

Technology Now

Timely Topics for Academic Medical Centers

a product of the AAMC's Group on Information Resources (GIR)

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Mobile Apps

Mobile apps are purpose-built applications designed for mobile devices. Integration with gps/location services, reference databases and social media are common. Some academic medical centers are developing these on their own and various app stores have thousands of medical and health apps available for download.

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Advantages

- Resource portability for mobile employees, students, and physicians
- Immediacy - real-time access to data
- Wide range of quality apps available
- Intuitive interface, minimal training investment
- Easy adoption and learning by most students/staff/faculty
- Ability to foster team-based learning through social media apps
- Usage of latest technology
- Ability to remotely 'wipe' data from device

Finding and Vetting Apps

- Finding reliable vendors
- Accuracy and value of online reviews
- Evaluating what setting the app will be used in
- If a clinical app, is it [FDA Approved for clinical use?](#)

Examples of App Warehouses:

[iMedicalApps.com](#), [mHIMSS.org](#),
[AppBrain medical](#), [Educause Learning Initiative](#), [Happtique](#)

Examples in Educational Settings: CME, Anatomy – [Pocket Anatomy](#), [3D4Medical series](#), [Blausen Human Atlas](#); Journals & journal search – [NEJM](#), [PubMed](#);

Presentation apps; News – [Medscape](#); eBooks – [Inkling](#), [Kno](#), [VitalSource](#), [ModalityBody](#); Annotation – [iAnnotate](#), [Good Reader](#); Audience polling and interaction

Examples in Clinical & Research Settings: Medical reference – [ePocrates](#), [FirstConsult](#), [Micromedix](#), [Unbound Medicine](#); Medical Calculators - [MedCalc](#);

Mobile EMR – [Practice Fusion](#), [Epic](#), [Allscripts](#); Specialty specific – [Heart Surgery Risk](#); Patient Safety - [QxMD](#); Imaging - [Radiology 2.0](#), [Joslin Chest Atlas](#);

Research – [CHF Trials](#), [Clinical Trials Mobile](#); Patient Monitoring - [Diabetes](#), [Translation](#); Patient Education - [DrawMD](#), [JiffPad](#); Patient screening - [mym3](#), [ePSS](#)

Note: The app examples in this Technology Now brief do not indicate an endorsement by the AAMC or the author.

Considerations

- Who pays for apps?
- Security/privacy of patient information
- Need for wireless service availability and load on internal wifi networks
- Commitment to support
- Learning curve for older users
- Boundaries for data and apps – what can be shared, what cannot?
- Consider support for smart phones and tablets
- Do you support Apple, Android, Blackberry, Windows or all four?
- Device-specific bugs and upgrade issues
- Do you deploy the app from your own app store or use existing stores?
- Do you provide devices or allow to bring your own?
- What data and phone plans are needed?
- Who owns the apps/device?
- Do you allow app purchases on devices owned by hospital/school?
- Risk of distraction from patient care
- Promotions for individual mobile subscriptions to journals, etc.

Notes About Building Custom Apps

- Ability to control content available in the app
- Allows direct control over security/authentication
- The potential to commercialize apps
- Marketing/encouraging user buy-in
- Conversion of generic web apps to mobile apps
- Potential unique business workflow improvements
- Mobile operating systems, HTML5, universal platform builds
- Importance of including adequate resources for support and maintenance
- Allows creator to make proprietary information available, e.g., business intelligence

Future of Apps

- Patients bringing self-initiated monitoring apps to the exam room – [Quantified Self](#)
- Enabling social learning and care delivery with social media and ePatient interaction
- Apps for eBooks and eJournals and the future functions of medical libraries
- Interactive voice apps (Siri, Dragon Dictation, Google Translate)
- Increasing role in Global Health
- Cloud-based storage and retrieval
- Vendors creating secure mobile versions of EHRs
- Replacement of Workstation on Wheels
- Increased availability and use for disabled audiences

Building Tools:

App dev. platforms:

[Phonegap](#),
[Rhomobile](#)

eBook creation:

[iBooks Author](#)

