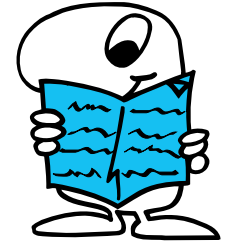


Initiative for Sub-District Support



Kwik-Skwiz
#13

Using Stock Cards to Improve Drug Management

File for quick reference

The issue

We all know the consequences of running out of medicines or other essential items: patients who need treatment don't get it, they have to seek help at other facilities (often far away or more expensive), and they lose confidence in the ability of the clinic or hospital in question to meet their needs. It also leads to health care workers becoming demotivated.

For this reason, effective stock management systems for drugs are important at all levels of the health care system. All too often there is some control over stock at higher levels of the distribution chain (depots or hospitals) but poor control at lower levels such as at clinics. This lack of control can also result in large financial losses. South Africa spends some R2 billion per year on medicines in the public sector alone, and how much is lost through poor control systems remains unknown at this stage. This Kwik Skwiz will focus on the use of stock cards in drug management.

Two kinds of stock

At many facilities, a distinction is drawn between "open" and "closed" stock:

- "Open" stock, sometimes referred to as "operating stock", consists of the stock of drugs which are dispensed directly to patients. They include drugs which are dispensed from wards, treatment areas or consulting rooms to patients.
- "Closed" stock refers to the drugs that are kept in a secure bulk store from which "open" stock is replenished. In many districts, "closed" stock is kept in a secure place in the District Hospital, and issued from there to fixed or mobile clinics. Fixed clinics, in turn, may have a secure area for "closed" stock as well as "open" stock in treatment areas.

Why do we need stock cards?

Stock cards have four basic functions:

- They allow staff to account for and monitor the movement of drugs over a period of time.

Stock cards provide a system which records all stock movement and which allows someone to compare the stock balance on record with the actual physical stock present. This is termed "stock-taking" or "stock-counting", and will identify stock losses or the disappearance of drugs.

- They are used to calculate the quantities of drugs that need to be ordered.

Health facilities/services should order drugs on the basis of locally determined need. This "need" can be quantified accurately using stock cards by recording the previous consumption of drugs and using this to determine order quantities.

- They can be used to monitor the efficiency of the drug management system.

For example, stock cards are used to determine various indicators such as the time lag between ordering drugs and receiving them.

- They aid in the proper storage of drugs and stock rotation by alerting staff to the expiry dates.

So how do they work?

Stock cards are basically handy, small record-keeping systems made from cardboard. There is normally one stock card per item, and it should be kept close to the stock it refers to, usually on the same shelf. A separate stock card is created for each item, in each pack size and strength (e.g. separate cards will be needed for paracetamol tablets 10s, 100s and for paracetamol elixir 50ml). In some systems,

a second record is kept either in a ledger (book) or on a computer.

The necessary information is written on the cards by the dispensary or clinic staff, and must be recorded at the time of each stock movement. If left for later, inaccuracies will creep in and stock counts will show large differences between what is recorded and what is actually on the shelf. Stock movements occur when:

- stock is received from the provincial stores or hospital depot which supplies the facility;
- stock is issued from the “closed” stock area to the patient care or dispensing areas within a facility;
- expired stock is removed for disposal or return.

Example of a stock card:

Clinic/Pharmacy Stock Record Card							
Item (generic name):			Description:		Unit of issue:		
Catalogue number.....			Unit price:				
Date	Requisition number	To/From	Quantity Ordered	Quantity Received	Quantity Issued	Stock Balance	Signature
12/02/98	001		1000			500	DNY
25/02/98	012	To clinic			100	400	Jis
13/03/98	001	From stores		1000		1400	LMH
16/03/98	013	To clinic			100	1300	Ang

If, as is shown in the example above, a column is included for “quantity ordered”, then an entry can be made on the day an order is placed with the stores. The card will then show the time delay from order placement to receipt in the facility. This is called the “lead time”. In the example above, the lead time was one month. [Requisition order 001 was sent on 12/2/98 and the drugs were received on 13/3/98].

Some stock cards also have a column for remarks (such as the expiry date of the stock received), or for allowing

the running consumption total to be recorded. This allows for easier calculation of the re-order quantity at the end of each month.

For many facilities, stock should be re-ordered each month so that the facility is replenished to the level of *three times the average monthly consumption*. This is so that the facility will always have one or two months worth of reserve stock. Therefore, for each item, the facility should estimate its average monthly consumption.

In order to calculate the re-order quantity, perform the following calculation:

$[3 \times \text{average monthly consumption}] - [\text{quantity of remaining stock}] = [\text{Re-order quantity}]$

For example, if the average monthly consumption of ciprofloxacin is 100 tablets, and the clinic only has 180 tablets left in stock, then the reorder quantity would be: $[3 \times 100] - [180] = 120$.

What can go wrong?

As with any record system, stock cards are only useful if the information recorded is accurate. Problems creep in when:

- Stores areas are disorganised, so that stock cannot be linked to the correct card.
- “Closed” stock is accessible without control measures being in place.
- Stock counts (or stock-taking) are not performed, and discrepancies are not traced and corrected.
- Stock is received or issued but not recorded.
- No-one is made responsible for stock management.
- Staff are not well trained or motivated.
- Different systems are used in different facilities, making district-level monitoring difficult.
- Stock cards are poorly designed and clumsy to use, or do not record all the information needed.

However, with accurate use, stock cards can be a powerful tool to ensure the availability of necessary drugs, to avoid over-stocking and expiry, and to provide the necessary information to monitor and improve drug supply management.

So where are they working already?

In the Kalahari Region of Northern Cape, stock cards were successfully introduced in a number of sites. For example, such cards have enabled the pharmacist at Kuruman Hospital to document the quantity of drugs used per ward in the hospital. The Northern Cape Department of Health is now implementing the system across the province.

Cards that record more detail are being introduced in the Eastern Cape. Here, the implementation of the cards has provided a concrete issue for the District Drugs Co-ordinator (DDC) and her Team to tackle. Following a workshop to introduce the new cards in one district, the DDC has visited clinics and hospitals to check on the consistent and correct application of the cards and to iron out any problems and misunderstandings.

A version of the Eastern Cape card will soon be introduced to the Impendle/Pholela/Underberg district of KwaZulu-Natal, and then compared with the standard card used elsewhere in the province.

What can a District Manager do to implement a stock card system?

- Reach agreement with hospital and clinic staff on the necessity of a stock card system – involve the staff who will maintain the system in its planning and implementation.
- Make sure that only one standardised stock card is used in all facilities in the district.
- Allocate responsibility for the maintenance and monitoring of the system to a district pharmacist or district drugs co-ordinator.

What can a District Drugs Co-ordinator do to implement a stock card system?

This is a crucial task for DDC or district pharmacist and will provide him/her with the necessary data to make a meaningful contribution to the overall district management effort.

- For each facility, ensure that discrete areas are designated for “closed” and “open” stock
- In the “closed” stock area, ensure that stock is organised and arranged by dosage form (eg. tablets and capsules; liquids and solutions; and creams and ointments), and then alphabetically within each group.
- Ensure that all staff who work with “closed” stock enter the relevant details whenever receiving or issuing medicines from this area according to a written standard operating procedure.
- Ensure that the necessary information is extracted from the cards on a monthly basis and reported to the District Management Team (such as average lead times and percentage items out of stock).

Finally, continuous support and supervision have been shown to be necessary if stock cards are to achieve their goals. This is especially the case when a pharmacist’s assistant or professional nurse is expected to manage the system. Regular support for the DDC from a regional, provincial or academic pharmacist should therefore be arranged. ■

Written by Andy Gray, with input from Aarti Kishuna, Catherine Orrell, Fatima Suleman.

SELF TEST

In order to check your understanding of the concepts outlined in this Kwik Skwiz, take a few minutes to answer the following questions. Use the figures entered in the stock card shown below to perform the calculations:

1. What was the total monthly consumption in August?
2. What was the average monthly consumption in the last three months?
3. What was the average time from placing an order to receiving it (i.e. the average lead time) over the period shown on the stock card?
4. How many months' stock are on hand on 31 August 1998?

Clinic/Pharmacy Stock Record Card

Item: *Paracetamol 500mg*..... Description: *tablets*..... Unit of issue: *pack of 20*
 Catalogue number: *017,345,678*.... Unit price:

Date	Requisition number	To/From	Quantity Ordered	Quantity Received	Quantity Issued	Stock Balance	Initial
12/06/98	001		1000			500	
25/06/98	012	To Clinic			100	400	
12/07/98	001	From Stores		1000		1400	A
16/07/98	013	To Clinic			100	1300	A
20/07/98	014	To Clinic			200	1100	A
21/07/98	015	To Clinic			200	900	A
22/07/98	002		1000			900	
10/08/98	016	To Clinic			200	700	A
15/08/98	002	From Stores		1000		1700	A
31/08/98	017	To Clinic			300	1400	A

Monthly consumption

FY	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
98/99	300	200	400	100								

- Answers:**
1. 500 packs
 2. $(400+100+500)/3 = 333$ packs per month
 3. From 12/06/98 to 12/07/98 = 30 days; from 22/07/98 to 15/08/98 = 24 days. Average is $(30+24)/2 = 27$ days
 4. Balance on hand divided by the average monthly consumption is $1400/333 = 4.2$ months

Comments or criticism?

Contact: **Andy Gray**

Tel: **031 204 4358**

Fax: **031 204 4792**

Email: andy@healthlink.org.za

Initiative for Sub-District Support

Health Systems Trust

PO Box 808

Durban 4000

Internet: <http://www.hst.org.za/isds>

Tel: **031 307 2954**

Fax: **031 304 0775**

Email: isds@healthlink.org.za