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

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 Squibb’s 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:
  1) Three pharmacy assistants and one pharmacy technician surveyed
  2) Topic-based pre-test administered
  3) 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:
  1) Basic HIV pathophysiology
  2) Adverse Drug Reactions (ADRs) and side effect (SE) management
  3) Drug interactions
• Staff were awarded certificates of completion at the conclusion of the training program.

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.

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.

Pre-Test

Table 1. Senkatana Pharmacy Performance by Assessment Area

<table>
<thead>
<tr>
<th>Assessment Area</th>
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<th>Staff #3</th>
<th>Staff #4</th>
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<td>Medication Errors</td>
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Table 2. Overall Performance by Staff Member

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<th>Staff Scores (%)</th>
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