

Technician-run Pharmacy as a Model for Resource-Limited HIV/AIDS Clinic in Southern Africa

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Background

- Senkatana is a public-private co-funded HIV/AIDS clinic in the Kingdom of Lesotho
- Since opening in 2004, the clinic has struggled to attract licensed pharmacists to manage complex HIV medication therapy.
- Senkatana relies upon a single pharmacy technician and a team of on-the-job trained pharmacy assistants.
- The presence of pharmacy staff has distinguished Senkatana from other primary healthcare centers in southern Africa, which customarily employ trained nurses to perform dispensing-related functions

Introduction

- Despite deeply constrained resources, the pharmacy staff at Senkatana Centre has performed miraculously; though knowledge gaps exist
- A unique pharmacy residency created through a partnership between Rutgers University and Bristol-Myers Squibbs' Secure the Future attempted to identify and address some of these gaps

Methods

- A **knowledge assessment survey** was conducted by the resident to determine knowledge level of pharmacy staff:
 - Three pharmacy assistants and one pharmacy technician surveyed
 - Topic-based pre-test administered
 - Post-test (pending results)
- Results were discussed with staff after scoring (*Tables 1 and 2*)
- The PharmD resident developed training for pharmacy assistants on key aspects of antiretroviral treatment, including:
 - Basic HIV pathophysiology
 - Adverse Drug Reactions (ADRs) and side effect (SE) management
 - Drug interactions
- Staff were awarded **certificates of completion** at the conclusion of the training program

Survey Results

Pre-Test

Table 1. Senkatana Pharmacy Performance by Assessment Area

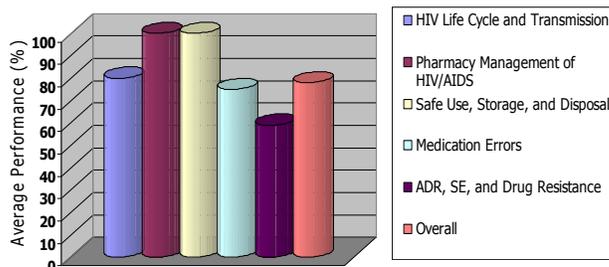
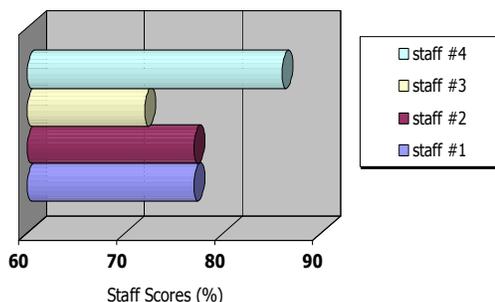


Table 2. Overall Performance by Staff Member



Survey Results

- Assessment contained mixture of multiple choice and fill-in questions
- Pharmacy technician scored highest in most categories
- Overall average score= **78%**
- Lowest scores in **Medication Errors** and **ADR, SE, and Drug Resistance**
- Highest scores in **Pharmacy Management of HIV/AIDS**, and **Safe Use, Storage, and Disposal**
- Scores indicated room for improvement in understanding about ADRs and SEs (average score 59%)
- Scores indicated strong knowledge of modes of transmission and prevention

Post-Test (pending results)

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Discussion

- The **knowledge assessment survey** demonstrated that trained pharmacists can gain critical insight into staff strengths and weaknesses
- They can use this insight to develop programs that enhance therapeutic knowledge, counseling skills, and drug monitoring
- Senkatana provides a compelling case for utilizing trained pharmacists at HIV/AIDS clinics in southern Africa
- Pharmacists can direct pharmacy service delivery and encourage both personal and professional staff development
- Enhanced staff skills can potentially lead to more comprehensive medication therapy management, improved quality of care, and better alignment between all healthcare staff:
 - Longer period of observation at Senkatana Centre potentially would have helped determine the likelihood of this outcome

Next Steps

- Acquire and evaluate post-test results**
- More frequent checkpoints for staff knowledge to gauge growth and professional development
- Investigate staff reward process
- Ongoing training and evaluation of pharmacy staff by trained pharmacist (s) to ensure continued development of pharmacy-based programs

Conclusion

- This unique residency was able to assess strengths and areas for improvement in pharmacy services in an HIV clinic
- Further collaboration with other onsite healthcare staff (ie: physicians) may enhance drug monitoring