Quality Improvement in NHSScotland - an Independent Evaluation of the Impact of NHS Quality Improvement Scotland

Volume II - Additional Material
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Dr Steve Cross
Dr Claire Blackett
Human Reliability

Professor Lorna McKee
Health Services Research Unit, Aberdeen University
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Introduction

1 Volume II of this report contains detailed findings from senior management interviews and practitioner interviews, presented largely in graphical form. It also contains a detailed methodology section, including a commentary on the strengths and limitations of the study, a note with regard to ethics and confidentiality, copies of research instruments employed in the study, and the literature review conducted prior to the commencement of the primary research phase.

2 Our aim in separating these items from Volume I, which contains key findings and summary data, has been to meet the needs of executives for an accessible report, whilst simultaneously presenting the fullest dataset possible for this important study.
Methodology

3 The primary research phase of this study was conducted using semi-structured interview formats, designed by the research team, and piloted prior to use. The three instruments are appended to this report. Instrument 1 was used in discussions with senior management and also served as a basis for discussions with members of the Scottish Executive Health Department (SEHD). Instruments 2 and 3 were designed for practitioners, data from these instruments being aggregated for quantitative analysis. In interviewing members of the Academies of the Royal Colleges and Faculties in Scotland, we adopted a less structured approach, but used instrument 1 as a basis for the areas to be addressed.

4 Interviews were conducted face-to-face and by telephone, depending upon the availability of key personnel. All interviews yielded both quantitative data in the form of product ratings, impact assessments, etc, and qualitative data recorded by hand at the time of the interview. This qualitative data was assessed manually by the research team, and categorised/quantified wherever possible. Direct quotes, presented in Volume 1, have been transcribed from interview forms. Quantitative data was analysed using the statistical programme SPSS.

5 Interviews were conducted confidentially and participants were assured formally by the research team that individual data would not be disclosed, aggregated data only would be presented, and no identification of individual responses would be enabled.

Project scope

6 Initially, project scope was defined by documentary outputs from NHS Quality Improvement Scotland (NHS QIS) between October 2004 and October 2005. Following discussions, a reduced sample of documentary outputs from the time period above have been selected in addition to the scope being expanded in two directions:

- support and liaison processes carried out by NHS QIS are now included
- documentary outputs are categorised by health theme.

7 The sample of documentary outputs selected from the period between October 2004 and October 2005 for impact assessment is shown in the table below:
<table>
<thead>
<tr>
<th>Document</th>
<th>Theme</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTA Report 7 – May 2005</td>
<td>CG &amp; PS</td>
<td>The provision of alcohol-based products to improve compliance with hand hygiene</td>
</tr>
<tr>
<td>National overview and local reports – May 2005</td>
<td>CG &amp; PS</td>
<td>Healthcare Associated infection (HAI); infection control in NHSScotland</td>
</tr>
<tr>
<td>Best practice statement – June 2004</td>
<td>CG &amp; PS</td>
<td>Urinary catheterisation &amp; catheter care</td>
</tr>
<tr>
<td>National overview – September 2005</td>
<td>CG &amp; PS</td>
<td>Anaesthesia – care before, during and after anaesthesia</td>
</tr>
<tr>
<td>Health indicators report – December 2004</td>
<td>CH</td>
<td>A focus on children &amp; leaflet understanding the 2004 health indicators report – a focus on children</td>
</tr>
<tr>
<td>SIGN Guideline 81</td>
<td>CH</td>
<td>Diagnosis and management of epilepsies in children and young people</td>
</tr>
<tr>
<td>Clinical standards – March 2005</td>
<td>CH</td>
<td>Maternity services</td>
</tr>
<tr>
<td>National overview and local reports – June 2004</td>
<td>MH</td>
<td>Schizophrenia</td>
</tr>
<tr>
<td>SIGN Guideline 86</td>
<td>OP</td>
<td>Management of patients with dementia</td>
</tr>
<tr>
<td>Best practice statement – November 2005</td>
<td>PCHC</td>
<td>Continence – adults with urinary dysfunction</td>
</tr>
<tr>
<td>Standards – August 2004</td>
<td>PCHC</td>
<td>The provision of safe and effective primary medical services out-of-hours</td>
</tr>
<tr>
<td>SIGN Guideline 79</td>
<td>PCHC</td>
<td>Management of urinary incontinence in primary care</td>
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</tbody>
</table>

(Key to themes: CG & PS: clinical governance and patient safety; CH: child health; MH: mental health; OP: older people; PCHC: primary and community healthcare)

In addition, the following processes are to be evaluated:

- Risk management and Clinical Governance Network
- Accreditation of managed clinical networks

8 Sampling will be carried out at three levels:

- six Boards will be researched on-site by the research team, referred to as the core group for the purposes of the study
- nine additional Boards will be canvassed remotely by the research team
- discussion with the SEHD Sponsor Division and other stakeholders.

The sample of Boards from which the views of a wider range of staff will be gathered have been chosen to reflect the range of responsibilities and circumstances across NHSScotland such as size, teaching/non-teaching, territorial/special, and rurality and remoteness.
<table>
<thead>
<tr>
<th>Shetland</th>
<th>Lothian</th>
<th>Tayside</th>
<th>Highland</th>
<th>Ayrshire &amp; Arran</th>
<th>NHS Education Scotland (opinion interviews only)</th>
</tr>
</thead>
</table>

Boards to be sampled remotely are as follows:

| Borders             | Grampian    | Forth Valley | Dumfries and Galloway | Fife   | Greater Glasgow and Clyde | Lanarkshire | Orkney | Western Isles | NHS 24 | NHS National Services Scotland | Scottish Ambulance Service | NHS Health Scotland | National Waiting Times Centre | State Hospital |

9 Within the core group of Boards, a number of target audiences will be investigated in face-to-face semi-structured interviews. These will be:

- chief executive
- medical director
- nursing director
- chair
- primary recipient of documentary outputs
- secondary recipients of documentary outputs

10 Within the remaining Boards, remote interviews will be carried out with:

- chief executive
- medical director
- nursing director
Critique

11 In the opinion of the research team, this research complies well with four recognised guiding principles of qualitative research:

- it is **contributory** in advancing wider understanding
- it is **defensible** in design by providing a researched strategy designed to address the questions posed
- it was **rigorous** in conduct by the systematic collection and analysis of qualitative data
- it is **credible** through offering plausible argument, quantification and categorisation of qualitative data

12 Nevertheless, the study may be said to have a number of limitations. As far as the research team is aware, no comparable study of the impact of a healthcare quality organisation on its wider organisational context has been carried out. This means that comparable data are not available from other studies, and there are no longitudinal or "before and after" internal comparisons possible - at this point; it is to be hoped that additional impact evaluations will be conducted in the future.

13 A further limitation of the study relates to the sampling and volume of responses obtained. The research team attempted to target, for this qualitative research, key personnel within a number of Boards. Though this is a reasonable strategy to adopt, where impacts of specific documents or initiatives are being evaluated, it is not random sampling, nor is it formally stratified. Additionally, the volume of responses obtained, whilst high overall, is sometimes low for individual NHS QIS outputs.

14 The research team believe that further work should be carried out in this area and is in discussion with NHS QIS as to the best context and methodology to use in adding further depth to this research.
Literature Review

Background

NHS QIS was established in 2003 to improve the quality of healthcare in Scotland. Five key functions of NHS QIS are: (i) to provide clear advice and guidance on effective clinical practice; (ii) to set clinical and non-clinical standards of care; (iii) to review and monitor the performance of NHS services; (iv) to support NHS staff in improving services; (v) promoting patient safety and implementation of clinical governance.

The aim of this study is to evaluate NHS QIS to determine if it has been delivering on key functions and to measure the impact NHS QIS has had on the quality of healthcare in Scotland.

The first stage of this study is a literature review to establish the current level of knowledge in the areas of assessment and evaluation of public health interventions and public health organisations. The goal of this literature review is to establish whether similar evaluation work has been carried out in equivalent organisations elsewhere, to identify the key issues and methodologies arising from any similar evaluation studies and to provide a framework to inform and guide the NHS QIS evaluation. The specific objectives of the literature review are outlined below.

Objectives

The specific objectives of this literature review are:

- To establish if similar evaluation work has been carried out in relation to the effectiveness of equivalent organisations to NHS QIS, either in terms of overall organisational effectiveness, or the success of individual interventions and related products.
- To inform the NHS QIS evaluation project by identifying key methodological issues in the development, implementation and subsequent evaluation of public health interventions.
- To identify, if possible, an appropriate conceptual framework to drive the development of the NHS QIS evaluation.
- To ensure that recommendations made for future evaluation work within NHS QIS are based on current good practice in the public health domain.

Search strategy

The limited timescale and resources available for the literature review meant that the review was focused on identifying key articles within the published literature and on work that has already been carried out within NHS QIS or within equivalent organisations elsewhere. The key areas of activity are summarised below:

- Review of internal NHS QIS evaluation work (as provided by NHS QIS).
- Review of relevant work carried out by equivalent or similar organisations within the UK and internationally.
• Identification of key reviews using databases, as listed in Box 1.
• A wider search for literature available online using search engines such as Google and Teoma, and using search terms including those listed in Box 2.

<table>
<thead>
<tr>
<th>Box 1 – List of databases searched</th>
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<tbody>
<tr>
<td>• MEDLINE</td>
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<tr>
<td>• BioMed Central</td>
</tr>
<tr>
<td>• Blackwell Synergy</td>
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<tr>
<td>• CMA Infobase</td>
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<tr>
<td>• PubMed</td>
</tr>
<tr>
<td>• ScienceDirect</td>
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</table>

<table>
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<tr>
<th>Box 2 – List of search terms used</th>
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<tbody>
<tr>
<td>• Evaluation of clinical guidelines</td>
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<tr>
<td>• Evaluation of best practice guidelines</td>
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<tr>
<td>• Evaluation of healthcare initiatives</td>
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<tr>
<td>• Evaluation of primary healthcare initiatives</td>
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<tr>
<td>• Health technology assessment</td>
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<tr>
<td>• Impact analysis</td>
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A cursory search of any of the databases listed in Box 1 above will reveal the sheer volume of literature available on evaluation of all aspects of health care and health care providers. However, as the timescale and resources available for this literature review were somewhat limited, significant care had to be taken when determining which results should be retained and which should be discarded.

Of the many articles and papers returned by the search, a list of criteria had to be drawn up by which to assess the results and determine which would be of use for the literature review. This list of criteria included:

• **NHS QIS evaluations:** Any articles or papers reviewing NHS QIS evaluations or referring to NHS QIS evaluations, such as the Ring and Finnie (2004) report.
• **Equivalent or similar organisations:** Any articles or papers reviewing similar or equivalent public health organisations, such as the Sharing Health Care Initiative (2005a) in Australia.
• **Equivalent or similar public health interventions:** Any articles or papers reviewing interventions equivalent or similar to NHS QIS interventions, such as evaluations of clinical guidelines.
• **Frameworks or methodologies for evaluation:** Any articles or papers outlining and/or assessing frameworks or methodologies for evaluation. Such as the AGREE instrument (The AGREE Collaboration, 2001).
• **Implementation:** Any articles or papers outlining a framework for implementation of guidelines or interventions, or assessing an implementation of guidelines or interventions.

Any articles or papers that conformed to any of the above criteria were retained for analysis.
Results of the search

The literature search yielded some interesting results. While there are a number of international organisations that are equivalent or similar to NHS QIS, there is no evidence that any of these organisations have undertaken any form of self-evaluation or independent objective evaluation to determine their impact upon the communities which they serve. The most noteworthy and relevant evaluation report uncovered was the National Evaluation of the Sharing Health Care Initiative in Australia (Sharing Health Care Initiative, 2005a), which will be discussed later in this review.

There is a significant amount of information available about frameworks and methodologies for developing guidelines but there is relatively little quality research on the evaluation of guidelines or their impact in the public health community. This dearth of information has been noted by some authors:

- Basinski (1995) observes that “compared with the current focus on the development of clinical practice guidelines the effort devoted to their evaluation is meagre”.

- Ring and Finnie (2004) note that, because best practice statements (BPS) are a new initiative, there is no national research available in the UK about the dissemination, support or impact of BPS.

- Bero et al. (1998) write that “despite the considerable amount of money spent on clinical research relatively little attention has been paid to ensuring that the findings of research are implemented in routine clinical practice”.

- Grimshaw et al. (2004), in their review of strategies for guideline dissemination and implementation, and their effectiveness and efficiency, found that “the overall quality of the studies was poor”.

There are some suggestions as to the reasons for this lack of knowledge. Rychetnik and Frommer (2000) suggest that “evidence on the effectiveness of public health interventions is often assigned a relatively low level because it is based on observational (rather than experimental) research”. Rycroft-Malone et al. (2002) write that research is often seen as inconclusive or contested when put into a practical context. They also write that professionals tend to retain autonomy over their work practices and that they tend to resist external interventions from research and development. Further, they found that much of the clinical knowledge is tacit and experiential, based on opinions or observations, so that the findings of evidence-based medicine are not generally accepted as valid to practice. This and other barriers to implementation of interventions are discussed in more detail later in this report.

Despite this, some useful literature was uncovered which gives details of evaluations of individual interventions and guidelines, and also details of proposed frameworks and methodologies for evaluation which will help to inform this study. These evaluations, frameworks and methodologies are also described in greater detail later in this report.
Summary of key findings of the literature review

- Independent objective evaluation of health care organisations is quite rare. Many organisations conduct evaluations of specific products or interventions, but little effort is put in to the evaluation of the organisations themselves.

  **Implication for NHS QIS:** There is no existing structure or framework for organisational evaluation, therefore new assessment instruments will have to be developed which capitalise on the knowledge gained from existing evaluations of products and interventions.

- Evaluation is a valuable process to: determine how resources should be efficiently allocated; improve patients’, practitioners’ and managers’ knowledge about services and treatments available; and to measure the impact of the public health organisation on the community it serves.

  **Implication for NHS QIS:** In order to determine the success of NHS QIS, the evaluation must evaluate organisational factors within NHS QIS, as well as the impact of NHS QIS products and interventions on healthcare in Scotland.

- It is essential that interventions are carefully planned to ensure that recommendations are realistic and that they take into account the needs and limitations of all stakeholders.

  **Implication for NHS QIS:** The careful planning of interventions plus stakeholder consultation are key factors in ensuring successful implementation.

- Passive dissemination of information is largely ineffective in ensuring understanding of and compliance with evaluation or intervention recommendations. Instead, interactive methods (for example, reminds, audit and feedback, interactive educational workshops, etc.) should be used to engage the target audience and promote implementation of the intervention.

  **Implication for NHS QIS:** The dissemination of information must be carefully planned to ensure that the target audiences receive and understand the information, and to ensure implementation of the intervention.

- There are many barriers to the implementation of interventions, such as the fact that much professional clinical knowledge is based upon opinion and observation, and thus the findings of evidence-based medicine are generally not seen as valid to practice.

  **Implication for NHS QIS:** Interventions must be presented and promoted in a manner that recognises and attempts to overcome these barriers, such as the use of opinion leaders to promote interventions.
Nurses, carers, families and the community play a key role in the success and sustainability of interventions, and thus should be engaged in the development process of new interventions to ensure their needs are met and that their boundaries are considered, and to increase feelings of “ownership” of the interventions.

**Implication for NHS QIS:** It is widely recognised that it is difficult to sustain interventions once the information has been disseminated to the target audience. However, if the target audience has been involved in the development of the intervention, the sense of “ownership” will encourage them to promote use of the intervention in the long term.
Definitions for evaluation

For the purpose of clarity, some key terms that will be used throughout this report are defined here.

*Evaluation* can be defined as the process by which the value or worth of something (for example, an intervention) is determined by judging it against some specific, pre-determined standards (Rychetnik and Frommer, 2000). It is a comparative assessment of the value of the intervention using systematically collected and analysed data (Øvretveit, 1998).

Evaluation is used to determine the *effectiveness* or *impact* of an intervention, that is, the ability of the intervention to achieve its intended effect in those to whom the intervention has been administered. To measure the effectiveness or impact, the evaluation must ask the question “Does it work?” (Sharing Health Care Initiative, 2005a).

An *intervention* is defined as an action or set of actions with specified objectives, which is implemented to bring about a change or to produce a particular outcome (Rychetnik and Frommer, 2000).

A *public health intervention* can be defined as an organised activity intended to promote or protect health or to prevent ill health in a community or in a population. These are distinguished from *clinical interventions*, which are intended to protect health, prevent ill health or treat ill health in individuals (Rychetnik and Frommer, 2000).

Rychetnik and Frommer argue that interventions can include the following:

- Local and national government policies
- Organisational policies
- Regulatory and legislative policies
- Clinical practice guidelines
- Services or programs targeted at a community
- Treatments targeted at an individual
- Educational programs
- Engineering and technical developments
- Communication policies

The goal of evaluation in the context of this study is to determine whether NHS QIS has made a significant impact upon the quality of healthcare in Scotland since its inception in 2003, and, if so, to examine the ways in which this has been done. This evaluation study seeks to identify areas of strength and positive action that need to be retained and built upon. The evaluation also seeks to highlight any problem areas where NHS QIS has not made an impact, and to identify the barriers that have prevented NHS QIS from delivering on the key functions as outlined in the introduction to this report.
The importance of evaluation

There are many reasons why evaluation is seen as an important and valuable process within health organisations. Øvretveit (1998) writes that there are a number of reasons for and purposes of evaluation, which are summarised in the following list. Evaluation is needed to:

- **Effectively and efficiently allocate resources:** Some health treatments and services require significantly more resources (such as money, equipment or staff) than others, but the factors that determine allocation of resources may not always be immediately obvious. In some cases, resources may be allocated for the wrong reasons (for example, due to political pressure), meaning that some areas have an excess of resources whilst other areas have insufficient resources to meet their demands. Evaluation allows organisations to make informed decisions about where to allocate resources, and allows them to deal more rationally and fairly with competition for limited resources between different areas. Evaluation also furnishes the organisation with information to allow it to challenge or defend existing resource allocations.

- **Reduce patients’ ignorance:** Most patients want to know all of the benefits, drawbacks and side-effects of treatments they are receiving or that they are considering undertaking. This information allows patients to make better informed decisions about whether to undertake certain courses of actions, and what to expect if they do decide to undergo treatment. However, the information available to patients can sometimes be either completely unreadable - written in medical terms using language that is difficult to decipher – or it may be too “user-friendly” in that it over-simplifies the intricacies of the treatment. Evaluation can ensure that patients are getting the right information about treatments and services available, and that this information is easy to understand whilst at the same time, giving the patient all of the information that he/she needs to make a valid judgement.

- **Improve professionals’ knowledge and decisions:** Considering the number of health treatments and services available worldwide, the number of evaluations of these treatments and services is estimated to be relatively low. Of those evaluations that have been conducted, many have been found to be ineffective or of uncertain use or value. However, the solution to this problem is not to evaluate all treatments and services available, but rather to conduct well-designed evaluations of frequent or high-cost procedures, with the intention of saving money and reducing suffering as a result of unnecessary treatment. These evaluations need to be designed to enable practitioners to put the results into action, to foster a more receptive attitude on the part of practitioners and managers, and to encourage practitioners and managers to spend more time and effort evaluating their own practices and organisations. By doing this, professionals will be better informed to make decisions about their patients’ needs and about which treatments and services are suitable to address those needs.

- **Improve managers’ knowledge and decisions:** As mentioned previously, the number of health treatments and services that have been evaluated is relatively low, but the number of health organisations that have been evaluated is even lower. Evaluation is an important tool to help
managers and others to use and allocate resources in a more efficient and effective way. Evaluation will better inform managers to allow them to protect the services and treatments which work and which are cost-effective, while at the same time allowing them to justify the reduction of services and treatments of dubious or no value, or to re-arrange organisational and/or structural arrangements to ensure better delivery of service.

Public accountability also increasingly requires organisations to evaluate their reasons for using resources in a particular area. The public are less willing to accept ignorance as an excuse for the consequences of health treatments or policies, and instead expect health organisations to give careful consideration to the potentially harmful consequences of the treatments and services which they offer (Øvretveit, 1998).

Similarly, evaluation enables politicians and governments to make more informed decisions about whether to initiate, expand or terminate health policies, or about which areas of public health are in more need of funding or other resources.

More specifically, evaluation can be used to uncover important information about why a particular intervention was successfully implemented, or about why it failed. For example, process evaluation can determine: (i) the exact nature of the intervention; (ii) the actual exposure and implementation of the intervention; and (iii) the experience of those exposed to the intervention and the impact it had upon this group. This information can be used to improve the design of future interventions and to increase the likelihood of successful implementation (Hulscher et al., 2003).

<table>
<thead>
<tr>
<th>Key messages for NHS QIS</th>
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<tbody>
<tr>
<td>Evaluation is important for NHS QIS to determine where resources are being used, what impact this use of resources is having, and whether this is the most efficient allocation of those resources.</td>
</tr>
<tr>
<td>Evaluation is also important for NHS QIS to identify the drivers and barriers to successful implementation of products, which can inform the development of future products.</td>
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</table>
Examples of centres of excellence for evaluation studies

As mentioned previously, this literature review has uncovered a number of organisations that are currently engaged in, or that have, in the past, produced evaluations of aspects of health care such as evaluations of clinical guidelines or best practice statements. The following list of some of the key centres of excellence gives an example of the breadth of work currently in progress:

- **The Royal College of Nursing (RCN):** The RCN\(^1\) is a UK-based professional organisation representing nurses and nursing, and also promotes excellence in practice and health policies. Part of the RCN's clinical effectiveness work includes developing nurse-led guidelines in specific areas such as: psychiatric care, pain management, and ulcer management. The RCN is also involved in helping other organisations develop guidelines, such as the Royal College of General Practitioners and The Royal College of Psychiatrists.

- **The Joanna Briggs Institute (JBI):** The JBI\(^2\) is an international Research and Development Unit of the Royal Adelaide Hospital in South Australia, and is involved in the evaluation of evidence derived from a diverse range of sources including experience, expertise and all forms of rigorous research and the translation, transfer and utilisation of the "best available" evidence into health care practice. Specifically, the JBI has produced reports on the evaluation of best practice standards amongst Australian Nurses (Joanna Briggs Institute, 2002). The JBI has also produced a tool called PACES (Practical Application to Clinical Evidence System) which is an online audit tool designed to help hospitals and health care centres to conduct an audit and to implement best practice to achieve better outcomes for its patients or health care consumers (Conroy-Hiller, 2005).

- **The Enhancing Interdisciplinary Collaboration in Primary Health Care (EICP) Initiative:** The EICP\(^3\) is a Canadian-based organisation responsible for enhancing the quality, effectiveness and efficiency of the delivery of primary health care in Canada. The objective of the EICP is to develop a set of guiding principles and a framework that will better define the relationship between the client or patient and the practitioners who comprise the primary health care system.

- **The National Institute for Health and Clinical Excellence (NICE):** NICE\(^4\) is an independent organisation, based in the UK, which is responsible for providing national guidance on the promotion of good health and prevention and treatment of ill health. NICE produces guidance in three areas of healthcare: public health, health technologies and clinical practice.

- **The Appraisal of Guidelines Research and Evaluation (AGREE) Collaboration:** The AGREE Collaboration\(^5\) is an international association of researchers and policy makers who seek to improve the quality and effectiveness of clinical practice guidelines by establishing a shared

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1 The RCN website can be accessed online at: http://www.rcn.org.uk
2 The JBI website can be accessed online at: http://www.joannabriggs.edu.au
3 The EICP website can be accessed online at: http://www.eicp-acis.ca
4 The NICE website can be accessed online at: http://www.nice.org.uk
5 The AGREE website can be accessed online at: http://www.agreecollaboration.org
framework for their development, reporting and assessment. When the AGREE Collaboration was founded in 1998, its main objective was to develop an appraisal instrument to assess clinical guidelines and to standardise guideline development across Europe. In 2002, the AGREE Collaboration received additional funding for a project to enhance effective health care policy in Europe by promoting the diffusion of a comprehensive approach to the production, dissemination and evaluation of high-quality clinical guidelines through established networks.

- The Cochrane Effective Practice and Organisation of Care Group (EPOC): EPOC\(^6\) is an international organisation that aims to help people make well informed decisions about health care by preparing, maintaining and ensuring the accessibility of systematic reviews of health care interventions. EPOC produces systematic reviews of educational, behavioural, financial, organisational and regulatory interventions which have been designed to improve health professional practice and the organisation of health care services, within any clinical area.

The reports published by these centres of excellence vary in their nature and scope. However, to date, none of the centres has published an organisational evaluation similar to the proposed evaluation of NHS QIS. Hence, there is no obviously transferable evaluation framework which could be directly mapped across for use as the NHS QIS evaluation framework. As will be discussed later in this literature review, some of the reports published by the above organisations may be used to guide evaluations of particular products within NHS QIS. However, a new structure for evaluation of the organisation as a whole must be developed, to take into account not only the impact NHS QIS has had on healthcare in Scotland, but also to look at behavioural changes within healthcare organisations to evaluate how these have influenced the relative success of the NHS QIS products.

This literature review has uncovered two major reports of large-scale evaluations, which have been specifically identified as valuable to the NHS QIS evaluation. These reports are:

- The evaluation of the Sharing Health Care Initiative in Australia (Sharing Health Care Initiative, 2005a)
- The evaluation of the Primary Health Care Strategy in New Zealand (Cumming et al., 2005)

Although these reports detail the evaluation of specific interventions, rather than an organisational evaluation, the methodologies used may help to inform the NHS QIS evaluation, and lessons may be learned from the results of these reports.

\(^6\) The EPOC website can be accessed online at: http://www.epoc.uottawa.ca/
Key messages for NHS QIS

- This evaluation study of the impact of NHS QIS is the first time a health care organisation has been evaluated.
- Therefore, no directly transferable structure exists that can be mapped onto this study.
- A new methodology for evaluating the impact of a health care organisation must be developed.
National evaluation of the Sharing Health Care Initiative, Australia

Background to the national evaluation

In 1999/2000 the Australian Government Department of Health and Ageing (DoHA) set up the Enhanced Primary Care initiative for older Australians (50 years or older) and for those with chronic and complex medical conditions. The Sharing Health Care Initiative (SHCI) was part of this package, which represented a generic approach to using self-management in addressing the common debilitating features of chronic conditions. The SHCI was designed to promote SHCI Demonstration Projects (DPs), education and training for Health Service Providers (HSPs) and National Evaluation of the DPs.

The SHCI DPs were set up to: (i) develop solutions to bring about change and improvement to identified systemic problems; (ii) develop and strengthen partnerships between relevant stakeholders; and (iii) be responsive and appropriate to their environmental and social context (Department of Health and Ageing, 2005). It is important to note that the DPs were not efficacy trials and did not consist of a standardised intervention, nor were there any control groups. Rather, the DPs were developed to improve understanding about the most effective ways to deliver self-management programs and to inform HSPs about future options for better management of chronic conditions.

The National Evaluation of the SHCI focused on the DPs and their ability to meet the SHCI's objectives which were: (i) to improve the health-related quality of life for people with chronic conditions; (ii) to improve the use of the health care system by people with chronic conditions; and (iii) to encourage collaboration between clients, their families and HSPs in the management of chronic conditions (Sharing Health Care Initiative, 2005a).

The evaluation framework

The evaluation framework consisted of three hypotheses and nine evaluation questions, which were identified at a workshop for the DPs. These hypotheses and evaluation questions are listed in Tables 1 and 2.

The SHCI developed a National Evaluation Framework (NEF) to address the hypotheses and evaluation questions. Three core components were specified:

- **Process evaluation**: to monitor program implementation from the point of view of self-management program delivery and more general organisational factors at both a DP and a health system level. The process evaluation also provides contextual information for the impact and outcome evaluations, which will help to explain which programs were successful and why.

- **Impact evaluation**: to measure changes in modifiable risk and protective factors as well as community capacity and the potential for ongoing sustainability of the programs.

- **Outcome evaluation**: to measure changes in the health and well-being of the target population or program participants.
Hypothesis 1
That learning self-management principles will improve:
(i) The health-related quality of life for people with chronic conditions, particularly those with comorbidities.
(ii) The carer/family/significant others perceptions and experiences of the health-related quality of life for people with chronic conditions.
(iii) The health/well being of communities.

Hypothesis 2
That learning self-management principles will help facilitate, among HSPs, improvements in awareness and understanding about the benefits of self-management and consequent behaviour changes, as well as improving communication between GPs, people with chronic conditions and their families, and other health professionals.

Hypothesis 3
That learning self-management principles will result in more appropriate use of health services.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Description</th>
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</table>
| Hypothesis 1 | That learning self-management principles will improve:  
  (i) The health-related quality of life for people with chronic conditions, particularly those with comorbidities.  
  (ii) The carer/family/significant others perceptions and experiences of the health-related quality of life for people with chronic conditions.  
  (iii) The health/well being of communities. |
| Hypothesis 2 | That learning self-management principles will help facilitate, among HSPs, improvements in awareness and understanding about the benefits of self-management and consequent behaviour changes, as well as improving communication between GPs, people with chronic conditions and their families, and other health professionals. |
| Hypothesis 3 | That learning self-management principles will result in more appropriate use of health services. |

<table>
<thead>
<tr>
<th>Evaluation Question</th>
<th>Description</th>
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<tbody>
<tr>
<td>Evaluation Question 1</td>
<td>Which recruitment strategies are most successful in recruiting which clients/groups of clients?</td>
</tr>
<tr>
<td>Evaluation Question 2</td>
<td>Which clients/groups of clients are most likely to participate in which DP self-management programs?</td>
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<tr>
<td>Evaluation Question 3</td>
<td>What other factors influence participation rates and in which direction?</td>
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<tr>
<td>Evaluation Question 4</td>
<td>How and by how much does the form/structure of self-management education influence the health behaviours and health outcomes of clients?</td>
</tr>
<tr>
<td>Evaluation Question 5</td>
<td>How and by how much does the type, intensity and frequency of client support and follow-up influence the health behaviours and health outcomes of clients?</td>
</tr>
<tr>
<td>Evaluation Question 6</td>
<td>How and by how much does the SHCI intervention components influence community outcomes?</td>
</tr>
<tr>
<td>Evaluation Question 7</td>
<td>What is the level of client and carer/family/significant other satisfaction associated with each DP self-management program? What factors influence this?</td>
</tr>
<tr>
<td>Evaluation Question 8</td>
<td>What is the level of behaviour modification by HSPs? What factors influence this?</td>
</tr>
<tr>
<td>Evaluation Question 9</td>
<td>What factors affect the sustainability of the program?</td>
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</table>

Table 1 - Hypotheses for evaluation of DPs

Table 2 - Questions for evaluation of DPs
Key findings of the evaluation

The following list outlines the key findings of the National Evaluation (Sharing Health Care Initiative, 2005b):

- GPs were generally very receptive to the idea of self-management, but found that constraints on their time prevented them from taking a more active involvement in the program.
- The role of other health service providers, for example practice and community nurses, provided much of the momentum in the demonstration projects.
- Education and training of health service providers, such as GPs and specialist doctors, will have a critical role in ensuring that self-management techniques are integrated into everyday clinical practice.
- Providing ongoing training and support is necessary to retain the required level of self-management knowledge within projects that have a high level of HSP turnover, although this is a resource intensive practice.

Some barriers to the successful implementation of the self-management program include: transport for clients, ensuring there is no duplication in coordinating multidisciplinary care processes, high staff turnover, networks and relationship building, and issues in education and training.

### Key messages for NHS QIS

- To ensure successful implementation of a product (i.e. guideline, best practice statement, etc.), the product must take into consideration the constraints of the target audience (e.g. time constraints) during development and dissemination.
- Other health service providers, such as nurses or carers, can provide significant momentum when implementing a product, and as such should be taken into consideration when developing the product.
- Education and training of health service providers is essential to ensure successful implementation of the product, and also to ensure sustainability of the product.
- The framework for evaluating NHS QIS should examine how NHS QIS products deal with these issues:
  - If/how the needs, resources and constraints of the target audience are taken into consideration during development;
  - How the target audience is selected;
  - If/how the target audience is trained and supported during initial and ongoing implementation of the products.
Evaluation of the implementation and intermediate outcomes of the Primary Health Care Strategy, New Zealand

Background to the evaluation

In 2001, the New Zealand Government published the Primary Health Care Strategy, with the aim of improving the health of New Zealanders and reducing inequalities (Cumming et al., 2005).

Implementation of the Strategy has involved three major policy changes: (i) government funding for primary health care is being increased so that more people are eligible for government subsidies; (ii) the government is encouraging the development of Primary Health Organizations (PHOs) as local non-governmental organizations which serve the needs of an enrolled group of people; and (iii) public funding of primary care has changed from fee-for-service to funding based on population needs.

Objectives of the evaluation

The main objectives of the evaluation of the Strategy are:

- To describe the implementation of the Strategy, including the structural, governance, funding, workforce and contractual issues that impact on the establishment of PHOs.
- To evaluate the implementation of PHOs with reference to understanding the experience and activities of PHOs, measuring change in programs, processes and intermediate health outcomes during the adoption and implementation of the Primary Health Care Strategy, and assessing the impact of the Strategy on reducing health inequalities involving Māori, Pacific peoples and the financially disadvantaged.
- To analyse the net costs of the strategy at the national and at the PHO level.
- To identify positive and negative influences on PHO achievement and to identify the critical success factors for delivery of effective, accessible primary health care.
- To disseminate the results from the evaluation to the relevant government and health agencies.

Research methods used

The evaluation used four main methods: key informant interviews; a postal questionnaire; quantitative analyses focusing on utilisation and intermediate health outcomes; and quantitative analyses in support of an economic analysis of the impact of the Strategy. Table 3 outlines each of the methods in more detail (Cumming et al., 2005).
<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Key Informant Interviews</strong></td>
<td>The aim of these interviews was to reach an in-depth understanding of the experience and activities of PHOs and their member practices in responding to the Strategy. These interviews were to be undertaken twice – during the early phases of implementation of the Strategy, and again around 18 months later. The interviews would be held with representatives from governance/management, Māori and/or Pacific program managers, medical services, nursing services and community members.</td>
</tr>
<tr>
<td><strong>Postal Survey</strong></td>
<td>The postal survey was due to be undertaken mid-2005 and again in early-to-mid 2006, and would cover a similar range of themes and topics as the interviews but would enable the evaluation to be widened to cover all PHOs and member practices. The survey would also quantify the extent to which the views and experiences found through interviews are found in the wider community.</td>
</tr>
<tr>
<td><strong>Quantitative Assessment</strong></td>
<td>This phase of the research would measure the change in activities, processes and outcomes of primary care during the adoption and implementation of the Strategy. The assessments would report on the impact of the Strategy in relation to changes in fees and utilisation of services.</td>
</tr>
<tr>
<td><strong>Economic Analysis</strong></td>
<td>This method was complicated because of the number of changes occurring at the same time. This made it particularly difficult to determine which components of the policy were responsible for identified impacts on costs and benefits. This method would undertake two analyses that aimed to estimate the (net) costs of the Strategy and the extent to which the distribution of expenditure changed over time, by population group and by service type.</td>
</tr>
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**Table 3 - Methods used to evaluate the Primary Health Care Strategy**

**Key findings of the evaluation**

The key findings of the evaluation are listed below (Cumming et al., 2005):

- Participants generally agreed that fee reductions had improved access to primary care, and that a more flexible service delivery with a focus on prevention provided opportunities to improve patient care.

- Some GPs were worried that their role had not been adequately recognized and they were also worried about the long-term financial implications for themselves and their practices.

- Some participants commented that more resources should have been put into the implementation process, and raised concerns about the targeting of new funding as well as problems with loss of funding arising from patients making casual visits to GPs they are not enrolled with.

- The community appeared to be well represented at Board level in PHOs, but there was concern about medical dominance and many participants
reported that communication with the community was still in its early stages.

- There was general agreement that PHO management required many resources in terms of time and money. There was, however, a general feeling that the setting up and organising of PHOs was nearing completion, and that the focus could soon be directed to improving services and implementing new programs.

- Research has indicated that there are many opportunities under the Strategy for enhancement of nursing practice to contribute to health outcomes.

- The Strategy increases the responsibilities of the primary health care team, and there is concern that the medical and nursing workforce may be inadequate to the tasks required by the Strategy.

- All participants felt that there would be no change in the management of injuries as a result of the implementation of the Strategy.

- Some key participants suggested that there would be an incentive to use hospital services more, although respondents reported that there appeared to be little change in the use of secondary health services to date.

- There was some concern about the sustainability of aspects of the Strategy, including: the delivery of low cost care for all; addressing population health; full community involvement in PHOs; the monitoring of outcomes; the consolidation of community health services within PHOs; and the development of closer ties with agencies involved in the determinants of health.
Key messages for NHS QIS

- Careful planning of the product is important to identify and include the correct target audience when developing the products, including practitioners, nurses, opinion leaders, community members and even patients and family members where relevant, and to ensure the needs and constraints of all involved are accounted for.

- It is important to have clear communication with all relevant parties (practitioners, nurses, carers, patients, families, etc.) during the development and implementation of the initiatives to ensure all needs are met and all concerns are considered.

- It is important that the products be relevant and realistic for the target audience to be able to implement them fully and correctly.

- Education and training are essential to ensure that initiatives are integrated into everyday clinical practice.

- It is important that the products be sustainable once implemented, i.e., that they do not require huge effort or resource which is unlikely to be sustainable in the long run. Therefore, ongoing training and support are necessary.

- Again, the framework for evaluating NHS QIS should examine how NHS QIS products deal with these issues:
  - If/how the wider community is involved in developing the products;
  - How realistic and relevant the products are to enable them to make a difference to patient health;
  - How realistic the products are in terms of long-term sustainability.
Evaluation of individual interventions

The literature search yielded many published reports on three particular health care interventions: clinical guidelines, health technology assessments and best practice statements. The following three sections summarise why these three interventions have been so extensively evaluated and briefly review the more popular methodologies used to evaluate these interventions.

Evaluation of clinical guidelines

What are clinical guidelines?

Clinical guidelines are “systematically developed statements” which are designed to help health practitioners and patients decide on the most appropriate healthcare treatments for specific clinical conditions (Broughton and Rathbone, 2001). Clinical guidelines have the potential to improve the care received by patients by promoting those interventions which have proven to be beneficial, and by discouraging those interventions which have been proven to be ineffective (Grimshaw et al., 2004).

Clinical guidelines also have the potential to empower patients by providing them with a framework to evaluate the appropriateness of the care they are offered. Guidelines give patients explicit information that has been critically evaluated (Mead, 2000).

Why do clinical guidelines need to be evaluated?

Clinical guidelines help practitioners and local organisations choose which treatments to use for particular conditions or circumstances. The provision of appropriate and effective health care to patients may also decrease health costs by reducing the number of unnecessary treatments (Mead, 2000).

The development of clinical guidelines is, in itself, a costly process, and the potential benefits of the guidelines do not always outweigh the costs of development and introduction. Local healthcare organisations typically have few resources to spend on clinical effectiveness activities (Grimshaw et al., 2004) and for this reason, many organisations simply take existing national guidelines and adapt them at a local level, even modifying them to particular patients (Mead, 2000). Evaluation allows local organisations to compare existing guidelines to make informed judgements about which guidelines they can and should implement (Grimshaw et al., 2004).

The development of clinical guidelines will have an obvious effect on the quality of the guideline, which, in turn, will affect the impact of the guideline in practice. If the development of the guideline does not make any reference to cost, recommended practices may result in large financial increases for little corresponding health benefit. However, it is still not clear the extent to which guidelines should take cost effectiveness into account, as distinct from clinical effectiveness (Mead, 2000). Similarly, evidence of the effectiveness of a clinical guideline will not guarantee that it will be implemented – in some cases it may simply be too expensive to do so. The barriers to implementation of guidelines will be discussed later in this report.
In order for local organisations to determine which guidelines should be adapted to their community and circumstances, it is essential for the organisation to be able to evaluate and compare guidelines with these considerations in mind.

**How are clinical guidelines evaluated?**

There are a number of tools that provide a framework for evaluating clinical guidelines. This section describes the most well-known instrument for evaluating guidelines – the AGREE Instrument.

**The AGREE Instrument for Appraisal of Guidelines:**

The AGREE instrument was developed to provide a framework for assessing the quality of clinical practice guidelines. It does not, nor was it designed to, measure whether a guideline will be of actual value in clinical practice (Clinical Effectiveness and Evaluation Unit, 2006a). Rather, the instrument assesses the “confidence that the potential biases of guideline development have been addressed adequately and that the recommendations are both internally and externally valid, and are feasible for practice” (The AGREE Collaboration, 2001). This process takes into account the benefits, harms and costs of the recommendations issued by the guidelines, as well as the practical issues attached to them.

The AGREE instrument can be used to assess guidelines developed by local, regional, national or international groups. It can be used to assess new guidelines, existing guidelines or updates of existing guidelines (The AGREE Collaboration, 2001).

The AGREE instrument consists of 23 key items, organised into six domains. Each domain captures a separate aspect of the quality of the guideline under consideration. Table 4 outlines each of the 23 items (The AGREE Collaboration, 2001).

Each item in Table 4 is rated on a 4-point scale, ranging from “Strongly Agree” (4) to “Strongly Disagree” (1). The scale measures the extent to which a criterion has been fulfilled. The instrument also provides a comment box for the user to insert any comments or relevant information about the item. When the user has rated each of the 23 items, the domain scores are calculated by summing the scores of the individual items, and then standardizing the total as a percentage of the maximum possible score for that domain. Box 3 gives an example (The AGREE Collaboration, 2001).
Table 4 - The AGREE Instrument for evaluation of guidelines
Box 3 – Example of calculations

If four appraisers give the following scores for Domain 1 (Scope & Purpose):

<table>
<thead>
<tr>
<th>Item 1</th>
<th>Item 2</th>
<th>Item 3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appraiser 1</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Appraiser 2</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Appraiser 3</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Appraiser 4</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9</strong></td>
<td><strong>13</strong></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>

Maximum possible score = 4 (strongly agree) x 3 (items) x 4 (appraisers) = 48
Minimum possible score = 1 (strongly disagree) x 3 (items) x 4 (appraisers) = 12

The standardized domain score will be:

\[
\frac{\text{Obtained score} - \text{minimum possible score}}{\text{Maximum possible score} - \text{minimum possible score}} \times 100 = \frac{36 - 12}{48 - 12} = \frac{24}{36} \\
= 0.67 \times 100 = 67\%
\]

The six domain scores are independent and should not be aggregated into a single quality score. The domain scores may be useful for comparing guidelines, and will inform the decision as to whether or not to use or recommend a guideline for use, but it is not possible to set thresholds for the domain scores to mark a “good” or “bad” guideline (The AGREE Collaboration, 2001).

**Other appraisal instruments:**

Cluzeau et al. (1997) have developed a similar appraisal instrument, with 37 items arranged into three “dimensions”: Rigour of development, Context and Content, and Application. Many of the items are similar to those in the AGREE instrument.

Broughton and Rathbone (2001) have developed a guideline evaluation checklist, adapted from the St. George’s Health Care Evaluation Unit Appraisal Instrument for Clinical Guidelines (Cluzeau et al., 1997), the Leicestershire Evidence Based Guidelines Checklist and the Agency for Health Care Policy and Research Guidelines.

Graham et al. (2002) describe a framework for evaluating and adapting existing practice guidelines for local use by healthcare organizations. The framework consists of ten steps, which are listed below:

1. Identify a clinical area to promote best practice.
2. Establish an interdisciplinary guideline evaluation group.
3. Establish guideline appraisal process.
4. Search and retrieve guidelines.
5. Guidelines assessment: quality and content.
6. Adaptation of guidelines for local use.
7. External review – practitioner and policy-maker feedback; expert peer review.
8. Finalise local guideline.
10. Scheduled review and revision of local guideline.

A major advantage of this framework is that it breaks down the complicated process of adapting a national or international guideline for local use into discrete and achievable phases (Graham et al., 2002). The framework is rigorous and systematic, and it also allows for the inclusion of the stakeholders, which is important for successful implementation and sustainability of the guideline, as will be discussed later in this report.

### Key messages for NHS QIS

- Evaluation of clinical guidelines is important to allow local organisations to compare existing national guidelines to make informed judgements about which guidelines they can and should implement.

- Clinical guidelines should take into account the cost of implementing the guideline as target organisations may not implement the guideline if it is too expensive to do so, regardless of any evidence of effectiveness.

- In order for local organisations to determine which guidelines should be adapted for their community, it is essential for them to be able to evaluate and compare guidelines with cost and evidence of effectiveness in mind.

- A framework for developing new clinical guidelines or adapting existing guidelines for local use should include the following steps:
  - An interdisciplinary guidelines evaluation group should be established to ensure all stakeholders’ points of view are considered.
  - A guideline appraisal process should be established by which to compare and evaluate the guidelines.
  - Local needs and resources should be considered to ensure the guideline is correctly adapted for local use.
  - The guideline should be reviewed externally to ensure correctness.
  - The guideline should be reviewed to ensure it has had the expected impact, and should be revised if necessary.
Evaluation of health technology assessments

What is a health technology assessment?

Health technology assessment (HTA) is an internationally recognised term that includes any method used by those working in health services to promote health, prevent and treat disease and improve rehabilitation and long-term care (Caldow et al., 2006). Technologies do not only include medical equipment and/or drugs, but can also include, for example, educational programs.

HTAs were established in Scotland to advise the National Health Service in Scotland on the clinical and cost-effectiveness of new and existing health technologies (NHS QIS, 2003). In addition to examining cost-effectiveness and clinical-effectiveness, HTAs also examine patient needs and preferences and help those working in health services to identify how services should be best organised (NHS QIS, 2003). An important aspect of the HTA process is the evaluation of alternative courses of action to derive recommendations about effective and efficient care (Caldow et al., 2006). Evaluation helps to ensure that HTAs are delivering on these objectives, and that resources are being allocated correctly to develop and promote HTAs.

How are health technology assessments evaluated?

NHS QIS has previously conducted an evaluation of health technology assessments. The next section outlines the methodology used and the results of this evaluation.

An impact assessment of the HTAs produced by NHS QIS:

The aim of this project was to examine the impact of HTAs conducted by NHS QIS, and to examine how NHS QIS can improve this impact by increasing the adoption of the HTAs’ evidence-based recommendations (Caldow et al., 2006). The project addressed four objectives:

- **Evaluate the effectiveness of the dissemination of the HTAs recommendations:** This objective seeks to examine what HTA dissemination strategies were outlined at the outset of the work in order to facilitate a critique of planned dissemination activities.

- **Critically appraise the documentation itself, by seeking views of users on factors such as accessibility, clarity, relevance and ease of understanding:** This objective seeks to examine whether the recommendations provided by the HTAs were tailored for the end users. For example, it examines whether the documentation could be readily obtained, whether it contained relevant information, whether recommendations were easy to understand, etc.

- **Measure the impact of the recommendations on national and local health policy makes and on patients, focusing particularly on changes to patient outcomes as a result of the implementation:** It can often be difficult to measure changes in care and cost-effectiveness, and so this objective focuses instead on measuring how health care behaviour has reportedly changed and the perception as to whether recommendations have been met.
• **Capture any secondary effects on research and other related topics:** This objective seeks to determine whether the HTAs have prompted any further research at both local and national level.

The project focused on three case studies: *Prevention of relapse in alcohol dependence; Troponin testing in acute coronary syndromes;* and *Routine ultrasound scanning before 24 weeks of pregnancy.* Data about these HTAs were collected by reviewing existing documentations and by conducting in-depth qualitative interviews or focus groups with national and local policy makers, clinicians and patients.

The results of the evaluation are summarised below (Caldow *et al.*, 2006):

- NHS QIS uses passive dissemination of educational materials to implement HTAs, which is likely to have only a modest effect on behaviour. Methods such as reminders are likely to be more effective at supporting implementation, although these methods are also likely to be more costly.

- Dissemination and tailoring of documentation to health professionals has generally been successful, but should be widened to include other organisations and groups within the health service. The dissemination of documentation to non-professionals and patients was very poor.

- Little evidence was found that HTA recommendations were included in management protocols. However, there was a perception that HTAs have helped the development of services, and improved the care of patients and patient satisfaction.

- The interviews and focus groups also reported information about the limitations surrounding the implementation of recommendations, for example, the fact that the HTA recommendations are non-mandatory.

- Other limitations relate to the availability of funding and resources to, for example, train and recruit staff, retain skilled staff, etc.

- The secondary effects of HTAs on other services were difficult to identify, but interviews suggested that the adoption of HTAs is believed to have increased the workload of health care professionals. There was no evidence to suggest that the ultrasound or the troponin HTAs had prompted further research, however a small number of relevant research projects were prompted by the alcohol HTA.
### Key messages for NHS QIS

- Effective dissemination of information about guidelines or HTAs plays a major role in determining whether or not a guideline or HTA recommendation will be successfully implemented.

- Passive dissemination of product documentation is unlikely to have a significant effect on behaviour. Instead, methods such as interactive workshops or reminders are likely to be more effective, although these may also be more costly.

- Dissemination of documentation should include healthcare professionals, but should also include other organisations and groups within the health service as well as non-professionals and patients.

- If recommendations are non-mandatory, then some other method of ensuring successful implementation should be used, such as increased training of staff or the use of an opinion leader to promote the recommendations.
Evaluation of best practice statements

What are best practice statements?


The best practice statements provide guidance and advice to nurses, midwives and allied health professionals in relation to specific areas of healthcare. The statements comprise:

- The best evidence available at the time;
- Agreed opinion; and
- Examples of good, as well as innovative, practice.

How are best practice statements evaluated?

In 2003, the Nursing and Midwifery Practice Development Unit (NMPDU) in Scotland commissioned an evaluation of the impact of its best practice statements across Scotland. The main objectives of this evaluation were to determine the dissemination, support and impact of the first five BPS amongst a sample of nurses and midwives working within Scotland (Ring and Finnie, 2004).

The study consisted of a postal survey and telephone interviews. A sample of 1,278 nurses and midwives selected from clinical practice, the NMPDU Network and Directors of Nursing were surveyed using the postal methods. Fifteen nurses were selected for the telephone interviews, including five BPS project leaders and two members randomly selected from each development group.

Results of the BPS impact evaluation study produced by NHS QIS:

The results of the evaluation study raised a number of issues (Ring and Finnie, 2004):

- As the evaluation was commissioned less than a year after the launch of the first five BPS, it was relatively difficult to determine the benefit to patient care that these BPS would have. However, there is early evidence that the BPS have benefited patients.

- BPS have also benefited nurses and midwives by: facilitating care management and delivery; increasing knowledge and awareness; acting as drivers for local change and increasing accountability.

- There is also evidence that BPS are starting to achieve what they were designed to do, namely, increase quality improvement through the consistent use of evidence-based practice amongst nurses and midwives working in Scotland.

- The study raised the issue of awareness of and access to the BPS amongst nurses and midwives. According to this evaluation, the majority of clinical

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7 Taken from the NHS QIS website: http://www.nhshealthquality.org/
respondents, especially those in the lower grades, are not fully aware of the BPS applicable to their area of practice. Therefore, awareness of and access to the BPS amongst clinical staff needs to be raised to ensure successful implementation.

- The BPS have the potential to considerably benefit patients, but this is dependent upon the extent to which they are considered a priority for implementation by both local and national bodies.

- As BPS are a relatively new initiative in Scotland, the full potential for the BPS to benefit patient care has yet to be realised and the exact nature of such benefits needs to be the subject of future evaluation focusing on clinical impact from the patient perspective.

### Key messages for NHS QIS

- Best practice statements (BPS) should aim to increase quality improvement through the consistent use of evidence-based practice.

- It is important to ensure that the target audience is sufficiently researched and targeted to increase awareness and take-up of guidelines and HTA recommendations.

- In order to achieve this, awareness of and access to the BPS amongst the clinical staff on the “front line” needs to be raised.

- In order for BPS to reach their full potential and to significantly benefit patients, they need to be prioritised by both local and national bodies.
Key methodological issues in ensuring successful interventions

The next four sections look at the key methodological issues that can help to ensure the success of interventions. These issues can be divided into four categories:

- Development – how are the interventions created?
- Dissemination – how are the interventions communicated to end users?
- Implementation – how are the interventions put into practice at a local level?
- Evaluation – are the interventions having the desired effect?

Development of interventions

Regardless of how well interventions are targeted and disseminated, if the interventions have not been well developed they will not be successful. Smith (2000) suggests, as part of a four-step cycle to improve physicians’ performance and adherence to guidelines, the first step for developing guidelines: set priorities (plan).

Setting priorities, or planning, involves examining the importance of the problem that the guideline intends to address. Smith (2000) writes that it is essential to concentrate on important, well-defined clinical problems where there is good enough evidence to indicate optimal practice. Otherwise, guidelines may end up addressing issues about which there is no consensus and, thus, recommendations may be difficult to implement.

Graham et al. (2002) also advise that the first step of development of guidelines is to identify a clinical area in which to promote best practice. There are a number of criteria which can be used to prioritise and identify areas for best practice guidelines:

- The prevalence of the condition.
- The burden associated with the condition.
- Concerns about variations in treatment practices.
- Costs associated with different practice options.
- The likelihood that a guideline will be effective in influencing practice.
- The existence of relevant evidence-based guideline.

The next stage in the development of interventions is to assemble an appropriate group of experts to help develop the intervention. Broughton and Rathbone (2001) suggest that a “good clinical guideline” should consider all relevant disciplines and stakeholders as well as local circumstances. To ensure the intervention takes into account everybody’s needs and expectations, the group should therefore consist of interdisciplinary experts, local health care providers, patients, families, etc.

Broughton and Rathbone (2001) list nine potential barriers to the development of good clinical guidelines, which can also be considered barriers to the development of successful interventions:

- The guideline may not have been developed by a fully multidisciplinary group that is representative of the end users, with the result that there is a “lack of ownership” and the end users do not buy into the guideline.
• Recommendations that are not evidence-based can result in sub-optimal, ineffective or harmful practice.
• There is often insufficient, misleading or misinterpreted scientific evidence about what to recommend.
• Guideline development groups can often lack the required time, resources and skills to gather and scrutinise evidence in detail.
• Value judgements made by a guideline group may be the wrong choice for individual patients.
• If the guideline group is not truly interdisciplinary or representative of the end users, then recommendations may be influenced by the opinions, clinical experience and composition of the guideline group.
• Patients’ needs may not be the only priority in making recommendations; those of doctors, risk managers or politicians may also be involved.
• Conflicting guidelines from different professional bodies can confuse and frustrate practitioners.
• Inflexible guidelines can cause harm by leaving insufficient room for clinicians to tailor care to patients’ individual needs and personal circumstances.

<table>
<thead>
<tr>
<th>Key messages for NHS QIS</th>
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</thead>
<tbody>
<tr>
<td>• Interventions should address important, well-defined clinical problems where there is enough evidence to indicate optimal practice.</td>
</tr>
<tr>
<td>• The development group should be multidisciplinary to ensure the needs of all stakeholders are considered.</td>
</tr>
<tr>
<td>• The development group should also include local health care providers, patients, families, etc. to increase the sense of “ownership” of the intervention, thereby increasing the likelihood of implementation.</td>
</tr>
<tr>
<td>• Before assembling the development group, a realistic assessment of the time, resources and skills required should be made to ensure the group members are appropriately chosen.</td>
</tr>
<tr>
<td>• It is important to ensure the development group is truly interdisciplinary and representative of the end users, otherwise there is a possibility that the recommendations may be influenced by one party.</td>
</tr>
<tr>
<td>• It is important to ensure the guidelines and recommendations are flexible enough to allow clinicians to tailor care to patients’ individual needs and circumstance, otherwise incorrect or insufficient care may be given.</td>
</tr>
</tbody>
</table>
Dissemination of interventions

Bero et al. (1998) write that, despite the considerable amount of money spent on clinical research, relatively little attention has been paid to ensuring that the findings of the research are implemented into routine clinical practice. They also argue that passive dissemination of information is generally ineffective.

However, they point out that there are many different types of actions that can be used to promote behavioural changes amongst healthcare professionals and to promote implementation of research findings. Bero et al. conducted an extensive Medline search for any review of interventions to improve professional performance. Eighteen reviews were identified that met the explicit inclusion criteria. These reviews included information on: dissemination and implementation of guidelines; continuing medical education; strategies such as audit and feedback; particular target groups such as nurses or primary healthcare professionals; and particular problem areas or types of behaviour such as diagnostic testing or aspects of preventative care.

Most of the reviews identified modest improvements in performance after interventions were implemented. However, the dissemination of information had a significant impact on the implementation of interventions, and Bero et al. note that the passive dissemination of information was generally ineffective in altering practices, no matter how important that issue or how valid the assessment methods.

Based on the information gained from this study, Table 5 lists some methods of dissemination of information, divided into three categories: constantly effective, sometimes effective and little or no effect (Bero et al., 1998).

As Table 5 shows, methods for dissemination of information to clinicians are only effective if there is some level of interaction with the end user. However, some of the more effective interactive methods, such as reminders, may be expensive or time-consuming to implement, so local organizations will have to carefully weigh the benefit against the cost to determine whether or not to use the suggested methods (Bero et al., 1998).

Before implementing a particular method, the organization also needs to ensure it is the best method to achieve the required impact. For example, Oxman (1995) points out that reminders are only likely to be effective if not having the right information at the right time is an important cause of sub-optimal compliance with interventions. If this is not the case, then reminders may not be worth the cost of dissemination.

In a study about the use of HTA and clinical effectiveness data in health care purchasing decisions in the UK and the USA (Millbank Memorial Fund, 2000), it was discovered that, while purchasers value the findings of research into HTAs and clinical effectiveness, they rarely use it when making health care purchasing decisions. Purchasers are increasingly responsible for making decisions about which health technologies will become part of routine health care. They listed four factors that have contributed to their relatively limited use of HTA information: (i) they are more concerned with the cost of the intervention than the quality of the intervention; (ii) they find it difficult to access data about clinical and cost-effectiveness; (iii) there is insufficient training in using, interpreting and critically appraising HTA information; and (iv) there is a lack of skills and training in translating research evidence into practice.
Methods that are consistently effective

- Educational outreach visits
- Reminders (manual or prescribed)
- Multifaceted interventions (a combination that includes two or more of the following: audit and feedback, reminders, local consensus processes, or marketing)
- Interactive educational meetings (participation of healthcare providers in workshops that include discussion or practice)

Methods that are sometimes effective

- Audit and feedback (or any summary of clinical performance)
- The use of local opinion leaders (practitioners identified by their colleagues as influential)
- Local consensus processes (inclusion of participating practitioners in discussions to ensure that they agree that the chosen clinical problem is important and that the approach to managing the problem is appropriate)
- Patient mediated interventions (any intervention aimed at changing the performance of healthcare providers for which specific information was sought from or given to patients)

Methods that have little or no effect

- Educational materials (distribution of recommendations for clinical care, including clinical practice guidelines, audiovisual materials, and electronic publications)
- Didactic educational meetings (such as lectures)

Table 5 – Methods to promote behavioural change among health professionals (Bero et al., 1998)

The quality of the information also determines its success in being used by stakeholders, such as purchasers. According to the previously mentioned study (Millbank Memorial Fund, 2000), the following list outlines methods which would improve the take-up of interventions by purchasers:

- The information should be produced by a “credible” and/or “reputable” organization, agency or institute.
- The information should be based on studies that use an experimental or quasi-experimental research design.
- The information should be based on studies that are in the “public domain” (i.e., not conducted for marketing purposes or on behalf of a particular company or manufacturer).
- The information should be relevant to the issues in which purchasers are interested.
- The information should be peer-approved or regarded by clinicians as state-of-the-art.
- The information should be published (or publishable) in top medical journals.

One method of dissemination of information that has proven successful is the CHAIN (Contact, Help, Advice and Information Network for Effective Health Care) programme developed by the NHS in 1997 (Russell et al., 2004). CHAIN is an informal email network for people working in health care with an interest in health care improvement. More information about CHAIN can be found online at: http://chain.ulcc.ac.uk/chain/
evidence-based health care. CHAIN is an example of how information can be targeted, personalized and made meaningful through informal social processes.

CHAIN is multi-professional and cross organizational. It is free to join, and allows the members to:

- search the online directories to contact other members directly
- find out about forthcoming events, conferences and research funding opportunities through messages targeted by the CHAIN facilitator
- request information from groups of CHAIN members
- publicise the members’ own events
- download resources from CHAIN events.

There are three CHAINs currently in use. CHAIN 1 focuses on research and evidence-based practice; CHAIN 2 is for people interested in work-based and e-learning, and the new CHAIN 3 is a community interested in innovation and improvement.

<table>
<thead>
<tr>
<th>Key messages for NHS QIS</th>
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<tr>
<td>• Dissemination of information has a significant impact on the implementation of interventions.</td>
</tr>
<tr>
<td>• Passive dissemination of information is generally ineffective; however, dissemination is generally more successful if there is some level of interaction with the end user, such as feedback, workshops or reminders.</td>
</tr>
<tr>
<td>• The quality of the information also determines successful implementation. The information needs to be credible, not based on experimental studies, relevant to the issues in which stakeholders are interested, peer-approved and published.</td>
</tr>
</tbody>
</table>
Implementation of interventions

While considerable effort is applied to the development of evidence-based clinical guidelines, there is relatively little attention paid to the actual implementation of these guidelines (CRAG, 2002). Rycroft-Malone et al. (2002) write that there is some scepticism regarding the implementation of evidence-based interventions. There are three reasons for this (Rycroft-Malone et al., 2002):

- Much of the science behind evidence-based interventions is seen, in practice, as inconclusive or uncontested.
- Groups of professionals retain substantial autonomy over their work practices and tend to resist external interventions from research and development functions.
- Much of the current clinical knowledge is tacit and experiential, based on opinions or observations, so that the findings of evidence-based medicine are not accepted as valid to practice.

Organisational culture also plays a key role in the successful implementation of interventions. Learning organisations that “value the contributions of individuals, are open, have decentralised decision making, a shared vision, and quality organisational systems” are more likely to experience success when promoting a new intervention (Rycroft-Malone et al., 2002).

In order to ensure the successful implementation of any intervention, organisations must adopt a planned and targeted distribution strategy, which is sustainable and ensures high accessibility, along with a “systematic approach to implementation which has considered barriers and facilitators for implementation at a local and national level” (CRAG, 2002).

Bero et al. (1998) write that it seems necessary to use specific strategies to encourage implementation of research based recommendations and to ensure changes in practice.

There are a number of strategies that can be used to ensure implementation of interventions, as listed below (CRAG, 2002):

- **Educational**: Involve target groups to discuss needs, experiences; “ownership” of product.
- **Epidemiologic**: Develop a sound and credible “message” or “product”.
- **Marketing**: Learn about needs and problems of the target group; adapt guidelines.
- **Behaviourist**: Consider reinforcement and rewards; assist target group (provide practical tools, reminders, etc. to use guidelines).
- **Social influence**: Use opinion leaders to promote use of guidelines.
- **Organisational**: Be aware that the barrier to implementation is often the setting; improve teamwork and leadership; provide resources and support; restructure care processes; build guidelines into routine practice.
- **Coercive**: Consider that some target groups need some pressure to change; appropriate use of regulations and budgets to support the change process.
Ultimately, Walshe and Freeman (2002) argue that it is better for an organisation to focus on one intervention at a time and persevere to make that one work, than taking up, trying and discarding a succession of different quality improvement interventions.

<table>
<thead>
<tr>
<th>Key messages for NHS QIS</th>
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<tbody>
<tr>
<td>• Organisational culture plays a key role in the successful implementation of interventions, and organisations that have decentralised decision making, a shared vision and that value the contributions of individuals are more likely to successfully implement interventions.</td>
</tr>
<tr>
<td>• To ensure successful implementation of interventions, organisations must have a planned and targeted distribution strategy, which is sustainable over time.</td>
</tr>
<tr>
<td>• Ultimately, it is better for an organisation to focus on one intervention at the time and strive to make that work, rather than trying to implement many interventions at the same time.</td>
</tr>
</tbody>
</table>
Evaluation of the impact of interventions

Bero et al. (1998) write that, given the fact that there is so little information about the dissemination and implementation of interventions, it is vital that dissemination and implementation activities should be rigorously evaluated whenever possible. Walshe and Freeman (2002) note that research that focuses on the effectiveness and impact of quality improvement interventions is likely to be relatively unhelpful because it will probably just reiterate the fact that the impact of most interventions is very variable and their effectiveness is mixed. Instead, research into quality improvement should focus on understanding how and why quality improvement interventions work (i.e., the determinants of effectiveness). Walshe and Freeman also state that, because the effectiveness of quality improvement interventions is highly variable, practitioners should aim to incorporate some form of ongoing evaluation into quality improvement interventions in healthcare organisations.

Øvretveit (1998) suggests that there are eight phases in an evaluation, although they may not necessarily occur in the precise order listed below:

- **Initiation**: acting on a felt need to make a judgement of value about a treatment, service, policy or change, by looking at the options for making a self-evaluation, or an internal or external evaluation. The initiator may be an evaluation user, a sponsor or an evaluator.

- **Formulation and proposal**: deciding whom the evaluation is for and which user perspectives to take, the primary questions and decisions it is to inform, the criteria for valuation and the comparisons which will be used in the evaluation.

- **Reviewing knowledge**: discovering and reviewing what is already known about the evaluated, or about similar things.

- **Finalizing details of design and methods**: finalizing design and the details of which data gathering methods to use, how to use them and how to analyse the data to give information about the criteria.

- **Data collection**: gathering and recording using qualitative or quantitative methods, or both.

- **Data analysis and reporting**: analysing the data, and reporting what was discovered about the evaluated in relation to the criteria.

- **Judging value and deciding action**: users judge value and decide what to do by drawing on the evaluation findings as well as other data, and by considering the options open to them.

- **Evaluator self-review**: the evaluator or evaluation team review the lessons for them from the evaluation, and consider any methodological innovations or improvements which they developed during the evaluation.
Key messages for NHS QIS

- Instead of focusing on the actual effectiveness and impact of quality improvement interventions, research into quality improvement should focus on understanding the determinants of effectiveness, i.e., how and why interventions work.

- Developers should incorporate some form of ongoing evaluation into quality improvement interventions as the effectiveness of interventions is highly variable and may change over time.
Evaluating behavioural change

As mentioned previously, this study also undertakes to evaluate behavioural change amongst healthcare professionals to determine the behavioural drivers and barriers to successful implementation of products.

Whilst considerable attention has been given to evaluating behavioural change within individuals, significantly less attention has been given to models or theories that attempt to understand behaviour change within groups, organisations or whole communities (Theories and Models of Behaviour Change, 2006).

There is much literature to suggest that behaviour change occurs in stages or steps, and that it is neither unitary nor linear, but rather it is cyclical and involves a pattern of adoption, maintenance, relapse and readoption over time (Theories and Models of Behaviour Change, 2006).

Prochaska and DiClemente (1986) developed a transtheoretical model of behavioural change, which proposes that behaviour change occurs in five distinct stages:

1. Precontemplation: in this stage there is no intent on the part of the individual to change his or her behaviour in the foreseeable future.

2. Contemplation: people are aware that a problem exists and are seriously considering taking some action to address the problem. However, at this stage, they have not made a commitment to undertake action.

3. Preparation: this involves both intention to change and some behaviour, usually minor, and often meeting with limited success.

4. Action: this is the stage where individuals actually modify their behaviour, experiences or environment in order to overcome their problems or to meet their goals.

5. Maintenance: this is where people work to prevent relapse and consolidate the gains attained in the action stage. The stabilisation of behaviour change and the avoidance of relapse are characteristics of the maintenance stage.

As Figure 1 shows (Theories and Models of Behaviour Change, 2006), behavioural change is a cyclical process that involves both progress upwards and periodic relapse. People are likely to move back and forth between the five stages for some time, experiencing one or more periods of relapse to earlier stages, before moving again through the five stages. In successful behavioural change, whilst relapses to earlier stages will inevitably occur, individuals will never remain within the earlier stage to which they have relapsed, but will spiral upwards until they eventually reach a state where most of their time is spent in the maintenance stage (Theories and Models of Behaviour Change, 2006).

Prochaska and DiClemente (1992) further suggest that successful behavioural change can only take place in an environment that is enabling or supportive.

Rogers (1983) explains that there are five distinct stages which explain how new theories or innovations are disseminated and adopted at community and
population levels. These are: knowledge, persuasion, decision, implementation and confirmation. Rogers argues that “the diffusion of an innovation is enhanced with the perceived superiority of an innovation is high compared to existing practice and when the compatibility of the innovation with the existing social systems is perceived to be high” (Theories and Models of Behaviour Change, 2006). In other words, if the new innovation is seen as an improvement on current practice, and if it can be easily implemented, then it is more likely to be adopted by the target audience.

Changes in knowledge are relatively easy to achieve, provided the individual has access to the updated knowledge. However, changes in attitudes and behaviour may be more difficult to achieve, especially within the larger group or organisation. Therefore, implementation strategies should be informed by relevant behavioural change theory. This is especially important to ensure long term sustainability of the behaviour (Ring and Finnie, 2004).

Organisational culture plays a major role in the successful implementation of interventions and can influence behavioural change. For example, working environments in which practitioners feel supported within a learning culture have been found to be effective. Leaders in particular has a key role in creating a culture that is conducive to transforming practice, and research has

Figure 1 - The Behaviour Change spiral
found that change is easier to effect and manage when clinical leadership is strong (Rycroft-Malone *et al.*, 2002).

<table>
<thead>
<tr>
<th>Key messages for NHS QIS</th>
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<tbody>
<tr>
<td>• Organisational culture has a significant impact on behaviour and on the successful implementation of interventions.</td>
</tr>
<tr>
<td>• Behavioural change occurs in stages or steps, which are cyclical, and involve both progress and periodic relapses.</td>
</tr>
<tr>
<td>• Behavioural change theory can inform implementation strategies, to ensure that the behavioural drivers and barriers to successful implementation are considered when developing new products.</td>
</tr>
</tbody>
</table>
Examples of evaluation frameworks

This section reviews some existing frameworks for evaluation of quality improvement interventions.

Review of existing evaluation frameworks

A framework for process evaluation of quality improvement (QI) interventions:

Hulscher et al. (2003) propose a framework for process evaluation of quality improvement interventions. They describe process evaluation as an important tool to:

- **Describe the QI intervention itself:** for example, what was the exact nature of the intervention; what material investments, time investments, etc. were required?

- **Check the actual exposure to the QI intervention:** for example, was the intervention implemented according to plan; was the target population actually exposed to the intervention as planned; does this offer an explanation for not achieving the goals?

- **Describe the experience of those exposed to the QI intervention:** for example, how did the target group experience the interventions and the changes; what problems arose while implementing the changes; what requirements for change were experienced?

This framework is based, in part, upon the checklist developed by the Cochrane Effective Practice and Organisation of Care Review (EPOC) (Hulscher et al., 2003), and it guides reviewers when extracting relevant information from primary studies. The framework is also influenced by reviews on the effectiveness of a number of interventions and on a literature review of process and programme evaluation. The framework pays attention to features of the target group, the implementers of the interventions, the frequency of intervention activities and the features of the information communicated.

The CDC Evaluation Framework:

The US Centers for Disease Control and Prevention (1999) states that “effective program evaluation is a systematic way to improve and account for public health actions that involves procedures that are useful, feasible, ethical and accurate”. Therefore, a framework is required to guide the evaluation and to organise the various elements and phases of the program evaluation. An evaluation framework also ensures that program evaluation procedures are explicit, formal and justifiable, which is of particular importance when the risks of potential decisions or program changes increase (The Centers for Disease Control and Prevention, 1999).

The Centers for Disease Control and Prevention (CDC) have developed an evaluation framework for the following purposes:

- To summarise and organise the essential elements of program evaluation.
- To provide a common frame of reference for conducting evaluations.
- To clarify the steps in program evaluation.
To review standards for effective program evaluation.
To address misconceptions about the purposes and methods of program evaluation.

Figure 2 shows the CDC evaluation framework cycle. The steps of the framework are outlined in more detail in Table 6.

**Figure 2 - CDC evaluation framework**

Steps
- Engage stakeholders
- Describe the program
- Focus the evaluation design
- Gather credible evidence
- Justify conclusions
- Ensure use and share lessons shared

Standards
- Utility
- Feasibility
- Propriety
- Accuracy
### Table 6 - Steps in evaluation framework

The steps in Table 6 are interdependent, and the earlier steps provide the foundation for subsequent steps. The steps are described in more detail in the following list:

- **Engage stakeholders:** The evaluation cycle begins by engaging the stakeholders. Evaluation of public health programs involves partnerships, as it requires consideration of the value systems of the different partners. Stakeholders must be engaged to ensure that all perspectives are understood. Afterwards, the stakeholders will help to execute the subsequent steps.

- **Describe the program:** The program description communicates the mission and objectives of the program under evaluation. The descriptions should be sufficiently detailed to ensure program goals and strategies are understood, and should detail the program’s capacity to effect change, its stage of development and how it fits into the larger organisation and community.

- **Focus the evaluation design:** The direction and process of the evaluation must be focused to address the issues of greatest concern to stakeholders, while using time and resources as efficiently as possible. After data collection begins, it may be difficult or impossible to change procedures, even if better methods become obvious.

- **Gather credible evidence:** The persons involved in the evaluation should endeavour to collect information that conveys a well-rounded picture of the program, and that is seen as credible by the evaluation’s primary users. Information should be perceived by stakeholders as believable and relevant for answering their questions. Having credible evidence strengthens the evaluation judgements and the recommendations that follow from them.

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9 Full description available online at: [http://www.cdc.gov/eval/steps.htm](http://www.cdc.gov/eval/steps.htm)
• **Justify conclusions:** Conclusions from the evaluation are justified when they are linked to the evidence gathered and judged against agreed-upon values or standards set by the stakeholders.

• **Ensure use and share lessons learned:** Deliberate effort is needed to ensure that evaluation processes and findings are used and disseminated appropriately. This involves strategic thinking and continued vigilance, both of which begin in the earliest stages of stakeholder engagement and continue throughout the evaluation process.

Figure 2 also shows four groups of standards for assessing the quality of evaluation activities. The utility standards are intended to ensure that an evaluation will serve the information needs of intended users. The feasibility standards are intended to ensure that an evaluation will be realistic, prudent, diplomatic and frugal. The propriety standards are intended to ensure that an evaluation will be conducted legally, ethically, and with due regard for the welfare of those involved in the evaluation, as well as those affected by its results. The accuracy standards are intended to ensure that an evaluation will reveal and convey technically adequate information about the features that determine worth or merit of the program being evaluated\(^{10}\).

**Framework for description of clinical guideline programs**

Burgers *et al.* (2003) report that guides for the development, implementation and evaluation of clinical guidelines have been developed in different countries, for example, Australia and the UK, but there is little evidence to determine whether the recommended approaches are actually used in current guideline programs. In order to describe systematically the structures and working methods of current guideline programs in different countries, Burger *et al.* developed a conceptual framework covering relevant aspects of guideline programs, including guideline development, dissemination, implementation and evaluation. The framework is outlined in Table 7.

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\(^{10}\) Full standards description available online at: [http://www.cdc.gov/eval/standard.htm](http://www.cdc.gov/eval/standard.htm)
<table>
<thead>
<tr>
<th>Basic characteristics of guideline organisation</th>
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<tbody>
<tr>
<td>- Name, country, website</td>
</tr>
<tr>
<td>- Type of organisation</td>
</tr>
<tr>
<td>- Historical details (year of first guideline, reason for guideline development)</td>
</tr>
<tr>
<td>- Funding</td>
</tr>
<tr>
<td>- Estimated budget for guideline development and dissemination</td>
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<table>
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<tr>
<th>Purpose and topics</th>
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<tbody>
<tr>
<td>- Objectives</td>
</tr>
<tr>
<td>- Care level</td>
</tr>
<tr>
<td>- Target users</td>
</tr>
<tr>
<td>- Scope (screening/prevention/diagnosis/treatment)</td>
</tr>
<tr>
<td>- Topic selection (who selects topics)</td>
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</tbody>
</table>

<table>
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<tr>
<th>People involved in guideline development</th>
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<tbody>
<tr>
<td>- Size of guideline development group</td>
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<tr>
<td>- Number of disciplines in guideline development group</td>
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<tr>
<td>- Involvement of experts (e.g. epidemiologists, statisticians, health economists)</td>
</tr>
<tr>
<td>- Involvement of parents</td>
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<tr>
<td>- Editorial support</td>
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<tr>
<th>Methodology of guideline development</th>
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<tbody>
<tr>
<td>- Methodological training for group members</td>
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<tr>
<td>- Methods used to collect evidence</td>
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<td>- Methods used to analyse evidence</td>
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<tr>
<td>- Methods used to formulate recommendations</td>
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<tr>
<td>- Methods of review</td>
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<td>- Authorization</td>
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<table>
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<tr>
<th>Products and deliveries</th>
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</thead>
<tbody>
<tr>
<td>- Total number of guidelines produced</td>
</tr>
<tr>
<td>- Average size of guideline (number of pages)</td>
</tr>
<tr>
<td>- Guideline products (e.g. extensive/short/patient versions)</td>
</tr>
<tr>
<td>- Tools for application (e.g. algorithms/flow charts, balance sheets, risk tables)</td>
</tr>
<tr>
<td>- Media used (paper/CD-ROM/Internet)</td>
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<tr>
<th>Implementation, evaluation and update procedure</th>
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</thead>
<tbody>
<tr>
<td>- Implementation strategies (e.g. educational materials, conferences, audit and feedback)</td>
</tr>
<tr>
<td>- Use of monitoring and documentation</td>
</tr>
<tr>
<td>- Quality systems for guideline program (e.g. use of quality criteria, guideline clearinghouse)</td>
</tr>
<tr>
<td>- Update procedure</td>
</tr>
</tbody>
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<table>
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<tr>
<th>Future plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Plans for further development of guideline program in the near future</td>
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</table>

Table 7 - Framework for description of clinical guideline programs

Burgers et al. reviewed eighteen prominent guideline organisations in the United States, Canada, Australia, New Zealand and nine European countries using this framework. The questionnaire was sent to key informants of the guideline
programs, who were persons in a leading role in the guideline development organisation, or with lengthy experience of the guideline program. When answers were not clear, between four and eight additional specific questions were sent to the key informant. For validation, the first draft of the results was sent back to the informants to check the interpretations.

The study uncovered three key issues:

- The evidence-based approach to guideline development is being adopted with greater consistency by all organisations. Most guideline programs now combine an evidence-based approach with formal or informal consensus procedures. For example, when evidence is contradictory, controversial or lacking, consensus procedures are needed to solve problems, and can be considered an additional source of evidence when it is obtained from formal surveys of experts and the broader population of practitioners, or from feasibility studies.

- Patients are not involved in all programs and pilot testing and guideline comparison are only used in a few. National agencies take less responsibility for implementation of guidelines than do professional organisations. Larger organisations tend to prefer leaving implementation to regional and local organisations, whilst guideline development organisations in smaller countries are more involved in implementing their guidelines. Professional organisations use more formal update procedures than other organisations. However, the report does state that these differences may be due in part to differences in resources, such as budget and manpower.

- There is a growing awareness amongst organisations that cooperative partnerships, such as the AGREE Collaboration, may contribute to improving methods of guideline development, implementation and evaluation, and help to avoid duplication of efforts.

**Conceptual framework of the national evaluation of the SHCI:**

The conceptual framework for the Sharing Health Care Initiative (SHCI) of Australia (Sharing Health Care Initiative, 2005a) aimed to provide a comprehensive and logically integrated approach to the specification of the evaluation of the SHCI self-management program. Three core components of the framework were identified:

- **Process evaluation:** this component monitors program implementation, provides contextual information for the impact and outcome evaluation, and explains what was successful and why.

- **Impact evaluation:** this component measures changes in perceptions and experiences, behaviour, and organisational structure, and also measures the potential for ongoing sustainability of the program.

- **Outcome evaluation:** this component measures changes in the health and wellbeing of the target population.

The framework also includes three hypotheses, and nine evaluation questions, as outlined in Table 8.
Hypothesis 1
That learning self-management principles will improve:

(iv) The health-related quality of life for people with chronic conditions, particularly those with comorbidities.

(v) The carer/family/significant others perceptions and experiences of the health-related quality of life for people with chronic conditions.

(vi) The health/well being of communities.

Hypothesis 2
That learning self-management principles will help facilitate, among HSPs, improvements in awareness and understanding about the benefits of self-management and consequent behaviour changes, as well as improving communication between GPs, people with chronic conditions and their families, and other health professionals.

Hypothesis 3
That learning self-management principles will result in more appropriate use of health services.

Evaluation Question 1
Which recruitment strategies are most successful in recruiting which clients/groups of clients?

Evaluation Question 2
Which clients/groups of clients are most likely to participate in which DP self-management programs?

Evaluation Question 3
What other factors influence participation rates and in which direction?

Evaluation Question 4
How and by how much does the form/structure of self-management education influence the health behaviours and health outcomes of clients?

Evaluation Question 5
How and by how much does the type, intensity and frequency of client support and follow-up influence the health behaviours and health outcomes of clients?

Evaluation Question 6
How and by how much does the SHCI intervention components influence community outcomes?

Evaluation Question 7
What is the level of client and carer/family/significant other satisfaction associated with each DP self-management program? What factors influence this?

Evaluation Question 8
What is the level of behaviour modification by HSPs? What factors influence this?

Evaluation Question 9
What factors affect the sustainability of the program?

Table 8 - Hypotheses and questions for SCHI evaluation framework

Five domains were identified from the hypotheses and evaluation questions. The national evaluation was based around these five domains, which are: client, carer/family/significant other, community, health service provider, and health service system. The relevant initiative inputs and evaluation dimensions were then identified, to develop the conceptual framework. These are outlined in Table 9.
<table>
<thead>
<tr>
<th>Evaluation Domain and associated Hypotheses and Evaluation Questions (EQ)</th>
<th>Inputs</th>
<th>Evaluation Components</th>
<th>Processes</th>
<th>Impacts</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Client Hypothesis 1</strong>&lt;br&gt;EQ 1,2,3,4,5,7,9</td>
<td>• Recruitment strategy</td>
<td>• Marketing</td>
<td>• Self-management behaviour</td>
<td>• Health status/health related</td>
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<td></td>
<td></td>
<td>• Reach</td>
<td>• Self efficacy</td>
<td>Quality of life</td>
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<td></td>
<td></td>
<td>• Recruitment</td>
<td>• Perceptions</td>
<td>Functional status</td>
<td></td>
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<tr>
<td></td>
<td>• Self-management model</td>
<td>• Features of model:</td>
<td>• Experiences</td>
<td>Social function</td>
<td></td>
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<td></td>
<td></td>
<td>• Enrolment</td>
<td>• with the DP self</td>
<td>Psychological distress</td>
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<td></td>
<td></td>
<td>• Education of clients</td>
<td>management program</td>
<td>Overall wellbeing</td>
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<td></td>
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<td>• Education of personnel</td>
<td></td>
<td>Service use</td>
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<td></td>
<td>• Care/self-management strategy</td>
<td>• Care/self-management planning</td>
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<td></td>
<td>• Support services</td>
<td>• Support from program</td>
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<tr>
<td><strong>Carer/Family/Significant Other Hypothesis 1</strong>&lt;br&gt;EQ 1,2,3,4,5,7,9</td>
<td>• Recruitment strategy</td>
<td>• Marketing</td>
<td>• Perceptions and experiences with DP self-management program</td>
<td>N/A</td>
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<td>• Reach</td>
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<td>• Recruitment</td>
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<td></td>
<td>• Self-management model</td>
<td>• Education of carers</td>
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<td>• Support services</td>
<td>• Support from program</td>
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<tr>
<td><strong>Community Hypothesis 1</strong>&lt;br&gt;EQ 1,2,3,6,7,9</td>
<td>• Recruitment strategy</td>
<td>• Reach</td>
<td>• Perceptions and experiences with DP self-management program</td>
<td>N/A</td>
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<tr>
<td></td>
<td>• Health promotional model</td>
<td>• Health promotion</td>
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<td>• Health planning strategy</td>
<td>• Health planning</td>
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<td>• Community support services</td>
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<td>• Organisational development</td>
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<td>• Workforce development</td>
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<td>• Resource allocation</td>
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<td></td>
<td>• Support services</td>
<td>• Sustainability:</td>
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<td></td>
<td></td>
<td>• Network partnerships</td>
<td></td>
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<td></td>
<td>• Knowledge transfer</td>
<td></td>
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<td>• Problem solving</td>
<td></td>
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<td></td>
<td>• Infrastructure</td>
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<td></td>
<td>• Capacity</td>
<td></td>
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<tr>
<td><strong>Health Service Providers Hypothesis 2</strong>&lt;br&gt;EQ 5,6,8,9</td>
<td>• Recruitment strategy</td>
<td>• Marketing</td>
<td>• Satisfaction with the DP self-management program</td>
<td>N/A</td>
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<td></td>
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<td>• Reach</td>
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<td>• Recruitment</td>
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<td></td>
<td>• Self-management model</td>
<td>• Education of providers</td>
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<td></td>
<td>• Support services</td>
<td>• Support from the DP self-management program</td>
<td></td>
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<tr>
<td><strong>Health Service System Hypothesis 3</strong>&lt;br&gt;EQ 8,9</td>
<td>• Structural support</td>
<td>• Infrastructure development</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
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<td>• Governance</td>
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<td>• Integration</td>
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</tbody>
</table>

Table 9 - SHCI conceptual framework
Table 9 presents the process, impact and outcome evaluation components as parallel rows, but they should be seen as interlinking aspects of the evaluation (Sharing Health Care Initiative, 2005a). The collective influence of these three components is of potential importance to the success of the SHCI. The process evaluation underpins the whole approach, whilst at the same time providing a context for the impact and outcome evaluations.

The information from this literature review has helped to inform the NHS QIS methodology, which is described in the document “NHS QIS Impact Evaluation Study: Study Methodology”. Dialogue about the methodology is ongoing, and will take on Board the principles and key issues identified throughout this literature review.
References


13. Millbank Memorial Fund, Better Information, Better Outcomes? The Use of Health Technology Assessment and Clinical Effectiveness Data in Health

15. Davies, G.P., Hu, W., McDonald, J., Furler, J., Harris, E. and Harris, M., *Developments in Australian general practice 2000 – 2002: what did these contribute to a well functioning and comprehensive Primary Health Care System?* Australia and New Zealand Health Policy 2006;3(1)


Findings – Senior Management Responses

15 In the following sections we present further quantitative data gathered during the primary research phase but not presented in Volume I. Data are presented in graphical form, following the structure of Volume I.

Role and perception of NHS QIS

16 Respondents were asked whether the review and assessment role was correct for NHS QIS. Responses are shown in Figure 2.1, below.

Respondents were asked how well NHS QIS fulfils its role:

Respondents were asked if there were ways in which NHS QIS is not as effective as it could be, responses shown overleaf.
NHS QIS priorities

17 Respondents were asked whether they had a clear idea of NHS QIS priorities, responses shown below in Figure 2.4

Where respondents believed they had a clear idea of NHS QIS priorities, they were asked if they believed these to be correct:
Finally in this section, respondents were asked if it would be helpful if they had a clearer understanding of NHS QIS priorities:

A small number of chief executives and one chair commented in this context that they were confident that NHS QIS priorities were sensible and that it was not central to their role to know more.

**NHS QIS activities**

**Value ratings**

18 The following figures illustrate senior management value judgements of NHS QIS activities (figures 2.7 – 2.14)
Figure 2.8
Board Reviews Rated
Total sample (n=48) %s

Figure 2.9
Best Practice Statements Rated
Total sample (n=48) %s

Figure 2.10
HTAs Rated
Total sample (n=48) %s
Figure 2.11
Evidence Notes Rated
Total sample (n=48) %s

Figure 2.12
Accreditation of MCNs Rated
Total sample (n=48) %s

Figure 2.13
Patient Safety Work Rated
Total sample (n=48) %s
Respondents were asked to rate the quality of NHS QIS activities. Responses are shown below in figures 2.15 to 2.25.
Figure 2.17
QIS Activities Rated - Topic Selection
Total sample (n=48) %s

Figure 2.18
QIS Activities Rated - Dissemination of Information
Total sample (n=48) %s

Figure 2.19
QIS Activities Rated - Follow-up
Total sample (n=48) %s
Figure 2.20
QIS Activities Rated - Networking
Total sample (n=48) %s

Figure 2.21
QIS Activities Rated - Performance Assessment
Total sample (n=48) %s

Figure 2.22
QIS Activities Rated - Practice Development
Total sample (n=48) %s
Impact evaluation

Respondents were asked to assess each of twelve NHS QIS products and two NHS QIS processes for changes in knowledge, practice or policy and patient outcome. In some cases, of course, the respondent would not be aware of the initiative, or of its impacts. Only those respondents who were aware of these outputs...
have been included in these data, which are presented in figures 2.26 to 2.39.

**Figure 2.26**
Product 1 - HTA 7 (Alcohol-based products)
(n=34) - % reporting changes

**Figure 2.27**
Product 2 - Review HAI
(n=35) %s

**Figure 2.28**
Product 3 - Best Practice Statement (Urinary Catheterisation)
(n=22) %s
Figure 2.29
Product 4 - Review Anaesthesia
(n=22) % reporting changes

Figure 2.30
Product 5 - Health Indicators Report, A focus on Children
(n=20) % reporting changes

Figure 2.31
Product 6 - SIGN 81 (Epilepsy in Children)
(n=23) % reporting changes
Figure 2.32
Product 7 - Clinical Standards Maternity
(n=33) - % reporting changes

Figure 2.33
Product 8 - Review Schizophrenia
(n=24) - % reporting changes

Figure 2.34
Product 9 - SIGN 86 (Dementia)
(n=24) - % reporting changes
Figure 2.35
Product 10 - Best Practice Statement (Adults Urinary Dysfunction)
(n=18) - % reporting changes

Figure 2.36
Product 11 - Standards - Out of Hours Provision
(n=32) - % reporting changes

Figure 2.37
Product 12 - SIGN 79 (Urinary Incontinence in Primary Care)
(n=14) - % reporting changes
Figure 2.38
Process 1 - Clinical Governance and Patient Safety Network
(n=11) - % reporting changes

Figure 2.39
Process 2 - Accreditation of MCNs
(n=5) - % reporting changes
Findings – Practitioner Responses

Practitioners were asked to rate several aspects of the NHS QIS outputs considered. We present in the following figures (2.40 -2.46) the aggregated ratings.

Figure 2.40
Technical Quality of QIS Output
\((n=90)\) %

Figure 2.41
Understandability/Accessibility of QIS Output
\((n=90)\) %

Figure 2.42
Suitability of Format of QIS Output
\((n=90)\) %
Figure 2.46
Follow-up from QIS
(n=90) %s
## Research Instruments

The following pages reproduce the research instruments used. We have not reproduced cover pages or backing pages, where additional notes were added by researchers.

### Instrument 1

**NHS QIS Impact Evaluation Study**

<table>
<thead>
<tr>
<th>Section 1 - QIS Role and Perception</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How would you describe the current perception of QIS within NHSScotland?</td>
</tr>
<tr>
<td>2. How would you describe the current role of QIS within NHSScotland?</td>
</tr>
<tr>
<td>3. Do you think that this is the role that QIS should be fulfilling?</td>
</tr>
<tr>
<td>4. If yes, how effectively do you think QIS fulfills this role?</td>
</tr>
<tr>
<td>5. If no, what should be the role of QIS within NHSScotland?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>DK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Go to Q4</td>
<td>Go to Q5</td>
<td>Go to Q6</td>
<td></td>
</tr>
</tbody>
</table>

Please continue overleaf if necessary
### Section 1 - QIS Role and Perception

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>DK</th>
<th>Go to Q7</th>
<th>Go to Q8</th>
<th>Go to Q9</th>
<th>Go to Q10</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. In your opinion, are there any ways in which QIS is not as effective as it should be?</td>
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<tr>
<td>7. What are the main things you would like to see QIS carry out in order to fulfill its role more effectively?</td>
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<tr>
<td>8. Do you think QIS is effective in ensuring that health professionals have a clear understanding of its roles and priorities?</td>
<td>Yes</td>
<td>No</td>
<td>DK</td>
<td>Go to Q10</td>
<td>Go to Q9</td>
<td>Go to Q10</td>
<td>Go to Q10</td>
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<tr>
<td>9. If no, in what way could it be more effective?</td>
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</tr>
</tbody>
</table>
Section 1 - QIS Role and Perception

10. In your opinion, what would say are the positive aspects of QIS and its work?

11. In your opinion, what would say are the negative aspects of QIS and its work?
### Section 1 - QIS Role and Perception

10. In your opinion, what would say are the positive aspects of QIS and its work?

   ![Positive aspects blank space]

   *Please continue overleaf if necessary*

11. In your opinion, what would say are the negative aspects of QIS and its work?

   ![Negative aspects blank space]

   *Please continue overleaf if necessary*
### Section 2 - QIS Priorities

1. Do you have a clear idea of the current priorities of QIS?  
   - Yes \(\rightarrow\) Go to Q2  
   - No \(\rightarrow\) Go to Q4  
   - DK \(\rightarrow\) Go to Q5

2. If yes, what do you see as their current priorities?  
   Please continue overleaf if necessary

3. Do you feel that these are the right priorities for QIS?  
   - Yes \(\rightarrow\) Go to Q5  
   - No \(\rightarrow\) Go to Q4  
   - DK \(\rightarrow\) Go to Q5

4. If no, would it be helpful if you had a clearer understanding of QIS priorities and programmes of work?  
   Please continue overleaf if necessary

5. Have you personally ever been consulted by QIS with regard to their priorities or programme of work?  
   - Yes \(\rightarrow\) Go to Q6  
   - No \(\rightarrow\) Go to Q7  
   - DK \(\rightarrow\) Go to Q7

6. If yes, please describe the contact. If no, has anyone else in your organisation been so consulted?  
   Please continue overleaf if necessary

Go to Q7
Section 2 - QIS Priorities

7. If you had the opportunity to choose what the priorities of QIS should be, what would be your key targets?

8. Have you or your organisation ever raised an issue with QIS that you would like them to act on?

9. If yes, please provide details and comment on the responsiveness of QIS.

10. How would you best describe the relationship between QIS and its target audiences?
Section 2 - QIS Priorities

11. How would you rate the main sets of activities that you associate with QIS as an organisation?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Very valuable</th>
<th>Valuable</th>
<th>Not valuable</th>
<th>No opinion</th>
<th>No knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best practice statements</td>
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<tr>
<td>Standards development</td>
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<tr>
<td>Individual board reviews</td>
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<tr>
<td>Promoting patient safety</td>
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<tr>
<td>Promoting clinical governance</td>
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<td>Accrediting Managed Clinical Networks</td>
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<tr>
<td>Health technology assessments</td>
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<td>Evidence notes</td>
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<tr>
<td>General advice and support</td>
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<td>Other (please list)</td>
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<td>Other (please list)</td>
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<tr>
<td>Other (please list)</td>
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</tbody>
</table>
### Section 3 - Interaction with QIS

1. Can you tell me about the main interactions, both formal and informal, that take place between your organisation and QIS?

<table>
<thead>
<tr>
<th>Details</th>
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<tbody>
<tr>
<td>You personally</td>
</tr>
<tr>
<td>Your organisation</td>
</tr>
</tbody>
</table>
Section 4 - QIS Impact

1. Do you believe that QIS has the potential to increase its influence and impact within NHSScotland?

2. If yes, how should this be accomplished?

3. If no, why is this?

4. Thinking about the last two years, can you identify any actions of QIS that you feel have significantly increased professional knowledge – for you personally or for your organisation?

<table>
<thead>
<tr>
<th>Personal level</th>
<th>Organisational level</th>
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Please continue overleaf if necessary.
### Section 4 - QIS Impact

4. Thinking about the last two years, can you identify any actions of QIS that you feel have led to changes in practice or policy – for you personally or for your organisation?

<table>
<thead>
<tr>
<th>Personal level</th>
<th>Organisational level</th>
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</table>

5. Has this lead to an improvement in patient outcomes?

6. If yes, please provide any quantitative or qualitative details.

   Please continue overleaf if necessary

6. If no, what are the reasons for this?

   Please continue overleaf if necessary
1. Turning now to specific outputs of QIS, we would like to explore your knowledge of the following products by completing the table below.

<table>
<thead>
<tr>
<th>Product</th>
<th>Awareness</th>
<th>Changed knowledge</th>
<th>Changed practice</th>
<th>Changed outcome</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>The provision of alcohol-based products to improve compliance with hand hygiene (HTA report 7)</td>
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<td>Healthcare Associated infection (HAI); Infection control in NHS Scotland (National overview &amp; Local Reports – May 2005)</td>
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<td>Urinary catheterisation &amp; catheter care (Best practice statement – June 2004)</td>
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<tr>
<td>Anaesthesia – care before, during and after anaesthesia (National overview – September 2005)</td>
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<td>A focus on children &amp; leaflet understanding the 2004 health indicators report – a focus on children (Health indicators report – December 2004)</td>
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<tr>
<td>Diagnosis and management of epilepsies in children and young people (SIGN Guideline 81)</td>
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<td>Maternity services (Clinical standards – March 2005)</td>
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<td>Schizophrenia (National overview &amp; Local Reports – June 2004)</td>
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<td>Management of patients with dementia (SIGN Guideline 86)</td>
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<td>Continence – adults with urinary dysfunction (Best practice statement – November 2005)</td>
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<td>The provision of safe and effective primary medical services out of hours (Standards – August 2004)</td>
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<td>Management of urinary incontinence in primary care (SIGN Guideline 79)</td>
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<tr>
<td>Clinical governance and patient safety network</td>
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<tr>
<td>Accreditation of managed clinical network</td>
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</tbody>
</table>
Section 6 - Impact Evaluation

1. Do you carry out any formal evaluations in your organisation of QIS interventions?
   - Yes: Go to Q2
   - No: Go to Q3
   - DK: Go to Q3

2. If yes, please provide details and results.
   Please continue overleaf if necessary

3. What do you believe contributes to a successful intervention from QIS?
   Please continue overleaf if necessary

4. What do you believe are barriers to the successful implementation of QIS interventions?
   Please continue overleaf if necessary
Section 6 - Impact Evaluation

5. Please indicate your view of the quality of QIS processes as far as you are able by rating the following topics:

<table>
<thead>
<tr>
<th></th>
<th>Very Poor</th>
<th>Poor</th>
<th>Neutral</th>
<th>Good</th>
<th>Very Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Product Development</td>
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<tr>
<td>Liaison with the service</td>
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<tr>
<td>Selection of topics and work programmes</td>
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<tr>
<td>Dissemination of information</td>
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<td>Follow-up</td>
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<tr>
<td>Networking</td>
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<tr>
<td>Other support</td>
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</tbody>
</table>
6. Please indicate your view of QIS activities as far as you are able by rating the following topics:

<table>
<thead>
<tr>
<th></th>
<th>Very Poor</th>
<th>Poor</th>
<th>Neutral</th>
<th>Good</th>
<th>Very Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance assessment</td>
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<tr>
<td>Practice development</td>
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<tr>
<td>Clinical Governance and risk management</td>
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<tr>
<td>Patient Safety</td>
<td></td>
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<tr>
<td>Evidence-based guidance (HTA, evidence notes, SIGN, etc)</td>
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</tbody>
</table>
Section 1 - Introduction & Background

1. How would you describe the current role of QIS within NHSScotland?

2. Do you think that this is the role that QIS should be fulfilling?

3. If yes, how effectively do you think QIS fulfills this role?

4. If no, what should be the role of QIS within NHSScotland?

5. Why do you think it is not currently fulfilling it’s role?
Section 1 - Introduction & Background

6. In what way would you say QIS is not as effective as it should be?

7. What are the main things you would like to see QIS carry out in order to fulfill its role more effectively?

8. Do you think QIS is effective in ensuring that health professionals have a clear understanding of its roles and priorities?

9. If no, in what way could it be more effective?

10. How would you describe the current image of QIS within NHSScotland?
### Section 1 - Introduction & Background

11. **What are the actions that QIS have carried out that reinforce the positive aspects of QIS and its work?**

   Please continue overleaf if necessary

12. **Have there been things that QIS have done that undermine the image of QIS and its work?**

   Please continue overleaf if necessary

13. **If you were describing QIS as an organisation to a colleague, what words would you use?**

   Please continue overleaf if necessary

14. **Why do you say that?**

   Please continue overleaf if necessary
Section 2 - QIS Priorities

1. Do you have a clear idea of the current priorities of QIS?
   - Yes  Go to Q2
   - No  Go to Q4
   - DK  Go to Q5

2. If yes, what do you see as their current priorities?

3. Do you feel that these are the right priorities for QIS?
   - Yes  Go to Q5
   - No  Go to Q4
   - DK  Go to Q3

4. If no, would it be helpful if you had a clearer understanding of QIS priorities and programmes of work?

5. Have you personally ever been consulted by QIS with regard to their priorities or programme of work?
   - Yes  Go to Q6
   - No  Go to Q7
   - DK  Go to Q5

6. If yes, please describe the contact. If no, has anyone else in your organisation been so consulted?

   Please continue overleaf if necessary
Section 2 - QIS Priorities

7. If you had the opportunity to identify what the priorities of QIS should be, what would be your key targets? [Please continue overleaf if necessary]

8. Have you or your organisation ever raised an issue with QIS that you would like them to act on? [Yes, No, DK]

9. If yes, please provide details and comment on the responsiveness of QIS. [Please continue overleaf if necessary]

10. How would you best describe the relationship between QIS and its target audience? [Please continue overleaf if necessary]

Go to Q8

Go to Q9

Go to Q10

Go to Q11

Go to Q8

Go to Q10

Go to Q11
11. How would you rate the main sets of activities that you associate with QIS as an organisation?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Very valuable</th>
<th>Valuable</th>
<th>No opinion</th>
<th>Not valuable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best practice statements</td>
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<tr>
<td>Clinical standards development</td>
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<td>Individual board reviews</td>
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<td>Non-clinical standards development</td>
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<td>Promoting patient safety</td>
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<td>Promoting clinical governance</td>
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<td>Managed Clinical Networks</td>
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<td>Health technology assessments</td>
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<td>Evidence notes</td>
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<td>Advice and support</td>
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<td>Other (please list)</td>
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<td>Other (please list)</td>
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<tr>
<td>Other (please list)</td>
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</tbody>
</table>
Section 3 – Target Audience and Product Dissemination

1. Can you tell me how you became aware of this product?

2. Can you describe any other publicity, training, directives or communications from QIS regarding this product?

3. Within this Board, were you the best person to receive this product from QIS?

4. Who do you think should have received this product initially?

5. After receiving this product, was it clear what action should be taken?

6. Can you describe what action was taken?

Please continue overleaf if necessary

| Yes | Go to Q5 |
| No  | Go to Q4 |
| DK  | Go to Q7 |

Go to Q2

Go to Q3

Go to Q6
Section 4 – Product Impact and Quality

1. Thinking about you personally, has your level of professional knowledge been increased by this product?
   - Yes: Go to Q2
   - No: Go to Q3
   - DK: Go to Q4

2. Please provide some details.
   Please continue overleaf if necessary
   - Go to Q4

3. Please comment on why this is the case.
   Please continue overleaf if necessary
   - Go to Q4

4. Again, thinking about you personally, has your professional practice or policy changed as a result of this product?
   - Yes: Go to Q5
   - No: Go to Q6
   - DK: Go to Q7

5. Please provide some details.
   Please continue overleaf if necessary
   - Go to Q7

6. Please comment on why this is the case.
   Please continue overleaf if necessary
   - Go to Q7
### Section 4 cont. – Product Impact and Quality

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<table>
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<tbody>
<tr>
<td>7.</td>
<td>Do you believe that this product and any actions taken as a result have changed outcomes for patients in any way?</td>
<td>Yes Go to Q8&lt;br&gt;No Go to Q9&lt;br&gt;DK Go to Q10</td>
</tr>
<tr>
<td>8.</td>
<td>Please provide some details.</td>
<td>Please continue overleaf if necessary Go to Q10</td>
</tr>
<tr>
<td>9.</td>
<td>Please comment on why this is the case.</td>
<td>Please continue overleaf if necessary Go to Q10</td>
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<tr>
<td>10.</td>
<td>In your opinion, have other staff in this Board been influenced in any way by the product?</td>
<td>Yes Go to Q11&lt;br&gt;No Go to Q12&lt;br&gt;DK Go to Q13</td>
</tr>
<tr>
<td>11.</td>
<td>Please provide some details.</td>
<td>Please continue overleaf if necessary Go to Q13</td>
</tr>
<tr>
<td>12.</td>
<td>Please comment on why this is the case.</td>
<td>Please continue overleaf if necessary Go to Q13</td>
</tr>
</tbody>
</table>
### Section 4 cont. – Product Impact and Quality

13. What would you say are the key incentives or drivers for the adoption or uptake of this product?

Please continue overleaf if necessary

14. What would you consider the chief barriers to the adoption or uptake of this product?

Please continue overleaf if necessary

15. Are you aware of other products, advice or guidelines which also apply to this theme, apart from the one under consideration?

Yes [Go to Q16]  
No [Go to Q18]  
DK [Go to Q18]

16. Please provide some details.

Please continue overleaf if necessary

17. How do you think the QIS initiatives compare with others?

Please continue overleaf if necessary
Section 4 cont. – Product Impact and Quality

18. Please rate the product or document for each of the elements listed below.

<table>
<thead>
<tr>
<th>Element</th>
<th>Very good</th>
<th>Good</th>
<th>Don’t know</th>
<th>Poor</th>
<th>Very poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical quality</td>
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<td>Follow-up from QIS</td>
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</table>

19. Have you any other comments about this specific QIS product or about NHS QIS work in general?
### NHS QIS Impact Evaluation Study

#### Section 5 – Feedback and response

1. After receiving this product, did you provide QIS with any comments or feedback?
   - [ ] Yes  [ ] Go to Q2
   - [ ] No   [ ] Go to Q7
   - [ ] DK   [ ] Go to Q6

2. Please provide some details.
   - Please continue overleaf if necessary

3. Please comment on why this is the case.
   - Please continue overleaf if necessary

4. If you provided feedback, did you receive a response from QIS?
   - [ ] Yes   [ ] Go to Q5
   - [ ] No    [ ] Go to Q6
   - [ ] DK    [ ] Go to Q6

5. Please provide some details.
   - Please continue overleaf if necessary

6. Please comment on any other interactions you have had with QIS.
   - Please continue overleaf if necessary
Instrument 3

Thank you for helping us with this research!

This questionnaire is part of a larger study where we are attempting to assess the impact of a number of healthcare initiatives carried out recently by NHS Quality Improvement Scotland (QIS). Note that this questionnaire relates only to the product described below.

How to complete the questionnaire

Please answer the questions as well as you can – don’t worry if there seem to be some that don’t apply to you. Some are asking for “yes”, “no” or “don’t know” (DK): please circle your answer. Some ask for your opinions or comments: please write your responses in the boxes provided, or on the back of the sheet if you need more room. When complete, please send it to us in the envelope provided. And you can call Dr Steve Cross or Dr Claire Blackett on the project team if you have any questions, on 01257 463121.

Confidentiality Statement and Consent

In providing this information, I understand that my confidentiality will be respected. Individual data will not be shared with NHS QIS under any circumstances and only aggregated data will be presented or published. In all reporting, care will taken to ensure that individual respondents will not be identifiable.

Your signature ……………………………………………………………………

Date ………………………………………………………………………

Your name: ……………………………………

Date: …………………………………………………

Position: ………………………………………

Board: ……………………………………………

QIS Product evaluated:

……………………………………………………………………
1. Thinking about you personally, has your level of professional knowledge been increased by this product?

2. If your answer was "yes" please provide some details.

3. If your answer was "no", can you tell us why?

4. Again, thinking about you personally, has your professional practice or policy changed as a result of this product?

5. If your answer was "yes" please provide some details.

6. If your answer was "no", can you tell us why?

<table>
<thead>
<tr>
<th>Response</th>
<th>Go to Q2</th>
<th>Go to Q3</th>
<th>Go to Q4</th>
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<tbody>
<tr>
<td>Yes</td>
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<td>No</td>
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<tr>
<td>DK</td>
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</table>

<table>
<thead>
<tr>
<th>Response</th>
<th>Go to Q5</th>
<th>Go to Q6</th>
<th>Go to Q7</th>
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<tbody>
<tr>
<td>Yes</td>
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<tr>
<td>No</td>
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<td>DK</td>
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<tr>
<th>Response</th>
<th>Go to Q7</th>
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<tr>
<td>Yes</td>
<td></td>
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<tr>
<td>No</td>
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<tr>
<td>DK</td>
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</tbody>
</table>
7. Do you believe that this product and any actions taken as a result have changed outcomes for patients in any way?

8. If your answer was "yes" please provide some details...

9. If your answer was "no", can you tell us why?

10. Please rate the product for each of the elements listed below.

<table>
<thead>
<tr>
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Thanks again! – please add any other comments you’d like to on the reverse of this sheet and send it back to us in the envelope provided.
You can read and download this document from our website. We can also provide this information:

- by email
- in large print
- on audio tape or CD
- in Braille, and
- in community languages.

**NHS Quality Improvement Scotland**

Edinburgh Office
Elliott House
8-10 Hillside Crescent
Edinburgh EH7 5EA

Phone: 0131 623 4300
Textphone: 0131 623 4383

Glasgow Office
Delta House
50 West Nile Street
Glasgow G1 2NP

Phone: 0141 225 6999
Textphone: 0141 241 6316

Email: comments@nhshealthquality.org
Website: www.nhshealthquality.org