Fast Track to Go-Live Success
PennChart ED implementation
Agenda

• About Penn Medicine
• Go-Live Schedule
• Lessons Learned
  – Operational Readiness
  – Command Center Planning
• Summary of Go-Live
The University of Pennsylvania Health System was created in 1993 and consists of three hospitals (Hospital of the University of Pennsylvania, Presbyterian Medical Center, Pennsylvania Hospital), a faculty practice plan, a primary care provider network, two multi-specialty satellite facilities, home care, hospice and a nursing home.

<table>
<thead>
<tr>
<th>Licensed Beds</th>
<th>1,893</th>
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<tbody>
<tr>
<td>Total Employees</td>
<td>24,293*</td>
</tr>
<tr>
<td>IT Employees</td>
<td>419</td>
</tr>
<tr>
<td>IT Operating Budget</td>
<td>$112,396,932</td>
</tr>
<tr>
<td>Operating Revenue</td>
<td>$4.9 Billion</td>
</tr>
<tr>
<td>Adult Admissions</td>
<td>83,994</td>
</tr>
<tr>
<td>Outpatient Visits</td>
<td>2,837,864~</td>
</tr>
<tr>
<td>Physicians</td>
<td>2,846~</td>
</tr>
</tbody>
</table>

*Total Figures as of FY14
*Includes CCA, CORP, CPUP, HCHS
+ Includes CCA/CHCA
+ Includes CHOP
~ Includes physicians with privileges at more than one hospital.
NEW BUILDINGS The combined cost of the capital projects over the next two years is expected to total more than $200 million.

Penn Medicine University City
Summer 2014
$38 million

Pavilion for Advanced Care at Penn Presbyterian
Winter 2015
$127 million

Henry A. Jordan, M ’62
Medical Education Center
Fall 2014
$38 million

RESEARCH
Penn Medicine is an internationally recognized leader in discoveries that advance science and pave the way for new therapies and procedures to improve human health. Sixty-eight Penn Medicine researchers are elected Members of the Institute of Medicine, one of the highest honors in medicine. The basic and clinical research findings emerging from Penn Medicine's laboratories and hospitals improve the treatment of a wide range of medical conditions and provide the foundation of knowledge on which many of medicine's next generation of cures will be developed.

*Figures & Statistics as of FY13 (http://www.uphs.upenn.edu/news/facts.htm)
The Hospital of the University of Pennsylvania is annually recognized as one of the nation's best hospitals by the US & World Report in its Honor Roll of best hospitals.

Penn Presbyterian Medical Center is consistently recognized for delivering superior patient safety and high-quality care and as a center of excellence for cardiac surgery, cardiac care, orthopaedics, and ophthalmology.

Pennsylvania Hospital is the nation's first hospital (cofounded by Benjamin Franklin in 1751), with many expert clinical programs, including the Women's Cardiovascular Center, the Center for Bloodless Medicine and Surgery, orthopaedics, and maternity.

The Chester County Hospital and Health System, which became part of Penn Medicine in fall 2013, includes a 245-bed hospital complex in West Chester and satellite locations in Exton, West Goshen, New Garden, Jennersville, and Kennett Square.

The Perelman Center for Advanced Medicine is a state-of-the-art, outpatient facility containing 321 exam rooms (including the new south-tower expansion in 2013), with diagnostic and treatment facilities designed to be in close proximity for patient-focused care.
Trauma center has moved!

- **State-of-the-art trauma unit** featuring a 5-bay resuscitation area with immediate access to the critical treatment areas.

- **Vital access to the latest medical imaging and diagnostic equipment** is literally just steps away or mounted overhead - including CT, MRI, X-Ray and Ultrasound.

- **Immediate access** - estimated time from Ambulance Entrance to Trauma Bay is 30 seconds.

- **Elevator from Helipad opens directly into the Trauma Unit.** This elevator also provides direct access to the Trauma OR located one floor above the Trauma Bay.

- Additional 2-bay emergency resuscitation space.
Penn Medicine by the numbers

<table>
<thead>
<tr>
<th></th>
<th>HUP</th>
<th>PPMC</th>
<th>PAH</th>
<th>CCH</th>
<th>PSOM</th>
<th>Penn Medicine Total†</th>
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</thead>
<tbody>
<tr>
<td>Physicians</td>
<td>1,871</td>
<td>1,001</td>
<td>837</td>
<td>550</td>
<td>n/a</td>
<td>2,846*</td>
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<tr>
<td>Adult Admissions</td>
<td>36,737</td>
<td>14,634</td>
<td>19,854</td>
<td>12,769</td>
<td>n/a</td>
<td>83,994</td>
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<td>Outpatient Visits</td>
<td>1,515,612</td>
<td>151,950</td>
<td>159,481</td>
<td>497,609</td>
<td>n/a</td>
<td>2,837,864†</td>
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<tr>
<td>Emergency Dept. Visits</td>
<td>65,365</td>
<td>38,048</td>
<td>34,390</td>
<td>43,240</td>
<td>n/a</td>
<td>179,243</td>
</tr>
<tr>
<td>Births</td>
<td>4,221</td>
<td>n/a</td>
<td>4,708</td>
<td>2,121</td>
<td>n/a</td>
<td>11,050</td>
</tr>
<tr>
<td>Employees</td>
<td>6,714</td>
<td>1,812</td>
<td>2,628</td>
<td>2,046</td>
<td>5,290*</td>
<td>24,293@</td>
</tr>
</tbody>
</table>
Live Applications

• Applications already live on Epic:
  – EpicCare Ambulatory
  – Prelude
  – Cadence
  – Professional Billing
  – Outpatient Willow
  – OpTime
  – Identity
  – Beacon
  – *ASAP (Jan 2015)*
  – *Phoenix (February 2015)*
  – *Radiant (March 2015)*

• Coming Soon (Fall 2016/Spring 2017):
  – ADT
  – EpicCare Inpatient
  – Hospital Billing
  – HIM
  – Inpatient Willow
  – Home Health and Hospice
  – *Cupid (Fall 2017)*
ED Users by the Numbers

PMC - Total To Be Trained

- ED Providers: 293
- Trauma Providers: [Pie Chart]
- Nurses: [Pie Chart]
- Techs: [Pie Chart]
- Clerks: [Pie Chart]
- RTs: [Pie Chart]
- Pharmacists: [Pie Chart]
- CM/SW: [Pie Chart]

HUP - Total To Be Trained

- Providers: [Pie Chart]
- Nurses: [Pie Chart]
- Nurse (PEEC): [Pie Chart]
- Techs: [Pie Chart]
- Clerks: [Pie Chart]
- RTs: [Pie Chart]
- Pharmacists: [Pie Chart]
- CM/SW: [Pie Chart]

PAH

- Providers: [Pie Chart]
- Nurses: [Pie Chart]
- Nurse BH: [Pie Chart]
- Techs: [Pie Chart]
- Clerks: [Pie Chart]
- RTs: [Pie Chart]
- Pharmacists: [Pie Chart]
- CM/SW: [Pie Chart]

1000+
Operational Readiness

Will your users be ready at go-live?

Do they know PennChart is coming?
  – MARKETING/COMMUNICATION STRATEGY

Can users support their workflow in the system?
  – TRAINING STRATEGY

Have the workflows been tested?
  – TESTING STRATEGY

Can users access the system?
  – SECURITY STRATEGY

YES!
Communication Strategy

- PennChart ED Website
- Waiting Room Posters
- Frequent communication by leadership and SME’s
- Monthly committee meetings

Quick win tip:
- Use standing meetings to communicate project updates
Training Strategy

• Lessons Learned
  – BUILD should be complete and tested in training environment
  – Identify users by role EARLY, and create role-specific training
  – Training team should be part of the build team
  – Users did not use Playground environment

• Lessons Learned (cont.)
  – Don’t forget about consultants and non-ED providers!
  – Coding workflow was a huge miss 😞
  – Personalization labs were not helpful for users

Quick win tip:
  • Create training dashboard to view stats
## Training Dashboard

<table>
<thead>
<tr>
<th>PMC Users by Role</th>
<th>Total To Be Trained</th>
<th>Trained</th>
<th>Enrolled</th>
<th>Total Trained + Enrolled</th>
<th>Not Enrolled</th>
<th>Classes Remaining</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED Providers</td>
<td>55</td>
<td>43</td>
<td>78%</td>
<td>8</td>
<td>51</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>7%</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Trauma Providers</td>
<td>56</td>
<td>31</td>
<td>55%</td>
<td>0</td>
<td>31</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25</td>
<td>45%</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>Nurses</td>
<td>73</td>
<td>39</td>
<td>53%</td>
<td>18</td>
<td>57</td>
<td>16</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td>16</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Techs</td>
<td>16</td>
<td>4</td>
<td>25%</td>
<td>6</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td>38%</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Clerks</td>
<td>8</td>
<td>1</td>
<td>13%</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
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<td></td>
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<td></td>
<td>1</td>
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<tr>
<td>RTs</td>
<td>35</td>
<td>6</td>
<td>17%</td>
<td>26</td>
<td>32</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td>1</td>
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<td>Pharmacists</td>
<td>37</td>
<td>17</td>
<td>46%</td>
<td>17</td>
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<td>3</td>
</tr>
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<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>CM/SW</td>
<td>13</td>
<td>4</td>
<td>31%</td>
<td>9</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
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<td></td>
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<td></td>
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<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>293</td>
<td>145</td>
<td>49%</td>
<td>87</td>
<td>232</td>
<td>61</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>61</td>
<td>21%</td>
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</tbody>
</table>
End User Dress Rehearsal

• Test all important workflows!
  – Patient movement (ED to Obs, ED to OR, ED to PEEC, etc)
  – Test in PROD
  – Test with end users
  – Review integrated test scripts and use them during dress rehearsal

Quick win tip:
• Test the full workflow, from registration to discharge, not just certain areas
Technical Dress Rehearsal

• Have dedicated resources test ALL of your hardware that will access Epic
  – Printers
  – PCs
  – Mice, keyboard, etc

• Lessons learned
  – Default printing
  – Prescription printers

Quick win tip:
• Staff Desktop Support/SWAT Team 24x7 during the first week of go-live!
Security Strategy

• **PAH Go-live**
  – Created production accounts AFTER users were trained
  – Huge rush to build account just before go-live
  – *Stressful and last-minute, more security issues at go-live*

• **HUP/PMC Go-live**
  – Create production accounts BEFORE users were trained
  – Block account the night before go-live for users that did not go to training
  – *Less security issues*
  – *Users had Production accounts ready at Personalization labs*

**Quick win tip:**

• Hold “log-in labs” in the department the week before go-live to test user security
Command Center Planning

• What’s important?
  – Logistics
  – Floor Support
  – Communication with users during go-live
  – Change Control process
  – **Review downtime policy**
  – Inclement weather policy
  – FOOD!

• During go-live:
  – Structured status calls (2x daily)
  – Issue tracker and stats
  – Schedule support staff beyond your anticipated command center closure date
  – RED VESTS for quick identification of super users/floor support
PennChart ED at PAH
January 23, 2015

Tickets by Issue Type

- Application
- Printing
- Interfaces
- Hardware
- Security
- Education/Training

Activity since Project Go-live

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Issues Reported</td>
<td>803</td>
</tr>
<tr>
<td>Resolved</td>
<td>643</td>
</tr>
<tr>
<td>Open</td>
<td>98</td>
</tr>
<tr>
<td>SEV Issues</td>
<td>20</td>
</tr>
</tbody>
</table>

Tickets by Day (Open / Closed)

- Open
- Closed
- Provider Review
- Active

Dates:
- 1/23/2015
- 1/24/2015
- 1/25/2015
- 1/26/2015
- 1/27/2015
- 1/28/2015
- 1/29/2015
- 1/30/2015
- 1/31/2015
- 2/1/2015
- 2/2/2015
PennChart ED at HUP
February 20, 2015

Tickets by Issue Type

- Application
- Education/Training
- Hardware
- Interfaces
- Printing
- Security
- Workstation

Ticket Volume per Day

<table>
<thead>
<tr>
<th>Date</th>
<th>Ticket Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/20/12...</td>
<td>227</td>
</tr>
<tr>
<td>2/21/12...</td>
<td>137</td>
</tr>
<tr>
<td>2/22/12...</td>
<td>89</td>
</tr>
<tr>
<td>2/23/12...</td>
<td>118</td>
</tr>
<tr>
<td>2/24/12...</td>
<td>64</td>
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<tr>
<td>2/25/12...</td>
<td>79</td>
</tr>
<tr>
<td>2/26/12...</td>
<td>62</td>
</tr>
<tr>
<td>2/27/12...</td>
<td>61</td>
</tr>
<tr>
<td>2/28/12...</td>
<td>34</td>
</tr>
<tr>
<td>3/1/12...</td>
<td>65</td>
</tr>
<tr>
<td>3/2/12...</td>
<td>45</td>
</tr>
</tbody>
</table>

Activity since Project Go-live

- ED Issues Reported: 995
- ED Issues Resolved: 679
- ED Open Issues: 223
- ED Open SEV Issues: 31
- ED Optimization Tickets: 67
PennChart ED at PMC
March 21, 2015

Tickets by Issue Type
- Application
- Education/Training
- Hardware
- Interfaces
- Printing
- Security
- Workstation

Activity Since Project Go Live
- Issues Reported: 168
- % Issues Resolved: 58%
- Open Issues: 64
- Open Sev Issues: 0
- Optimization Requests: 7

Ticket Volume per Day
Summary of PennChart ED Go-Live

• Wins
  – Excellent floor support
  – Operational partnership
  – Lessons learned from first go-live applied to the consecutive go-lives
  – Command Center tracked issues from every entity, not just the entity going live
  – Change Control/Prioritization process

• Challenges
  – Inpatient Willow not live
  – Data integrity with live apps
  – Training during go-live
  – Workflow didn’t exactly match previous EMR system
  – Security issues, especially with consultants and non-ED providers
  – Communicating updates from command center to users
  – When to close the command center
  – Support and training post-live
Questions?

Contact us!

• Jennifer Manosca
  – Jennifer.manosca@uphs.upenn.edu

• Christopher Edwards
  – Christopher.edwards@uphs.upenn.edu