

Health

National report

August 2006



# National duplicate registration initiative

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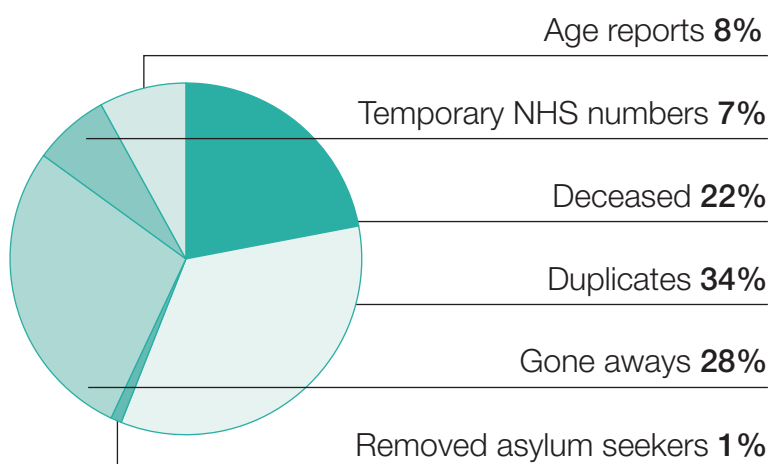
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## Summary

The Audit Commission has undertaken the National Duplicate Registration Initiative (NDRI), first undertaken in 1999, at all primary care trusts (PCTs) and local health boards (LHBs) in England and Wales as part of the statutory audit of the 2003/04 accounts. It involved extracting electronic details of the 56 million patients registered with general practitioners (GPs) in England and Wales, undertaking data matching and feeding back the matches for review. In total almost 1.5 million matches were fed back to the 87 National Health Applications and Infrastructure Services (NHAIS) sites who manage the patient list data for all PCTs and LHBs. The review of these matches has:

- generated savings in excess of £9.5 million by enabling almost 185,000 patient registrations, 0.3 per cent of the population, to be cancelled (**Figure 1**);
- allowed GPs to have access to the full medical records of their patients in cases where the records had remained with the former GP; and
- successfully incorporated data from external organisations, including central government and private sector organisations, to provide NHAIS sites with intelligence that has led to a significant improvement in the quality of the patient registration data held.

**Figure 1**  
NDRI deductions analysed by match type



Source: Audit Commission

In addition a review of the outcomes from the initiative has identified:

- weaknesses in the current system, for example allowing duplicate registrations with the same NHS number, that must be addressed in the new Patient Demographic System;
- that poor data capture has reduced data quality;
- that users have difficulties obtaining tailored management information and extracting data. This has hindered their efforts to effectively manage the patient list data; and
- that system and training issues have led in some cases to the incomplete transfer of information between systems. This makes it difficult to ensure that complete medical records are available for all patients.

The extent to which NHAIS sites were able to exploit the opportunities NDRI offered varied widely. The reasons for this included the effectiveness of the approach adopted, the experience of the staff undertaking the review and the decision by some not to follow up key NDRI reports, for example gone away matches.

# 1

## Introduction

- 1 The Audit Commission's NDRI, first undertaken in 1999, uses leading edge data matching techniques to review GPs' patient lists to identify inaccuracies in the data that distort both the wider resource allocation within the NHS, and specifically the payments made to GP practices. By tackling these inaccuracies the initiative also enables patients' medical records to be passed to their new GP in cases where previously the system has been unable to link the patient's former and current GP registrations.
- 2 Under the new General Medical Service contract the global sum element, which accounts for approximately half of practices' income, is based on a practice's population. In addition to global sum payments, which totalled almost £3 billion for England and Wales in 2004/05, there are a number of other payments made under this contractual arrangement that are affected by practice population.
- 3 In light of this new contract, and the linked Department of Health commitment to cleansing patient list data, the Audit Commission has undertaken a second NDRI exercise at all PCTs and LHBs in England and Wales as part of the statutory audit of the 2003/04 accounts.
- 4 The NDRI initiative was coordinated with the ongoing NHS National Programme for IT (NPfIT) and the work of the associated Information Quality Assurance Programme (IQAP). The timing of the initiative has ensured that the full benefits that the NDRI data cleanse offered are realised as part of the plans for the implementation of the NHS Care Records Service (NCRS).
- 5 The patient list data for all PCTs and LHBs is maintained on 87 NHAIS systems. This data, 56 million patient records, was cross-matched between systems to identify possible inaccuracies in the lists that were distorting resource allocations. It was also cross-matched to other data sources to identify additional data anomalies. These included:
  - the Department for Work and Pensions records of deceased persons to identify patient registrations that appeared to relate to deceased persons;
  - gone away data to identify registrations of individuals who appeared to have moved from the address held; and
  - Home Office records to identify persons who remained registered after they had been removed from the UK.

- 6 The use of data for NDRI purposes was controlled to ensure compliance with data protection and human rights legislation.
- 7 Since the 1999 initiative, significant improvements have been made to the CD-ROM on which the matches were reported back to participating bodies. These changes provided new facilities to sort and prioritise matches, thereby reducing the amount of investigation resources. Feedback on these changes has been favourable with further improvements suggested for any future NDRI initiatives.
- 8 This report discusses the results from NDRI. In particular it covers the analysis of patient registration deductions made as well as data quality and system control issues and ways to improve them.

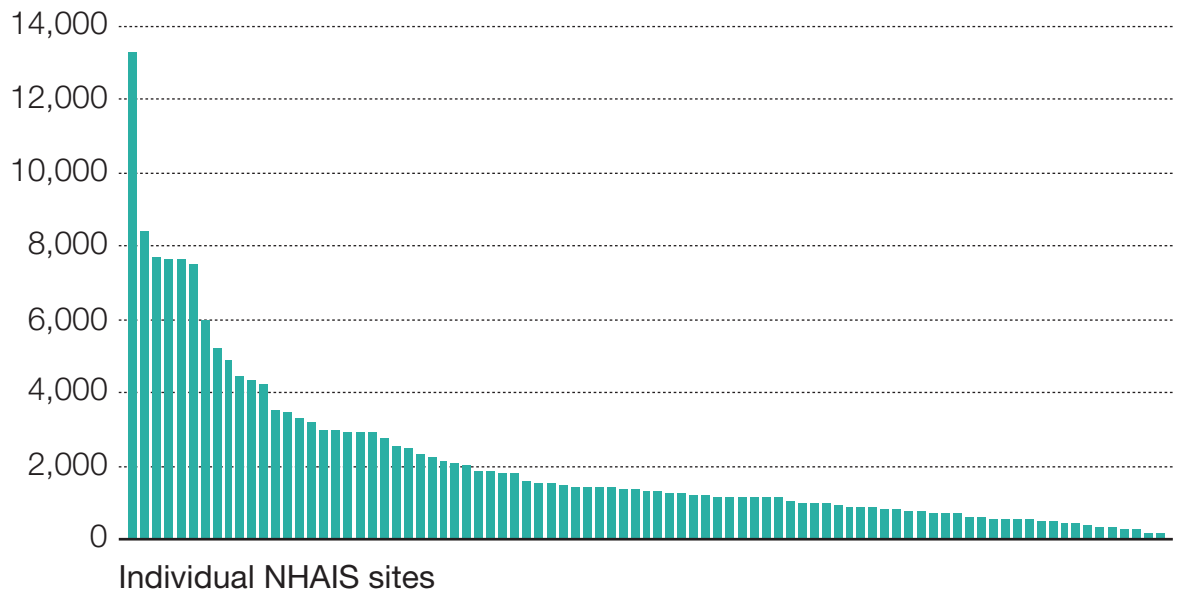
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## Results

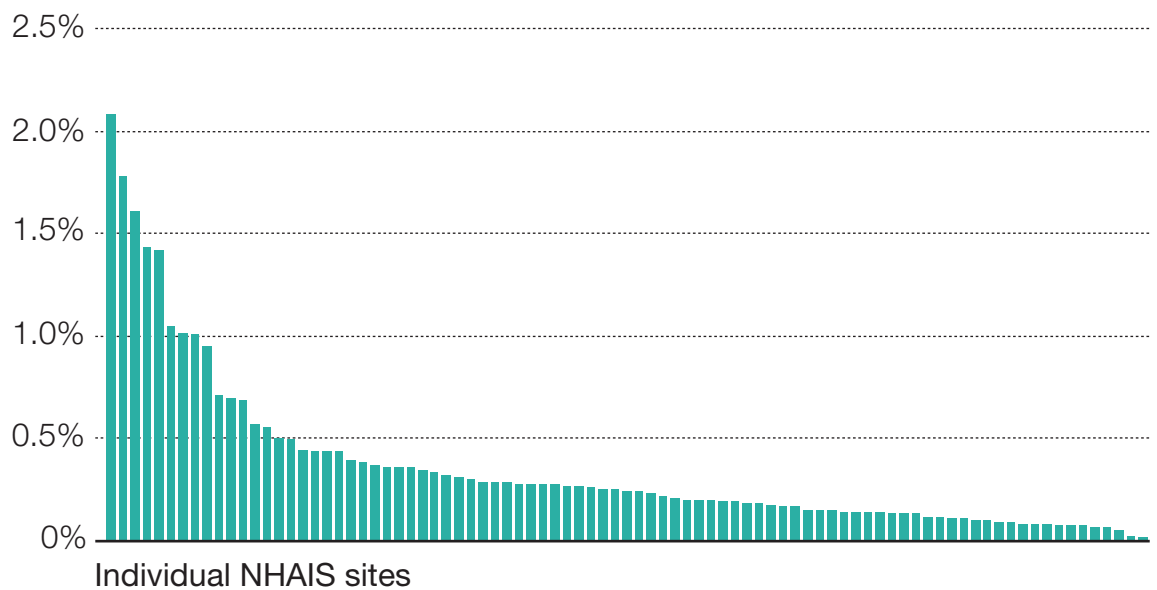
- 9 The results of the data matching were fed back on CD-ROM to the agencies supporting the 87 NHAIS systems in summer 2004. Throughout the initiative these sites reported patient deductions to the Audit Commission so that the overall impact could be assessed.
- 10 To date more than 180,000 patient registration cancellations have been reported, 0.3 per cent of the population, and we are aware that work is still ongoing at some sites. With the current basic global sum payment being £54 per patient the annual savings from these deductions exceed £9.5 million. However it is not possible to estimate the actual savings from NDRI because the period during which these registrations would have gone unnoticed cannot be determined.
- 11 Participating sites adopted a range of methodologies for following up the NDRI matches; some considerably more effective than others. There is also a significant minority which failed to maximise the potential benefits offered by NDRI by not reviewing, and taking appropriate action, on key reports; for example gone away matches. The impact of these weaknesses is revealed when the results are analysed by NHAIS site. Although variances were expected due to the different populations served by each NHAIS site, the variance in reported deductions (ranging from 155 to 13,312) highlights that the different approaches have had a big impact upon the benefits realised from NDRI (**Figure 2** provides further comparison).
- 12 At a number of sites the reported deductions include an element of estimation as actual deductions information was unavailable. This was restricted to certain match types, mainly gone aways, and was a reflection of the limitations of the NHAIS system's ability to provide flexible management information.

**Figure 2****NDRI deductions analysis by NHAIS site**

Patient registration deductions



Deduction rate by percentage of population



Source: Audit Commission

## Deceased persons

- 13 Matching was undertaken to identify patient registrations relating to dead persons. This was done by matching the patient list data against the Department for Work and Pensions records of deceased persons. These matches, which totalled almost 135,000, were passed back to NHAIS sites to review.
- 14 The relative risk each match represented depended upon the reported date of death, with the earliest deaths representing the greatest risk. Analysis of the matches fed back shows over 10,500 had passed away before 1 January 1990 (**Table 1**). These patients have therefore remained on GP lists for a minimum of 15 years after they passed away, but in many cases significantly longer. The payments made to practices for these patients after they passed away are estimated to have exceeded £6 million, based on the average capitation fee per patient in this period.

**Table 1**  
**Analysis of deceased persons' matches**

Date of death	Number of matches	Percentage of total matches
Before 1980	1,467	1
1980 – 1990	9,060	7
1990 – 2000	18,023	14
2000 – 2004	16,556	12
01/01/2004 – 14/03/2004	23,002	17
After 14/03/2004	66,308	49

**Source:** Audit Commission

- 15 Participating sites have reported almost 40,000 patient deductions as a direct result of NDRI, with all sites reporting deductions. A further 50,000 of the matches were deducted through normal business independently of NDRI. The patients deducted as a result of NDRI included:
- a patient who died in 1964, but was only removed in August 2004 as a result of NDRI;
  - a patient who had died in 1962 yet had remained on a dummy GP list despite not being seen since 1955; and
  - a patient who had not been seen since 1968.

- 16 Although there was a range of approaches adopted, the majority of sites gave the deceased reports the highest priority and reviewed them first. Some sites improved the effectiveness of the investigative resources they invested by first undertaking further local data matching on the NDRI results (**Case study 1**).
- 17 Despite *NDRI Matters* promoting such local matching as good practice (newsletter available on the NDRI website [www.audit-commission.gov.uk/ndri](http://www.audit-commission.gov.uk/ndri)) there were a significant number of NHAIS sites who felt they did not have the necessary skills, or the appropriate IT support, to adopt this approach. As a result the majority of these sites opted to undertake a more onerous manual check to eliminate those already removed. Alternatively some elected to simply ignore all matches with a date of death after a specific date, commonly the date of data download.

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### Case study 1

Essex NHAIS site used further local data matching to effectively identify the 803 patient registrations that required cancellation. The approach adopted involved using the NDRI application to extract the 4,242 deceased persons' matches. At the same time they ran a query on the live NHAIS system to extract all persons who had been removed as deceased since the NDRI data download date. By running a comparison of the two in Microsoft Access they were able to automatically eliminate those patients whose death they were already aware of. Details of the remainder were fed back to the relevant practices which were given two months to identify any patients who appeared to be alive. At the end of this period the patient registrations were removed.

**Source:** Audit Commission

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## Gone away

- 18 NDRI 2004 included, for the first time, matching to identify patients whose registration related to a previous address. This was done by matching to information available on persons who have moved. A number of sources of data were used and patients who appeared to have moved on two or more of these databases were identified. Details were fed back to the NHAIS sites for review, and action where appropriate, for example updating details for patients who had moved locally or cancelling the registration of those who had moved out of the area.

- 19 Participating sites have consistently indicated that they have found this match one of the most effective elements of NDRI and this is reflected in the fact that over 50,000 patient deductions have been reported.
- 20 The majority of sites adopted a similar follow-up approach for these matches which involved setting FP69s against these patients unless updated registration details had been provided. An FP69 gives the GP six months to validate the registration or provide updated details otherwise the registration is cancelled at the end of this period. Due to limitations of the NHAIS system the user cannot easily produce management information to identify the outcomes of FP69s that related to gone away matches. Consequently the majority of sites estimated the outcomes by selecting a statistically valid sample of records and extrapolating the results from this sample to the whole population (**Case studies 2 and 3**).

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### Case study 2

Kent and Bexley and Greenwich both wrote to all patients on the gone away report whose registration details remained unaltered. For a small percentage of the patients this process led to updated details being obtained or the patient confirming that they were still living at the address. For the remainder, 4,623, an FP69 was set. The actual outcomes were established by manually reviewing the registration status at the end of this period. In total there were 3,613 patient registrations cancelled, 78 per cent of the FP69s set.

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### Case study 3

Kensington, Chelsea and Westminster also issued FP69s as part of the follow-up approach. However, in common with many sites they were unable to identify the actual outcomes of the FP69s. Therefore a manual review was undertaken of a sample of 120 of the 2,632 FP69s set. This revealed that 101 of the 120 had been removed; 84 per cent of FP69s set. Applying this rate of deduction to the 2,632 FP69s set gives an estimate of 2,215 deductions.

**Source:** Audit Commission

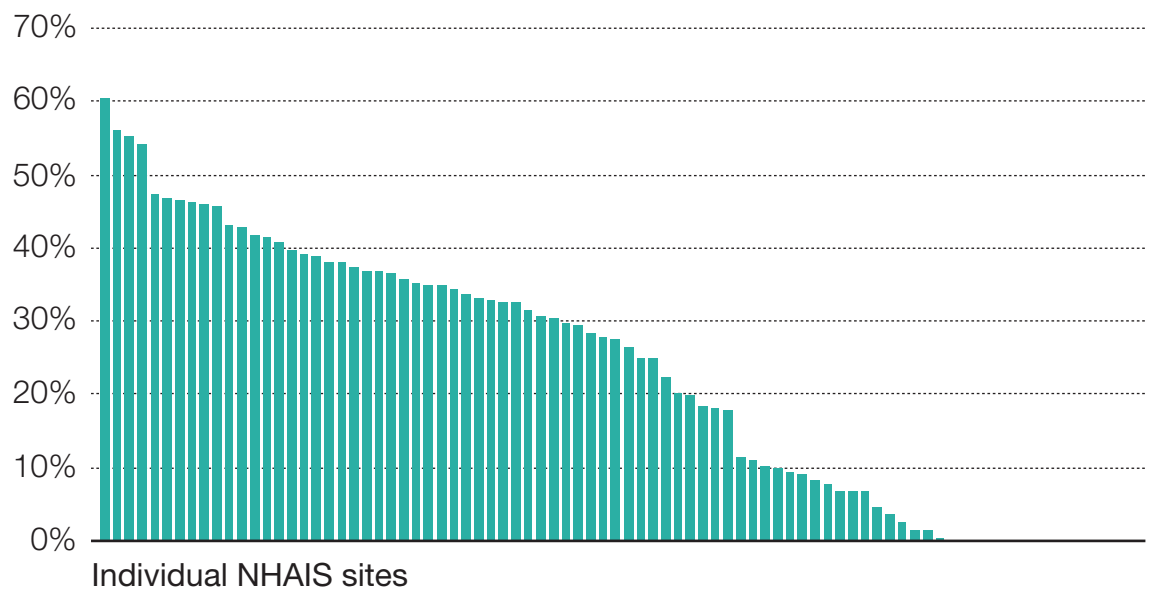
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- 21 Analysis of reported deductions by NHAIS sites reveals a wide variance. Although the 50,000 deductions represent just over 25 per cent of the matches released, deduction rates at individual NHAIS sites ranged from 0 per cent (15 sites) to 60 per cent (**Figure 3** provides a full analysis). A further review of the 15 sites who have not reported any deductions has revealed that some have not followed up these matches at all, while for

others the work is still ongoing. If these 15 sites are excluded from the analysis, which gives a more accurate assessment of the impact of this match, the overall deduction rate increases to 31 per cent.

**Figure 3**  
**Analysis of gone away deduction rates**

Percentage of matches



**Source:** Audit Commission

## Duplicates

- 22 Duplicate registrations for the same patient were identified and fed back. In addition to these duplicate registrations generating payments to multiple practices for the same patient, the exception being those that involved a non-payable code (for example, ZZZ), the failure to connect a patient's new registration with their previous one means that the patient's medical records do not transfer to the new GP.
- 23 As in 1999, when duplicate matches were the main focus of NDRI, these matches were identified by matching the NHAIS data provided by each site to both itself and the data provided by all the other NHAIS sites.

- 24 NDRI identified over 43,000 cases where there were duplicate patient registrations, on different NHAIS systems, with the same NHS number. Some duplicates were expected, as patients may have been in the process of transferring to another GP, but the fact that almost 60 per cent had remained on the system for over 6 months, with over 200 having remained for over 10 years suggests that there is an issue with the controls in place to reconcile patient data between NHAIS systems (**Table 2** provides further analysis). While these NHS number duplicates represent less than 0.1 per cent of the total list population they demonstrate that current controls permit some duplicate registrations to be generated.
- 25 In the majority of cases the NHS number duplicate registrations related to the same person, but there were a significant number where it appeared as though two different people had been allocated the same NHS number, for example, John Smith and David Jones. The fact that only 18,000 deductions have been reported by sites suggests that a significant number of these duplicate registrations have not been appropriately reviewed and cleared.

**Table 2****Age analysis of duplicates by NHS number**

Date of registration	Number of matches	Percentage of total matches
Before 2000	3,121	7
2000	2,325	5
2001	3,621	8
2002	6,284	15
2003	12,761	30
After 01/01/2004	14,963	35

**Source:** Audit Commission

- 26 There were a number of other types of duplicate match which were fed back to NHAIS sites with guidance on the appropriate action to take. These included the same name and date of birth, almost identical and unusual names or where the name was reversed (**Table 3**). Additional information was provided about how common the patient's name was, using a count based on both the surname and forename, to assist those following up these matches. The need to make a judgement on whether or not the match related to

the same individual meant the greatest success was achieved by the sites that were able to use experienced staff who adopted a balanced risk-based approach to the work.

- 27 Where such resources were unavailable sites commonly did not make such effective use of these reports. For example, by failing to take action on matches that related to the same individual, opportunities to clean the data have been missed. At the other extreme failure to correctly interpret the matched details fed back led to patient registrations being incorrectly cancelled and the medical records transferred. This error sometimes occurred in instances where officers reviewing the matched data failed to identify that the duplicate registration was not a GP registration but rather a registration against a dummy code for specific screening services. If a future NDRI initiative is undertaken these matches will be shown separately to minimise the risk of participating bodies repeating this error.

**Table 3**

**Examples of reversed name and date of birth matches**

Surname	Forename	Surname	Forename	Same 2nd forename
Lee	Smith	Smith	Lee	Y
Alkharef	Jones	Jones	Alkharef	Y
John	Delovan	Delovan	John	Y
Chandrani	Sue	Sue	Chandrani	Y

**Note:** These represent real examples, but some details have been amended to protect individuals.

**Source:** Audit Commission

## Temporary NHS numbers

- 28 Details of patients who had had a temporary NHS number in excess of a year were fed back to NHAIS sites. A temporary number is allocated while attempts are made to establish the actual NHS number and therefore identify the previous registration details and medical records.
- 29 In total over 113,000 such cases were identified. Analysis of the results shows that although most sites had a relatively small number of these matches there were 18 who had in excess of 1,000, with 5 sites having in excess of 5,000. When compared to population size these 5 sites also had the highest percentage of temporary NHS numbers, ranging from 1.42 per cent to 2.77 per cent. The level of temporary NHS numbers on any one NHAIS system is affected by the stability or otherwise of the population they serve. The fact that four of these five sites are in London, where the population is significantly more transient than other areas, is therefore not surprising.
- 30 Until the link to the actual NHS number is achieved it is likely that as well as the new practice not having access to the full medical records two practices will receive payment for the same patient. It is therefore important that efforts are made to obtain the actual NHS number as quickly as possible. The examples of good practice undertaken as part of normal business at many sites include:
- writing to patients using a standard pro forma requesting additional personal information to enable them to identify the patient's previous GP practice;
  - setting the patients a response deadline and issuing the request a second time if no reply is received; and
  - finally setting an FP69 on these patients, therefore passing on responsibility to the practice while also setting a deadline for resolving the issue.
- 31 Since NDRI commenced there has been considerable effort made to address the issue of temporary NHS numbers as the Personal Spine Information Service (PSIS), the new central database containing clinical records for each NHS patient, cannot accommodate temporary NHS numbers. As data is to be loaded onto this system in 2006 the elimination of temporary numbers has been prioritised.
- 32 These other data cleansing initiatives mean most sites have been unable to separately identify the results from NDRI. Additionally when these temporary NHS numbers are

resolved the most common action is not to remove the patient registration but rather to update the registration with the correct NHS number. It is therefore apparent that the 12,000 reported deductions do not give the full picture of the outcomes of the NDRI work in this area. Therefore in order to gain a more accurate indication of the progress in cleansing temporary NHS numbers we have looked at movement in the number of such temporary numbers over time.

- 33 At the time of the initial data download there were over 138,000 registrations which had had a temporary NHS number for over 6 months. The latest statistics available show that as at November 2005 this had fallen to 71,000, a reduction of 67,000 (49 per cent). Although this significant reduction is good news, and reflects the considerable efforts put into NDRI and other temporary numbers cleansing initiatives, it does show that resource and effort must continue to be put into clearing these numbers prior to the new PSIS system coming on stream during 2006.

## Removed asylum seekers

- 34 The introduction of Home Office data enabled NDRI to identify patient registrations which related to persons who had been removed from the UK by the Home Office. In the majority of cases the registration has now been cancelled. However, the NHAIS sites identified some cases where the person appeared to have subsequently returned to the UK. Details of these were passed to the Home Office for them to consider what, if any, action should be taken. Based on this information the Home Office has made a number of deportations.

## Age analysis reports

- 35 Individual sites have the facility to run queries against their database to identify patients above a specified age. Many sites undertake annual exercises to confirm that elderly patients remain alive, generally those above 100 years of age. There were others, however, who had not adopted this good practice. It is important that such local data cleansing initiatives are promoted as good practice and that all sites are encouraged to participate.
- 36 As a result of these local initiatives a number of sites elected not to take specific action on the NDRI age reports, patients aged over 100 and those aged 90 to 100. However, there were 70 sites which have reviewed these reports and have reported deductions totalling 15,000 (**Case study 4, overleaf**).

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### Case study 4

Despite undertaking proactive local data quality initiatives Clwyd elected to review the two NDRI age reports. The process involved asking practices to confirm that the patients remained alive and for those where such confirmation could not be provided an FP69 was set. As a result of this work a total of 1,032 patient registrations were cancelled.

**Source:** Audit Commission

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- 37 As NDRI did not incorporate any medical information, for example the last time a patient visited their GP, it was not possible to undertake matching to identify elderly patients who had not visited their GP in the preceding 12 months. It is more likely that elderly patients would regularly see their GP; indeed there is an expectation that the GP would undertake an annual health assessment for such patients. Given this, local initiatives to identify those elderly patients who had not seen their GP in the last 12 months may be an effective way to identify patient registrations which require further validation.

# 3

## Data quality

- 38 NDRI included a review of the factors reducing the quality of the NHAIS data. Those identified included inaccurate data capture, system user error, inconsistencies in the approach to data management and system weaknesses.

### Data capture

- 39 Inaccurate and incomplete data capture, due to both human error and deliberate deception, has reduced the quality of the information held on the NHAIS system. These data quality issues affect the ability of registrations to be linked and therefore prevent the cancellation of the old registration and the transfer of the medical records to the new GP practice.
- 40 The current system requires a person to complete the appropriate form (GMS1) when they wish to register with a new GP practice. As well as collecting personal information, for example name, date of birth and address, the form also requests information on the patient's previous GP. However, the system does not require the patient to provide identification to support the registration details provided. This leaves it exposed to deliberate abuse by patients who set out to be registered patients at multiple GP practices. It is widely acknowledged that a significant number of such patients exist, for example to obtain an increased supply of certain drugs. A local initiative undertaken by one NHAIS site targeting such abuse identified a number of individuals having over 10 patient registrations, with some having in excess of 60. This specific initiative led to almost 100 patient deductions and 2 convictions. Once accepted onto the system these false patient registrations are difficult to identify as patients normally provide different details for each registration.
- 41 The failure to verify registration details also leaves the system exposed to human error. For example, instances where the patient inadvertently confuses the surname and forename entries on the GMS1 form. The matches fed back for investigation included over 10,000 such cases, the earlier **Table 3** provided examples, and led directly to almost 2,000 of these registrations being cancelled. In addition, problems can arise because in certain cultures the surname and forenames are, in effect, interchangeable. In some cases the forename and surname confusion is clear and the person inputting the GMS1 form is able to identify the error and query the details accordingly. However in many more cases the confusion is not identified and the registration is accepted with the incorrect details. As a

result of this issue it has become standard for data matching exercises to incorporate a review aimed at identifying surname forename reversed matches.

- 42 Simple inputting errors, often caused by mistyping or illegible writing, can also lead to duplicate patient registrations. For example the forename Michael is commonly incorrectly spelt as Micheal. Analysis of the 56 million GP patient records provided for NDRI identified that although the name had been correctly input as Michael in 799,565 cases there were 4,781 patient registrations in the name Micheal.
- 43 As well as such common errors there is also a much greater number of errors which are only made on a small number of occasions, possibly even just once, but when added together represent a significant number (**Table 4**). These errors increase the likelihood that the system will fail to link a patient's new registration with their previous one and therefore lead to inaccurate registrations remaining on the system.

**Table 4**  
**Examples of simple inputting errors**

Registration a	Registration b	Other details matched
Lawrence	Laurence	Y
Shiozogue	Ehiozogue	Y
Ananda	Anand	Y
Beyhan	Beyman	Y
Ronald	Ronal	Y
Marchant	Merchant	Y
Mehri	Marhi	Y

**Source:** Audit Commission

## System user error

- 44 The follow-up of NDRI matches revealed instances where errors by system users led to inaccuracies in the NHAIS database.
- 45 The problem identified arose where staff at GP practices, who maintain their own patient records databases, had been updating their records for patients who had passed away but due to user error these updates had failed to upload onto the NHAIS system (**Case study 5**). As a result these deceased patients had remained on the NHAIS system and the practice had therefore continued to receive income for them.

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### Case study 5

As part of the follow-up of the deceased person matches Leicestershire issued details of all the NDRI deceased person matches to practices for them to investigate. This process revealed a number of instances where the practice had previously been informed of the patient's death and they had already removed them from the practice patient list. However details of these removed patients had not transferred to the NHAIS system via the normal automated links system. Further investigation identified that these anomalies were due to the practice staff not following the correct procedures when updating the data held on their patient list system. Training was therefore provided to raise awareness of the correct procedures to ensure changes to GP practice systems data upload to the NHAIS system.

**Source:** Audit Commission

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## Local data quality initiatives

- 46 The NDRI review found a significant number of examples of effective local data quality initiatives. However it also revealed that there:
- are significant differences in the levels of local data quality initiatives being undertaken at NHAIS sites; and
  - is no effective mechanism for sites to share details of these initiatives, including the methodology adopted and the outcomes.
- 47 There were many examples of effective local data quality initiatives being undertaken at NHAIS sites. These included multiple occupancy reviews to identify patients who are

registered at an address they have now vacated and university student reviews aimed at ensuring the registrations of students who had completed their studies and left the area are cancelled promptly. However, the resources invested into these initiatives, and therefore the level of such initiatives, varied greatly between NHAIS sites. Commonly the reason given for not undertaking local data quality initiatives was a lack of resources due to the pressures of the ongoing day-to-day workload with data quality initiatives being perceived as optional extras rather than a core aspect of effective data management.

- 48 At present there is no effective mechanism for NHAIS sites to share details, for example on the methodology and outcomes, of local data quality initiatives. While there were some examples of intelligence being shared it was on an ad-hoc basis and restricted to a regional level. The result of this weakness is that sites are duplicating effort spending time developing local initiatives that have already been delivered at other sites, effectively ‘re-inventing the wheel’. Additionally the opportunity to share the lessons learnt about what works and what doesn’t are also being missed. The introduction of a national mechanism for sharing details of good practice data quality initiatives would therefore improve the effectiveness of the resources NHAIS sites are able to invest into these initiatives.

## Weaknesses in current systems

- 49 Weaknesses in the current arrangements, both the systems and the operational controls in place, affect data quality. Although the NPfIT programme is introducing a new IT infrastructure which will replace the current systems, including the NHAIS system, this is being phased in gradually over the next five years. Therefore although only a small minority of patient records are affected, if these weaknesses are not addressed they will continue to affect data quality, and the associated payments, for many years to come. As the new Patient Demographics System (PDS) is developed it will be important to ensure that it addresses the limitations of the current system.
- 50 A number of these weaknesses have been detailed earlier in this report: Specifically the:
- failure to identify duplicate registrations with the same NHS number or identical registration details;
  - lack of guidance and procedure notes to support the system which has led to significant inconsistencies in the approach adopted by the NHAIS data managers, to the detriment of data quality;

- failure to use information available from other sources, for example, gone away data, to cleanse the data held; and
  - inflexibility of the system which makes tailored management information difficult to extract, hindering effective data management.
- 51** The current system involves the data from each of the 87 NHAIS systems being uploaded onto the NHS Strategic Tracing Service (NSTS). The information uploaded includes the key information, but not all information, held on the NHAIS systems about each patient. This national database of patients can then be accessed by all NHAIS sites, for example when they are undertaking a patient enquiry, and acute hospital trusts, to allow them to populate their patient records systems. The data on NSTS is also being used to populate the new PDS database as it comes on stream with downloads already underway. Therefore as well as impacting upon the quality of NHAIS data these weaknesses also affect the NSTS system and ultimately the new PDS system.
- 52** The follow-up approach of NDRI adopted by NHAIS sites often included making reference to this national NSTS system. This identified issues with NSTS that affect both acute trusts and NHAIS users and which could, if not resolved, affect the quality of data being migrated onto the new PDS system. These issues were:
- NHAIS patient data information not uploading on a timely basis;
  - NHAIS patient records deliberately being excluded from NSTS; and
  - the decision not to make the patient immigrant status indicator available on NSTS.
- 53** A number of cases were identified where delays with the upload of NHAIS data onto NSTS were causing operational issues for an acute trust who, having obtained patient information from NHAIS, were unable to validate it as required against NSTS. Such cases can arise where the upload process identifies an anomaly with the patient record being updated, for instance an incorrect date of birth. In these instances the record is not transferred onto the NSTS system but held in an error management database. Other reasons included errors with the initial load of NHAIS data onto NSTS in January 2002 and problems where patients had incorrectly been flagged as deceased and the details had subsequently been corrected. These errors are cleared from the error management database both automatically by the system and manually by officers reviewing the errors and taking appropriate action.

- 54 At present there are around 100,000 records on the error management database, 16,000 of which relate back to the original upload of NHAIS data to NSTS in 2002. These 100,000 errors represent only a small proportion (0.2 per cent) of the overall patient list. Additionally it does not mean there are 100,000 patients currently omitted from NSTS, as these errors may relate to historic patient registrations which have now been superseded by updated registrations. However it is important that these cases are reviewed and the error management database cleared to ensure all relevant records are uploaded onto NSTS and therefore the new PDS. The importance of this has been recognised and efforts to clear this database are underway with the initial focus placed on the 16,000 records dating back to 2002.
- 55 Patient records are deliberately excluded from NSTS, via a stop note, in certain circumstances. These include witness protection and patient confusion cases, where the medical records of two individuals appear to have been inadvertently combined. Currently there are almost 340,000 such stop noted records, 0.6 per cent of the list population. While these cases should upload onto the new PDS system this stop note prevents the NHAIS and acute hospital users from obtaining information on these patients until the stop note is removed.
- 56 As noted earlier the information held on NSTS about each patient is a subset of that held on NHAIS. The data deliberately excluded from NSTS includes the patient immigrant status indicator which identifies:
- a patient who was previously a UK citizen, but who has lived outside the UK for a set period of time (defined locally); and
  - a patient who has never been a resident of the UK.
- 57 One of the increasing challenges acute hospitals face is to identify overseas patients who are required to pay for the NHS treatments they are receiving. Therefore the extension of the NSTS database to include the immigrant status indicator would assist acute hospitals, who utilise the NSTS information to populate and validate their own patient records, in their attempts to identify, and therefore charge, these patients.

## FP69 process weakness

- 58 The failure of a significant number of practices to undertake an effective investigation into patients where the NHAIS site has set an FP69 affects data quality. An FP69 is set where the NHAIS data manager has some doubts about a patient registration. It gives a practice six months to validate the registration. At the end of this period the patient is deducted from the practice list unless the patient's registration has been validated.
- 59 The NDRI work suggests that the majority of practices are not checking these registrations but instead are simply electing to let the patient's registration be cancelled at the end of the six months' notice period. This had two significant consequences:
- the practice continued to receive income for six months for former patients; and
  - some genuine patient registrations were cancelled and then had to be re-instated when the patient contacted the practice to request an appointment.
- 60 In contrast there were some good practice examples of practices promptly reviewing the FP69's set and taking action, often within a couple of months, to either cancel the patient registration or remove the FP69 status where the registration was validated.

# 4

## Good practice in achieving results from NDRI matches

61 The results achieved by the sites participating in NDRI varied significantly. A review of the approaches adopted has established the link between sites that maximised the benefits of NDRI and those which effectively project managed the exercise. Commonly sites failing to maximise the benefits of NDRI had adopted ineffective investigations or had not reviewed key match types. The examples of good practice identified included:

- writing to practices at the outset to explain the purpose and remit of the initiative;
- having an NDRI key contact with appropriate experience and seniority who coordinated the overall initiative;
- undertaking an initial review of the NDRI matches to identify the key areas and establishing a prioritised follow-up plan;
- making effective use of local IT to eliminate matches already resolved through normal business;
- assigning roles and responsibilities to staff based on ability and experience;
- producing a pack of cases to investigate for each practice with specific instruction about the follow-up approach and timeframe for each match type;
- regularly reviewing the results to ensure resources were targeted in the most effective areas; and
- assessing the outcomes of the NDRI review to ensure any underlying issues were identified and appropriate action taken.



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