

# NHS Connecting for Health

## Demographic Migration - NN4B

Current Processes, Maintaining Service  
Continuity and Introducing the Future  
Requirements of the NHS CRS

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**NHS CRS Demographics Team**

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## NN4B - leading up to 29/10/2002 ...

### Implemented in England and Wales

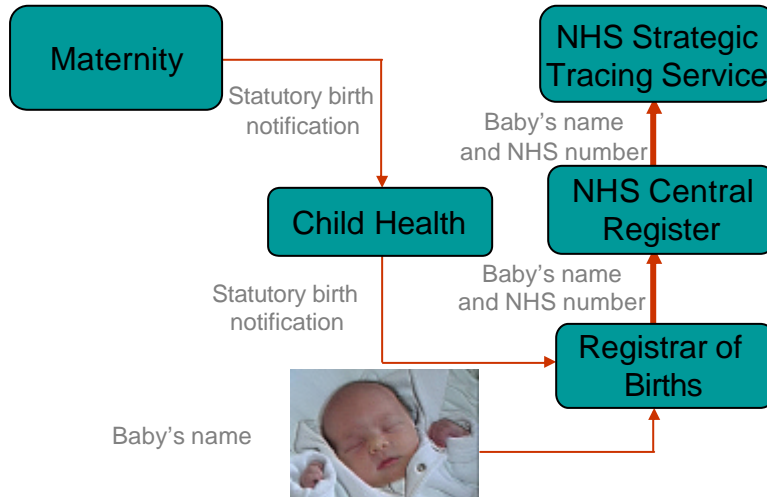
### Organisations involved ...

- 268 Maternity Units
  - currently comprising 157 Maternity System & 111 active INNS sites
- 177 Child Health Departments
- 1,102 Registrars of Births & Deaths
- 51 system suppliers

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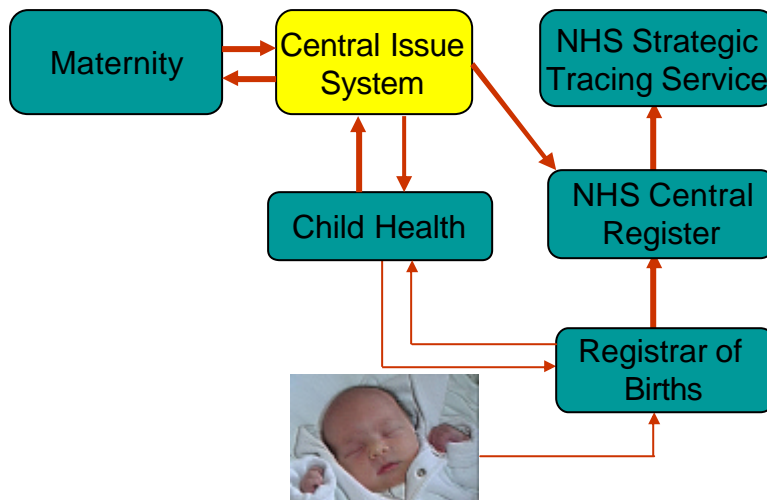
## Pre NN4B process ...



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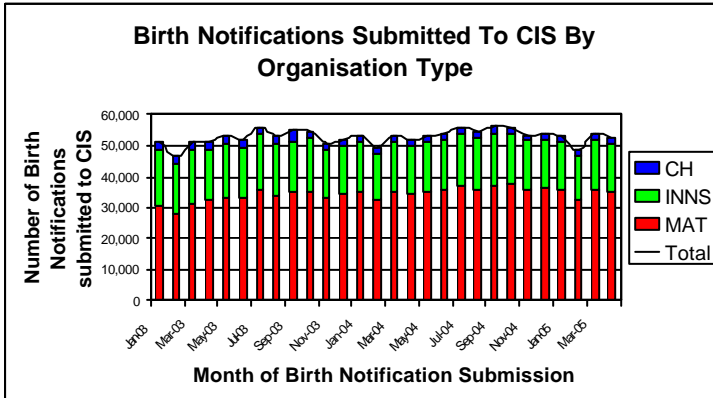
## The 'Original' NN4B solution ...



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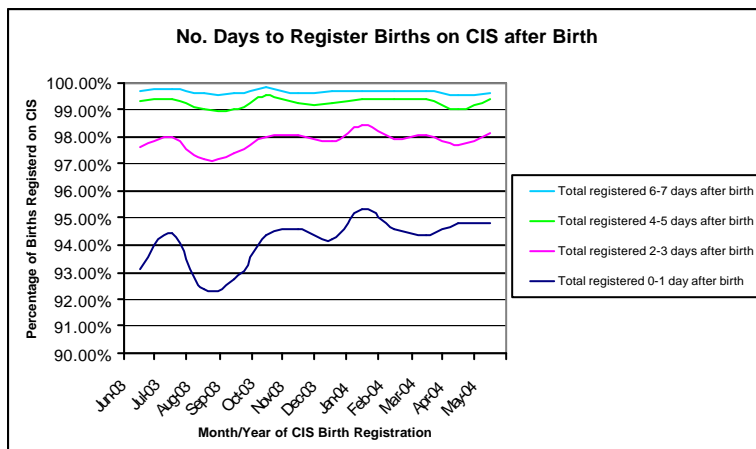
# NN4B Statistics ...



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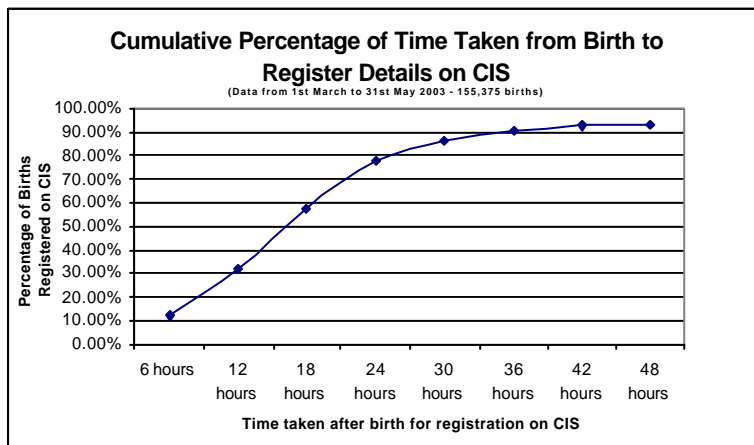
# NN4B Statistics ...



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## NN4B Statistics ...



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## NN4B Benefits Realisation ...

### **NN4B - Supporting Newborn Screening ...**

#### **Newborn Hearing Screening Project -**

- working with the NHS Newborn Hearing Screening Programme Centre <http://www.nhsp.info>

#### **NHS Numbers for Newborn Screening -**

- neonatal blood spot screening for PKU, Hypothyroidism, Sickle Cell Disorders and Cystic Fibrosis
- Getting the NHS Number on the blood spot card

#### **CIS - P1R2 - PDS Interface -**

- near real-time messaging between CIS and PDS

#### **CIS - P2R1 -**

- PDS takes over responsibility for issuing NHS Numbers to babies

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# NN4B - Hearing Screening Project

## About the Newborn Hearing Screening Programme ...

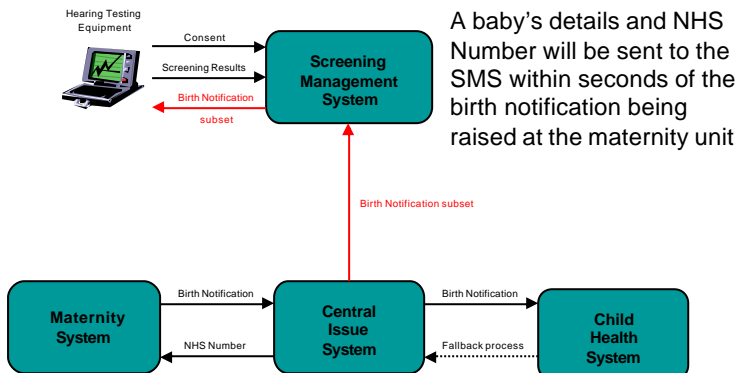
- Aiming to implement a hearing screen for all newborn babies in England. Over 70 areas of England are currently screening and it is estimated that all areas will be participating by December 2005
- The Newborn Hearing Screen is harmless, is more accurate than the Infant Distraction Test, and can be used with newborn babies
- If babies are identified with a hearing loss very early in their life, precious time is gained to help them and their family develop communication skills

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# NN4B - Hearing Screening Project

## Interface between CIS and SMS ...



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## NN4B - Hearing Screening Project

Working in close partnership with the NHS  
Newborn Hearing Screening Programme

### **System Interface enables ...**

- a real-time link between the Central Issue System (CIS) and the Hearing Screening Management System (SMS)
- pre-population of the SMS with birth notification data from the CIS
- local hearing screeners to access details of babies to be screened and monitor and track babies through the screening process
- identification of the screening population (all babies born in England) to the SMS and ensuring all babies and results are accurately and uniquely identified with an NHS Number

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## NN4B - NHS Numbers for Newborn Screening

### Blood spot screening - 'heel prick test'

- Baby at 5-8 days old (ideally on day 5)
  - heel of baby's foot pricked, blood dropped on special filter paper card, dried as several blood spots
- Blood spots sent to newborn screening laboratory
  - Undergo a number of tests - inc. PKU and CHT (sickling disorders and cystic fibrosis)
- Problem
  - Tracing babies through the system, as currently using names and other identifiers, as NHS Number historically not available when screening occurs
- NN4B - now can realise the above, as NHS Number usually issued shortly after birth ...

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## NN4B - NHS Numbers for Newborn Screening

To facilitate the use of the NHS Number ...

Printing of labels at **ALL** maternity units including:

- NHS Number (bar-coded and numeric formats)
- Demographics and birth details

Example (not to scale)


		
<b>NHS No. 612 895 8184</b>		
Woodward, Glen	01/10/2002	Male
41, Sentries Orchard, Exminster, Exeter		EX6 8UE
3175g (7lb 0oz)	British	
Rank : 1/1	40+0 weeks	
Glenis Woodward	25/03/1968	
DR SGH Rains	Heavitree Hospital	

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## NN4B - NHS Numbers for Newborn Screening

Example blood spot card and **proposed blood spot label**

		<b>NHS No. 612 895 8184</b>	
Woodward, Glen	01/10/2002	Male	
41, Sentries Orchard, Exminster, Exeter		EX6 8UE	
3175g (7lb 0oz)	British		
Rank : 1/1	40+0 weeks		
Glenis Woodward	25/03/1968		
DR SGH Rains	Heavitree Hospital		

CARE OF SPECIMEN With a needle (✓) <input type="checkbox"/> YES <input type="checkbox"/> NO Dips on Milk/Pasteurised <input type="checkbox"/> YES <input type="checkbox"/> NO Has only had a blood transfusion (✓) <input type="checkbox"/> YES <input type="checkbox"/> NO If you able of oral transfusion <input type="checkbox"/> YES <input type="checkbox"/> NO In the lab at hospital (✓) <input type="checkbox"/> YES <input type="checkbox"/> NO		034318005 S665 <sup>TM</sup> LOT # W-011 EXPIRATION DATE 03/06/08 DO NOT DETACH OR FOLD
NHS No. 612 895 8184 Name of MRMH taking sample (PRINT) *Complete if required by local laboratory		

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## NN4B - NHS Numbers for Newborn Screening

### Background ...

- 'NHS Number' bar-code standard
  - UCC/EAN-128 bar code symbol - recommended format by GS1 UK (UK authority for EAN.UCC)
  - Meetings held with GS1 UK, NPfIT, NCAB, NHS ISAB
  - Leading to NHS ISAB submission in early November 2004
- OBS for the blood spot screening label format
  - Blood spot label format
  - NHS Number bar-code standard
  - Sent out for review with
    - UK Newborn Screening Programme Centre
    - UK Neonatal Screening Laboratories Network
- Submission to the **NHS Information Standards Board**
  - **Approval** was granted for the NHS Number Bar-code as an Operational Requirement Standard in late November 2004

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## NN4B - NHS Numbers for Newborn Screening

### 'UK Health and Social Care' Number bar-code standard ...

Format of the Element String			
Application Identifier	EAN.UCC Global Service Relation Number (GSRN)		
	EAN.UCC Company Prefix	Service Reference	Check Digit
8018	N <sub>1</sub> N <sub>2</sub> N <sub>3</sub> N <sub>4</sub> N <sub>5</sub> N <sub>6</sub> N <sub>7</sub> N <sub>8</sub> N <sub>9</sub> N <sub>10</sub> N <sub>11</sub> N <sub>12</sub> N <sub>13</sub> N <sub>14</sub> N <sub>15</sub> N <sub>16</sub> N <sub>17</sub>		N <sub>18</sub>

- e.g. the element string **'8018505089899900054513'** comprises ...
- **'8018'** - Application Identifier
- **'5050898'** - EAN.UCC Company Prefix
- **'9990005451'** - NHS Number **999 000 5451**
- **'3'** - Check Digit

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## NN4B - P1R2 - CIS - PDS Interface

### CIS - PDS Overview ...

- For each birth allocated an NHS Number by CIS, a BN sub-set will be sent to the Spine (via TMS) as defined within an agreed CIS to Spine Message Specification
- BN sub-set will be sent after the transaction with the maternity system, INNS user, Child Health browser, or helpdesk browser has completed
- The near real-time messaging will mean that a baby will be able to be traced on PDS almost immediately after the birth has been registered on the CIS
- Currently, it can take from 1½ to 7½ weeks for a baby to be available for tracing on NSTS due to both the inherent delay around the systems and the dependency on the parents registering the birth at the RBDs (up to 6 weeks after the birth)

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## NN4B - P1R2 - CIS - PDS Interface

### CIS - PDS Update ...

- First phase of Project been completed
  - IVR decommissioned as at 21<sup>st</sup> November 2004
- Second phase went live 28<sup>th</sup> November 2004
  - Child Health/Proxy Browser modifications live
  - Benefiting CIS-Hearing Screening Interface
  - NN4B Software ready for PDS messaging
- Third phase going live by end May 2005
  - Functionality to improve Data Quality
- Fourth phase live late 2005
  - Near real-time CIS to PDS messaging available

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## NN4B - P2R1 ...

### Birth Notifications Business Use Case developed

- Details (amongst other things) ...

Birth Notification sent from local system to other Systems via the TMS ...

- Child Health department ('partner')
- Child Health department ('responsible')
- **Civil Registration CDB** (live from early 2006)
- **NHS Newborn Hearing Screening Management System**
- CIS (until the NN4B service is closed)
- Other systems as required to support future business requirements

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## NN4B - P2R1 ...

### Civil Registration CDB (live from early 2006)

#### - Details ...

- Project to modern civil registration service in England & Wales (from local paper based to central electronic with local input)
- Current legislation - NHS must inform local registration service of all new births occurring in their area
- Current arrangements - local Child Health Systems notify by paper listings, floppy disk or e-mail
- Proposed arrangements - PDS (P2R1) will inform ONS centrally via electronic messages normally within 24 hours of the birth

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## NN4B - P2R1 ...

### NHS Newborn Hearing Screening Management System

#### - Details ...

- Current eSP system interfaced with CIS, supplying demographic data to Hearing Screening Management System
- Plan to make eSP NCRS compliant, so as to benefit from updated demographics available from PDS
- Once work is approved, hope is to handle development, testing work through 'existing systems' workstream

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## NHS Connecting for Health

### Demographic Migration - NN4B

#### Contact details ...

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