

**The use of the CHI  
(Community Health Index) to support  
integrated care  
across the NHS in Scotland**

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## Foreword

This document provides updated guidance on the use of and access to the Community Health Index (CHI) to support person-centred care and the management of information across the NHS in Scotland. The updated guidance highlights a range of other purposes for the CHI to support the improvement of the health of Scotland's citizens, as well as meeting the legal requirements of the Data Protection Act 1998.

Recent changes to the document, for this 1.1 version, include provision for the CHI number to more effectively support integrated working, particularly as we move to more integrated care for both children and adults.

It supersedes Annex D of HDL (2003)37: The Use of personal Health Information in NHS Scotland to Support Patient Care, and version 1.0 of the guidance, published in 2012.

To ensure that this guidance is fully understood and embedded within processes, I would ask that Chief Executives:

- Continue to ensure that robust mechanisms are in place to govern the use of and access to the CHI within their Board;
- Disseminate the guidance to those responsible for oversight of the CHI system locally; and
- Ensure that all staff are aware of and follow this revised guidance. These arrangements should include informing primary care contractors about the contents of this guidance.

**Dr Harry Burns**  
Chief Medical Officer

## What is the CHI number?

1. The CHI number is a unique ten-digit number that identifies an individual in NHSScotland, and is the only consistent way of positively identifying a person across the service. Currently the majority of people receive a CHI number as a result of being registered with a Scottish GP practice. However, a Positive Patient Identification strategic review in April 2010, identified there are still a small number of patients who access NHS Scotland services who do not have a CHI number (i.e. visitor to Scotland) A programme of work is currently underway to enable NHS Scotland boards to create new CHI registrations and, update a patients demographic data in CHI, at the point of care. **Use of the CHI number on clinical communications is mandated across all NHSScotland IT systems.**
2. The CHI number contains personally identifying information (date of birth and gender code) and is the equivalent of the NHS number in England which is also a “personal identifier” as set out in the Data Protection Act 1998. This is because it relates to an individual.
3. The CHI number has **no** role in entitlement to care, and is not used within NHSScotland as evidence of an entitlement to NHS care. Its purpose is to positively identify an individual for NHSScotland business purposes.
4. Individuals accessing NHS care services **cannot opt out** from the CHI system.

## Governance of the CHI

5. The Chief Medical Officer (CMO) has responsibility for the overall administration of the CHI system on behalf of Scottish Ministers. However, because of the regional nature of the individual CHI databases (at the moment the CHI system consists of eight separate databases linked by a search index), the data controllers for the CHI system are the NHS Boards. Decisions on access to, and use of, the CHI system within an NHS Board are taken by the Director of Public Health as part of their role in safeguarding and governing uses made of patient information. The Director of Public Health is supported by the Caldicott Guardian, and by general information governance principles regarding the support to direct person care by the NHS, including integrated NHS and Social Care services. Boards are responsible for ensuring the quality of the data which is recorded within the CHI system.
6. Practitioner Services Division (PSD) of NHS National Services Scotland (NSS) manages the development of the CHI system on behalf of the NHS Boards. PSD is a data processor in terms of the Data Protection Act 1998. Changes to the CHI system that require investment must be approved by the eHealth Public Health Portfolio Management Group (large investments are referred to higher level groups within the eHealth governance structure).
7. ATOS acts as a data processor under contract to National Services Scotland (acting as the contract signatory on behalf of the other NHS boards).

## **The Community Health Index Advisory Group (CHIAG)**

8. The [CHIAG](#) was established at the request of a former CMO to advise the CMO and Directors of Public Health on cross-cutting requests to access the CHI system for a range of purposes including: operational management of NHSScotland; secondary uses such as audit and research; and future developments that might involve the use of the CHI. This ensures that access is granted consistently and is done within a stringent information governance framework and the law.

## **Positive Person Identification (CHI) – Steering Group**

9. This Steering Group provides oversight and strategic direction to oversee:
  - All aspects of Positive Person Identification within NHSScotland (including co-ordination and communication of person-centred services based on authoritative positive identification).
  - The use of the CHI system as the prime source of demographic information.
  - Positive Person Identification using the CHI number in relation to other citizen focused public services, recognising the need for appropriate and sound and secure matching of records in support of integrated services across health and social care, and wider service planning and provision.
10. The Group is chaired by the Chief Executive of NHS Tayside and constituted from senior NHS Board level representatives, the Scottish Government, The Registrar General for Scotland and lay members, and reports to the eHealth Strategy Board.

## **Who Registers People on the CHI System?**

11. CHI registrations are normally made by PSD as a by-product of the GP registration process. A few NHS Boards have also had the capability to create new CHI registrations. However, CHI registration at the point of care is currently being rolled out to NHS Scotland boards in two phases.
12. Phase one will provide appropriate registration capability to staff working in acute care (for example in an A&E department and/or in other direct health care provision settings). Phase two will provide the capability to update patient demographic data at the point of care. Updating patient demographic data in CHI has a number of impacts across primary and secondary care and the principles to allow this still need to be defined and agreed.
13. These programmes of work will be rolled out under strict quality assurance procedures and under business rules approved by Directors of Public Health. A programme of training and awareness is being established to take this forward.

14. Entries on the CHI system can also be created in some circumstances by other services, such as screening, Scottish Birth Record and Board Child Health departments.

### **The benefits of using the CHI number**

15. Throughout NHSScotland the CHI number provides the capability to identify and link information relating to an individual from disparate systems within Health Boards and across Health Boards, including integrated NHS and Social Care services. Health Boards have agreed to make the CHI system the prime source for demographic information, and most have completed extensive business process and system change to make this the case. The investment that has been made in establishing the CHI number as the primary identifier across all systems and records is now realising many benefits, some include:

16. Improved person safety:

- People can be identified quickly and easily.
- Reduces the risk of incorrect identification.
- A more complete picture of a person's healthcare can be created.
- More informed decisions can be made about a person's care.

17. Improved person-centred experience:

- Less need to repeat tests and investigations.
- Reduces the need to ask the same questions again and again.
- Ensures that the right person is identified first time, every time.
- Allows positive identification of a person across NHS Scotland.
- Enables effective communication with people.

18. More effective care:

- Reduces delay and duplicate work.
- Clinical staff have more complete information on which to base decisions.
- Reduces the need to chase results and other information, repeat tests and checking as a result of incomplete and/or ambiguous person details.
- Supports epidemiological analyses for public health, health services planning, audit and quality assurance, as well as research.
- Provides a population denominator for information about the health of the population used to support health improvement and the reduction of health inequalities.
- Saves time by linking clinical information and test results.

19. The CHI system is used as a fully integrated part of population screening and immunisation programmes, including: breast, cervical, bowel and abdominal aortic aneurysm screening; and child health surveillance systems.

20. The CHI system is also important in the wider strategic context. Using the CHI system throughout NHSScotland is a vital building block both locally and for national initiatives, including: the Picture Archiving and Communications System (PACS); Scottish Care Information (SCI) Store and Gateway; the Emergency Care Summary (ECS); and will form the basis of linking information to create a virtual Electronic Health Record.

### **Technology of the CHI System**

21. The CHI system was developed in the 1970s and has served NHSScotland well for close to 30 years. However, the current system is still based on 1980s database and whilst the hardware is up to date, the application's technology is inflexible and expensive to maintain. It also does not have the full capability to act as the hub of an integrated eHealth architecture that can create a virtual Electronic Health Record by locating and combining the disparate parts. An exercise is underway to assess options for migrating from the old technology to an up-to-date one, while ensuring continuity of service.

### **Who gets a CHI number?**

22. Currently the majority of people receive a CHI number as a result of being registered with a Scottish GP practice. CHI numbers can also be allocated following screening or some other contact with NHS services in Scotland. Once Positive Patient Identification (PPI) at the point of care has been fully rolled out in NHS Scotland, Boards will have the capability to create a CHI number for anyone who presents without a CHI number on a planned or unplanned basis (such as a visitor to Scotland).
23. At the request of the Ministry of Defence (MOD), work is underway to issue a CHI number to all serving Armed Forces personnel stationed in Scotland who does not have one. The purpose of doing so is to improve continuity of care and ensure that members of the Armed Forces are not disadvantaged as compared to the civilian population and have access to NHS Scotland medical care and appropriate screening services. The CHI number will be used by the MOD in all communications with NHSScotland relating to individuals.
24. From May 2012, prisoners serving a sentence of 6 months or more will be registered with the prison practice. Prisoners who do not have a CHI number will be allocated one.
25. It has been the practice in some Boards to allocate CHI numbers to stillbirths. It has now been agreed that this practice must cease. There are risks that by recording stillbirths on CHI these records could be used in future call/recall for child health and screening. Boards should have local mechanisms for recording information on stillbirths.

## **Restrictions on the use of CHI number**

26. The Information Commissioner's Office (ICO) believes that unique identifiers such as the CHI number, National Insurance number and NHS number (the primary identifier used in England and Wales), should only be used for the purposes for which they were devised. In the case of CHI, the purposes are those set out in this circular. Using identifiers for purposes other than those devised reduces their efficacy in relation to being a unique identifier and as such can make them less robust.
27. The fact that the CHI number has embedded personal information makes it even more important that it is treated with care in terms of how it is used and who is permitted to use it in their systems.
28. The CHI number should not be used as a substitute for ascertaining a person's actual date of birth, and where a date of birth is required this should be recorded separately.

## **Use of the CHI number to support integrated care (see also Annex A)**

29. The ICO is comfortable with the CHI number being used as a means of linking records of non-health service bodies with the healthcare records held by a partner health service body. It can be used where necessary because organisations, whether health, social services, education, police, fire, other relevant statutory bodies, or the third sector, are working to deliver a joint health and care service. There are many situations where linking through joint working would be appropriate.
30. Such non-health service bodies could use the CHI number as a secondary identifier within their systems for people receiving integrated care from them. This means that, for example, social services would have a social work identifier as their primary identifier in their systems, but could also include the CHI number to enable communication with the relevant health service body (i.e. for service efficiency and as an added safeguard that they had the right person). The same would apply for other statutory bodies and third sector organisations.
31. The current advice of the ICO is that non-health service bodies may use the CHI number, but never as the primary identifier and only as a secondary identifier in interaction with a health service body. The ICO would also be opposed to the CHI number being used subsequently by a non-health service body for any purposes not directly related to the services it was providing jointly with the health service body. For example, where a CHI number is in the possession of a social services body that has been providing integrated mental health services, it should not then be used by that social services body or any services that are not related to the provision of integrated care. The CHI number is used by the Mental Health Tribunal for Scotland, in this context.

32. The CHI data can be used to support the production of routine health data and integrated social care and health-related research, but should never be used to “seed” databases for which there is no integrated health and social care purpose.

### **The requirement for informed consent**

33. Where necessary, NHS staff should seek consent in line with the [NHSScotland Code of Practice on Protecting Patient Confidentiality](#).
34. During routine clinical care, specific consent to share information relevant to their care is not needed as most patients understand that their information must be shared within the healthcare team. When working with organisations other than those in the NHS, staff should ensure that patients understand the ways in which their information will be used, always adhering to relevant information sharing protocols.

### **Principles of the Data Protection Act 1998 and why the CHI should only be used in health or integrated health and social care**

35. There are three Data Protection Principles that are likely to be breached if the CHI number is used outside the context in which it was created (and where there is no strong argument for that additional use - for example, joining up health and social care services).
36. The Second Data Protection Principle requires that personal data shall be obtained only for one or more specified and lawful purposes, and shall not be further processed in any manner incompatible with that purpose or those purposes. It would be incompatible for a non-health service body to further process the CHI number beyond that which was necessary for record linkage while providing a joint service with a health body.
37. The Third Data Protection Principle requires that personal data shall be adequate, relevant and not excessive in relation to the purpose or purposes for which it is processed. While it would be relevant for a non-health service body to use the CHI number for the purpose of record linkage while providing an integrated service with a health body, it would not be relevant for it to use the CHI number for other purposes where it is not necessary to link records with those of a health service body. The processing of the CHI number in these circumstances would be excessive for the purpose.
38. The Seventh Data Protection Principle requires that appropriate technical and organisational measures are taken to ensure the security of personal data. The widespread use of the CHI number in non-health situations may increase the risk of the CHI number being used in identity fraud. This may result in individuals being able to access personal data to which they are not entitled (resulting in a breach of confidentiality as well as the Data Protection Act 1998). The fact that the CHI number contains personally identifying information

increases the need to apply appropriate measures for its protection. For example, care should be taken to ensure that the CHI number is not visible (e.g. printed or on a sticky label) on envelopes that are posted to the person.

39. As a working principle, the CHI number should only be shared with another agency:

- For the purpose of providing an integrated health and care service.
- Where health care workers are already providing other personal identifying data such as name, address, date of birth (or have received the person's informed consent to do this).
- Or where there is a legal or statutory duty to share CHI and its associated data.

### **The use of the CHI for statistical and research purposes**

40. Information held in the CHI system is also used to link health data for statistical and research purposes. One of CHIAG's primary roles is to consider requests from researchers, or anyone who requires access that is not for direct person care to access the CHI system, or data released from the system, on a pan NHSScotland basis.

41. The routine use of CHI in linking records supports epidemiological analyses for public health, health services planning, audit and quality assurance, as well as supporting research. The CHI can be used as a matching variable that is not used further in the analytical process, or data derived from the CHI database can be used for research purposes. For example, the CHI database is used to censor out individuals who have died/emigrated when undertaking longitudinal analyses.

42. Where the CHI number is not present on the records to be linked (e.g. historical data) the record linkage unit within Information Services Division (ISD) of NHS National Services Scotland uses probability matching based on demographic data to establish the link.

### **Further Information**

43. Additional Information is downloadable for NHS staff and members of the public via the following link:

- [www.ehealth.scot.nhs.uk/wp-content/documents/CHI-Programme-Communication-Proofs-CHI-Staff-Leaflet-20-April-2006.pdf](http://www.ehealth.scot.nhs.uk/wp-content/documents/CHI-Programme-Communication-Proofs-CHI-Staff-Leaflet-20-April-2006.pdf)

## **Outputs from CHI Short Life Working Group – December 2012**

In a fully integrated health and social care partnership, there is a need for a common identifier to support the effective sharing of information by ensuring that the information shared relates to the correct person.

The CHI number has been identified as a suitable candidate to be a common identifier, based upon the analysis undertaken by NHS National Services Scotland. It is widely used across the NHS in Scotland, and everyone born in Scotland, registered with a Scottish GP or has had an intervention with an NHS Scotland hospital, has one.

It is also supported by Scottish Government policy colleagues with the lead for the integration of health and social care, across services for adults and children.

The substance of the conclusions of the Short Life Working Group, outlined below, can be applied to identifiers in general, but are framed as a series of positive statements about the use of the CHI number.

The information sharing between all partners involved in the delivery of integrated care will be governed by legislation (such as the Data Protection Act 1998) and appropriate partnership governance, such as information sharing protocols, access rules, information security policies and procedures, records management plans, and safe information handling arrangements.

With these arrangements in place, the following statements, relating to the use of the CHI number, hold true:

1. It can be used as the key person identifier for integrated care and support.
2. It can be used to provide the verification of correct identity to support effective information sharing and integrated care delivery between partners.
3. It can be used to link electronic records, as part of a record linkage or data matching service, in support of both integrated care and integrated management, planning and commissioning of services.
4. It can be displayed as a data item on a practitioner's screen, where they have appropriate permissions.
5. It can exist as an identifier within any information system that supports a person's integrated care, for the sole purpose of ensuring the delivery that care.