

Targeted Data Management Strengthening in Health Facilities: Results of the use of non-health trained interns in Botswana

Open Day
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Background: Low LMIS reporting for essential medicines was challenging the health system

- Central Medical Stores (CMS) is responsible for procuring, storing and distributing over 3,000 individual lines of medicines and related supplies to all 645 public health facilities in the country.
- CMS uses issues data to determine the quantities of essential medicines required for facilities with minimal input from the facilities due to low reporting rates - **which was less than 10% overall.**



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Since 2007, SCMS has been strengthening the logistics system for health commodities in Botswana

SCMS has been developing structures to improve inventory control systems in the facilities.

- Redesigned the inventory control system/logistics management information system (LMIS)
- Conducted rollout training on the LMIS which reached 304 pharmaceutical and 164 laboratory staff from 29 hospitals, 110 clinics, 28 health posts and 45 laboratories.
 - Following rollout, facilities were expected to fill out and submit LMIS reports monthly to the CMS Logistics Management Unit (LMU) for collation and further analysis
- **SCMS implemented an innovative intern program** to further support these efforts and ensure their sustainability whereby interns are deployed to facilities to support existing facility staff in strengthening their logistics operations.

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Intern program design, objectives, and implementation

- **Selected and trained 17 interns** on the operations of the Botswana Logistics System and then deployed them to the districts/facilities.
- **Interns worked with facility staff** to update and manage inventory records, determine AMC's and stock status of products in the facilities, and prepare LMIS reports.
- Conducted over a 9 month period in three phases; **planned to reach all 27 districts and 331 facilities**, including:
 - 284 clinics
 - 16 primary hospitals
 - 8 district hospitals
 - 8 health posts
 - 7 warehouses
 - 3 referral hospitals



District distribution

Phase 1 (7 Districts)	Phase 2 (9 Districts)	Phase 3 (11 Districts)
Boteti	Bobirwa	Charleshill
Gaborone	Francistown	Chobe
Goodhope	Ghanzi	Jwaneng
Kanye - Southern	Kweneng West	Kgalagadi North
Mahalapye	Lobatse	Kgalagadi South
Palapye	Mabutsane	Kgatleng
Selebi-Phikwe	Ngamiland	Kweneng East
	North East	Moshupa
	Tutume	Okavango
		Serowe
		South East

Results: Reporting rates and capacity building

- **Reporting rates for essential medicines are at 60%**, a significant increase over baseline.
- Interns **reached 374 facilities** (43 more than planned) and **trained /supported 559 staff** in the operations of the logistics system.



Phase	Total Staff Met	Total Staff Trained
Phase 1	247	142
Phase 2	448	200
Phase 3	350	217
Total	1,045	559

Results: Stock status

Overstocks valued at BWP 60 million

- Stock status reviews conducted by the interns revealed that **most facilities are not stocked according to plan.**
- **Only 10%** of the facility stock were within the prescribed minimum and maximum stock levels.
- Overstocked commodities were valued at **BWP 60,372,563** and Non-Use commodities were valued at **BWP 29,400,056**

Average stock status per phase

	Phase 1	Phase 2	Phase 3
Adequate	10%	9%	10%
Overstock	26%	32%	39%
Understock	7%	5%	5%
Emergency	5%	4%	4%
Non-Use	15%	21%	15%
Stockout	38%	29%	27%

Every district has a high percentage of overstock: >12 Mths

District	Ov.Stk Value - P	% Ov.Stk > 12Mths	District	Ov.Stk Value	% Ov.Stk > 12Mths
Boteti	617,207	37%	Ngamiland	6,970,992	19%
Gaborone	2,747,193	47%	North East	1,821,102	12%
Goodhope	882,335	39%	Tutume	2,569,920	83%
Mahalapye	4,698,655	24%	Charleshill	149,078	51%
Palapye	3,208,091	36%	Chobe	348,365	32%
PMH	11,210,638	30%	Jwaneng	188,159	43%
Selebi-Phikwe	1,698,146	34%	Kgalagadi North	262,936	29%
Southern	2,642,942	65%	Kgalagadi South	477,846	47%
Bobirwa	2,727,355	50%	Kgatleng	1,036,759	23%
Francistown	3,550,391	51%	Kweneng East	3,906,544	36%
Ghanzi	170,693	48%	Moshupa	129,280	48%
Kweneng West	234,049	48%	Okavango	1,812,231	89%
Lobatse	1,819,379	38%	Serowe	2,950,071	56%
Mabutsane	299,941	53%	South East	1,242,256	54%

BWP 29.4 million in product is not turning over

Phase 1	NU. Stk. Val	Phase 2	NU. Stk. Val	Phase 3	NU. Stk. Val
Boteti	1,096,550	Bobirwa	547,389	Charleshill	143,592
Gaborone	1,949,705	Francistown	1,376,039	Chobe	110,948
Goodhope	662,175	Ghanzi	111,676	Jwaneng	89,606
Mahalapye	1,506,818	Kweneng West	187,764	Kgalagadi North	353,482
Palapye	2,614,272	Lobatse	826,864	Kgalagadi South	168,660
PMH	6,024,940	Mabutsane	36,846	Kgatleng	285,817
Selebi-Phikwe	2,706,310	Ngamiland	1,590,995	Kweneng East	2,416,358
Southern	722,095	North East	327,382	Moshupa	61,371
	17,282,865	Tutume	804,263	Okavango	220,743
			5,809,218	Serowe	2,326,892
				South East	130,500
					6,307,973

Intern findings, solutions, and ongoing challenges

- Accountability for medicines in facilities with no pharmacy officers. Interns had to work through issues of responsibility.
 - Identified staff members to handle drug management operations
- Poor supervision; failing to address not up to date stock cards.
- Reporting burden as well as report complexity.
 - Report condensation and reporting as a process and not an event
- Lack of internal requisition forms.
 - Where forms were available, introduced requisition books
- Untrained staff in logistics systems handling logistics transactions.
 - Addressed via OJT provided by the interns
- Facility infrastructure challenges.
 - Optimisation of space and stocking levels review
- Expired products taking up unnecessary space.

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Evaluation by facility pharmacy managers

	Good - Excellent	Average	Poor
Overall project rating	91%	9%	0%
Intern service provision	96%	4%	0%
Filing reorganisation	91%	4%	0%
Setting up and maintenance of stock cards	96%	0%	0%
Training and mentoring	91%	9%	0%
Stock analysis	96%	0%	4%
LMIS report preparation	96%	0%	4%
Level of learning for facility staff	87%	9%	4%
Project timeframe (Wanted more time)	61%	30%	9%
	Yes	No	Maybe
Project continuation	96%	4%	0%
Interns back in the districts	100%	0%	0%

Before pictures



After pictures



What we have gained from the internship?

- **Learned the inner workings** of the health care industry, especially from the pharmacy and logistics perspective
- **Gained opportunities** to contribute to developing and making decisions on project progress under varying conditions
- **Increased appreciation** of the value of data in driving decision-making at all levels
- **Developed innovative solutions** tailored to accommodate the nuances of individual facilities; adaptability is key
- **Acquired significant problem solving skills** and people management skills

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