Introduction

Personal smartphones are commonly used by healthcare practitioners. A comprehensive literature search failed to reveal an evaluation of the impact of smartphones on clinical pharmacy practice. VIHA is one of the first health authorities in Canada to endorse the iPhone as a potentially valuable tool for clinical practice.

Proposed efficiency benefits include:
1) Rapid communication between pharmacists and physicians, nurses, and other practitioners.
2) Increased access to:
   - patient information off-site through encrypted access methods.
   - drug information in the patient care area.
   - decision-support tool to resolve drug therapy problems (DTPs).
3) To the best of our knowledge this is the first study of its kind in North America.

Objectives

1. To measure smartphone efficiency on pharmacists’ efficiency, to assess pharmacist acceptance of corporate smartphones, and to investigate how these devices are being used.

2. To test the hypothesis that the use of smartphones replaces the use of pagers, landlines and other non-computer devices.

Methods

Design
Multi-center (9 VIHA facilities on Vancouver Island, B.C., Canada), time-trial, survey and observational prospective study.

Inclusion Criteria
Front Line Staff:
- Permanent full or part time pharmacist
- Provides unit-based clinical services greater than 50% of the time
- OR routinely takes on greater than 50% of the time

Exclusion Criteria
- Job requires travel to multiple sites

Results of Survey

Percentage of Pharmacists:
98% (60/61) agree or strongly agree that they find Smartphones to be useful. 87% (53/61) agree or strongly agree that the Smartphone aids their job performance. 68% (41/61) agree or strongly agree that they require further training on use of the Smartphone.

63% (32/51) had never owned an iPhone before.

Results of Direct Observation

Conclusions

- Pharmacists readily accepted smartphones into their practice but were still becoming familiar with the potential uses and benefits during the first four months post-implementation.
- Impacts on most measures of workflow were not changed by smartphone introduction during the first four months following implementation.
- Variable effects on time to answer simulated clinical questions were observed. Overall, smartphone use facilitated a statistically significant faster response time.
- Half of pharmacists reported that the smartphone increased their confidence and competence to resolve DTPs.
- The full effects of smartphones on pharmacists clinical activities will require longer observation timeframes.

Application to Practice

- This research provides sufficient evidence to continue to support the use of smartphones within VIHA’s pharmacy department.
- Future quality-focused research would aid other health departments and organizations in deciding whether to endorse smartphone technology in their own departments.