Making a Difference in Healthcare Via Mobile Technologies

Phyllis Teater, CIO
The Ohio State University Wexner Medical Center
USA: DATA SNAPSHOT

- Total Population: 316,668,567
- Urban: 82%
- Rural: 18%

- Internet Users: 254,295,536
- Internet Penetration: 80%

- Active Facebook Users: 178,000,000
- Facebook Penetration: 56%

- Active Mobile Subscriptions: 327,577,529
- Mobile Penetration: 103%
91% of all people on earth have a mobile phone. **AF-Studio.pl** and **Super Monitoring**

50% of mobile phone users use mobile as their primary Internet source. **AF-Studio.pl** and **Super Monitoring**

Mobile web adoption is growing x8 faster than web adoption did in the 1990s and early 2000s. **AF-Studio.pl** and **Super Monitoring**

The average person checks their smartphone 34 times a day. **2013 Mobile Marketing Statistics by LocalVox**

Mobile web browsing accounted for 30% of all web traffic in 2012 and is expected to grow to 50% by 2014. **2013 Mobile Marketing Statistics by LocalVox**

No one screen size has more than 20% of the market share. **Mobify Research & Development**

90% of people move between devices to accomplish a goal, whether that’s on smartphones, PCs, tablets or TV. **Google**

86% of mobile internet users are using their devices while watching TV. **Microsoft Tag – Mobile Marketing Infographic**

56% of American adults are now smartphone owners. **Pew Internet & American Life Project 2013**

75 percent of Americans bring their phones to the bathroom. **Digiday 2013**
Known for our teamwork
Improving People’s Lives Through Innovation In Research, Education & Patient Care

1.1 million patients last year. 36 buildings. 5 hospitals.
Mobile And The Academic Medical Center

Workforce
- Doctors
- Nurses
- Encryption
- Faculty
- BYOD
- Administrators
- Standards
- Researchers
- HIPAA

Customers
- PATIENTS
- Non-Standard Collaborators
- responsive
- Candidates
- Applicants
- HIPAA

THE OHIO STATE UNIVERSITY WEXNER MEDICAL CENTER
Mobile Activity for Employees

- 7751 Total mobile devices connecting to our network in January, 2014
  - 4290 iPhones
  - 2142 iPads
  - 79 iPod touch
  - 1240 Androids & Other Devices

- Updating Encryption and Enforcement Policies
## BYOD

### OSUWMC - Mobile Device Support Matrix

<table>
<thead>
<tr>
<th>Key</th>
<th>Supported and/or Standard</th>
<th>Conditionally Supported</th>
<th>Not Supported or Available</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How To Use &amp; Frequently Asked Questions (FAQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do I see if a specific device is supported?</td>
</tr>
<tr>
<td>Due to the rapid changes in devices, this matrix is based on Handheld Device Operating System (OS). The most popular models are listed and any specific devices that have known issues can be found via the link under known issues.</td>
</tr>
<tr>
<td>Why are only these Operating Systems listed?</td>
</tr>
<tr>
<td>The Operating Systems on this matrix have been identified as meeting the security &amp; management requirements to allow connectivity to OSUWMC systems and tools.</td>
</tr>
<tr>
<td>What does Conditionally Supported mean?</td>
</tr>
<tr>
<td>Some functionality and/or applications have been able to work in a limited way depending on device or configuration. Please check the known issues link for more information.</td>
</tr>
<tr>
<td>If I get a device that does not work, or has issues, what do I do?</td>
</tr>
<tr>
<td>OSUWMC IT is not able to test and validate every device that is released. OSUWMC IT provides no guarantee that a specific device will properly connect or function. Please contact the HD (614-293-3861) to report an issue.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Platform/OS</th>
<th>BlackBerry</th>
<th>Apple</th>
<th>Android</th>
<th>Windows Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Popular Models</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bold, Curve, Storm, Pearl, Torch, Playbook</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iPhone 4/4s/5, iPad 3 &amp; Mini, iPod Touch</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Droid, Galaxy S, Nexus, One</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Windows Phone 7/8, Lumia, Focus, Surface</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supported Operating Systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackberry OS 4.5 - 7.1, OS 10 device are NOT supported including the Z10 and Q10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iOS 5.0.1 or Higher, iOS 7.x recommended (iPad Mini Retina, not supported for email fix coming soon.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Android OS 2.2 or Higher, Android 4.x recommended</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Windows Phone 7.x or Higher</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Email, Calendar, Contacts</th>
<th>How To Set-Up</th>
<th>How to Set-Up</th>
<th>How to Set-Up</th>
<th>How to Set-Up</th>
</tr>
</thead>
<tbody>
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<td>How to Set-Up</td>
<td>How to Set-Up</td>
</tr>
<tr>
<td>Citrix (General Use)</td>
<td>X</td>
<td>✓</td>
<td>Link</td>
<td>Under Evaluation</td>
</tr>
<tr>
<td>Citrix (IHS)</td>
<td>X</td>
<td>✓</td>
<td>Link</td>
<td>Under Evaluation</td>
</tr>
<tr>
<td>Mtools</td>
<td>X</td>
<td>Link</td>
<td>Link</td>
<td>X</td>
</tr>
<tr>
<td>IHS Haiku</td>
<td>X</td>
<td>✓</td>
<td>iPhone, iPod Touch</td>
<td>X</td>
</tr>
<tr>
<td>IHS Canto</td>
<td>X</td>
<td>✓</td>
<td>iPad</td>
<td>X</td>
</tr>
<tr>
<td>OSUMC WIFI Supported</td>
<td>X</td>
<td>✓</td>
<td>Link</td>
<td>X</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Applications/Features</th>
<th>How To Set-Up</th>
<th>How to Set-Up</th>
<th>How to Set-Up</th>
<th>How to Set-Up</th>
</tr>
</thead>
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<td>How To Set-Up</td>
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<td>How to Set-Up</td>
<td>How to Set-Up</td>
<td>How to Set-Up</td>
</tr>
<tr>
<td>Links</td>
<td>Vendor Support</td>
<td>Link</td>
<td>Link</td>
<td>Link</td>
</tr>
<tr>
<td>Known Issues</td>
<td>No known issues</td>
<td>Link</td>
<td>Link</td>
<td>Link</td>
</tr>
</tbody>
</table>
Haiku and Canto
Compliment traditional Provider workflows
Searches

- Access your patient lists
- Access your outpatient schedule
- Search the database for patients

Review Patient Information

- Keep up to date on the patient’s status
- Problem list
- Medications
- Allergies
- Immunization history
- Past medical history
- Demographics
- View Inpatient and Outpatient encounters
- Review Notes
- Review Care Everywhere documents
- Review lab results

Update Patient Information

- Contact members of the patient’s care team
- Dictate
- Review and act on Pt Med Advice Request, Staff and Results messages from In Basket
- Co-sign clinic orders
- Approve or refuse patient refill requests
- Release results to patients through OSUMyChart
- Document and route Result Notes
- Take a patient photograph

Usage at OSUWMC

- 222 Haiku Users
- 91 Canto Users
- 505 Configured Devices

Haiku ePrescribing

- Review active medications for a patient
- Document historical medications
- E-prescribe medications
- Document call-in orders
Before Marketing and IT Started Working Together

Marketing will fix that

IT will fix that
Many Siloed Stakeholders
Making Requests Without a Shared Strategy
Being Fulfilled By Multiple Teams
Resulting in 130+ Disconnected Sites with No mobile presence

Did anyone ask the user?
We Had a Marketing Side
And an IT Side
So We Removed the Silos
To Form the Digital Team
A New Digital Strategy
Brought Stakeholders Together with a Shared Strategy
Increased Efficiency

Reduce duplication. Improve standardization and prioritization.
And Built a Multi-disciplinary Team with Focused Skillsets
And Delivers Cohesive, Meaningful Experiences
Mobile-first
The World Wants to Touch Everything
Our Computers
Our Soda Machines
http://www.youtube.com/watch?v=aXV-yaFmQNk
And Even Our Babies

• Our newest generation will only know a world that is interactive and interconnected
Our Mobile Usage by Patients

January 2012

January 2014
Responsive
Highly Visual
Case Study

Find a Doctor
Inconsistent Profiles

Cardiothoracic Anesthesiology Fellowship

Geline T. Dimitrova, MD
Fellowship Director

The OSU cardiothoracic anesthesiology fellowship is a 12-month program (July 1 – June 30) fully accredited by the Accreditation Council for Graduate Medical Education (ACGME). Two positions are offered each program year providing training in management of cardiothoracic anesthesiology cases and our fellows are expected to serve as a leader of the anesthetic team. The fellowship, under the leadership of Dr. Alexander, offers a diverse opportunity to train in a world-class center.

Basic Curriculum

- 12 months of clinical training in cardiothoracic anesthesia rotation, 1 month thoracic rotation, 1 month cardiac intensive care, 1 month cardiothoracic ICU rotation.
- Electives and research activities.

Prerequisites

- Graduates of medical schools outside the United States must have completed an accredited residency program in their country.

Find a Doctor

Kimberly Barnes MD
Specialty: Pediatrics
To Schedule an Appointment:
(614) 688-0320

Clinical Interests:
- General pediatric care
- Adolescent care

El J. Alexander, MD
Assistant Professor of Family Medicine

Assistant Professor of Family Medicine at CarePoint Lewis Center Primary Care
Aviva
Ohio 43035
360-7150
7155

Interests

- A faculty member of the Department of Family Medicine and a family physician at Ohio State University Medical Center. My clinical interests include preventive medicine as well as obesity related illnesses. My academic interests include the education of pre-medical and medical students, and I have served as an advisor and preceptor. I provide the full spectrum of ambulatory family care and invite you to join my practice.
New Requirements and Data Sources
Enhanced Experience
Connecting the Patient Experience from Marketing to the Electronic Medical Record
Welcome to OSUMyChart

OSUMyChart—Secure, online connection to your health

Your health is important to you around the clock—not just during office hours. That’s why the OSU Wexner Medical Center and its Community Connect partners offer OSUMyChart. With this on-line connection to your health care provider’s office you can request appointments, renew prescriptions, review your health history and more. It’s another way OSU Wexner Medical Center and its Community Connect partners are working to personalize your health care.

PLEASE DO NOT USE OSUMYCHART TO SEND MESSAGES THAT REQUIRE URGENT ATTENTION. FOR URGENT MEDICAL MATTERS, CALL YOUR HEALTH CARE PROVIDER’S OFFICE.

Access OSUMyChart from your iPhone or Android device! See details and instructions inside.
Patient Portals

Current

• Reviewing Results / Record
• Requesting Appointments
• Medical Advice
• Proxy Access

Future

• Direct Scheduling
• View/pay co-pay and bill
• eVisits
• Diagnosis based resources and tools
• Completing information before visits

Lessons Learned

A patient tool, not a physician tool. Culture change!

Physician response is a critical cultural shift. Myths and concerns must be addressed

Broader functionality will increase user participation and satisfaction.

Becoming a patient expectation
OSUMyChart – FY14 Focus

Supports “Meaningful Use” Requirements

- Tied to reimbursement amounts
- Stage 2 (January 1, 2014)
  - 50% of eligible providers must offer OSUMyChart and 5% of their patients must actively use it
  - 50% of admitted patients must be offered OSUMyChart
MyChart Bedside is a game-changing technology to engage our patients during their inpatient stay.

With such significant potential, we should prepare to embrace it by thinking differently and working differently.
Bedside Pilot: How It Works

Three-month pilot on 10 E James and 2 Ross began December 3, 2013

1. Unit staff and Patient Experience provide tablets to patients who want to participate.
2. Patients keep the tablet through their stay to view their health information and patient education materials, and to communicate with their care teams.
3. When patients leave the unit, tablets are returned, cleaned, and IT removes data.

February 2014
Initial Pilots Complete

June 2014
Additional pilots (TBD)

December 2014
MyChart Bedside Goes Live with the Tower

2015
Remainder of health system
Piloting OSUMyChart Bed Side

Good evening, Louise.

Today is Thursday, January 17

Looks like you'll be able to leave about 3 days from now, on Sunday.

You are here for...
- Heart Failure
- High Blood Pressure
- High Cholesterol

Your medications
- furosemide
- lisinopril
- acetaminophen (for Pain)
- temazepam (for Sleep)

Blood Pressure: 142/66
Pulse: 86
Temperature: 98.6
Respirations: 18
What Can Patients Do?

- View their list of diagnoses and medications.
- View their schedule.
- View their inpatient treatment team members.
- Send non-urgent messages and requests.
- Create personal notes and reminders.
- View their labs and vitals.
- View their assigned patient education materials.
### Bedside By the Numbers

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Patient Age</td>
<td>51</td>
</tr>
<tr>
<td>Oldest Patient</td>
<td>79</td>
</tr>
<tr>
<td>Youngest Patient</td>
<td>19</td>
</tr>
<tr>
<td>Patient Requested Proxy Access</td>
<td>1</td>
</tr>
<tr>
<td>Schedule Views</td>
<td>898</td>
</tr>
<tr>
<td>Medication List</td>
<td>3,373</td>
</tr>
<tr>
<td>Care Team List</td>
<td>2,110</td>
</tr>
<tr>
<td>Bedside Patients Activated</td>
<td>10</td>
</tr>
<tr>
<td>OSU MyChart</td>
<td></td>
</tr>
<tr>
<td>Patients Have Used MyChart Bedside</td>
<td>57</td>
</tr>
<tr>
<td>Patients Accessed Education Materials</td>
<td>274 Times</td>
</tr>
<tr>
<td>Lost</td>
<td>0</td>
</tr>
<tr>
<td>Damaged</td>
<td>0</td>
</tr>
<tr>
<td>Stolen</td>
<td>0</td>
</tr>
<tr>
<td>Total Messages</td>
<td></td>
</tr>
<tr>
<td>Care Team</td>
<td>14</td>
</tr>
<tr>
<td>I Would Like</td>
<td>21</td>
</tr>
<tr>
<td>Tablet Cost Per &lt;$200</td>
<td></td>
</tr>
</tbody>
</table>
Feedback

- Patients
  - **Over 80%** of patients feel MyChart Bedside is **easy to use** and helped them communicate with their treatment team.
  - “Thank you for providing the tablet, it is great having all my information at the click of a button, great idea!”

- Staff
  - 84% of staff feel MyChart Bedside is useful for admitted patients and their families.
  - One patient asked for handouts, but then we gave her the tablet. She was **incredibly happy** looking at the education on the tablet. She was **reading the websites and the digital handouts** to her mom over the phone.
Will be rolled out in the entire building of our new hospital
Wearable Devices

That day is here with Google Glass at Ohio State's Wexner Medical Center.

Wearing Google Glass, orthopaedic surgeon Christopher Kaeding, MD, performed one of the first live surgeries on Aug. 21, 2013.
The Future

Customers
- Geo-Location
- Wayfinding
- See open appointment slots and schedule
- Video Instructions
- Healthy applications through gamification

Employees
- Rover (mobile documentation for nursing)
- Administrative functions
- Increased Provider functionality
Questions???

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