Harvard Medical School

2012 update on Mobile technology
Mobile Devices 2012

• 94% of students overall own smart mobile devices 6% →

**Smart mobile device** - not a laptop, but a device small enough to carry and operate while moving around. Device must be capable of running applications just as iPod Touch, smartphone, or even an iPad does

• 97% of students in their clinical years own a smart mobile device

89% of teaching faculty are mobile users
Student owned mobile devices

- **64%** iPhone
- **23%** Android Phone
- **7%** Other
- **6%** No Smartphone

70% of HMS teaching faculty that have a mobile device use an iPhone

Other Student Devices
- 3% Dedicated Digital book
- 3% Android Tablet
- 18% iPod touch
- 36% iPad

37% of teaching Faculty have iPads

93% of students own a Smartphone
Upgrades expected by students in AY2013

Apple Trend expected to continue

- Other: 2%
- Android Phone: 5%
- iPhone: 24%
- Android tablet: 2%
- iPad: 23%
- Not upgrading: 53%
Top Tablet Use Limitations

- Too slow
- Crashes often (reliability)
- Battery life
- Course Content not formatted for it
- Files too big to open on device
- Writing on screens is problematic
- Other (please specify)
Student Stylus recommendations

Top recommended by students

1. Boxwave ($8+)
2. Griffin ($10+)
3. Targus ($10+)
4. Bamboo ($25)
5. Adonit – Jot/JotPro ($30)

Say NO to soft tips

1-3 similar
Annotation and Note-taking

Student use of tablet software

<table>
<thead>
<tr>
<th>Software</th>
<th>Clinical</th>
<th>Preclinical</th>
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</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
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<tr>
<td>Other</td>
<td></td>
<td></td>
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<td>Notability</td>
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<td>GoodReader</td>
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More Note-taking in Clinical?
More Annotation in Preclinical
Mobile Usage Trends (Yrs 3&4)

How students are using their mobile devices:

- **Email**: 98% (2012)
- **Voice**: 87% (2012)
- **Organizer**: 80% (2012)
- **Medical Reference**: 81% (2012)
- **Other Reference**: 78% (2012)
- **MyCourses Mobile**: 50% (2012)
Mobile App overload
Managing App Overload

- Recommendations by course faculty
- Student rating of Mobile resources
- Third-party ratings and review sites such as 
  - iMedicalApps.com
  - iTunes
  - Android Market
Going Mobile – Development efforts

Native Mobile App to track patient encounters

- Instant access to log
- Optimized for mobile
- Entry/edit with or without Internet Connection
- Wireless sync of entries when connectivity available
- Android version launching this year
Mobilizing Course Delivery

Course delivery – optimized for mobile devices

- Announcements, Events, Faculty list, tutorials
- Course Resources
- Event Podcast and video delivery to iPhone/iPad/Android
- Mobile Medical references
- Flash Cards/PCE Logs
- User Interface upgrades/”Big button” transition – In progress

https://m.mycourses.med.harvard.edu
Getting To Know Your Pulmonary Hypertension – by Dr. Michael Parker and Dr. David Roberts
Categories of Mobile apps used

- Drug and disease References
  - ePocrates
  - Harrisons
  - Micromedex
  - Dynamed
  - JH POC-IT
  - ABX Guide

- Differential Diagnosis
  - ePocrates
  - VisualDx
  - 5 minute Clinical Consult

- Imaging, Anatomy, Procedures, Other
  - iRadiology
  - 3D Brain
  - Procedures Consult

- Medical

- Other
Medical Mobile Software used

- Pre-Clinical
- Clinical

Software:
- ePocrates Essentials
- ePocrates Dictionary
- Micromedex
- iRadiology
- VisualDx
- Medical ePonyms
- Dynamed
- Medscape
- Other
- None
Other Student Recommended Apps

UpToDate
English and Spanish Medical Word & Phrases
EMRA
MedRef
Ped. Calc
Qx Calculator
iSnellen
Netters Atlas
Radiology 2.0
Opioids
Clemente Anatomy
MedEquations
PubMed
MedScape
USMLE Prep Apps
MediMath
ICD9 Consult
PocketRX
FirstConsult, Merck Manual
Thank You

Questions?