MODERNIZATION OF DRUG MANAGEMENT IN A LARGE HOSPITAL IN KAMPALA, UGANDA

March 2008

Background

The organization in pharmacy in Uganda has not developed significantly since the decolonization. In the last decade the availability of drugs has increased greatly for several reasons: population growth, increase of government and developmental aid funding and last but not least the emergence of HIV-AIDS. This has resulted in a massive increase in logistic drug transactions in dispensaries and hospitals. However this has not been accompanied by modernization of drug management, that can cope with this growth. Many hospitals still register their drug transactions by logging them in handwriting, which because of the ever growing number inevitably became futile. Financial control of pharmacy is virtually impossible and fraud is a common phenomenon . Out of stocks as well as expiries happen frequently. Scheme 1 pictures the drugs logistics in St Francis Hospital as they were at the beginning of the project.

SCHEME 1: THE STARTING SITUATION

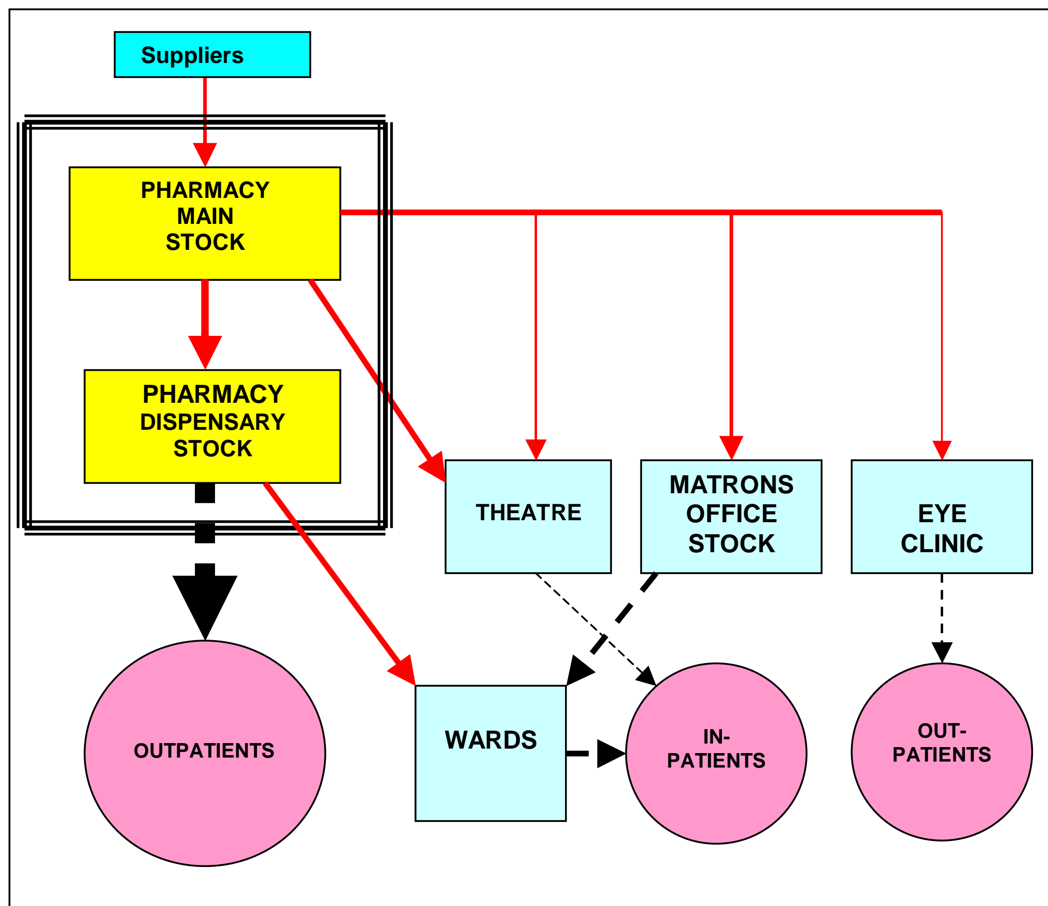

Diagram 1. *This diagram pictures process at the starting point. Arrows represent incoming and outgoing transactions; thickness of the arrows gives a rough indication of the number of transactions. Interrupted arrows represent transactions that are not logged. Red arrows represent transactions that are only logged in handwriting.*

The project history

A solution of the problems described has to be based on two simultaneous and integrated actions. These are redesigning the distribution process and secondly implementing a software program that can process the large numbers of transactions and is also able to produce aggregated information that is meaningful for policy purposes.
In late 2005 start of the project could start. The necessary hard- and software were sponsored (Farmacie Mondiaal[1]) and PUM (Programma Uitzending Managers) sponsored an advisor for a period of two months. A project plan for redesign of the logistic process as well as implementing the MSupply software in two main transition phases.
Immediately thereafter the implementation was started.

Implementation of phase 1

Phase 1 had two objectives. One was to reach full operational control of the pharmacy main stock with help of the logging all in- and outgoing transactions in the computer, as depicted in diagram 2. The second was to be able to produce meaningful management information on the basis of the accumulated data in the software program. In this phase registering and logging dispensing transactions to outpatients was not yet planned.

DIAGRAM 2: PROCESS AFTER TRANSITION PHASE 1

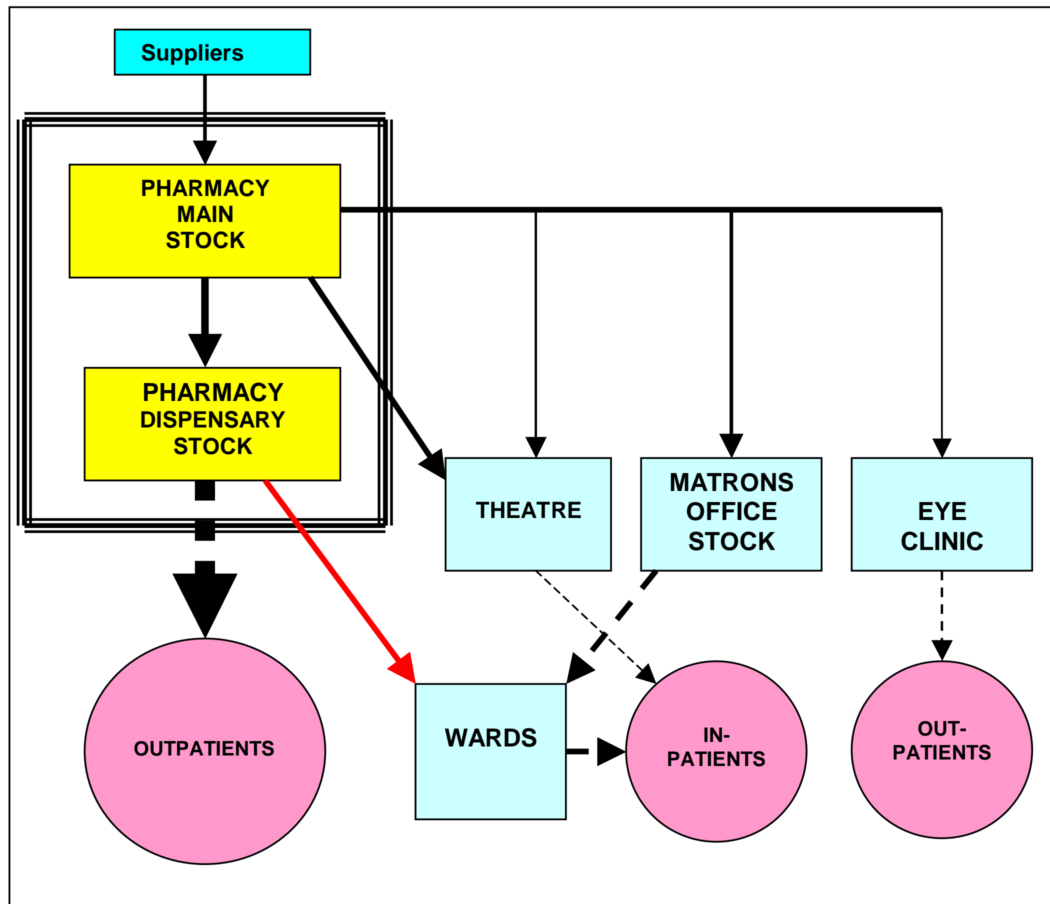

Diagram 2. *This diagram pictures the process after the first phase of transition. Logging in handwriting has been replaced by logging in the computer. Only the main stock in the pharmacy is fully controlled by the software program.*

[1] Farmacie Mondiaal is a small Foundation, that provides expert support on the field of pharmaceutics for small projects in third world countries

The first period of implementation of this phase was coordinated by the PUM-advisor, with help of an Irish pharmacist who was temporarily assisting in the pharmacy and also by three consecutive Dutch MPharms in the framework of their internships. The internships were sponsored by Foundation Farmacie Mondiaal.
Generally both objectives were achieved, with the restriction that the implementation period was to short to accumulate sufficient data to generate and discuss management information.

Implementation of phase 2

The second phase again had two objectives. The first was integration of the main stock and the dispensary stock by location coding, The second was to start registering and logging all transactions in order to achieve full financial accountability. The logistic organization can then be visualized as seen in diagram 3

DIAGRAM 3: FINAL PROCESS AFTER TRANSITION PHASE 2

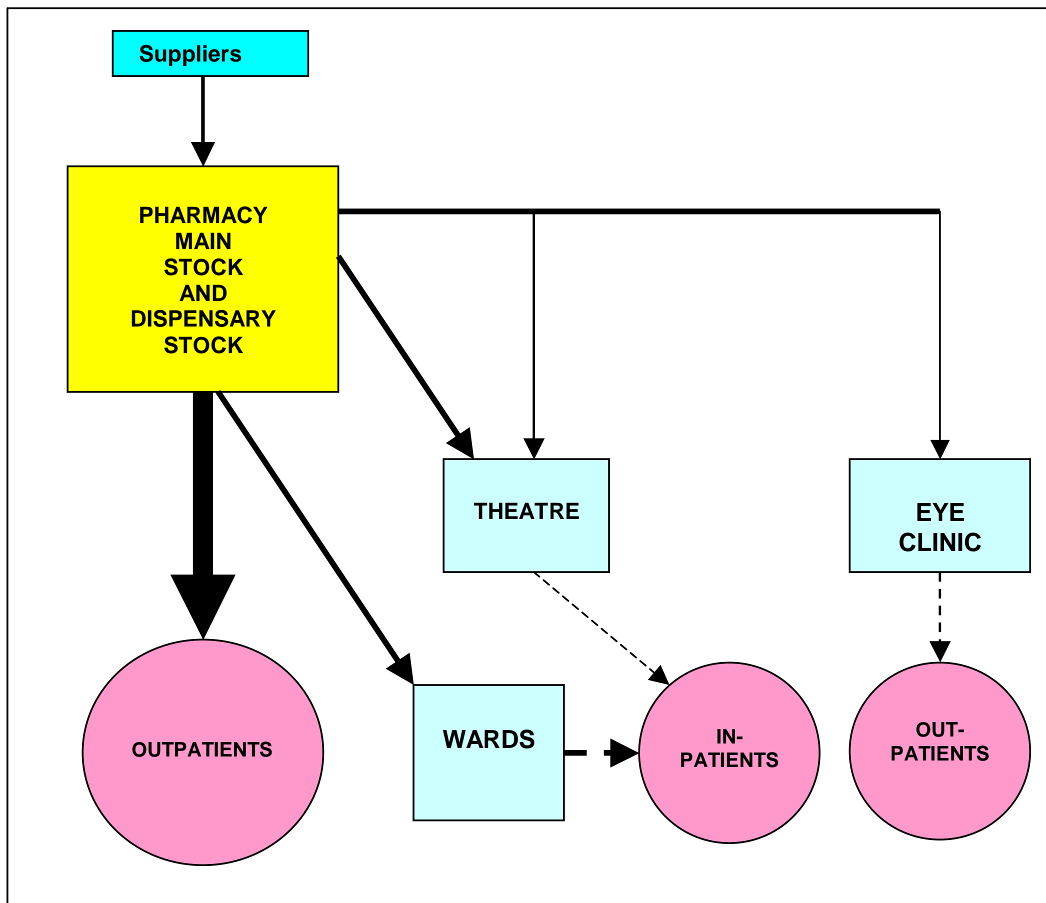

Diagram 3. *This diagram pictures the final process after completion of the transition. Pharmacy main stock and dispensary stock have been integrated. The substock at matrons office has been eliminated.*

Originally it was planned to consolidate after the first phase to be able to build a firm basis. Although the PUM-advisor had warned for to much enthusiasm two of the MPharm interns started with registering the dispensing transactions to outpatients in April-May 2006. Reason for the reserves of the advisor was his assessment of the managerial skills of the local pharmacist, head of the pharmacy. In spite of that initially this initiative was successful.

Present state of affairs

At a follow-up visit of two months in April-May 2007 the PUM-advisor found a number of problems. The situation as represented in diagram 2 (after completion of phase 1) still functioned reasonably well, although there had to be done a number of repairs, mainly in the drug database. Also on the part of management information there had been no progress. A very positive point was that the MSupply software program had proven to be stable and robust and came up to expectations.
However the part of dispensing to outpatients was in a mess, because of very deficient organization.
The situation was discussed with the medical superintendent of the hospital and it was agreed that the hospital should try to recruit a competent pharmacist. The advisor played a role in this through his contacts with the Department of Pharmacy of the Makerere University. Given the gross shortage of registered pharmacists in the country and the limited output of the department there was not much hope for success. This indeed proved to be the case.

How to proceed?

The analysis of the PUM-advisor is that the stagnation is mainly caused by managerial and ICT-incompetence in the pharmacy. This conclusion is shared by the management of the hospital. Given the lack of hospital-pharmaceutical competence in the country it was concluded that it should be tried to find a young pharmacist, who would be willing to spend a year in Kampala on the project.
Recently the management of the hospital has been able to recruit a young Irish pharmacist through a Irish NGO for a period of two years. Given the fact that a substantial effort is still necessary in order to complete the implementation, the PUM-advisor will remain involved and do another follow-up visit. If possible also internships of Dutch MPharms will be organized.

Budget-estimation

The costs for an internship can be estimated as follows

Travel costs, including visa (1 x Amsterdam-Entebbe vv)	€	1,250.-
Living allowance per period	€	250.-
Vaccination costs	€	150,-
Total	€	1,650,-

Interns are travelling on their own risk.

January 2008

Dr. W. Rutten, PUM-advisor[2], hospital pharmacist

[2] PUM stands for “Programma Uitzending Managers” and is linked to VNO, the organization of Dutch Entrepreneurs. It is “senior service” organization for developmental aid that sends out retired experts on short volunteer missions to development projects