Making IT Work for You

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NHS Newborn Hearing Screening Programme

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Or Why Do Large IT Projects Usually Go Wrong???

• "Government IT projects have too often missed delivery dates, run over budget or failed to fulfil requirements." (2000)

• Why?

• Multiple stakeholders, stricter measures of success, policy uncertainty, poor project management, cultural misunderstandings, lack of communication, procurement bureaucracy, value for money vs highest bid, cultural gaps between IT and business management…………….
IT: Information Technology or Irritating Technology??

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hearing.screening.nhs.uk
A Brave New World? 21st Century IT for Healthcare

- National Programme for IT in England
- World’s largest healthcare modernisation programme
- National summary care records and secure systems linking up other patient information across the country
- Official cost is £12.4 billion over 10 years
- Successes include NHS numbers at birth, PACS and a new national secure high bandwidth network
- Problems include concerns over confidentiality, scope creep, product delivery, spiralling costs and lack of stakeholder engagement
What do Users Want?

• Not to be sitting in front of computer more than necessary
• Not to have to re-enter data
• Not to be forced to do inappropriate actions by the IT system
• Not to have to change the way they’ve already been working
• To be involved and listened to
Newborn Hearing Screening in England

- Pilot started in 2001
- Rolled out national IT system (eSP) from early 2003
- All areas of England screening by March 2006
- NHSP Programme Centre based at the University of Manchester
- Over 2 million babies have been screened
- eSP system has evolved considerably based on lessons learned
Statistics for Financial Year 2006/07

- 524,975 records added to eSP
- 97.4% screens offered
- 93% screens completed
- For completed babies:
  - 93.7% clear responses with no follow up
  - 4.1% clear response – targeted follow-up
  - 0.6% bilateral referral
  - 1.5% unilateral referral
Common Elements to Screening

1. Manage population through the process

2. Provide failsafe mechanisms

3. Monitor, evaluate & improve
Can IT Help?

1. Manage population through the process
   - Patient tracking with simple but flexible interface
   - Guide screeners through care pathway
   - Reminders

2. Provide failsafe mechanisms
   - Electronic birth notifications
   - Screening manager reports to ensure no-one in target population missed

3. Monitor, evaluate & improve
   - Enable consistent reporting
   - Contribute to evidence base
Meeting the IT Requirements

- Off the shelf product tailored to fit English programme
- Focus on baseline (minimum) requirements
- Involve user champions
- Prioritise requirements using MoSCoW criteria
  - Musts
  - Shoulds
  - Coulds
  - Won’ts
Clarifying the Care Pathway
A Difficult Balancing Act?

Users

• Simple to use
• Quick to enter data
• Make decisions based on clinical experience
• Flexible

Central Programme

• Full audit trail
• Risk management
• Ensure good practice followed / mistakes minimised
• Consistent
Good Design
When IT is Not the Answer…

- Need to know when the best solution is not an IT one
- In England, the paper screening proforma is used to manage screening activity away from the computer
- Printed off for each baby after electronic birth notification received
- Used to record progress and update eSP when screening complete
Performance Management

• Performance management is…

  … the activity of tracking performance against targets and identifying opportunities for improvement in the future

• English Performance Management System
  – Data warehouse updated every night
  – Trends/metrics allow reporting on key performance indicators
  – Exception reporting to provide proactive warnings of concerns/issues

• Types of report
  – Quality Standards
  – National
  – Data quality
  – Ad hoc
Turning Data into Knowledge

• Getting good quality **data** in (bits of information, eg. screening test results)

• Getting useful **information** out (organised data, eg. babies with high numbers of test results)

• Turning this information into practical **knowledge** (information imbued with intelligence, eg. how to minimise unnecessary repeat screenings to ensure no drop in screen sensitivity)
Why Definitions Matter

- Imagine someone asks you how many babies were screened in Manchester in July 2007…
- Does **screened** mean testing offered, started or completed?
- Does **Manchester** mean born in Manchester, resident in Manchester or having a doctor in Manchester?
- Does **July** mean born in July, screen started in July, screen completed in July (date of last test or date screening outcome set) or screen took place wholly in July?
- Plus, due to the possibility of outpatient appointments, screens may take some time to complete, so can only assess coverage accurately after several months (in England most reports run 3 months in arrears)
# Quality Standards Report

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Information Governance

• Defined by the NHS as…

…the way in which information is handled, particularly sensitive patient information, to ensure it is used legally, securely, efficiently and effectively to deliver the best possible care

• Poor information governance
  – Accidentally contacting parents of deceased babies
  – Equipment that does not require log on and allows users to delete data

• In England, working with equipment suppliers to improve information governance on their devices
Post-Screening

• Audiological assessment data is **vital**
  – Must be possible to identify true cases and show screen sensitivity
  – Provides evidence of success for securing ongoing funding
  – Informs successful early intervention

• New audiology module in eSP v4.2
  – Speeds up data entry
  – Based around English assessment standards
  – Allowed development of national register of children with Permanent Childhood Hearing Impairment (PCHI)
Lessons Learned (the hard way!)

- Keep things simple
- Find a supplier willing to work collaboratively and flexibly
- Sell the benefits to the stakeholders
- Minimise IT installation requirements
- Start the rollout process as early as possible
- Good project management
- Get electronic birth notifications as soon as possible
- Ongoing training and support
- Speed of fixing bugs and responding to user requests
- Involve audiologists from the outset
One Final Lesson: The Importance of Disaster Recovery
What Users Think

• “When eSP is working, it’s so efficient, so good, that the minute it goes wrong, we’re floored!”

• “Before we were always triple checking over and over again that we had screened babies and you were constantly worried.”

• “I couldn’t imagine the screening programme without eSP.”

• “It would be awful if we didn’t have it.”

• “I think what’s good about it is they listen to the users and the updates have taken on board what users wanted it to do.”
Thanks

• OZ Systems
• Prof Adrian Davis and NHSP Programme Centre
• Northgate Information Solutions
• Users of eSP

• So can IT work for you?

YES!!!*

* SMALL PRINT: WHEN IT’S CAREFULLY PLANNED, KEPT SIMPLE & BASED AROUND USERS