Impact Assessment of Pharmacy Assistant Graduates in Malawi Health Centres

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Pharmacy Assistant (PA) Training Program

- Managed by Ministry of Health and Population and Malawi College of Health Sciences with technical assistance from VillageReach and funding from USAID (GHSC-PSM).
- 2-year program, 10 months of hands-on practice in health facilities, trains pharmacy personnel for 650+ health centers.
- Goal: Improve medicines management, reporting and dispensing – duties historically filled by clinical staff, HSAs, guards, cleaners.
- 5 Cohorts (447 students) trained to date, ~ 200 working in the health facilities.
- 50% completed 6 months (397 students); 24% of Cohort 1 (112 students) graduated and are working in facilities.
- 47% of students statically improved in test results over the training program.

Impact Evaluation

- Measured the contribution of Cohort 1 Pharmacy Assistants, as a new cadre of health workers, to the Malawi health system over 3 years:
  - Management and availability of health commodities
  - Data availability, quality and use for decision-making
  - Dispensing quality
  - Productivity and capacity of health workers
  - Spillover effects and system-wide contributions.

- Mixed-method, quasi-experimental design
- 39 health facilities with cohort 1 Pharmacy Assistants compared to 39 health facilities without any pharmacy personnel or students
- Evaluation period: 2015 to 2018
- Field data collection: Nov-Dec 2018

Methods

- Country-wide (25 out of 28 districts)
- 15 tracer commodities assessed: essential medicines, malaria, FP/RH and HIV/AIDS
- Quantitative data: Day-of-visit data
  - Baseline data (6 months before Pharmacy Assistant posted at health facility), End line data (most recent 6 months with Pharmacy Assistant)
- Qualitative data: 173 interviews with PAs, Health Facilities In-charges, District Pharmacy Staff, Health Facilities Management Committees (HMCs), Health Surveillance Assistants (HSA).

Stock Management Practices

- Storage practices: Perfect scores, % of facilities
  - Products properly arranged on shelves:
    - PA facilities: 78%
    - Control facilities: 56%
  - Shelves labeled with the commodity name and strength:
    - PA facilities: 85%
    - Control facilities: 50%
  - Products stored and organized according to FIFO:
    - PA facilities: 80%
    - Control facilities: 55%
  - Products stored and organized according to FIFO:
    - PA facilities: 80%
    - Control facilities: 55%
  - Stock management data from usable stock:
    - PA facilities: 75%
    - Control facilities: 50%

- Stockroom security was superior at PA facilities: 71% of stockrooms successfully utilized a 2 or 3-lock system compared to only 49% at control sites.

Dispensing Quality

- Direct observation of dispensing yielded a much higher quality score for PA than non-PA facilities.
- PAs often help clinicians change incorrect prescriptions and give better instructions to patients (national dispensing and rational use).

Dispensing quality score (7 indicators)

- 85% of facilities with Pharmacy Assistants
- 54% of facilities without Pharmacy Assistants

Data Availability, Quality and Use

- More data available, better quality at PA facilities vs. non-PA facilities.
  - Stock on Hand
    - Physical counts vs. Stock cards: 100% vs. 74%
    - Stock Management Practices
      - Percentage discrepancy (full valuation)
        - Stock losses
          - PA facilities: 0.5%
          - non-PA facilities: 2%
    - Stock on Hand
      - Percentage discrepancy
        - PA facilities: 0.5%
        - non-PA facilities: 2%

- More frequent and correct use of stock management tools at PA vs. non-PA facilities i.e. Requisition and Issue Vouchers (71% vs. 41%)
- Health Facilities In-charges and District Pharmacy Staff report that most PAs use data to monitor stock status and go to lengths to avoid stockouts and overstocks/expiries by placing emergency orders, paying out-of-pocket to go pick up products, requesting product relocations, etc.

Productivity and Capacity Health Workers

- Clinical In-changes at PA facilities spent less time on pharmaceutical tasks than those at non-PA facilities (1.7 vs. 7.7 working days per month). This gives the clinician more time with patients.
- PAs are greatly valued by clinical staff, drug store clerks, HSAs for being good mentors on pharmaceutical management and dispensing.

Broader Impact on Health System

- PAs are contributing to a “spillover” effect of knowledge and skills within their own facilities, mentoring other facilities nearby, filling in for staff at district hospitals, entering data into OpenMMS.
- District Pharmacy supervisors rated performance at PA facilities higher on all supply chain indicators.
- As community representatives, HCMCs valued PAs for keeping them informed of stock status and issues, improving accountability and transparency, and providing great customer service to patients.

Select Recommendations for Ministry of Health

- Increase target of 650 PAs trained.
- Correct systemic undersupply of essential medicines, which is outside the control of PAs.

For full evaluation results, contact:

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