

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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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

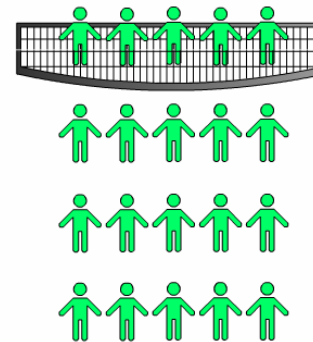
- Pilot started in 2001
- Rolled out national IT system (eSP) from early 2003
- All areas of England screening by March 2006
- NHSP Programme Centre based at the University of Manchester
- Over 2 million babies have been screened
- eSP system has evolved considerably based on lessons learned

Statistics for Financial Year 2006/07

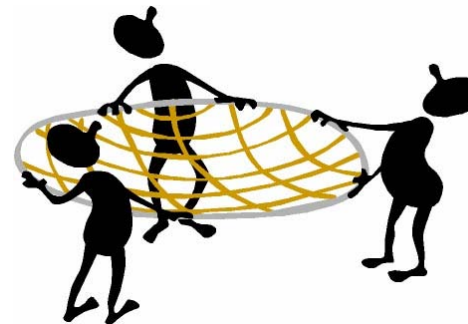
- 524,975 records added to eSP
- 97.4% screens offered
- 93% screens completed
- For completed babies:
 - 93.7% clear responses with no follow up
 - 4.1% clear response – targeted follow-up
 - 0.6% bilateral referral
 - 1.5% unilateral referral

Common Elements to Screening

1. Manage population through the process



2. Provide failsafe mechanisms



3. Monitor, evaluate & improve

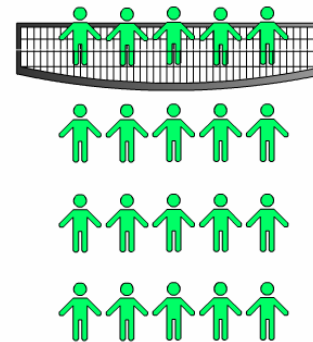


NHS Newborn Hearing Screening Programme

Can IT Help?

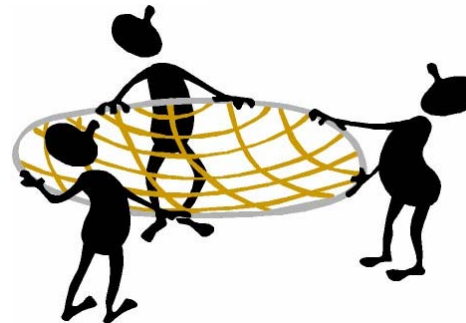
1. Manage population through the process

- 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



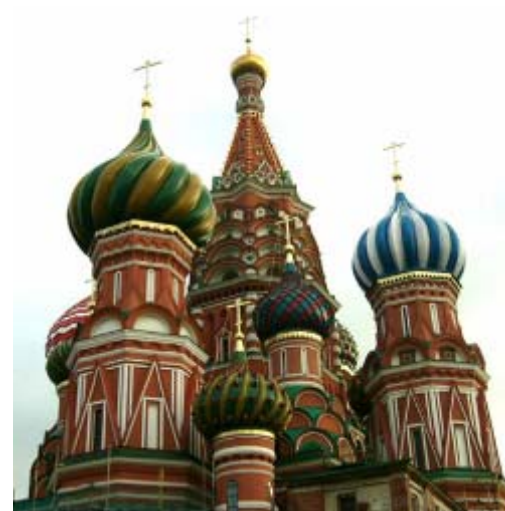
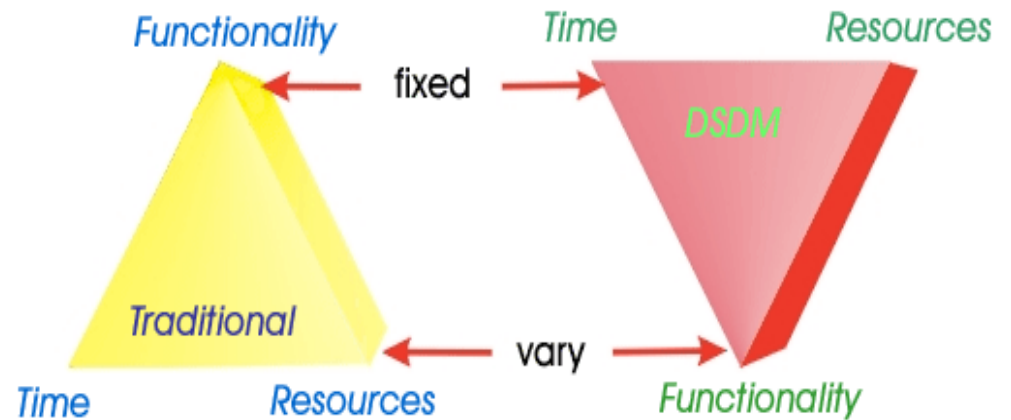
3. Monitor, evaluate & improve

- Enable consistent reporting
- Contribute to evidence base

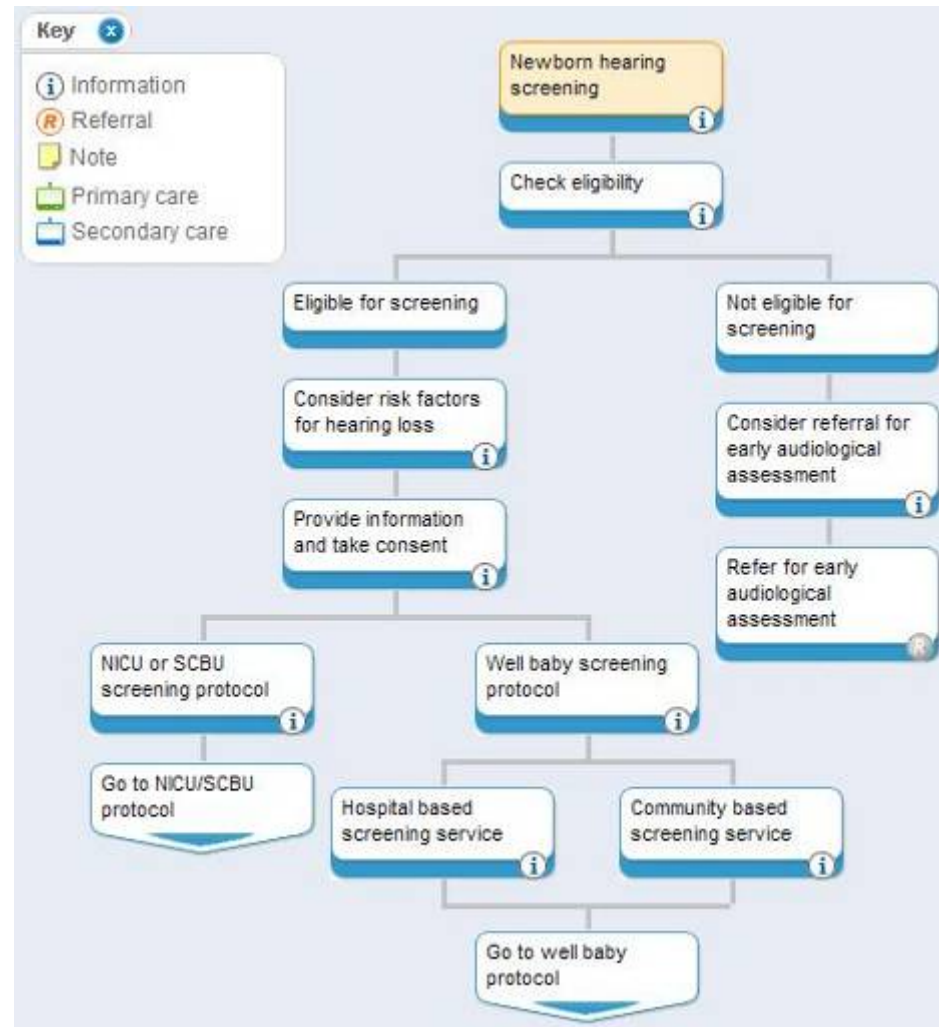


Meeting the IT Requirements

- 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

The screenshot displays the NHS Newborn Hearing Screening Programme web interface. The top navigation bar includes user information (User: Nick Waddell, Facility: MRC_Training, Last Login: 06/07/2007 14:46:51) and utility links (logout, support, select facility). The main content area is divided into a left sidebar with navigation options (Main Area, Patients, Letters, Admin) and a central patient profile for Nick Waddell (Male, NHS No.: Local No.: Nw001). The profile includes demographic information (Date of Birth: 31/07/2007, Place of Birth: MRC_Training, GA: 39, Birth Weight: 4000), location (Inpatient), and core risks (Congenital infection: U, Cranio-facial anomalies: N, Family history of hearing loss: Y, NICU > 48 hours: N). Primary contact details for Ms. Mother Waddell (Mother) are also shown, including phone (no phone data) and language (English). A 'Screening Summary' overlay is positioned in the foreground, showing results for Right and Left ears across three tests: AOA1, AOA2, and AABR. The results are: AOA1 (Right: CR, Left: NCR), AOA2 (Right: ND, Left: NCR), and AABR (Right: CR, Left: NCR). Below the summary, a 'Patient Summary' table provides key clinical and administrative data, and a 'Patient Professional Contacts' table lists contact information for Ashville Surgery and MRC_Training.

Screening Summary:

	Right	Left
AOAE 1	CR	NCR
AOAE 2	ND	NCR
AABR	CR	NCR

Patient Summary:

Screening Outcome	No Clear Response - Unilateral Referral
Follow-Up Status	Pending
Patient Status	Active - Follow-up
Protocol	Well Baby
Consent Status	Full
Letter Status	Letters To Produce
Appointment Status	Appointments Required
Responsible PCT	SCL (MAN_Site_Manchester)
Resident PCT	(None)

Patient Professional Contacts:

	Name	Service Type	Phone
View Remove	ASHVILLE SURGERY	GP Practice	01618814293
View Remove	MRC_Training	Responsible Site	0161 2758570

— TRAINING — Helpdesk: 08452 722 334 Tuesday, 31 July 2007 | [home](#) [contact](#)

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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

QS	Objective	Std	#	%	#	%	#	%
	Total babies		4569		5631		4237	
	Total well babies		4347		5326		3935	
	Total NICU babies		222		305		302	
5	Screens offered	≥ 99%	4567	100.0	5627	99.9	4237	100.0
6	Screens started	≥ 98%	4362	95.5	5444	96.7	4107	96.9
7a	Screens completed by 4 weeks (hospital sites)	≥ 95%	3409	74.6	4776	84.8	3416	80.6
7b	Screens completed by 5 weeks (community sites)		3486	76.3	4884	86.7	3553	83.9
7c	Screens completed by 3 months		4242	92.8	5351	95.0	4050	95.6
7d	Tests completed by 4 weeks	≥ 95%	3444	75.4	4808	85.4	3460	81.7
7e	Tests completed by 5 weeks		3516	77.0	4914	87.3	3582	84.5
7f	Tests completed by 3 months		4255	93.1	5369	95.3	4086	96.4
8	Screens declined	≤ 0.1%	0	0.0	0	0.0	1	0.0
Referral rates from each stage of the screen								
9a	Well baby referrals from OAE 1 hospital	≤ 30%	1531	36.8	1628	31.5	1111	29.1
9b	Well baby referrals from OAE2 hospital	≤ 6%	768	18.4	1044	20.2	634	16.6

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.”*

NHSP Website

NHS Newborn Hearing Screening Programme
Antenatal and Newborn Screening Programmes

Home | Site Map | Press Office | Health Professionals | NHSP Staff | Help

About Newborn Hearing Screening

"It's very important to identify children with hearing loss as early in life as possible, and the NHS Newborn Hearing Screening Programme (NHSP) makes sure that all newborn babies are given this opportunity across the whole of England" - Professor Adrian Davis, NHSP Director

- ◆ Why screen babies' hearing and what does it involve?
- ◆ When and where will my baby be screened?
- ◆ Why does my baby need a second test and what does it involve?
- ◆ What happens after the screen?
- ◆ Other questions parents commonly ask

Find out more about the organisation of NHSP and the national Programme Centre on the Health Professionals page.

hearing.screening.nhs.uk

Latest News

National Knowledge Week For Hearing starts March 19th

- 08/03/07 Improving Access to Audiology Services in England
- 06/03/07 Community Site Meeting
- 27/02/07 eSP Transition Successful

Latest Publications

- 20/03/07 NHSP Map of Medicine Care Pathway - Main
- 16/03/07 Quality Standards in the NHS Newborn Hearing Screening Programme
- 18/03/07 Report: Evaluation of the newborn hearing screening programme (NHSP) in England

Other Information

Screening in my area: Enter postcode Go

বাংলা Resources in other languages

Contact Us

NSC National Screening Committee

NHS Direct 0845 4647

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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**