Strategy driven by data
HIMSS7 overview and summary

12 April 2015
HIMSS Dutch eHealth Exchange
Liesbeth Langenuysen
‘To make a significant impact on healthcare’
Visie
- Vooroplopen in innoveren
- Volgende stap zetten:
  - Aantoenbaar onderscheidende kwaliteit
## European EMR Adoption Model

<table>
<thead>
<tr>
<th>Stage</th>
<th>Cumulative Capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 7</td>
<td>Complete EMR; CCD transactions to share data; Data warehousing feeding outcomes reports, quality assurance, and business intelligence; Data continuity with ED, ambulatory, OP.</td>
</tr>
<tr>
<td>Stage 6</td>
<td>Physician documentation interaction with full CDSS (structured templates related to clinical protocols trigger variance &amp; compliance alerts) and Closed loop medication administration.</td>
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<tr>
<td>Stage 5</td>
<td>Full complement of PACS displaces all film-based images.</td>
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<tr>
<td>Stage 4</td>
<td>CPOE in at least one clinical service area and/or for medication (i.e. e-Prescribing); may have Clinical Decision Support based on clinical protocols.</td>
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<tr>
<td>Stage 3</td>
<td>Nursing/clinical documentation (flow sheets); may have Clinical Decision Support for error checking during order entry and/or PACS available outside Radiology.</td>
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<tr>
<td>Stage 2</td>
<td>Clinical Data Repository (CDR) / Electronic Patient Record; may have Controlled Medical Vocabulary, Clinical Decision Support (CDS) for rudimentary conflict checking, Document Imaging and health information exchange (HIE) capability.</td>
</tr>
<tr>
<td>Stage 1</td>
<td>Ancillaries – Lab, Radiology, Pharmacy – All installed OR processing LIS, RIS, PHIS data output online from external service providers.</td>
</tr>
<tr>
<td>Stage 0</td>
<td>All. Three Ancillaries (LIS, RIS, PHIS) Not installed OR Not processing Lab, Radiology, Pharmacy data output online from external service providers.</td>
</tr>
</tbody>
</table>

- **Feb 2015**  score 7
- **Feb 2014**  score 6+
- **Nov 2012**  score 2.43
Virtuele werkplek

- snel wisselen van werkplek
- patiëntveiligheid – één interface
- lagere kosten
- nieuwe hardware, BYOD

- > 14.000 gebruikers
- 4500 tele / thuis werkers
- (medische) zero client
- minder applicaties
Medical images and speech

• Vendor Neutral Archive
• monitoring of chain: from imaging device to image archive (JCI!)
• improving backup, redundancy, calamity procedures, knowledge
• optimization: ordering, workflow gastro-enterology, workflow charging

• speech recognition available for all clinicians
mijnRadboud patiëntportaal

- mijnRadboud:
  - Toegang met DigiD
  - toegang ook voor kinderen tussen 12 en 16
  - Labuitslagen
  - Afspraken zien, maken en cancelen
  - Vragen stellen aan behandelteam
  - Brieven aan zorgverleners
- Here Is My Data
- strategische samenwerking met Philips Medical op gebied van e-health
- portaal voor patienten in gynaecologische oncologische keten (MediMapp)
Closed loop medication
Clinical and business intelligence

CEO top-10: online clinical dashboard within Epic for leadership
Strategy driven by data

- Demonstrably distinctive quality
- Operational excellence
- Clinical and business intelligence

- Assessment of problem or risk
- PDCA cycle
- Monitoring during the PDCA cycle
No show
How to reduce patient no shows

Charlotte Dubelaar, manager outpatient unit
Dept. Ophthalmology
What was the problem or risk?

• patients not showing up for their appointments, means
  • lack of partnership, commitment and compliance
  • waiting lists
  • costs
Plan

- improving appointment letters
- send a reminder before the appointment
- promoting patient portal where appointments can be viewed, cancelled and made by the patient (myRadboud)
- phone calls after no show

Fix Your No Show Problem
Do

Ophthalmology department prevents no shows by

- promoting use of myRadboud (started Q1 2014 continuously)
  The patient header of Epic shows if a patient uses myRadboud (mijnRadboud)
- improving appointment letters (Q2 2014)
- asking patients for mobile numbers to be able to send a text message as a reminder (started Q2 2014 continuously by front desk)
This graphs shows Ophthalmology only
Check

This graph shows Radboudumc data
Act

In case of no show

- The front desk calls patient after first no show
- After second no show: physician decides if patient can be removed from waiting list
Feedback to radiologists
Faster reporting of radiology exam

Willibrord Goverde, operational manager
KlaasJan Renema, head medical physics
Department of Radiology
What’s the problem?

- teams of radiologists based on body part
- exams are assigned to a team for reporting
- although the number of exams to be reported is available, radiologists tend to look only to the worklist of the own team

Result:
- clinicians call when time between exam and reporting is too long
- limited awareness among radiologists
- some reporting queues became dangerously large
- incidentally evening reporting was required
Plan

• MT member monitors queues until dashboard has been developed
• dashboard to gain overview of exams that need reporting
  • with adequate refresh rate
  • visible for all radiologists
• dashboard needs to display number of:
  • .. exams to be reported
  • .. exams with a temporary report (not visible to clinicians)
  • .. reports to be supervised (not visible to clinicians)
Do

- Epic – Radiant team together with Radiology developed an overview dashboard within Epic with a refresh rate of every 20 minutes

- dashboard was displayed in the reporting room (jan-15)
Check: time to deliver CT/MR report

dashboard
Check

- time between examination and reporting slowly decreases
- significantly less fluctuations in reporting time
- no peaks in waiting time
- radiologists like dashboard
- no evening reporting sessions since installation of dashboard
Act

- further reduction of time to deliver in accordance with the demands of the requesting physicians
- continuous feedback to radiologists
- idem to operational manager
- weekly feedback to management team and department lead
- additional parameters are requested bij radiologists, a.o.:
  - # of reports finished that day
  - # of exams performed that day (these will need reporting)

> input for version 2 of the dashboard
**Take away**

- HIMSS: the process is key, not the certificate
- strategy can and must be driven by data
  - distinctive quality
  - operational excellence
  - patient as a partner and personalized healthcare
  - network
- Radboud development will continue beyond stage 6/7
- don’t lean back: ‘performance of today is baseline for tomorrow’
- we will optimize both processes as well as applications
Take away

- clinical and business intelligence: twice a year an internal ‘success at seven’ session
- ownership with departments: part of planning and control cycle
- hospital-wide barcode medication administration is a must have in Europe too!!
Together we can have a significant impact on healthcare