting a sample of Regional Referral Hospitals, District Hospitals and Health Centre IVs. The national survey will provide more extensive data that will be used to inform the design of the VPMP.

Survey Respondents

Health care workers who are responsible for pharmaceutical management in Uganda have a wide range of knowledge and skills, training, and experience.

Survey respondents varied from managers who had received training in pharmaceutical management, supervised subordinates, and used the Internet on a regular basis, to a 19-year-old student who had received little training, had a low educational level, and who had no computer skills. This same respondent struggled to understand and complete the questionnaire and stated that his role at the hospital is to “dispense, record, and keep the drug storage area clean.”



Health Facilities

Health facilities’ infrastructure and resources vary greatly depending on their type (NGO versus public sector), size (larger Referral Hospitals versus small health centers) and geographic location.



One of the most striking differences between the facilities is how resource poor the public sector facilities are compared to the facilities run by NGOs. Many of the public sector facilities observed are in disrepair, lack drugs and staff (many simply were not at their assigned post), and computers were not readily available.

Computer & Internet Resources

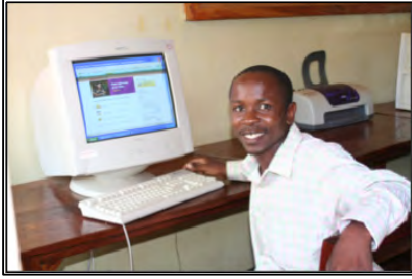
Many of the larger facilities have a few computers, however, they are not accessible to all staff and if they are accessible, they are often in high demand. For example, Kiboga Hospital is a large (public sector) district hospital that only has 2 computers for all of the staff, and they are kept in one office. At Kambuga Hospital, the dispenser also stated that the 2 existing computers are locked in someone’s office. Kiwoko Hospital, a NGO hospital, has a computer lab that is theoretically accessible to staff, however, its use is often reserved for students, making the computers largely unavailable.

Some of the smaller facilities also have computers, however, in some instances they are so old they are not operational. In one instance a new computer had been donated to a clinic, but only one staff person, who was traveling off site, had the password to use it. The computer was located in an office, covered up by several sheets.

Several of the more remote health clinics had neither computers nor reliable electricity. In the case of Ntwetewe Health Center IV (Kiboga) the government has allocated a computer for the facility, but they haven’t bothered to pick it up.

Internet Cafes

Internet cafes exist in some of the larger towns, although many people said that they were “expensive to use” and when asked, very few people know their location or hours of



operation. One Internet café in Luwero (a medium to large size town) had several computers, but the staff stated the Internet was “down.” When asked when it would be available, he replied “maybe next week.”

In addition to Luwero, I visited two other Internet cafes where the connection was reasonably fast. In both instances the cafés were busy, but not crowded. The cost was 50 shillings/minute (approximately \$.40/minute) in

one location and 500 shillings/15 minutes (\$3.96/15 minutes) in the other.

Perceived Training Needs and Motivation

“Learning something new is hard, but once you learn it, it becomes simpler and you enjoy it”

Nurse at Regional Hospital

Respondents were universally motivated to learn computer skills. Learning how to use computers would be a major incentive and added benefit for the health care workers participating in the VPMP.

The forthcoming report will contain information regarding the areas of supply chain management that staff would like additional training in. When asked what areas *outside* of supply chain management they wanted training in, many people replied “patient counseling.”

When asked, “What are the factors that encourage you (motivate you) to participate in training?” some of the responses included:

- “If someone encourages you to do it”
- “If tuition is available.”
- “If there is a need for training in a certain topic.”
- “When you see others doing it and you want to gain the same skills.”
- “To professionalize”
- “To acquire skills”
- “To learn and teach others

Modes of Training

The majority of respondents said they would prefer to learn on-site. They cited the difficulty of being away from their work post as a barrier to participating in trainings. A few respondents, however; expressed concern about being interrupted by patients if they attend trainings on-site.

Many of the delivery methods (such as video conferencing and using the Internet) listed on the questionnaire were unfamiliar to the respondents. Once each method was explained, respondents were more likely to select “Appropriate” as a means of training. Respondents often cited workshops, lectures on topics, and handouts as their preferred method of learning.

Potential Barriers to Participation

In addition to concerns regarding being interrupted by patients, respondents cited a lack of support from their supervisor and/or facility as a potential barrier to participating in a training.

Lack of replacement staff was also cited as a barrier. For example, at one of the health centers, there was only one mid-wife who, in addition to attending births, does all of the ante-natal and post-natal care for patients attending the facility.

Survey Methodology

The survey tools were very comprehensive and were administered by a set of skilled researchers. Although the tools had been pre-tested and revised before being used at a national scale, some of the questions were difficult for respondents to answer. In some cases, the questions may have been too sophisticated for the audience.



The research team may have benefited from receiving a brief orientation to some of MSH's existing eLearning products prior to conducting the survey. This background information would have given the team a better understanding of the possibilities and potential issues involved in implementing the VPMP.

OTHER FINDINGS

The HIV [e]ducation Program in Uganda

IDI suggested that I meet with staff involved with HIV [e]ducation. I met with Nadine Pakker, the Director AMC-CPCD Uganda (and Technical Advisor to INTERACT) and Marcia Weaver, who has evaluated the Program.

HIV [e]ducation is a HIV clinical management training program, run by the HealthFoundation, that has been implemented in multiple countries around the world. HIV [e]ducation combines face-to-face learning with ongoing continuing education. Multiple participants from health facilities are enrolled and are expected to attend face-to-face workshops as well as to complete the material on their own using a USB memory stick and/or on the Web. The USB stick contains the program content and uploads new material when users are connected to the Internet. Participants' progress is also monitored when they connect to the Internet.

The curriculum is comprised of 16 modules that have been authored by content experts around the world. Context experts are paid and are expected to update the modules on an annual basis.

Participants are obligated to pay a \$250 fee for participation, the cost of which may be covered by an outside sponsor. HealthFoundation has also partnered with other European organizations that donate old computers, distributing them on an as needed basis.

To date, approximately 500 people have been trained in HIV [e]ducation in Uganda.

Both Ms. Weaver and Ms. Pakker shared some of the advantages and challenges in implementing the Program in Uganda, including problems with participants losing the USB sticks, lack of electricity at some of the facilities, and not providing the participants with the materials in print format (a repeated request.)

RECOMMENDATIONS

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The following recommendations are divided into program design, participants, planning, content, facilitation, and certification.

Program Design

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- **Limit the use of web-based learning** in the program. Seek alternatives such as Memory Sticks or CD-ROMs (depending on the final results from the survey regarding existing infrastructure.)
- Conduct **further research in using mobile technology** as a means of delivering the program.

- **Plan for regular follow-up** with the participants, including scheduled phone calls and onsite visits as necessary.
- Provide the participants with the **program materials in multiple formats**, including **print**.
- **Determine if any other organizations** are offering blended learning programs in Uganda and consult with them as necessary.
- **Consult with HealtheFoundation** (Interact) about HIV [e] education as necessary.

Participants

- **Enroll teams** in the Program and provide guidance about the desired participant profile.

Planning

- Develop **detailed requirements for participation** (time commitment, basic infrastructure etc.)
- **Involve key stakeholders** in the planning stages of the program.
- Have program participants and their supervisors sign a “**contract**” for participation prior to the program commencement.
- If possible, **pilot the program with a smaller number of participants** before scaling up the delivery.
- Determine if a **program fee** can be charged for participation.

Content

- **Tailor the content for different levels of difficulty** to account for various levels of education and training.
- **Incorporate basic computer skills** into the training.
- Make the **curriculum as practical and case-based** as possible.

Facilitation

- **Use local facilitators** to avoid potential language barriers.

Certification

- Incorporate a **pre and post test** into the program and tie the participants' certification to the results of the post test.
- **Seek accreditation** from the Ministry of Health or another organization upon successful completion of the program.

NEXT STEPS

1. Review and discuss the pending findings from the national survey.
2. Identify a workplan, incorporating steps from the recommendations listed above.
3. Identify the Program development team.

ANNEX 1: SCOPE OF WORK FOR FIONA NAUSEDA, VPMP ASSESSMENT UGANDA

1. Work with team to finalize the field assessment tool.
2. Participate in one full week of field assessments in Uganda at both remote and representative sites.
3. Submit trip report detailing highlights of TDY using CPM trip report format.
4. Contribute written documentation as needed to the team for the final assessment report.
5. Make recommendations to the team about approaches to reach target audience given results of assessment.
6. Participate in post-assessment discussions on approach as requested.