P R O J E C T
MEMORANDUM

Developing, Disseminatin and Assessing Standards the National Health Serv

An Assessment of Current Status Opportunities for Improvement

ELIZABETH A. MCGLYNN, PAUL SHEKELLE, PETER HUSSEY

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HEALTH

Preface

As the National Health Service (NHS) approaches its 60th Anniversary, Lord Ara Darzi is leading a review of the progress the NHS is making toward achieving the vision of delivering world class health care. Lord Darzi has organized ten work streams to inform the *NHS Next Stage Review* on: quality and quality improvement, innovation, workforce, leadership, systems and incentives, NHS Constitution, primary and community care strategy, health inequalities, health informatics, and rural health. Multiple projects are being undertaken within each work stream. The project reported on here is part of the quality and quality improvement work stream.

The RAND Corporation was asked to conduct a high-level review of the current approaches to developing and disseminating standards, and the extent to which current data and information systems are adequate to support the assessment of standards. The project took place over about 6 weeks and included a review of existing documents produced by the Department of Health (DH), the National Health Service (NHS), various Royal Colleges, regulatory bodies, arms length bodies, and other organizations involved in the areas related to the remit. A list of documents and websites reviewed is contained in the bibliography section. In addition, RAND staff interviewed more than 35 individuals in various organizations to obtain their perspectives on the current status and opportunities for improvement in quality standard setting, dissemination, and assessment.

Executive Summary

Based on interviews with a people in a variety of organizations, we developed a set of key observations in three areas: developing standards, disseminating standards, and the adequacy of current data and information systems to support the assessment and improvement of performance on standards. Highlights of the findings in each area are provided here.

Developing Standards

A variety of organizations within and outside of DH participate in setting different types of standards. While these organizations interact with each other in various ways, we found no clear overarching framework for quality within which these organizations operate. The types of standards promulgated by these organizations are different and the processes by which the standards are produced are also different. In our interviews, we noted a clear relationship between who was responsible for setting a standard and how the standard was set and its degree of acceptability. In particular, standards that were set solely by DH, without involvement of outside groups, were perceived as less acceptable than other types of standards.

Disseminating Standards

Four major approaches are taken to disseminating standards: (1) providing print or electronic descriptions of standards; (2) developing decision tools to support practicing consistent with standards; (3) conducting performance assessments (with or without public reporting); (4) holding organizations and/or individuals accountable to standards through regulatory or financial means. The literature in general concludes that no single approach to dissemination is optimal; multiple methods are usually required.

In our review of the various approaches to disseminating standards, the most successful approach to date appears to be the Quality and Outcomes Framework (QOF) that defines part of the compensation arrangement for GPs. This has several features that are associated with success: the QOF is built on clinical standards that were developed by the profession and are consistent with NICE clinical guidance; there are methods for

signaling which patients are not appropriate for inclusion in a particular QOF standard; the electronic records maintained by GPs provide decision support tools to enhance performance; and GPs are rewarded for higher levels of adherence.

Information Systems

Excellent information systems are required to support most modern approaches to quality improvement. We found that the UK is still some distance from achieving the systems necessary to support either more widespread pay-for-performance schemes or to support evidence-based Commissioning (and its related focus on consumer activated purchasing). Work is underway in DH to address many of these issues. We highlight areas of particular concern that may be useful for future priority setting.

Recommendations

The report provides nine recommendations to guide future actions. Where appropriate, the discussion of the recommendation offers examples of best practices either from the UK or from other countries:

- Develop a coherent vision of the role of standards in accomplishing the major goals of the National Health Service, the types of standards required, and the best practices for developing and disseminating standards.
- Develop systematic approaches to integrating clinical guidelines with quality measures development.
- Work should be undertaken to fill gaps in the availability of standards related to fairness (equity) and personalization.
- Develop a strategy to ensure that data necessary to inform decisions by doctors, patients, and managers are accurate, available, usable, and appropriate.
- Investment must be made in developing the skills necessary to produce and use information for clinical care, management, and patient choice.
- Articulate the level at which different things get done (national, regional, local).
- Focus on getting the fundamentals right.

- Focus on improving the functioning of existing organizations before entertaining the development of new organizations.
- Beware of “magic bullets” that appear to offer simple solutions to complex problems.

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Introduction

In *Our NHS, our future* Lord Darzi outlines a vision for the National Health Service (NHS) in the 21st Century.[1] His vision is simply that the NHS will be world class in delivering health care services that are fair, personalized, effective, and safe. Although he notes that progress has been made, particularly in response to the most recent set of reforms, considerable work remains to be done.

The RAND Corporation was asked to conduct a high-level review of the current approaches to developing, disseminating, and assessing standards in the UK and to suggest areas for improvement with particular focus on best practices. We reviewed documents and websites from a variety of organizations and interviewed more than 35 people who worked for different organizations in and outside of government. The project was conducted over approximately six weeks starting in late December 2007.

This document is organized in three major sections:

1. A framework for standard setting
2. Observations about the current status of standard setting, dissemination, and information systems in the UK
3. Recommendations for future action based on best practices from both within and outside of the UK

The short time frame in which this project was done necessarily limits the depth of the analysis and the opportunity to iterate with more knowledgeable individuals. Thus, we focus on the major themes that emerged from our review of written materials and our discussions with those we interviewed. Our findings and recommendations highlight general principles that should be considered in designing quality assessment and improvement strategies going forward.

[1] Darzi (2007). *Our NHS, our future. NHS Next Stage Review. Interim Report.* Department of Health, London.

A Framework for Standard Setting

Effective standards do not exist in a vacuum. To be meaningful and useful, standards must enable an organization to understand the degree to which it is making progress toward accomplishing its vision. The purpose of this section is to suggest a framework within which the specific questions we were asked to address could be considered. Any evaluation of the current status of standard setting or the opportunities for improvement must be framed in light of the goals the standard supports.

The Department of Health (DH) defines standards as "a means of describing the level of quality that health care organizations are expected to meet or aspire to." We are more familiar with the use of standards as a level an organization is expected to meet; aspirations would seem to be more consistent with goals than with standards.

It was clear in the interviews we conducted that there were a variety of definitions of standards and that standards were developed in a number of areas. The table below lists some of the major types of standards that were discussed by different people and illustrates the heterogeneity of those standards by examining the range of purpose, users, and evidence on which the standards are based.

Type of Standard?	Purpose?	Who Uses?	Nature of Evidence?
Clinical performance	Improve outcomes of care	Physicians, patients, managers	Scientific, professional consensus
Safety • Patient • Staff	Reduce the likelihood of harm	Managers, clinicians, regulators	Epidemiology (either from literature of from reporting systems)
Access (e.g., waiting times)	Reduce barriers to needed care; improve patient experience	Patients, managers	Patient preference, clinical evidence (delays that affect outcomes)
Service (e.g., patient experience)	Improve patient experience	Patients, managers, clinicians	Patient preferences
Regulatory	Ensure minimal acceptable levels of	Regulators, managers	Consensus

	quality		
Professional	Ensure fitness for practice	Licensing bodies, regulators	Professional consensus
Population health	Motivate action to improve health	Public health professionals	Epidemiology
Financial	Increase value of health care product	Purchasers, regulators	Comparative performance
Data	Enhance utility	Standards setting bodies, vendors	Consensus

The development of clinical standards is most mature and benefits from a scientific research tradition that allows the strength of the evidence to be accounted for. Standards in other areas have less sophisticated or well developed evidence bases to draw on and the process for developing standards is not as systematized.

OBSERVATIONS ABOUT CURRENT STANDARD SETTING, DISSEMINATION, AND INFORMATION SYSTEM ADEQUACY

In this section of the report we will characterize the current status, as we understand it, of how standards are set and disseminated and the adequacy of data and information systems to support both assessment against standards and quality improvement activities.

STANDARD SETTING

Given the heterogeneity of types of standards, we have organized this section around the type of entity responsible for setting standards. This illustrates that even within organizations there is variety in the approaches taken and in the external acceptability of the resulting standards. The main organizations we identified were:

- Department of Health
    - National Service Frameworks
    - Quality and Outcomes Framework
    - Standards for Better Health
- Arms Length Bodies – Special Health Authorities
    - National Institute for Health and Clinical Effectiveness
    - National Patient Safety Agency
        - Patient Safety Division
        - National Clinical Assessment Service
    - National Health Service Litigation Authority
- Arms Length Bodies – Non-departmental Public Bodies
    - Healthcare Commission
    - Monitor
- External Organizations
    - Medical Royal Colleges
    - General Medical Council

Department of Health

In this section, we focus on standards developed for the National Service Frameworks, the Quality and Outcomes Framework, and Standards for Better Health because they illustrate key differences in the process by which standards were set and the resulting degree of acceptability.

National Service Frameworks (NSF)

The NSFs set evidence-based standards in specific clinical areas (pediatric intensive care, mental health, diabetes, coronary heart disease, cancer, renal services, long term conditions, chronic obstructive pulmonary disease) or for specific populations (older people, children). The NSFs represent exemplary practice in standard setting for various reasons:

- Each standard is set within the context of an aim (what result is being sought) and a rationale for the standard;
    - Most of the NSFs are motivated by the variation in outcomes observed within the UK or between the UK and other countries;
    - The Cancer Strategy is focused on improving outcomes in six areas (prevention, early diagnosis, better treatment, living with cancer, reducing inequalities, and delivering care in the appropriate setting) and improving delivery in four areas (information for quality improvement and choice, stronger commissioning, funding, building future capacity).
    - Reorganization of stroke services is highlighted as necessary to make the next level of improvement in outcomes;
    - The Long-term Conditions NSF focuses on improvements in quality of life and increasing the ability of people with neurological conditions to live independently;
    - The Coronary Artery Disease NSF shows the linkage between standards and the implementation of the recommendations.
- The markers of good practice are clearly articulated with targets related to the strength of the evidence that supports the standard;

  - The NSFs include very specific standards for delivery of services known to affect the outcomes of interest;
  - The NSFs also note the service delivery systems that are necessary to ensure delivery of appropriate care;
  - National clinical audits have been used to inform where the gaps exist and to identify areas that require prioritization;
  - NICE clinical guidelines are used, where available, to inform the markers of good practice;
- The NSFs are developed by an external group that represents the range of stakeholders;
  - The Stroke Strategy was developed by six independent groups of experts and was coordinated by the National Director for Heart Disease and Stroke;
  - The Cancer Strategy was developed by a wide range of groups including an Advisory Board and Working Groups, clinicians, patients, charities, and industry organizations;
- The NSFs have a named clinical leader who is responsible for overseeing the implementation of the plan. These individuals are well respected by a range of stakeholders.
  - In general we found there was a gap in many other types of standards between the design of the standard and the approach to implementation. Often a different organization is tasked with either implementing or evaluating the implementation of a standard which can either result in disconnects or in failure to follow through.
- The NSFs have a long-range focus (10 years typically) but include shorter-range actions. Almost all have been updated to reflect progress made and/or new scientific developments that warranted revisions. The ability to sustain attention to and progress in an area is critically important for success and stands in contrast to other approaches that change more frequently.

Perhaps the most important signal of the effectiveness of the NSFs is that clear progress has been made in [most/all] of the areas for which NSFs have been developed.

- Reductions in cancer mortality appear likely to exceed the target of a 20% reduction between 1997 and 2010;[2]
- Death rates from cardiovascular disease have been falling; the NSF targeted a 40% reduction in mortality between 1997 and 2010 and by 2003/2004, a 35.9% reduction had been achieved;[3]
- Inequalities in cardiovascular mortality have also been reduced; for example, there has been a 26.4% absolute reduction in mortality between the Spearhead PCTs and the average for England;[4]

Quality and Outcomes Framework (QOF)

The QOF was introduced in 2003 as part of the general medical services contract between the NHS and general practitioners (GPs). The QOF establishes standards (indicators) in five major domains for general practitioners: clinical, patient experience, additional services, holistic care, organizational. The QOF is used to determine ~25% of GP payment each year. Several aspects of the QOF standards are notable:

- The standards were developed by a negotiating team composed of the NHS Confederation and the General Practitioners Committee of the British Medical Association; the negotiating team is advised by an academic consortium.
- The QOF represents a fundamental change in the standards for evaluating physicians from relying on training and licensing to requiring evidence of performance in practice;
- About two-thirds of the standards relate to clinical care delivery and the majority are based on national guidelines;
- The QOF represents an alignment between financial incentives and the standards of good medical care;

[2] Department of Health. *Cancer Reform Strategy*. December 2007, p. 18.
[3] The Information Centre. *Health Survey for England 2006, Volume 1, Cardiovascular Disease and Risk Factors in Adults,* 2008, p. 20.
[4] Ibid, p. 20.

- The QOF encouraged the adoption of electronic medical records in GP practices because the information necessary to determine performance against standards can be routinely extracted from those records;
- Practice consistent with these standards requires proactive management of patients and involvement by the entire practice team;
- The QOF has been updated to change thresholds and add new conditions and indicators.

As was noted in the NSFs, performance in the areas covered by the GP contract has improved, although there is evidence that improvements were already happening prior to the contract implementation.[5] Incentive payments appear to have accelerated the rate of increase in performance improvement.

Standards for Better Health

The Department of Health's *Standards for Better Health* include both core standards (minimum level of service) and developmental standards (areas for continuous improvement). This set of standards drew the greatest number of critiques in our interviews and appear to have had a negative effect on how people view standards more broadly. We found, for example, that:

- The standards are not linked to a clear set of aims or goals; although the standards are organized around key domains (safety, clinical and cost effectiveness, governance, patient focus, accessible and responsive care, care environment and amenities, public health) they do not articulate a vision for the effect that adherence to the standards will have on patient outcomes or other goals;
- The distinction between core and developmental standards was not particularly clear and made worse by the fact that the level of performance on core standards was unexpectedly variable.

[5] Campbell S, Reeves D, Kontopantelis E et al. Quality of primary care in England with the introduction of pay for performance. *New England Journal of Medicine* 2007;357:181-190.

  - The expectation established in the document was that all organizations were providing care consistent with core standards but this did not turn out to be the case.
  - No consequences were established a priori for failure to meet the core standards.
  - Because NICE technology appraisals were part of core standards and NICE clinical guidance was part of developmental standards, these standards reinforced the concern that DH is more interested in costs than clinical quality.
- The standards themselves were written at a very high level making assessments of performance difficult (e.g., "Health care organizations ensure that clinical care and treatment are carried out under supervision and leadership.")
  - Two approaches to assessment were taken, neither of which appears to be completely successful. First, Trusts were allowed to "self declare" their level of adherence to the standards and these declarations were viewed with suspicion by outside observers. Second, the Healthcare Commission had to create metrics for assessing performance and these were sometimes viewed as too prescriptive (micromanagement).
- While the standards make reference to the NSFs and NICE, there is no clear articulation of how these relate to one another or to the standards (e.g., "Patients receive effective treatment and care that conform to nationally agreed best practice, particularly as defined in National Service Frameworks, NICE guidance, national plans and agreed national guidance on service delivery.")
  - A major concern across many of the standards is the lack of clear metrics for evaluating performance against standards.
- The standards were developed within DH and do not appear to have engaged a broader community of providers or patients in their development. Standards that are viewed as "top-down" are generally less well accepted.

Arms Length Bodies – Special Health Authorities

In this section we focus on three arms length bodies that are special health authorities that participate in standard setting: the National Institute for Health and Clinical Effectiveness, the National Patient Safety Agency, and the National Health Service Litigation Authority.

National Institute for Health and Clinical Effectiveness (NICE)

NICE was established in 1999 and its role was further refined in 2004. NICE is responsible for providing guidance in three major areas:

- Clinical practice (62 currently published; 57 under development)
- Health technologies (243 currently published; 55 under development)
- Public health interventions (6 published; 9 under development) and public health programmes (2 published; 10 under development)

In the international community, NICE is considered "best in class" for the type of evidence-based products it develops. In the interviews we conducted, it is clear that NICE is well respected within the UK. The process by which the clinical practice guidelines are developed is notable, specifically:

- National Collaborating Centres (acute care, cancer, chronic conditions, mental health, nursing and supportive care, primary care, women and children's health) are independent organizations that bring together the professional organizations (Royal Medical Colleges), doctors, patients and their caregivers. The NCCs engage guideline development groups for each topic referred to them; the development groups are responsible for evaluating the evidence and drafting the guideline. In general, this approach to engaging stakeholders increases the acceptability of resulting guidance.
- NICE has four standing guideline review panels that are responsible for validating the final guideline and assessing whether the guideline development group has adequately responded to comments. The guideline review panels are not associated with the National Collaborating Centres.
    - This approach facilitates consistency across the guidelines developed by different groups.

The NICE health technology appraisals undergo a somewhat different process relying on independent academic centers to review the evidence on a specific technology. NICE currently works with 7 centers. The public health guidance follows a similar development path although the evidence review may either be contracted or done internally by NICE.

A few of the concerns that were expressed about NICE warrant comment:

- NICE is too slow. It was not entirely clear what consequences were associated with the speed of developing NICE guidance and this likely differs between the technology appraisals (if it limits speed to market) and the clinical guidance (ensuring up to date practice). In evaluating whether the process of producing guidance could be done more quickly, one needs to separate out the different stages – topic selection, development of guidance, promulgation of guidance. The topic selection process could shortened by giving NICE greater autonomy in the selection of topics. One clear strength of NICE is that the process by which guidance is developed involves multiple stakeholders; while it may be possible to speed this process up, that likely would come at the cost of acceptance by those affected by the guidance.
- NICE is too focused on fiscal issues: This concern likely arises because NICE is simultaneously considering clinical effectiveness and cost effectiveness. Implementation of NICE technology appraisals is mandatory which underscores the focus on fiscal issues. Concerns were also raised about whether the thresholds are adequate (£30,000 per quality adjusted life year) and about the limited and somewhat weaker economic evidence relative to clinical evidence. This led some observers to suggest that the UK needed guidelines development that would not account for resource issues.

NICE has evolved over time in response to critiques and it is clear that the agency is continuing to improve on its mission. It seems unlikely that a new organization would function more effectively, rather, it would seem advisable to build on NICE's considerable strengths by providing adequate resources to do additional work or improving the processes by which it currently operates to improve its functioning.

National Patient Safety Agency (NPSA)

The NPSA was established in 2001 with a mandate to identify problems with patient safety and develop solutions. The NPSA has three sub-agencies: The Patient Safety Division, the National Clinical Assessment Service, and the National Research Ethics

Service; the latter two were merged into the NPSA during the most recent effort to reduce the number of arms length bodies. The three agencies operate relatively separately from one another.

The Patient Safety Division issues different types of standards (broadly defined), including:

- Alerts
    - Rapid response reports (5 have been issued; this is a new program begun in 2007 to produce early warning about potential patient safety problems; one page format)
    - Alerts (17 have been issued ranging from instructions on the administration of certain medications to protocols to prevent against wrong site surgery)
    - Safer practice notices (10 have been issued; these often include tool kits and information for patients)
    - Patient safety information (4 have been issued; these appear to be areas where a need for additional training has been identified.
    - Joint NICE-NPSA guidance (one thus far on medication reconciliation)
- Directives
    - Directives, guidance and patient safety observatories (PSO) reports (8 topics ranging from preventing trips and falls to hand hygiene to mental health issues)
    - Infection control (a campaign on hand hygiene)

The NPSA has experienced a number of problems since its inception and has a relatively new director (6 months at the time of interview) who has been charged with turning the agency around. Some observations, primarily based on interviews and a review of the web site:

- The distinction between the different types of standards issued is not clearly articulated and not immediately apparent from the web site;

- How topics are selected and the basis for the standard is also not clear; many appear to arise from root cause analysis or from problems identified by another agency (e.g., the Medicines and Healthcare Products Regulatory Agency);
    - The web site notes that all of the standards are currently under review suggesting that a process may be underway to address some of these issues;
- It is not entirely clear how performance against these standards is evaluated (except perhaps by continued monitoring of the National Reporting and Learning System (NRLS));
    - There is no conceptual clarity around the purpose of measurement and how the data are used (culture and performance issues).
- The NRLS is a voluntary, anonymous data base collected primarily for risk management action by Trusts, which means that the reports cannot be validated or verified; the reports are frequently lacking key pieces of information that would facilitate identification of problems;
    - 60% of data fields are missing more than half of the information, for example:
        - Name of medication involved in an adverse event is frequently not reported;
        - Age of the patient involved in an incident is frequently not reported (so identifying age-specific threats to safety cannot be done)
- NPSA is producing comparative reports that allow Trusts to benchmark themselves against others; this has been seen as one of the most useful things done by the NPSA, however, many Trusts lack staff with the skills and/or capacity to use the data;

National Health Service Litigation Authority (NHSLA)

The NHSLA was established in 1995 to handle negligence claims against the Trusts. It has a risk management program in place to reduce the number of incidents that might lead to claims. The NHSLA has established risk management standards for each type of

Trust. The standards are organized into five categories: governance, competent and capable workforce, safe environment, clinical care, learning from experience. The standards were developed through a combination of analyzing prior negligence claims, reviewing the literature, consulting with the Trusts, and consulting with national bodies. Some observations about this work:

- The standards are based on an analysis of the pattern of claims.
    - In most studies that have been done in the U.S. of negligence claims, these represent a very small fraction of the incidents that occurred and are not necessarily predictive of the level of safety in an organization.
- The standards are statements of goals (what to do) rather than prescribing how those goals are accomplished.
    - This has both positive and negative aspects. Prescribing how an action should be taken raises complaints about micromanagement but overly vague statements may not be actionable, particularly for poorly performing Trusts.
- It isn't clear how the NHSLA is linked up with other organizations that are setting standards in related areas. In particular, there is no clear linkage between the National Patient Safety Agency and NHSLA although the two operate at different ends of the same spectrum;
    - The NHSLA in particular would like to be able to routinely analyze incident patterns (identifying potential problems before claim are filed);
    - NHSLA believes, for example, that the damage due to infections could have been limited if they had more authority.
- Progress is being made on these standards with more Trusts operating at higher levels than previously (as of 2005/6, no trusts at Level 0, ~51% at Level 1, ~42% at Level 2, and 7% at Level 3).
- Although minimizing the burden of inspections is an important goal (e.g., as organized through the Concordat), there may be a role for regular inspection to maintain performance.

Arms Length Bodies – Non-Departmental Public Bodies

In this report we focus on two non-departmental public bodies – the Healthcare Commission and Monitor. Neither of these organizations sets its own standards related to quality but they are mentioned here to make clear that point.

Healthcare Commission

The Healthcare Commission is an independent regulatory body that assesses the performance of Foundation Trusts and non-Foundation Trusts on quality of services and use of resources. The Healthcare Commission does not set its own standards but rather assesses the performance of various NHS organizations using the standards developed by DH. In particular, the core and developmental standards established in Standards for Better Health and national targets (primarily related to waiting times) form the basis for the Annual Health Check.

Monitor

Monitor is the independent regulator of Foundation Trusts. Monitor does not set standards related to quality although it relies on the Healthcare Commission's assessments of quality as input to its ongoing regulatory responsibilities.

Royal Medical Colleges

The Royal Medical Colleges set standards for education and training of physicians and for clinical practice through the development of guidelines. The Royal Colleges have supported the NICE guideline development process; 5 of the 7 National Collaborating Centres are hosted by a Royal College:

- The Royal College of Physicians houses the National Collaborating Centre for Chronic Diseases;
- The Royal College of General Practitioners houses the National Collaborating Centre for Primary Care;
- The Royal College of Obstetricians and Gynecologists houses the National Collaborating Centre for Women and Children's Health

- The Royal College of Surgeons houses the National Collaborating Centre for Acute Care
- The British Psychological Association and the Royal College of Psychiatrists jointly lead the National Collaborating Centre for Mental Health

In part due to participation in the NICE guideline development process, the guidelines produced by the Royal Medical Colleges have become more similar over time. For example, most use the general approach designed by NICE including reviewing and grading the evidence, broad stakeholder participation in developing the guideline, and designing tools to assist with the implementation of the guideline. The Royal Colleges also develop guidelines in areas that are not covered by NICE; some guidelines may be incorporated into updates of National Service Frameworks. For example, in November of 2007 the Royal College of Physicians issued a guideline on the assessment of pain in older persons in response to an area of need identified within the National Service Framework for Older Persons.

General Medical Council (GMC)

The GMC is the national regulator of doctors' practice and is responsible for developing general standards for fitness for practice and standards for ethical practice. Up until recently, the GMC set standards largely independent of any input from the NHS. This began to shift about 15 months ago and the GMC is looking for mechanisms to engage with the NHS. Some key elements of change in the GMC include:

1. A recognition that ongoing assessment of fitness for practice needs to replace assessment only at entry to practice. The GMC has been developing plans for revalidation every 5 years based on actual practice patterns. To make this work in practice will require that the NHS develop systems that generate the data needed in the revalidation assessment; these have been slow to develop.
2. Training standards need to shift from accumulating facts during training to developing skills for finding information at the time it is required, developing communication skills, practicing in multidisciplinary teams, and having the skills needed to participate in ongoing improvement activities.

The standards of good practice are written at the level of principles and values. For example, the guidance contained in *Good Medical Practice*[6] for provision of good clinical care notes three elements:

- "adequately assessing the patient's conditions, taking account of the history (including the symptoms, and psychological and social factors), the patient's views, and where necessary examining the patient
- providing or arranging advice, investigations or treatment where necessary
- referring a patient to another practitioner, when this is in the patient's best interests."

The Royal Colleges produce additional standards that address issues of particular concern to different groups of doctors (e.g., surgeons, anesthesiologists). These documents also are written at the level of principles and values.

Summary

A variety of organizations within and outside of DH participate in setting different types of standards. While these organizations interact with each other in various ways, we found no clear overarching framework for quality within which these organizations operate. The types of standards promulgated by these organizations are different and the processes by which the standards are produced are also different. In our interviews, we noted a clear relationship between who was responsible for setting a standard and how the standard was set and its degree of acceptability. In particular, standards that were set solely by DH, without involvement of outside groups, were perceived as less acceptable than other types of standards.

Taking a step back and considering the framework proposed by Lord Darzi for what constitutes world class quality in the NHS, the table below shows the groups involved in setting standards related to each of the main domains.

[6] General Medical Council. *Good Medical Practice* (2006). London: GMC.

Domain	**Organizations Developing Standards**
Fair	DH
Personalized	
Effective	DH (NSF, QOF) NICE Medical Royal Colleges
Safe	NHSLA NPSA NICE

Standard setting is most common in the areas of effectiveness and safety. While themes of fairness and personalization run throughout many publications, standards in these areas are not as well developed.

Disseminating Standards

Standards can be disseminated in a variety of ways, both by those who develop the standards and by others. We have organized this section around four major ways of disseminating standards:

- Publication of standards (print or electronic)
- Decision support tools
- Performance assessments
    - Private feedback
    - Public reports
- Standards-based accountability
    - Non-financial incentives
    - Financial incentives

These approaches are not mutually exclusive and the literature shows that multiple approaches are more effective than single approaches.

Publication of Standards

Publishing standards, through print or electronic media, is a passive method of dissemination. While documentation of standards is necessary it is unlikely to be sufficient for ensuring that the target audience is aware of the standards.

All of the standards that we discussed in the prior section are available in print versions, electronically or both. A few observations about these materials:

- Information provided in print form can be daunting.
    - The NSFs are generally quite long; for example, the NSF for coronary heart disease is about 128 pages long and the NSF for Cancer is 144 pages long.
    - NICE guidelines include both quick reference documents and the full guideline;

    - Guidelines from the Royal Colleges vary in length but most include high level summaries of the major elements;
- Print (or web) documents are not always tailored for different audiences.
    - The NSFs include a section that addresses what the framework means for patients; for example, this has 10 major points covered in 3 pages in the Cancer Strategy.
    - By contrast, documents transmitting the NICE clinical practice guidelines are developed separately for health professionals and for patients and their caregivers.
- Consistent formats can help regular users of the information go quickly to the sections most relevant to them.

We did not identify any routine mechanism for alerting doctors about new standards or for assisting them in incorporating new standards into everyday practice. Probably the most common way that doctors become aware of new guidelines is through postgraduate training meetings, but awareness of new guidelines alone is unlikely to translate into changes in practice.

Decision Support Tools

We use the term decision support tools broadly in this section to mean any device (e.g., checklist, electronic reminder, logic map, tool kit) that helps a decision maker use standards in the conduct of their job. We saw a few examples of decision support tools but these did not appear to be widely used.

- The recent guideline on managing pain in older patients from the Royal College of Physicians provides a one page algorithm (process diagram) and several different tools that can be used to assess pain;
- NICE includes a few tools for using guidelines in Commissioning. The tools are constructed at a service level (e.g., foot care for persons with diabetes, assisted discharge service for persons with COPD) and include the service specifications Commissioners should require when contracting for those

services. Unfortunately, only 5 such tools have been developed to date and they do not cover the range of services required for the management of any single condition.

- The NHS Institute for Innovation and Improvement includes some tools on its website related to implementing the Better Care, Better Value indicators. A number of tools appear to be under development on the website. We do not have a good sense of how much these tools are being used.
- Decision support tools are commonly imbedded in electronic medical records. Such tools exist in the GP electronic medical records systems and are related to the pay by results standards. For example, they have access to templates for the management of chronic conditions and computerized order entry for tests and medications. Some of the tools are considered to be more useful than others. We were unable to assess the extent to which this is happening in other parts of the NHS.

Performance Assessments

A number of groups in and out of government conduct performance assessments, which are either used to provide private feedback or are reported publicly. Performance assessments, particularly those in which the results are publicly released, are an effective mechanism for raising awareness about the existence of standards. We highlight here some of the major groups doing this work and comment, where possible, on the nature of the assessment.

Healthcare Commission

The Healthcare Commission is responsible for assessing the performance of NHS organizations on the standards developed by the NHS (*Standards for Better Health*) . Performance is publicly reported on the Commission's website, by Trust, for two summary constructs: quality of services and use of resources. Performance is characterized as "excellent", "good", "fair", or "weak" in each of these areas. Additional detail is available in each area by "drilling down" on links available. The assessments are generally qualitative even at the most detailed level (e.g., "All or almost all practices in

the PCT could offer a GP appointment within 48 hours."; "This organisation made sure that everyone had an equal opportunity to access services and fair choice of treatment.") Information on the basis for assessment is also available (self-declaration statements from the Trust, results of inspection visits).

We heard mixed reviews about the Healthcare Commission's assessments; many people we spoke with were enthusiastic and positive about the utility of the Healthcare Commission's reports and others were either skeptical about their validity or raised concerns about actions taken by Trusts to meet standards that were not in the best interests of patients (e.g., only being able to schedule appointments within 48 hours rather than being able to book in advance, patients being left on trolleys overnight to meet the target of patients being the ER less than 4 hours). Others questioned the priorities that are emphasized by these assessments (seen as being motivated by political rather than health concerns).

Information Centre

The Information Centre is a relatively new arms length body that is responsible for coordinating data collection and analysis across the NHS. The Information Centre produces three sets of performance reports relevant to this section of the report:

- Clinical audits: these are national assessments of performance in select clinical areas (cancer of the bowel, lung, head and neck, esophageal/gastric; mastectomy and breast reconstruction; diabetes; heart disease; hip fracture). Performance is reported at the national level (although some report performance at the Trust level) and is based on assessments done in participating Trusts (listed in the report). The assessments are generally conducted by the Royal Colleges under contract to the Healthcare Commission. The reports examine organizational and process indicators. Private feedback is generally provided to the entities that participate in a clinical audit.
- Results from the Quality and Outcomes Framework with both overall statistics for the nation (proportion of practices achieving 100% performance, average performance levels) and an online database that allows users to get detailed

information about specific practices. The online database has a number of display options including comparisons between a selected practice and the PCT average and the average for England. Statistics on the prevalence of disease nationally and by practice are also available.

- Prescribing patterns in hospitals and for diabetes: this report shows trends over time in the use of prescription medications and provides analyses and raises questions for consideration. Information is presented at the national and strategic health authority level.

Audits were seen by front line clinicians as being particularly useful when they were conducted locally or by the Royal Colleges. However, it appears that these are generally not adequately resourced.

Dr Foster

Dr Foster is a private company that provides information to help consumers compare information about hospitals. The website allows the user to select the areas of interest for information. For example, in evaluating hospitals, the site provides information on: number of beds, day case rates for 9 procedures, patient experiences, length of stay, mortality, number of operations done, readmission rates, staffing, CT scan for stroke within 24 hours, waiting time for hospital appointments, and waiting times by operation. The information that is used to construct the reports comes from the hospital episode statistics (HES) and the Healthcare Commission's Annual Health Check. Dr Foster produces a unique statistic – hospital standardized mortality ratio (HSMR). The website also allows the user to compare the performance of a specific hospital with the 10 hospitals that are nearby or with the top or bottom 10 performing hospitals.

Although Dr Foster produced the first public reports on quality performance in the UK and remains the only source for comparative mortality information, it was difficult to ascertain whether there was widespread knowledge or use of the site. The site was not spontaneously mentioned by anyone we interviewed and those we queried were aware of the site but did not use it or did not believe that it had any influence on practice.

NHS Choices

The NHS Choices website also provides comparative performance information. The website allows the user to retrieve information related to specific procedures and is organized around questions patients should ask when planning for the procedure. For example, selecting coronary artery bypass surgery (CABG), information is provided for the following questions:

- How long will I have to wait for the procedure?
- How long am I likely to spend in the hospital?
- What is the risk I will be readmitted to the hospital?
- Does the surgical department have a lot of experience in this operation?
- How well does this hospital control MRSA blood infections?

Answers are provided in different formats (descriptive, star ratings, numeric) and the source of the data is provided with the result. Information is also provided on patient respect (based on assessment of the Healthcare Commission) and patient ratings (based on voluntary posting of comments on NHS Choices). For the patient ratings, there does not appear to be a minimum sample size threshold required for reporting (for example, one hospital report displayed statistics based on reports from 2 individuals). The additional feature on this website is that GPs or their patients can book an appointment on the website with a booking number.

The NHS Choices website also provides links to GPs within the postcode of the user; information on the performance of GPs on the QOF is available through a link on the NHS Choices website.

The site is relatively new and it is not clear to what extent different audiences refer to it when making decisions. It was not mentioned voluntarily by anyone and those queried mentioned the booking function more than the comparative information function. It is likely too soon to tell what effect it might have but the site is designed around one of the fundamental principles of effective information provision – set the information within the

context of what is important to the decision maker (in this case, the patient) and provide other useful functionality that draws users to the site (e.g., booking options).

National Patient Safety Agency (NPSA)

The NPSA provides private feedback reports to Trusts comparing patterns of reporting to the National Reporting and Learning System. The information is provided to Trusts using a secure website that is password protected so that only authorized users of the information would have access to the report. The NPSA indicated that these private feedback reports have been enthusiastically received by the Trusts and are one of the most useful pieces of information produced.

The sample report we saw was aimed at showing Acute Trusts how well they were doing in reporting patient safety incidents and areas where they could improve their reporting. For example, two areas were highlighted in the sample report we viewed: using the degrees of harm to patients classification properly and including the name of the medication in incidents involving medication errors.

Standards-Based Accountability

The fourth major approach to disseminating standards is using the standards for accountability, which may include regulatory action and incentive payments.

NHSLA

The NHSLA assesses the level of compliance with risk management standards for each type of Trust. Organizations can receive a discount on contributions to the NHSLA scheme for higher levels of compliance; the discounts are 10% for Level 1 organizations, 20% for Level 2, and 30% for Level 3. The discount is applied for two years for Level 1 organizations and three years for Levels 2 and 3 organizations. In addition, the frequency with which organizations must participate in an onsite audit is related to their level of compliance ranging from annually (Level 0) to once every three years (Level 2 and 3).

The pattern of compliance with standards also supports the Annual Health Check conducted by the Healthcare Commission.

Healthcare Commission

Most of the work done by the Healthcare Commission relies on public reporting as the mechanism of encouraging compliance with standards. The Healthcare Commission is also responsible for registering private providers and can refuse registration to those who do not meet standards and take legal action against those who practice without being registered. Two convictions have been secured against unregistered providers. Beginning in October 2006, the Healthcare Commission was also given the authority to issue improvement notices to Trusts – in effect, requirements that a Trust must comply with to achieve performance to required standards. Two Trusts have received improvement notices since the authority was given to the Healthcare Commission. The Healthcare Commission also reviews complaints that have not been resolved locally and conducts investigations of "serious failures" in healthcare.

GMC

The General Medical Council is responsible for registration of doctors practicing in the UK. The registration standards operate somewhat differently for doctors trained in the UK and those trained outside of the UK. The principal means by which the GMC assures that doctors trained in the UK meet standards is by requiring that newly trained doctors practice for the first two years in Approved Practice Settings (APS) which is an "organisation that has systems for the effective management of doctors, systems for identifying and acting upon concerns about doctors' fitness to practise, systems to support the provision of relevant training or continuing professional development, and systems for providing regulatory assurance." All Primary Care Trusts in England, Area Health Boards in Scotland, Local Health Boards in Wales and Health and Social Services Boards or Health and Social Care Trusts in Northern Ireland) are automatically granted APS status. Non-primary care Trusts that are qualified as APS are listed on the GMC website.

Standards for individual specialties are the responsibility of the Postgraduate Medical Education and Training Board (PMETB). There is currently a proposal from the government to merge the GMC and PMETB so that there would be a single body responsible for standards for all doctors practicing in the UK.

There is no clear connection today between the standards set for the medical profession, that is, what is required to be registered, and the standards set for good medical practice. There is little engagement between the GMC and the NHS around what should be required of doctors. This may be changing with the recognition of the need for revalidation but putting this into place will require routine access to practice data that allow for ongoing or regular evaluation of doctors' actual practices. These systems have been slow to develop. There are somewhat different challenges in the hospital sector and the GP sector. The GMC believes that more progress is likely sooner in the hospital sector where there is a longer culture of management. The fragmentation in the GP sector makes progress there more difficult. While there is considerable data available today as a result of the GP contract, it is at the practice level and not at the level of individual doctors so it isn't possible to evaluate individual performance for the purpose of revalidation based on practice. In addition to finding ways to get better information about practice consistent with clinical guidelines, attention should be given to mechanisms to incorporate patient experience information into revalidation. This is a relatively underexplored area.

GP Contract

The GP contract demonstrates the approach of accountability using financial incentives and from most accounts this has been successful in getting GPs to be aware of clinical standards and to take actions to bring their practices in line with those standards. Because performance in the early years was better than expected, some have questioned the rigor of the standards, but changes are being made to both raise the thresholds of performance and to add new requirements. It appears that the foundation of the contract provided a good basis for engagement around standards and that opportunities exist to strengthen this mechanism in the future. Perhaps the area requiring greatest attention is

standards for the management of multimorbidity patients. Concerns have been raised about perverse incentives for treating multimorbidity patients imbedded in the financial incentives.

Data and Information Systems to Support Standards

We did not have the opportunity to explore these issues in depth, particularly given the complexity of the problem. There is a process currently underway to systematically review information systems in the NHS that, based on our limited review, appears to be asking the right questions. Assuming this review produces an appropriate design, the challenge ahead will be to take steps to implement the recommended approach. The observations offered here are unlikely to be new to those responsible for NHS information systems, but they offered in order to highlight those issues of greatest importance for the use of standards in operating the NHS of the future.

There are competing philosophies on how best to accomplish quality improvement. One is that competition will ensure improvement, particularly if resources follow patients. Under this philosophy, informed consumers will selectively choose higher quality providers which in turn will force all providers to improve so that they do not risk losing market share. The second philosophy is that professional pride or reputation will drive improvement. Under this philosophy, making performance information public will motivate providers to improve their performance to the highest possible level. What both of these philosophies have in common is the requirement that good information on performance be readily available to those making decisions. Thus, developing appropriate data and information systems to support performance assessment and reporting is critical for either of these approaches to quality improvement to work.

The overriding themes that emerged from discussions around data and information systems were:

- The NHS has a lot of data but most of it is not accessible or usable.
    - In general, the quality of data is likely to get better only if those who use and supply data have routine access to the information.
    - Improving data quality will also require establishing feedback loops that allow users to either correct errors in data or flag problems with the data; feedback on the utility of the displays will also improve usability.

- Those who produce the data generally do not use it; data are sent up the line in response to administrative requirements but little data flow back or are used locally;
    - This results in those who produce the data having little sense of ownership around it, which in turn compounds problems with data quality.
- The quality of much of the data is poor, including both significant amounts of missing data and inaccurate data;
    - Example: stage and extent of disease missing on the majority of cancer registry cases;
    - Example: age, type of medication missing from more than half of incident/error reports;
    - There is a balance between only releasing information when the data are accurate and the general observation that data don't get better unless they are used; may require taking some risks.
- Some types of data that would be useful are not routinely collected (e.g., procedure-specific mortality, patient outcomes, patient experience);
    - We heard repeatedly from the people we interviewed about the need for more patient reported outcomes data; this would include a range of information such as symptoms, functional status, side effects, response to treatment, and patients' experience with the care process.
    - Difficult to examine the extent to which practice is consistent with NICE guidance (particularly clinical guidance).
- The skills and capacity to analyze and use data are very limited at local levels, by patients and by many clinicians;
    - Choice and Commissioning initiatives require considerably more ability to use data by different audiences than is available today.
- Managers do not respect the importance of clinical information; doctors don't respect the importance of management information;
    - Some hope expressed that Commissioning might bring doctors and managers together around a common set of priorities but the path for accomplishing this is not clear.

- Information is not always presented in ways that can be used by different audiences (e.g., clinicians, managers, patients)
    - Data are organized around national priorities but not from the patient perspective; response by patients is to use other sources (e.g., Google) and bring that information to the doctor);
        - Some disagreement around the data that should be made available to patients; considerable paternalism from some quarters (e.g., concern that giving making patients clinical information will make them hypochrondriacs);
        - NHS Choices was deliberately organized around the patient perspective and makes available information of interest to patients as well as clinical information they might not have thought about that might be useful for decision making;
        - Very little information is available across the whole patient journey (e.g., before, during, and after hospitalization);
    - Different age groups or population subgroups may access information using different modes (e.g., some experimentation going on with reaching kids using mobile phone texting) and this has not been accounted for in some of the plans.
- Clear need for a national data information infrastructure but some considerable skepticism about whether this can be accomplished
    - One success in this area is the development of an electronic medical record (EMR) for GPs. The approach taken was to develop standards for interoperability and allow the market to develop multiple products that met those standards. The approach allowed for rapid development.
    - The timeline for implementation of the electronic patient record (other than in the GP practices) was overly ambitious, especially compared to the experiences in other large systems (Kaiser, the US VA) that have tried to do this.
        - About halfway through implementation; expect hospitals to be operational by next year;

- Some significant problems have been ducked along the way (e.g., the lack of a crosswalk between ICD-10 and SNOMED) but these problems have to be solved to make the system useful;
- Doctors have lost interest and it may be difficult to reengage them;
- Some systems may need to be completely replaced because they cannot be made interoperable with new systems but the Trusts have to be sold on the superiority of the new systems;
- Original approach to design is no longer consistent with best practices (i.e., produced a large specifications manual that was supposed to guide implementation but it is not sufficiently flexible going forward);
- Need clarity around the priorities and a link back to the vision of what they hoped to achieve.

Recommendations for Future Action

In this section, we highlight major recommendations for future action in standard setting, dissemination of standards, and development of information systems. We discuss relevant best practices from the UK or other countries, where available, in describing the recommendation.

1. **Develop a coherent vision of the role of standards in accomplishing the major goals of the National Health Service, the types of standards required, and the best practices for developing and disseminating standards.**

Standards are not an end in themselves but rather one of many tools for accomplishing health care system goals. Standards embedded within NICE guidance and the National Service Frameworks have been more effective in part because of the clear link between the overall aims and the specific actions required to achieve those aims.

An articulation of the overarching goals will facilitate coordination of efforts across the system. The National Service Frameworks and the Strategies (Stroke Strategy) are good examples of articulating goals. Establishing broad aims focuses attention and resources on a particular area. Improvements have been seen in areas where there has been focus. Aims can be clinical, operational, or service oriented. There was a sense in many of the interviews that too much attention had been paid to operational aims (waiting times) and too little to clinical and service aims.

A challenge is articulating these goals at a level that is both high level and actionable. For example, the goal of reducing premature mortality from a specific cause by a set percentage offers a high level goal for which multiple strategies will be required to achieve the desired outcome. The current aims (fair, personalized, effective, and safe) are at too high of a level to be actionable but these could be used to organize more specific goals related to specific clinical or service areas.

2. Develop systematic approaches to integrating clinical guidelines with quality measures development.

There do not appear to be consistent links between the guidelines or standards developed and the measures used to assess adherence to those guidelines. The VA has an integrated approach to this that illustrates a best practice related to this recommendation.

Although the term "standards" has several meanings, in the context of accreditation, practice guidelines, and performance review criteria the lead body for such items in the Veterans Affairs (VA) Health Care System is the Office of Quality and Performance (OQP; http://vaww.oqp.med.va.gov/default.htm). OQP has authority in numerous areas, including accreditation of facilities (JCAHO, Oryx), credentialing and privileging, surveys of the Veterans health experience (Surveys of Health Experiences of Patients, performed on a continual basis, and done separately for inpatient and outpatient users), clinical practice guideline development, performance measures (including development, measurement, and reporting), and to a lesser extent links to resources for quality improvement strategies.

The Evidence-Based Practice Workgroup was created in 2004 to oversee both practice guidelines and performance measures. The Workgroup is a joint function of VA and the Department of Defense. The Workgroup selects and prioritizes areas for development of guidelines and performance measures. Existing guidelines include the topics of heart failure, hypertension, ischemic heart disease, dyslipidemia, diabetes, pre-end-stage kidney disease, major depressive disorder, post-traumatic stress disorder, psychoses, substance use disorder, low back pain, pregnancy, tobacco use cessation, chronic obstructive pulmonary disease, stroke rehabilitation, and newly released guidelines on amputation rehabilitation and on obesity. The VA also subscribes to the guidelines of the US Preventive Services Task Force and does not develop its own guidelines in these areas. The process of developing guidelines is evidence-based, involving systematic reviews and multidisciplinary expert clinical input, and frequently results in algorithms for clinicians to use. Guidelines undergo periodic updates.

OQP's Performance Measurement Program (PMP) is the centerpiece of the OQP portfolio, and is the part of OQP that is best known by facilities and providers. Key aspects of the PMP include: the demonstration of health system performance; setting national system benchmarks for the quality of preventive and therapeutic services; and the unification of VA managers and clinicians in purpose by the use of an annual contract between Headquarters and the Networks (VISNs) called the Network Performance Plan. The PMP is linked directly to the VA's strategic goals, which for 2006 were in quality, access, patient function, exceeding patient expectations, maximizing resource use, and building healthy communities. The Performance Measurement Workgroup is responsible for developing the annual PMP and recommending it to the VA's Undersecretary for Health; which means the Performance Measurement Workgroup is responsible for incorporating new performance measures and retiring old measures. There are more than 100 measures in the 2007, and each measure has a target value. The targets are determined through a combination of processes. The Office of Quality and Performance 1) reviews and evaluates goals from other federal organizations such as the US Healthy People 2010; 2) evaluates other measurement systems to see what measures are being collected and their current results, e.g. HEDIS; 3) conducts literature searches for best practices; and/or 4) utilizes the first baseline results of a measure to set the first target. This information is then provided to the Performance Measurement Workgroup for a final recommendation to the Under Secretary for Health. Once a measure is established the subsequent setting of targets is based on two principles 1) resetting to a higher target that is based on the top 20% of the VISN performers, or 2) maintenance at a level that is in concert with clinical practice (i.e., VHA currently has a high compliance with prescribing aspirin at discharge for myocardial infarction patients (98% for FY 2000) but the goal will not be set higher than 95% to allow for natural variation of patient population.

In addition to measures with targets, there are "monitors", which are measures without targets. Monitors are frequently performance measures that are being evaluated for possible inclusion in subsequent performance network plans.

Kaiser's approach to setting targets is through the negotiations between the health plan and the medical group in setting the medical services agreement; the process aligns priority setting and target setting activities. This negotiation is scaled to a national process for a subset of measures. Increasingly the target setting is a shared exercise between the health plan and the medical leadership. This recognizes that improvement requires both health plan assets and medical group assets and this is agreed to through negotiations rather than mandates.

3. **Work should be undertaken to fill gaps in the availability of standards related to fairness (equity) and personalization.**

The development of standards for equity could be undertaken by NICE as part of their public health guidance. The standards involve both horizontal equity (reducing the so-called "post code lottery" effect) and vertical equity (ensuring that services are delivered relative to need).

Personalization of care standards will require greater engagement of patients in establishing aims and acceptable levels of performance. Current approaches to measurement are ad hoc and are not well connected to related activities.

For example, Industry Canada outlines a five step approach to the "quality journey" for companies that want to become world-class:[7]

1. Define the vision and mission of the organization;
2. Document how the organization does its business currently;
3. Set standards or measures for each process, product, or service;
4. Control and align processes to achieve desired outcomes;
5. Implement continuous improvement through benchmarking or comparison to standards.

[7] See http://strategis.ic.gc.ca/epic/site/stco-levc.nsf/en/qw00038e.html, accessed February 2, 2008.

The Darzi *Interim Report* articulates the four domains in which the NHS will seek to become world-class: fairness, personalization, effectiveness, and safety. The remaining steps along the quality journey, however, will require considerable investment. The step that would be particularly informative in a number of areas is systematically documenting how the organization does its business currently. A way to think about this challenge would be to draw a process map for producing personalized care (for every patient, every time). There is more experience with drawing such process maps for effectiveness and for safety, but much less in the areas of fairness and personalization. Additionally, the process map should be drawn from the patient (customer) perspective which likely means it will be more likely to be "horizontal" (cutting across existing organizational entities such as the various types of Trusts) than "vertical" (the path within a single organization or entity). Process mapping produces the facts (how are we doing this today?) on which the remaining steps depend – and those are the steps that are the key to establishing and monitoring an appropriate set of standards.

4. Develop a strategy to ensure that data necessary to inform decisions by doctors, patients, and managers are accurate, available, usable, and appropriate.

A focus on the needs of end users, particularly at the local level, will be critical as part of this effort. A strategy that is top-down only is unlikely to succeed. A major lesson Kaiser learned from the development of its system-wide EMR was that if you ignore the end user you will fail. The first step is getting people to use the new systems. This requires attention to the user interface. If requirements are too prescriptive, it will result in suboptimal use by key front line users. For example, Kaiser allowed doctors to use natural language in history and physical documentation. May limit utility of information for decision support tools but that can be approached later as the utility of the tool is demonstrated.

A great deal of the data collected by the VA's Office of Quality and Performance – patient experiences with care, ORYX, performance measurement – is available at the VISN and facility level to anyone with access to the VA intranet.

For data to be useful to patients, they need to connect across the patient experience rather than be "siloed" within each of the Trusts. Better connectivity of data is necessary to track patients across different settings/organizations.

A common theme throughout the interviews was the need for outcomes data. There was a particular emphasis on patient-reported outcomes data (e.g., functional status, side effects of treatment, experience of care). In addition, investments in developing risk-adjusted mortality data for the top 10 procedures and medical admissions would be useful.

5. Investment must be made in developing the skills necessary to produce and use information for clinical care, management, and patient choice.

A major barrier to undertaking many of the proposed strategies for improvement is the lack of people who are able to analyze and use data, including clinicians, managers, and patients. There was a suggestion that the turnover of managers in the NHS contributes to the loss of skilled capacity over time.

One opportunity for building skills among physicians in training is to build on the requirement that these doctors conduct a clinical audit during their training. As currently undertaken, there is little systematic guidance for doctors so for many the experience of conducting a clinical audit may not produce skills. But the ability to know how to evaluate one's own practice, the experience of identifying potential deficits in care delivery, and the design of a plan to close the gap between expectations and performance should be an integral part of all training going forward. Designed correctly, one hopes that more doctors would become engaged in quality improvement activities while in practice.

6. Articulate the level at which different things get done (national, regional, local).

While there appears to be an appreciation for the need to involve regional and local organizations in a variety of activities around settings standards and conducting assessments, it does not appear that careful thought has been given to what is best accomplished at different levels. This is something that both Kaiser and the VA have had to address.

An important element of the Kaiser approach is the balance between central guidance and local control. Fifteen years ago, each of the regions had a separate approach for the development of guidelines and protocols. Through the Care Management Institute, Kaiser now provides resources to the regions for developing guidelines. Kaiser subscribes to a variety of resources for summarizing evidence (e.g., Cochrane Collaboration, AHRQ's Evidence Based Practice Centers, Blue Cross Blue Shield Association's Technical Evaluation Center, U.S. Preventive Services Task Force) that can be used to establish the evidence base for a guideline. Kaiser participates in other national efforts, such as the National Cancer Institute's protocols (clinical pathways) that allow Kaiser to benchmark its performance against other institutions. Over time, regions have become more similar than different in their guidelines (similar to what has occurred with the Royal Colleges participating in the development of NICE guidelines).

In connecting guidelines to the information systems necessary to support dissemination and assessment, a major motivating force was desire to leverage a common set of tools including decision support and data design to achieve adequate economies of scale. This allows the regions to consider the extent to which doing something different from the rest of the regions is worthwhile given the need to develop a separate set of tools.

7. Focus on geting the fundamentals right.

As stated at the outset, the vision Lord Darzi has expressed for the NHS in the 21st Century is to be world class. We would argue that being world class starts with getting

the fundamentals right. From a clinical perspective, this might mean delivering care consistent with NICE Clinical Guidance and the National Service Frameworks 95% of the time. Given that these cover the leading causes of death and disability, one imagines that this might contribute to substantial improvements in the health and well-being of the people of England. No other country has achieved this which would truly make England world class.

Executing effectively on the fundamentals builds the capacity to deliver services at the cutting edge. The strategies that are necessary to deliver on the fundamentals are the same ones that are required to deliver care at the cutting edge. However, care at the cutting edge frequently assists only a small minority of the population whereas the basics are likely to help a much larger proportion of the population.

What does this mean? Perhaps starting with chronic disease it means developing integrated systems that allow patients to obtain care seamlessly across different settings and from different providers. It means developing a partnership between patients and doctors so that patients are helped to participate in achieving desired outcomes. It means having adequate information systems available to allow decision support tools to guide the effective and safe delivery of care and to make quickly available important new advances in care delivery.

8. Focus on improving the functioning of existing organizations before entertaining the development of new organizations.

Too much change may impede rather than accelerate progress. A theme that emerged from a number of the interviews was the habit of creating new organizations (or merging organizations) rather than working to improve the functioning of an existing organization. The sheer level of change in the NHS creates perhaps one of the greatest impediments to improvement. Much of the change does not create forward progress rather it results in chaos, loss of institutional knowledge, time required to learn new processes, and general disengagement with the process.

For example, we were told that a new organization was being considered to address some of the perceived slowness of NICE. This idea of "NICE Light" (our term) seems likely to create more confusion than benefit. It would seem far more sensible to consider how and in what areas the development of NICE guidance might occur more quickly. Another example is the new legislation to combine the Healthcare Commission with two other regulatory bodies. The distraction associated with these types of reorganizations generally results in reduced levels of functioning which seems unfortunate given the strides the Healthcare Commission has made since its inception.

9. Beware of "magic bullets" that appear to offer simple solutions to complex problems.

This last recommendation is perhaps more a general observation about policy change in general. There are rarely single approaches that accomplish dramatic changes.

We were struck by the degree to which Commissioning was talked about as the answer to many problems. This was particularly striking because the basic infrastructure that would be necessary to make Commissioning accomplish the many goals attached to it does not appear to exist. Further, the idea of Commissioning appears to be driven more by heavy handed purchasing strategies than a cooperative approach. Both Kaiser and the VA start with the assumption of mutual exclusivity – the health plan and the medical group (Kaiser) or the regions and the central office (VA) are dealing only with each other. In negotiating their respective contracts, the groups both approach the engagement from a collaborative rather than a contentious viewpoint. The negotiation focuses on how the groups can accomplish shared goals by using their resources in a coordinated manner. The negotiation entails an equal mix of clinical judgment (are we delivering right care, where are the gaps), operational understanding (how best can we organize staff), business expertise (what financial arrangements will we require), legal (what degrees of regulatory freedom are allowed). Ultimately, the negotiation requires excellent leadership from all parties.

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