Utilization of Mobile Computing Devices by Clinical Pharmacists

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Background
• Mobile computing devices (MCDs) and mobile application use has become prevalent with increasing use being seen in surveys of medical residents and physicians.
• Hospital-based clinical pharmacists are expected to provide drug therapy recommendations and drug information at the point of care.
• Little study of pharmacists’ integration of smartphones into their clinical practice has occurred.
• It is important to understand the extent to which these tools are accepted by pharmacists and their use of them to identify areas of untapped potential and barriers to their use.

Objectives
• To characterize the use of smartphones by clinical pharmacists who provide direct patient care in an institutional setting.

Methods
• Design: Cross-sectional survey and focus group-based study.
• Population: Clinical pharmacists practicing in a large, multi-site Canadian health authority.
• Clinical pharmacists were defined as pharmacists with formal hospital-based training (e.g. through a residency program or PharmD program) and currently practicing in a hospital with ≥33% of their time spent performing direct patient care at the bedside.
• Online survey was sent to 574 pharmacists between November 2013 and January 2014.
• Four focus groups were conducted and recorded at four different institutional sites. Groups were comprised of a convenience sample of survey participants.
• Statistical Analysis: Simple descriptive statistics for the survey responses were employed. Chi-squared and Pearson’s R inferential statistics were computed as appropriate. Focus group transcripts were analyzed to identify themes and to interpret the survey findings. Mixed-methods approach was used for quantitative and qualitative data collected.

Acknowledgements
Thank you to Kahoo Chan and Angela Shieh for their assistance in analyzing the focus group data.

Results
• Most common characteristics of an application that respondents looked for when choosing a clinical tool:
  • User friendly (94%)
  • Reviews from other users or colleagues (76%)
  • Ability to access without Internet connection (offline) (61%)
  • Support webpage for questions/FAQ or technical support (18%)
• Background information that users considered before using an application:
  • Evidence-based data (97%)
  • Frequency of updates (73%)
  • References cited (63%)
  • Involvement of medical professionals or medical organizations (61%)
  • Access to clinical images (8%)
• The most respondents had paid for an app was less than a dollar (27%)
• Common themes from the focus groups revolved around increased efficiency by using apps to make quick decisions on rounds or to access drug information
• Issues identified as barriers to use were personal costs and failure of employers to provide devices

Conclusions
• Pharmacists use their MCDs on a daily basis but for a limited range of functions.
• Higher level capabilities that integrate patient-specific information to assist providers in making health care decisions could further enhance the care that they are able to provide.