



**Health
Information
and Quality
Authority**

An tÚdarás Um Fhaisnéis
agus Cáilíocht Sláinte

International review on the use of information for the regulation of health and social care

April 2014

About the Health Information and Quality Authority

The Health Information and Quality Authority (HIQA) is the independent Authority established to drive high quality and safe care for people using our health and social care services. HIQA's role is to promote sustainable improvements, safeguard people using health and social care services, support informed decisions on how services are delivered, and promote person-centred care for the benefit of the public.

The Authority's mandate to date extends across the quality and safety of the public, private (within its social care function) and voluntary sectors. Reporting to the Minister for Health and the Minister for Children and Youth Affairs, the Health Information and Quality Authority has statutory responsibility for:

- **Setting Standards for Health and Social Services** – Developing person-centred standards, based on evidence and best international practice, for those health and social care services in Ireland that by law are required to be regulated by the Authority.
- **Supporting Improvement** – Supporting health and social care services to implement standards by providing education in quality improvement tools and methodologies.
- **Social Services Inspectorate** – Registering and inspecting residential centres for dependent people and inspecting children detention schools, foster care services and child protection services.
- **Monitoring Healthcare Quality and Safety** – Monitoring the quality and safety of health and personal social care services and investigating as necessary serious concerns about the health and welfare of people who use these services.
- **Health Technology Assessment** – Ensuring the best outcome for people who use our health services and best use of resources by evaluating the clinical and cost effectiveness of drugs, equipment, diagnostic techniques and health promotion activities.
- **Health Information** – Advising on the efficient and secure collection and sharing of health information, evaluating information resources and publishing information about the delivery and performance of Ireland's health and social care services.

Overview of Health Information function

Health is information-intensive, generating huge volumes of data every day. Health and social care workers spend a significant amount of their time handling information, collecting it, looking for it and storing it. It is therefore imperative that information is managed in the most effective way possible in order to ensure a high quality, safe service.

Safe, reliable healthcare depends on access to, and the use of, information that is accurate, valid, reliable, timely, relevant, legible and complete. For example, when giving a patient a drug, a nurse needs to be sure that they are administering the appropriate dose of the correct drug to the right patient and that the patient is not allergic to it. Similarly, lack of up-to-date information can lead to the unnecessary duplication of tests – if critical diagnostic results are missing or overlooked, tests have to be repeated unnecessarily and, at best, appropriate treatment is delayed or at worst not given.

In addition, health information has a key role to play in healthcare planning decisions – where to locate a new service, whether or not to introduce a new national screening programme and decisions on best value for money in health and social care provision.

Under section (8)(1)(k) of the Health Act 2007, the Health Information and Quality Authority (the Authority or HIQA) has responsibility for setting standards for all aspects of health information and monitoring compliance with those standards. In addition, under section 8(1)(j), the Authority is charged with evaluating the quality of the information available on health and social care and making recommendations in relation to improving the quality and filling in gaps where information is needed but is not currently available.

Information and communications technology (ICT) has a critical role to play in ensuring that information to drive quality and safety in health and social care settings is available when and where it is required. For example, it can generate alerts in the event that a patient is prescribed medication to which they are allergic. Further to this, it can support a much faster, more reliable and safer referral system between the patient's general practitioner (GP) and hospitals.

Although there are a number of examples of good practice, the current ICT infrastructure in Ireland's health and social care sector is highly fragmented with major gaps and silos of information which prevents the safe, effective, transfer of information. This results in service users being asked to provide the same information on multiple occasions.

Information can be lost, documentation is poor, and there is over-reliance on memory. Equally, those responsible for planning our services experience great difficulty in bringing together information in order to make informed decisions. Variability in practice leads to variability in outcomes and increased cost of care. Furthermore, we are all being encouraged to take more responsibility for our own health and wellbeing, yet it can be very difficult to find consistent, understandable and trustworthy information on which to base our decisions. As a result of these deficiencies, there is a clear and pressing need to develop a coherent and integrated approach to health information, based on standards and international best practice.

HIQA has a broad statutory remit, including both regulatory functions and functions aimed at planning and supporting sustainable improvements. In the area of health information, the Authority has responsibility for evaluating information resources, publishing information about the delivery and performance of health and social care services and using this information to deliver its regulatory functions. To this end, this international review will inform recommendations on the most constructive and beneficial data for the Authority to report on, that will inform and drive improvements in the quality and safety of health and social care in Ireland.

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1. Introduction

It is universally accepted that health information is a vital resource and is used for many important purposes such as informing decision-making, monitoring of diseases, planning of services, policy making, improving population health and for international reporting and benchmarking purposes.

The importance of having better health information systems has been highlighted by international organisations such as the Organisation for Economic Co-operation and Development (OECD).⁽¹⁾ National health data collections collect a considerable amount of data on a regular basis to provide us with a wealth of information about our health and social care services. The availability of data to measure, monitor and compare performance is central to the assessment of both the health of populations and the quality and efficiency of health and social care services.⁽¹⁾

The Health Information and Quality Authority was established under the Health Act 2007 with the primary aim to promote patient safety and quality throughout health and social care in Ireland.⁽²⁾ The Authority has a broad statutory remit, including both regulatory functions – which include inspection and monitoring activities – and functions aimed at planning and supporting sustainable improvements.

In the area of health information, the Authority has responsibility for evaluating information resources, publishing information about the delivery and performance of health and social care services and using this information (internal and external) to deliver its regulatory functions. In working towards driving improvements in the quality, safety and accountability of the health and social care sector in Ireland, and as a result of our regulatory functions, the Authority has begun to collect data that not only reflect the work undertaken as an intrinsic part of the inspection and monitoring processes of health and social care, but also provide an insight into the quality and safety of care provided.

Along with the collection and collation of these data and information, a strong business/health intelligence function is essential in order to analyse and interpret this information in a meaningful way so that it can be used to assist the regulatory process.

The analysis of existing external data sources such as the Hospital Inpatient Enquiry (HIPE) will be extremely important when the proposed licensing system for healthcare facilities is commenced and in terms of assessing and monitoring compliance with the *National Standards for Safer Better Healthcare*,⁽³⁾ the *National Quality Standards for Residential Care Settings for Older People in Ireland*,⁽⁴⁾ the

National Standards for the Protection and Welfare of Children,⁽⁵⁾ and the National Standards for Residential Services for Children and Adults with Disabilities.⁽⁶⁾

This review of health and social care regulatory agencies in other jurisdictions has demonstrated that there are a variety of tools/methods being employed to report on the performance, quality and safety of health and social care in those jurisdictions.

1.1 Aims and Objectives

The aim of this international review is to identify and analyse how regulators and agencies from international jurisdictions use information to inform their work to improve the safety and quality of health and social care in their jurisdictions.

As the remit of the Authority includes the functions of regulation and quality improvement in addition to health information, it was necessary to review both regulators of health and social care and also agencies responsible for improvement of safety and quality of care in the jurisdictions reviewed, and examine how these agencies use information to inform their work.

This report therefore identifies international health regulators and quality improvement agencies and outlines in detail how they use and report on health and social care data. It also describes the processes for accessing data from external agencies, the indicator data reported and the business intelligence resources that are in place. The conclusion of each section outlines the key recommendations and learnings from experts within each of the jurisdictions. Finally, there is a set of tables outlining the varying methods and formats used for reporting and presenting data.

This review is the first stage of a project to inform the Authority on the best approach to adopt to use information to improve health and social care in Ireland.

1.2 Methodology

The jurisdictions reviewed were chosen as a result of a desktop review that identified a range of initiatives across these jurisdictions that could potentially contribute to informing what data would better inform the public and service providers about health and social care in Ireland. Additional factors contributing to the selection of these jurisdictions included the availability of information in the English language, access to personnel in each jurisdiction and geographic spread.

The eight jurisdictions reviewed are as follows:

- New Zealand
- Canada – Ontario
- England
- the Netherlands
- Denmark
- Scotland
- Wales (summary)
- Northern Ireland (summary).

This review identifies both regulators of health and social care and quality improvement agencies in the jurisdictions examined, outlines the data collected and reported on, the external agencies involved, and the data that they publish.

The findings were compiled from online desktop research, and were then followed up with detailed discussions with key experts from the appropriate organisations. Appendix 1 lists the experts who were consulted within each jurisdiction.

1.3 Summary outline of this document

- This report identifies international health regulators and quality improvement agencies for eight jurisdictions and outlines in detail how they use and report on health and social care data.
- It identifies the external agencies that analyse or provide data, the resources committed to business intelligence and the data reported.
- There is a set of tables outlining the varying methods and formats used for reporting and presenting data, there is also a table that sets out the themes encompassing the quality and safety indicators used in the jurisdictions reviewed.

2. Summary of findings

The list below provides a summarised overview of the findings of this review. Additional detail in relation to all of these findings can be found in Section 10.

1. All of the jurisdictions reviewed have varying structures in place in terms of agencies responsible for regulation, quality improvement and health information.
2. The importance of developing an information/intelligence strategy was highlighted by all of the jurisdictions reviewed, as information is becoming an increasingly important tool to inform regulation of health and social care and drive quality improvements.
3. A number of the jurisdictions that were examined placed the onus on the service providers in that jurisdiction to report on the quality of the service they provide. For example, in New Zealand the provider's report is based on a set of criteria and guidelines provided by their quality improvement agency, the Health Quality and Safety Commission (HQSC).
4. The importance of developing a risk-based or proportionate regulation was highlighted by a number of jurisdictions, including England and the Netherlands.
5. It was evident that a number of jurisdictions are moving towards centralising their business intelligence skill-set, as it is considered more productive than having the business intelligence skill-set dispersed throughout the organisation.
6. Outsourcing the analysis of data to external data agencies is common practice. For example, in England the Health and Social Care Information Centre (HSCIC) and Dr Foster Intelligence analyse data on behalf of the Care Quality Commission.
7. The importance of publicly reporting on quality and safety indicator data was highlighted by all of the jurisdictions. Analysis of the high level themes is provided in Table 2 in section 10.
8. All of the jurisdictions examined produce an annual report of the state of health and social care in their country/jurisdiction. More detailed thematic reports are also prepared, such as on the quality and safety of maternity services.
9. Another interesting finding is that the Netherlands reviews financial information to identify any risks affecting quality of care which may result from the

governance and management of an organisation. Further detail can be found in Appendix 2 in this report.

10. All jurisdictions emphasised the importance of ensuring that what is measured and reported on improves the services, safety and quality of care provided.
11. Websites were seen to be an extremely important tool to communicate with the data user. Many jurisdictions are working towards an interactive website that allows the user to generate reports and graphs to provide in-depth information about their area of interest.
12. It was evident that the presentation format of the information being analysed is extremely important. The importance of the target audience and their ability to understand the message that is being conveyed was highlighted by all of the jurisdictions.

Review of data used for the regulation of health and social care in other jurisdictions

3. New Zealand

New Zealand has a population of 4.4 million.

3.1 Overview of regulation and quality improvement structures in New Zealand

- The Health Quality and Safety Commission (HQSC)⁽⁷⁾ was established under the New Zealand Public Health and Disability Amendment Act 2010 to ensure all New Zealanders receive the best health and disability care within available resources. HQSC is not a regulator, but is responsible for working towards quality improvement, including publishing information about the quality of health care in New Zealand.⁽⁷⁾
- HealthCERT (part of the Ministry of Health) is responsible for ensuring that hospitals, rest homes and residential disability care services provide reasonable and safe care for their service users as required under the Health and Disability Service (Safety) Act 2001.⁽⁸⁾ HealthCERT's role is to administer and enforce the legislation, issue certificates, review audit reports and manage legal issues.
- There are a number of designated auditing agencies which audit practices on behalf of the Ministry of Health (HealthCERT). These are designated under Section 32 of the Health and Disability Services (Safety) Act 2001 to audit healthcare services by the Director-General of Health.⁽⁸⁾ Examples include:
 - Global-Mark Pty Limited audits the provision of New Zealand fertility services.
 - Health and Disability Auditing New Zealand Limited was designated on 24 July 2011 to audit hospital care services, rest home care services and residential disability services.
 - Health Audit (NZ) Limited was designated on 2 July 2009 to audit the provision of hospital care services, rest home care services and residential disability services.

The HQSC is very active in the use of information to improve health and disability services in New Zealand. The focus of HQSC is on quality improvement. Measurement and evaluation are a critical part of the HQSC's work to encourage providers to use their data, and to combine clinical management and governance to improve their processes and procedures. They have developed indicators and report publically on health and disability services. The following sections provide details on how HQSC, as a quality improvement agency, both uses and reports on information. Section 3.7 provides an overview of the Ministry's (HealthCert) role in relation to using and reporting information in relation to regulation.

3.2 The Health Quality and Safety Commission (HQSC) – Quality improvement agency

HQSC is working towards the New Zealand 'Triple Aim for quality and safety outcomes' which will mean:

- improved quality, safety and experience of care
- improved health and equity for all populations
- better value for public health system resources.⁽⁷⁾

HQSC's focus is broadening to include areas such as primary care, aged residential care, disability services, home and community services, the wider mental health sector, other government agencies, professional bodies, non-government organisations and private providers. HQSC also provides advice and becomes involved in national projects as appropriate.

3.3 Links to external agencies

The Ministry of Health is responsible for national collections and surveys of health and disability information. This valuable health information supports decision-making in policy development, funding and at the point of care.⁽⁸⁾ HQSC accesses a number of the Ministry's national collections, including the national minimum dataset, patient administration system details, laboratory data and adverse events. HQSC pays an annual fee to the Ministry for this core data.

3.4 Resources and workforce

HQSC has 30 employees in total. In terms of business intelligence, there is a Director of Health Quality and Evaluation and two senior analysts.

The Ministry has excellent analytical capability, however, business intelligence is not centralised, but dispersed throughout the organisation.

3.5 Use of information by HQSC

HQSC collects very little data but accesses data from other sources, such as the Ministry's national minimum dataset (NMDS). The NMDS extends beyond the hospitals' patient administration system (PAS) which collects demographic and clinical data. In addition, HQSC is aware of every drug that is dispensed, has access to laboratory data, and collects serious adverse events, all of which provide them with core data to work with.

HQSC uses this data to work with providers to improve their clinical management and governance and to provide an impetus for providers for change management. HQSC involves stakeholders in all aspects of its work. It shares its data and findings with the health providers, looking for their input; the intention is to provide a helping hand as a quality improvement facilitator. HQSC distributes educational material and provides scholarships in order to inform and up-skill the sector.

One of the Commission's key roles is to publish information about the quality of healthcare in New Zealand. This involves comparing healthcare services across the country, as well as comparing what they do internationally with services in other jurisdictions. The Commission's role has been likened to 'shining a light and lending a hand'.

The Commission has a range of different measurement programmes, all with a slightly different focus. The measurement programmes⁽⁷⁾ are as follows:

- Quality and Safety Markers
- Atlas of Healthcare Variation
- Health Quality and Safety Indicators
- Quality Accounts.

3.5.1 Quality and Safety Markers

In 2012, HQSC was asked by the Ministry to develop quality and safety markers (QSMs) for the health sector. The markers developed are a mix of process and outcome measures focused on driving improvement for four key safety priorities. The markers do this through setting expected levels of improvement, public reporting of progress against these thresholds and supporting links to accountability mechanisms. The first report with baseline information was published in June 2013 on the Commission's website.⁽⁹⁾ The QSMs are sets of related indicators concentrating on the four areas of harm covered by the campaign:

- falls
- healthcare associated infections (hand hygiene, central line associated bacteraemia and surgical site infection)
- peri-operative harm
- medication safety.

The process measures show whether the desired changes in practice have occurred at a local level (for example, giving older patients a falls risk assessment and developing a care plan for them). The outcome measures focus on harm and cost that can be avoided. Process markers at the district health board (DHB) level show

the actual level of performance, compared with a threshold for expected performance.

The markers chosen are processes that should be undertaken nearly all the time, so the threshold is set at 90 percent in most cases. Outcome measures are shown at a national level, to estimate the size of the problem that the campaign is addressing. The markers set the following thresholds for district health boards' use of interventions and practices known to reduce patient harm:

- 90 percent of older patients are given a falls risk assessment
- 90 percent compliance with procedures for inserting central line catheters
- 70 percent compliance with good hand hygiene practice
- all three parts of the World Health Organization (WHO) surgical safety checklist used in 90 percent of operations.

3.5.2 Atlas of Healthcare Variation

The Atlas concentrates on individual conditions and clinical groups, highlighting variation in order to stimulate discussion about differences in practice and the improvement actions required to reduce variation where it is unwarranted. HQSC has found that the Atlas has identified interesting cultural issues. Every Atlas that is undertaken involves discussions with clinicians and academics about what measures should be recorded, in order to get 'buy in'. The interactive web-based tool displays easy-to-use maps, graphs, tables, and commentary, highlighting variations by geographical area in the provision and use of specified health services and outcomes. Seven Atlas domains were published in 2012-13 and four of these were made available on the Commission's website.⁽¹⁰⁾

3.5.3 Health Quality and Safety Indicators

This relatively small set of summary indicators gives the public and the sector a clear picture of the quality and safety of health and disability services in New Zealand, including changes over time and comparisons with other jurisdictions. In December 2012, the commission published the first report against national and international indicators, *Describing the Quality of New Zealand's health and disability services*.⁽¹¹⁾ This report included information on nine of the 24 indicators. During 2013-2014 the Commission completed development work on the full set of indicators, which included consumer experience indicators, the finalised tool will be published 2014-2015.

Consumer experience is seen as a good indicator of the quality of health services. By integrating the learning experience from consumer experiences in a quality improvement programme, the chance of service improvement is increased. During 2012-13, the Commission contracted the development of measures of patient

experience that can be used as part of the quality and safety indicator set. This work continues but the Commission hopes to have a tool implemented in 2014-15.

The Commission has supported the ongoing development of the library of quality measures held by Health Quality Measures New Zealand⁽¹²⁾ which is working towards making measure development as easy, transparent, collaborative and clinically led as possible.⁽¹²⁾ This online tool, based on research, provides guidance on how to use, interpret and contribute to a range of measures within the health sector. It now houses the Commission's national quality and safety indicator set.

3.5.4 Quality Accounts

Quality Accounts are statutorily required. District health boards (DHBs) give an account of the quality of their services in a similar way to financial accounts and HQSC is providing support and guidance about content and style.⁽¹³⁾ This initiative commenced in 2012 and the intention is that all DHBs in New Zealand will publish their 2012-13 Quality Account by the end of December 2013.

3.5.5 Reporting and management of healthcare incidents

Since 2012 organisations have been required to report to the Commission key findings and recommendations of reviews of serious adverse events. This means that the Commission will be able to report in greater detail issues such as contributory causes and what has been learnt from the events. The Commission reports at least annually on the serious adverse events that occur in public hospitals.⁽¹⁴⁾

3.5.6 Mortality committees

The HQSC has a statutory responsibility to provide a national programme of mortality review (Section 59e of the New Zealand Public Health and Disability Act 2000). A Mortality Review Committee (MRC) is a statutory body empowered by legislation to review and analyse the circumstances that result in preventable deaths, in order to provide evidence-based advice on how similar deaths can be avoided in future.

HQSC currently has four mortality committees,⁽⁷⁾ the committees report annually and work across agencies to ensure recommendations from their reports can be implemented. The aim of the four mortality committees is to reduce preventable deaths, in the following areas:

- Family Violence Death Review Committee
- Peri-operative Mortality Review Committee
- Child and Youth Mortality Review Committee
- Perinatal and Maternal Mortality Review Committee.

3.6 Overview of data that HQSC publishes

The following is a summary of what data are reported on and made publicly available.

3.6.1 Quality and Safety Markers

The first report with baseline information was published in June 2013 on the HQSC's website.⁽¹⁵⁾ By tracking the change in practice over time, the impact of the campaign can be measured. Data are reported by district health board, and in the area of falls the following is measured and reported on:

- percentage of patients aged 75 years and over who are given a falls risk assessment and implementation of appropriate falls intervention.
- percentage of assessments that result in a positive intervention to manage the risk of a fall.
- in-hospital fractured neck of femur (FNOF) per 1,000 admissions (age/sex standardised).
- mortality following in-hospital FNOF (actual lives lost and rate per 1,000 admissions).
- additional occupied bed days (OBDs) and associated cost following in-hospital FNOF (actual OBDs and cost).

3.6.2 Atlas of Healthcare Variation

Seven Atlas domains were published in 2012-13 and made available on the Commission website. Section 3.5.2 reviews the Atlas of Healthcare Variation in more detail. A detailed interactive report can be viewed on HQSC's website.⁽⁹⁾

3.6.3 Health Quality and Safety Indicators

In December 2012, the Commission published the first report containing national and international indicators: *Describing the Quality of New Zealand's health and disability services*.⁽¹¹⁾ This report provides a high-level summary of results for the nine identified indicators. Each indicator includes a graph and brief commentary. The following are the nine existing, defined and tested indicators:

1. Cancellations of elective surgery by hospital after admission.
2. Deaths potentially avoidable through healthcare (amenable mortality).
3. Occupied bed days for older people admitted two or more times as an acute admission per year.
4. Planned day case turns into unplanned overnight stay.
5. Emergency re-admission to hospital within 28 days of discharge.
6. Eligible population up to date with cervical screening.
7. Age-appropriate vaccinations for two-year-olds.

8. Healthcare cost per capita (US\$ purchasing power parity per capita).
9. Healthcare expenditure as a proportion of gross domestic product.

The indicators can be viewed in a variety of formats. The software they use presents the lead indicator with a range of commentary and other data that allow, for example, international comparisons and time trends to be grouped easily. The report operates as a high-level summary. There is also a data spreadsheet which contains all underpinning data, identifies sources and includes links to technical specifications.

3.6.4 Reporting and management of healthcare incidents

The Commission reports at least annually on the serious adverse events that occur in public hospitals. The latest report, entitled *Making health and disability services safer – serious adverse events report 2012-2013*,⁽¹⁶⁾ was published in November 2013. This is the fourth report on serious adverse events published by HQSC covering events reported by New Zealand's 20 district health boards (DHBs) and other providers. Serious adverse events (previously referred to as serious and sentinel events) are events which have generally resulted in harm to patients. Falls were the most frequently reported event in 2012-13.

3.6.5 Quality Accounts

Healthcare providers give an account of the quality of their services in a similar way to financial accounts. An example of a Quality Account report can be viewed on the Commission's website.⁽¹³⁾ These reports cover performance and priorities for improvement. In the area of performance an example is shorter stays in emergency departments. The report provides a description of where the district is in relation to the target and any planned initiatives to improve the target. The second part of the report looks at priorities for improvement, for example, reducing harm from falls, medication safety and reducing harm from surgery. All of the DHBs produced quality accounts by December 2013.

3.6.6 Mortality committees

An example of an annual report produced by one of the mortality committees is a report from the Family Violence Death Review Committee (FVDRC). It is dated from December 2011 to December 2012 and is available on the Commission's website.⁽¹⁷⁾

This is the third report from this committee and summarises the development of a two-tiered family violent death review system. The first tier provides an overview of family violence deaths and family violence-related deaths that occurred in 2009-10. The second tier provides an in-depth review of a number of family violent deaths.

3.7 Ministry of Health

The Ministry is responsible for a range of core regulatory functions within the health sector.⁽⁸⁾ Various sections within the Ministry have specific areas of responsibility. HealthCERT, is responsible for ensuring hospitals, aged residential care providers (including rest homes), residential disability care providers and fertility service providers provide safe and reasonable levels of service for consumers.⁽⁸⁾ The residential centres can be awarded a certificate for up to three years. If the residential centre does not meet all of the standards the term of certification is shorter.

Health targets are a set of national performance measures specifically designed to improve the performance of health services that reflect significant public and government priorities. The health and disability sector within the Ministry is responsible for monitoring and measuring the health targets. Three of the health targets focus on patient access, and three focus on prevention. The targets for 2013/14 are:

- shorter stays in emergency hospitals
- improved access to elective surgery
- shorter waits for cancer treatment
- increased immunisation
- better help for smokers to quit
- more heart and diabetes checks.

The health targets are published four times a year, in national and local media and on their website. The Ministry intends to build on this work and further develop the framework.

The Ministry is currently in the midst of developing an integrated performance and incentive framework which is designed to measure health sector performance and ongoing improvement. This framework will take a lifecycle approach looking at the child, chronic conditions and end of life. It is currently being determined what system level measures will be included as part of the framework and the associated contributory measures. The idea is that this framework will eventually be rolled out across the entire health sector but, in the first instance it will be focused on primary care. The performance and incentive framework is being developed alongside relevant stakeholders.

The Ministry of Health publishes annually the *Health and Independence Report*. The report contains the Ministry's achievements including the Ministry's financial and non-financial performance over the past year. It also includes the Director-General

of Health's annual report on the state of public health, which provides an overview of the current state of public health in three main sections: health status, factors that influence New Zealanders' health and health system performance.⁽⁸⁾

3.8 Key recommendations and learnings suggested by HQSC and the Ministry of Health

- Focus on the purpose for publishing information, it is only worth measuring if it changes your practice or the practice of services providers.
- In order to ensure the target audience fully comprehend the message, the data should be published intelligently, and the advice was to steer away from league tables.
- The importance of consumer/patient experience was highlighted, that there is great benefit collecting qualitative data, such as patient and staff surveys.
- The Authority should consider becoming involved in mortality outlier work, perhaps it should consider linking in with the Care Quality Commission in relation to this.
- In terms of displaying information, a discussion with the Institute for Healthcare Improvement (IHI) regarding Statistical Process Control (SPC) would be valuable.

4. Canada – Province of Ontario

The province of Ontario has a population of 13.5 million.

4.1 Overview of regulation and quality improvement structures in Ontario

Most hospitals go through an accreditation process conducted by Accreditation Canada.⁽¹⁸⁾ Accreditation Canada is a not-for-profit, independent organisation accredited by the International Society for Quality in Health Care (ISQua).⁽¹⁹⁾ It provides national and international healthcare organisations with an external peer review process to assess and improve the services they provide to their patients and clients based on standards of excellence. Several provinces in Canada also have quality councils, each of which has a different remit, but commonly they promote quality measurement.

In relation to regulation and quality improvement, Ontario has the following:

1. Long-term care homes are both funded and regulated by the Ministry of Health and Long-Term Care (MOHLTC).⁽²⁰⁾ There are up to 640 long-term care homes that receive unannounced inspections and enforcement orders as required. Two versions of the inspection reports and orders are issued by the MOHLTC – one is the licensee version and the other a public version.⁽²¹⁾ There is a drive toward developing a standardised tool to record patient experience, as currently there is none in place.
2. Health Quality Ontario (HQP) is a quality improvement agency set up under the Excellent Care of All Act, (2010)⁽¹¹⁾ to evaluate the effectiveness of new healthcare technologies and services, report to the public on the quality of the healthcare system, support quality improvement activities and make evidence-based recommendations on healthcare funding.
3. There is no direct regulation of the acute sector, however, most hospitals seek accreditation from Accreditation Canada.

4.2 Health Quality Ontario – quality improvement agency

Health Quality Ontario (HQP), under the Excellent Care of All Act, (2010)⁽²²⁾ was set up to evaluate the effectiveness of new healthcare technologies and services, report to the public on the quality of the healthcare system, support quality improvement activities and make evidence-based recommendations on healthcare funding. The Act also stipulates that every healthcare organisation must provide a copy of its annual quality improvement plan to HQO in a format established by the HQO's

quality committee, that permits province-wide comparison of and reporting on a minimum set of quality indicators.⁽²³⁾

4.3 Links to external agencies

HQO produces a yearly report – *Quality Monitor: Report on Ontario's Health System*.⁽²⁴⁾ This presents Ontarians with an evidence-based assessment of the quality of Ontario's publicly-funded health system relative to nine attributes of a high-performing health system. These attributes represent the extent to which the system is accessible, effective, safe, patient-centred, equitable, efficient, appropriately resourced, integrated and focused on population health. HQO goes to great effort to ensure that the information it presents is accurate and objective. It does this by partnering with a range of stakeholders including researchers, clinical specialists, data providers and policy makers. HQO chooses performance measures and data sources that are valid and reliable, and ensures the content receives thorough scientific review.

This report has evolved over time. For instance, the 2011 edition of the annual report included additional international comparisons on patient experience in primary care, expanded analysis of hospital infections and adverse events, and expanded coverage of mental health, including suicide, intentional harm and depression. It incorporated refreshed data and more indicators for long-term care and home care reporting. It also profiled examples of success – healthcare facilities and providers that have achieved significant results in areas such as reducing wait times at emergency departments, for surgery and magnetic resonance imaging (MRI), and in primary care. The 2013 report has a smaller number of indicators than previous reports; it is more user friendly, taking advantage of information graphics to better inform the public. It relays a more comprehensive overview of each sector. The 2014 yearly report will focus on a smaller set of key performance indicators to help guide quality improvement efforts for individual sectors and to encourage integration across sectors.

HQO examines data from sources that include Ministry of Health and Long-Term Care (MOHLTC) databases, Statistics Canada census data and international surveys from the Commonwealth Fund and others. The Institute for Clinical Evaluative Sciences (ICES) helps conduct many of the data analyses.

In addition to this annual report, HQO has a public reporting website, which reports data pertaining to approximately 32 indicators related to a number of areas including patient safety, effectiveness, and wait times as provincial averages. HQO intends to include resident experience in the near future. Some data are reported at the provincial or regional levels, others at organisation or facility level. For home care,

the organisation makes information available about the quality of care and services provided to long-stay home care clients in 14 regions of the province.⁽²³⁾ HQO is currently in the process of updating its website, allowing the user a more dynamic experience, for instance, allowing the user to create their own run charts based on their requirements.

The following is a list of HQO's data partners:

- Ministry of Health Long-Term Care, Health Analytics Branch
- Ontario Hospital Association
- Public Health Ontario
- Critical Care Secretariat
- Cancer Care Ontario
- Canadian Institute for Health Information
- Institute for Clinical Evaluative Sciences
- Workplace Safety and Insurance Board.
- Better Outcomes Registry and Network (BORN)
- Commonwealth Fund
- Ontario Association of Community Care Access Centres
- Statistics Canada
- Ontario MD
- College of Nurses of Ontario

4.4 Resources and workforce

There are three main branches within the structure of HQO, although this structure is currently being reviewed:

- evidence development and standards
- integrated programme delivery
- health system performance/performance measurement and reporting.

Within the Division of Health System Performance, there are 35 staff members, and of these there are eight dedicated data analysts.

4.5 Use of data by HQO

The HQO Performance Indicator Framework details approximately 32 indicators relating to safety, effectiveness, resident experience and wait times as provincial averages. HQO collaborates with the Ministry of Health and Long-Term Care (MOHLTC), local health integration networks, healthcare provider organisations, researchers and other healthcare stakeholders to develop indicator frameworks and

align measurement with strategy. Ideally, these publicly-reported indicators drive health system management decisions. An aligned performance indicator framework ensures that change efforts occur in a uniform, purposeful and focused manner, and that, within the system, every stakeholder collectively monitors gains and losses in the same way.⁽²⁵⁾

In relation to long-term care and home care indicators, Ontario was the first jurisdiction in Canada to report to the public on the quality of long-term care and home care at the service provider level. Shortly after the long-term care public reporting website was introduced, 130 long-term care homes had volunteered to self-report their results on pressure ulcers, falls and worsening bladder incontinence. This number continued to steadily grow, and now 100 percent of homes publicly report their results on HQO's website.

HQO has rigorous protocols in place to establish key performance indicators (KPIs) and benchmarks, and has adopted the Delphi process for indicator and benchmark selection. This involves a comprehensive environmental scan, after which HQO will look at other jurisdictions and identify fluctuations in patterns that exist, and factors that can influence and affect the indicator or value under review. An expert advisory panel is then established. When all the knowledge is gathered an information package is compiled, and distributed to all advisory group members, to inform the consensus meetings. Several consensus meetings are held until there is final agreement with all stakeholders on an indicator or a numeric target. The process may take several months.

4.6 Overview of data that HQO publishes

HQO produces a yearly report, historically, the *Quality Monitor: Report on Ontario's Health System*.⁽²⁴⁾ For 2014 the report will be based on a new framework: Common Quality Agenda. The yearly report presents Ontarians with an evidence-based assessment of the quality of Ontario's publicly-funded health system relative to nine attributes of a high-performing health system. The 2012 Quality Monitor is divided into a series of two-page themes. The first page describes key findings and presents data on how Ontario compares to other jurisdictions and whether or not there has been an improvement. The second page describes improvement strategies.

HQO also has a public reporting website. This website features information on the quality of care at the provincial, regional, and for a subset of indicators, the organisational level with geographic search and browse functionality, in a user-friendly interface. It reports on the following:

- The long-term care public reporting webpage provides information on the key areas in which long-term care homes are measuring quality. It is a resource for current and prospective long-term care residents and their families, as well as long-term care homes.
- The home care public reporting webpage contains information on the quality of home care services for community care access centre clients in order to help monitor home care service delivery, identify areas that may need improvement and to gain a deeper understanding of the characteristics that contribute to variations in quality.
- The patient safety webpage provides patient safety information to the public about Ontario's hospitals. Among other indicators, it reports the prevention and control of healthcare associated infections in hospitals, as it is a priority for Ontario and key to keeping patients safe.
- The primary care webpage provides information on the Primary Care Performance Measurement project that HQO is leading in collaboration with key stakeholders to provide a coordinated and sustainable approach to measure and report on primary care performance in Ontario.

Long-term care and patient safety will be described in greater detail in the following sections.

4.6.1 Long-term care public reporting

In the area of long-term care HQO publicly reports on 12 quality indicators at the provincial level. Four of these are also reported on at the individual home level. These quality indicators relate to different aspects of long-term care quality, such as how effective and safe the care is. HQO followed a rigorous, evidence-based process to select quality indicators for public reporting and research was carried out to determine which indicators should be used and publicly reported across Canada. HQO also consulted with a panel of family and resident advocates, sector representatives and research scientists to understand which indicators were most meaningful and useful for Ontarians.

The quality indicators chosen for public reporting are based on the best data and research currently available. The indicator results presented are provided to HQO by several sources including the Canadian Institute for Health Information (CIHI), the Institute for Clinical Evaluative Sciences (ICES), the Ministry of Health and Long Term Care (MOHLTC) and the Workplace Safety and Insurance Board (WSIB).

Most of the quality indicator results on HQO's website are based on data collected through a tool called the Resident Assessment Instrument – Minimum Data Set 2.0 (RAI-MDS 2.0).⁽²³⁾

RAI-MDS 2.0 is a computerized care management and assessment tool that is used in all long-term care homes in Ontario. This assessment helps long-term care staff monitor each resident's needs and care wishes, so that they can develop an individualized care plan for every resident. Residents are assessed using the RAI-MDS 2.0 tool when they first arrive at the long-term care home, then every three months and whenever there is a major change in their health status. Data on this website also comes from other sources, like administrative databases, that keep track of overall emergency department visits and prescription drug use in Ontario. HQO works with many leading organisations, such as the Canadian Institute for Health Information and the Institute for Clinical Evaluative Sciences, to ensure that the information it reports to the public is high quality and that it protects privacy and confidentiality.

HQO currently reports on 12 long-term care quality indicators which are organized according to five attributes of a high-performing healthcare system:

- accessible
- effective
- safe
- appropriately resourced
- focused on population health.

HQO is continually increasing the amount of patient and consumer engagement to understand how their reports and website are used. They engage with all of their stakeholders to determine what information brings the greatest benefit. It is an evolutionary process.

4.6.2 Patient safety

Health Quality Ontario currently publicly reports on nine patient safety quality indicators at the provincial level and at the individual hospital level. These indicators relate to the following aspects of patient safety in hospitals:

- *Clostridium difficile* infection (CDI)
- Methicillin-Resistant *Staphylococcus aureus* (MRSA) bacteremia
- Vancomycin-Resistant *Enterococcus* (VRE) bacteremia
- Hospital Standardised Mortality Ratio (HSMR)
- central line-associated primary bloodstream infection (CLI)
- ventilator-associated pneumonia (VAP)
- surgical site infection (SSI) prevention
- hand hygiene compliance (HHC)
- surgical safety checklist compliance (SSCC).

The Ministry of Health and Long-Term Care (MOHLTC) requires all hospitals to publicly report on these indicators as part of a patient safety initiative that aims to promote transparency and accountability, inspire improved performance, enhance patient safety and strengthen the public's confidence in Ontario hospitals.

Hospitals use administrative data to track the number of hospital care associated infections, mortality rates and results on compliance and these rates are collected by the MOHLTC. The Hospital Standardised Mortality Ratio is calculated by the Canadian Institute for Health Information (CIHI) and the results are posted annually on its website. Health Quality Ontario works with MOHLTC and CIHI to ensure that the information reported to the public is accurate and that it protects privacy and confidentiality.

Data are presented in tables by hospital site and overall for the province. Included in the tables are data on the number of new cases, the rate for each indicator or percentages. The data presented are confirmed by hospitals and also reported on hospital websites. Reporting periods for each indicator vary (e.g. CDI is reported monthly and MRSA bacteraemia is reported quarterly). The website also provides a description of the data under the following three questions:

1. What does the indicator show?
2. Why is this important to measure?
3. Ideas for improvement?

4.7 Key recommendations and learnings suggested by HQO

To engage as many people as possible in the process, this builds a stronger sense of collaboration, goodwill and will improve the product and its uptake.

5. England

England has a population of 53 million.

5.1 Overview of regulation structure in England

The Care Quality Commission (CQC) is the independent regulator of health and adult social care services in England.⁽²⁶⁾

Its purpose is to ensure that the care provided by hospitals, GPs, dentists, ambulances, care homes and home-care agencies meets government standards of quality and safety. It also protects the interests of vulnerable people, including those whose rights are restricted under the Mental Health Act.

5.2 Links to external agencies

Some of the key stakeholders are listed here; but this list is non-exhaustive:

- Health and Social Care Information Centre (HSCIC)
- Dr Foster Intelligence
- Health Protection Agency (HPA)
- General Medical Council
- Monitor
- NHS Trust Development Authority (NTDA)
- Royal Colleges.

5.2.1 The Health and Social Care Information Centre (HSCIC)⁽²⁷⁾

The HSCIC was set up as an Executive Non Departmental Public Body (ENDPB) in April 2013. It manages a number of large data collections covering many aspects of health and social care and collected from a wide variety of NHS trusts, local authorities, and independent sector organisations, such as Hospital Episode Statistics (HES), a large data warehouse.

The HSCIC's Indicator Portal brings a range of health indicators together in one place. Providing quick and easy access to hundreds of indicators, and is a valuable information resource for all health and social care professionals, not just information specialists. It contains a compendium of over 1,000 population health indicators alone.

The Health and Social Care Act 2012⁽²⁸⁾ sets out its responsibilities, which include:

- Collecting, analysing and presenting national health and social care data.

- Setting up and managing national IT systems for transferring, collecting and analysing information.
- Publishing codes of practice to set out how the personal confidential information of patients should be handled and managed by health and care staff and organisations.
- Building up a library of 'indicators' that can be used to measure the quality of health and care services provided to the public.
- Helping health and care organisations improve the quality of the data they collect and send to the HSCIC by setting standards and guidelines to help them assess how well they are doing.
- Creating a register of all the information that is collected and produced, and publishing that information in a range of different formats so that it will be useful to as many people as possible while safeguarding the personal confidential data of individuals.

While the HSCIC does not have a monitoring role, some of the indicators it defines are the same as those used for monitoring by the Care Quality Commission or Dr Foster intelligence.

5.2.2 Dr Foster Intelligence⁽²⁹⁾

Dr Foster Intelligence is a joint venture between the English Department of Health and Dr Foster Holdings, a private company. It offers a number of products and services to improve data quality and to improve quality and safety of services through the use of information. It offers these to public and private healthcare providers in the United Kingdom and internationally.

Dr Foster Intelligence is linked to a unit at Imperial College that develops methodologies for measuring performance. Dr Foster's best known product is its *Annual Hospital Guide*, which draws on a range of indicators. This hospital guide is aimed at service users who, in many cases, can choose the National Health Service hospital to which their GP refers them.

5.2.3 Health Protection Agency⁽³⁰⁾

The Health Protection Agency is a non-departmental public body that was established to protect public health throughout the United Kingdom. Its duties include surveillance of rates of healthcare associated infections.

5.3 Resources and workforce of CQC

- CQC regulates 22,000 organisations in health and social care
- annual turnover of £149 million
- CQC has 1,885 staff in total (and plans to recruit more).

- 900 inspectors
- 140-150 data analysts/business intelligence staff

5.4 Use of information by CQC

5.4.1 Background

In April 2013, CQC published a new strategy entitled *Raising Standards, putting people first*,⁽³¹⁾ which set out a clear, newly defined purpose for CQC and proposed significant changes to the way it works. This report came against the backdrop of a number of reports in the UK highlighting failings in the role of the regulator, such as the Robert Francis report into the failings at Mid Staffordshire NHS Foundation Trust⁽³²⁾ and the report into the abuse of people with learning disabilities at Winterbourne View.⁽³³⁾ The UK government also published a response to these catastrophic failures of care in *Patients First and Foremost*.⁽³⁴⁾

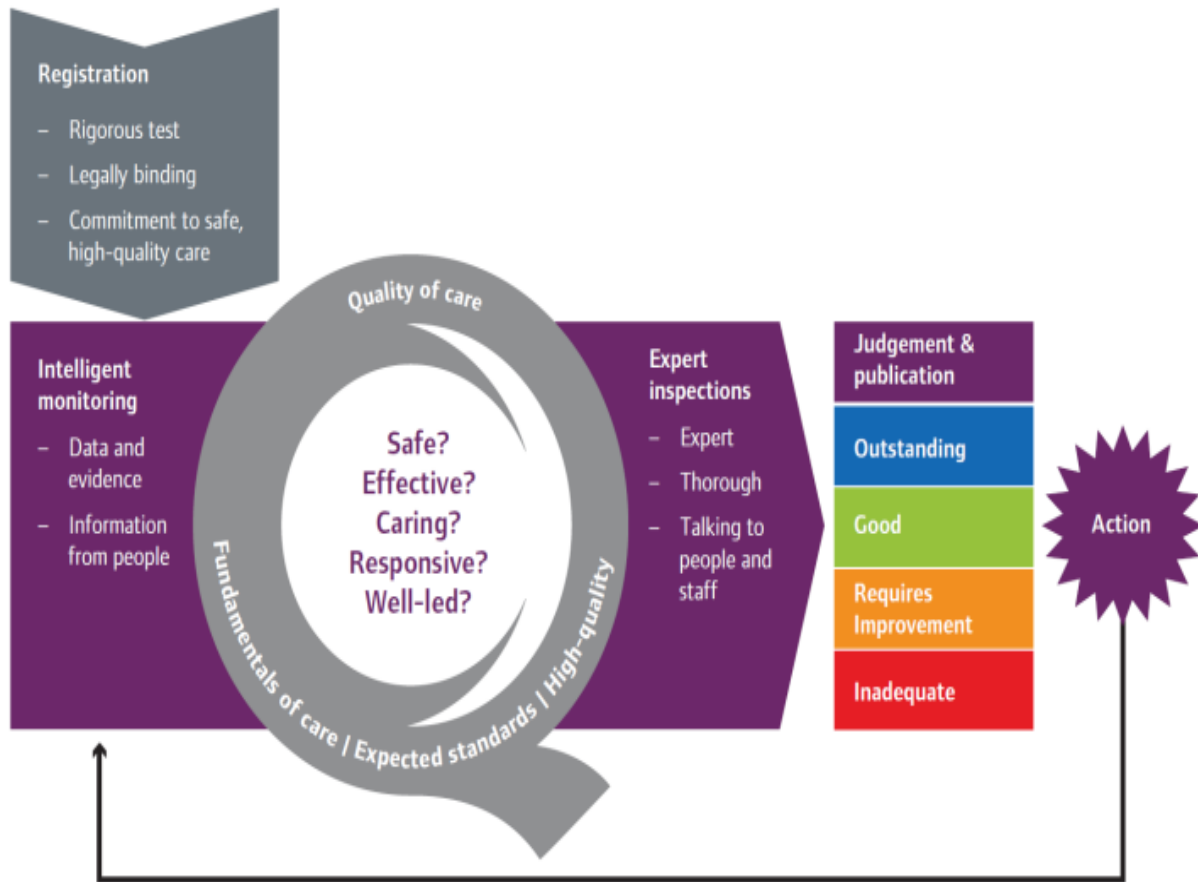
There have also been a number of independent reviews conducted into the work of CQC, most notably the review by Professor Kieran Walshe in Jan 2013⁽³⁵⁾ which proposed some sweeping changes to the regulatory model being employed by CQC.

In addition, following on again from the Francis report, a National Advisory Group on the Safety of Patients in England was convened, chaired by Professor Don Berwick of the Institute for Healthcare Improvement (IHI). This group produced a report⁽³⁶⁾ highlighting, amongst other issues, the importance of ensuring that the voice of the patient and carer is heard, and that there is a robust means of capturing that voice.

All of these reviews and reports informed the changes to the way that CQC developed a new regulatory model, including how information is analysed to inform regulation and support improvement. This model comprises monitoring of information and evidence to decide when, where and what to inspect, including listening better to people's experiences of care and importantly using, not all, but the best intelligence from across the system.

5.4.2 Overview of new approach by CQC – use of Intelligent Monitoring model

Figure 1: New regulatory model adopted by CQC⁽³⁷⁾



Intelligent Monitoring is one of the four key components of CQC's new hospital regulatory model, as illustrated in Figure 1 above.⁽³⁷⁾

- It is part of how they are improving use of information.
- It aims to identify failures and potential risk of failure.
- It informs decision making for where and what to inspect.
- It provides clarity about the sets of indicators that they will prioritise rather than a model that claims to scan all information all the time.
- It will support providers to benchmark their performance.
- It will support system alignment of quality measurement.

5.4.3 CQC's new Intelligent Monitoring model for NHS Acute Trusts

This model commenced in September 2013.⁽³⁸⁾ CQC now monitors information and evidence to anticipate, identify and respond more quickly to acute hospitals that are failing, or are at risk of failing.

A mixture of announced and unannounced inspections of 18 NHS trusts took place between September and December 2013. A second wave of trusts was also scheduled for inspection under the new approach between January and March 2014. The regulation approach will be to use indicators to raise questions about the quality of care provided in an acute hospital, though the indicators on their own will not be used to draw definitive conclusions or judge the quality of care – that will be a matter for inspection. Instead the indicators will be used as 'smoke detectors,' which will start to sound if a hospital is outside the expected range of performance or is showing declining performance over time for one or more indicators. CQC will then assess what the most appropriate response should be.

CQC has identified a small set of indicators by looking at the key quality and safety issues for NHS hospitals and identifying the data available to measure them. They have based them around the five main questions they will ask about services:

- Are they safe?
- Are they effective?
- Are they caring?
- Are they responsive to people's needs?
- Are they well led?

As there is potentially an unlimited set of indicators that could be used to monitor acute hospitals, CQC has grouped indicators in a tiered approach into three sets according to their importance. Figure 2 below outlines the tiered approach.

- The first set will be used to identify potential concerns and trigger a response from CQC.
- The second set includes a wider range of information, including nationally comparable data, which CQC will check if any of the first set signals concerns.
- The third tier includes those in development either by the CQC or others which could be included in the future in either of the other tiers.

5.4.4 Methodology and information sources used in CQC's new Intelligent Monitoring model for NHS Acute Trusts⁽³⁸⁾

The first run of the model in 2013 analysed 119 Tier 1 indicators and identified up to three levels of performance.

For the indicators derived from quantitative sources:

- Indicators that fall between 0 and 1.6 standard deviations above the mean are identified as 'expected.'
- Indicators that fall between 1.6 and 2.0 standard deviations above the mean are identified as a 'risk.'
- Indicators that are more than 2.0 standard deviations above the mean are identified as 'elevated risk'.

Two levels of performance were examined for indicators derived from qualitative sources:

- Indicators where the count of events is within two deviations of the median are identified as 'expected'.
- Indicators where the count of events exceeds the median by more than double the deviation is identified as 'risk.'

A risk score has been created for each NHS trust, which counts the number of 'risks' and 'elevated risks' for each organisation. Indicators identified as 'elevated risk' are weighted more heavily than 'risk', and are counted twice in the calculation.

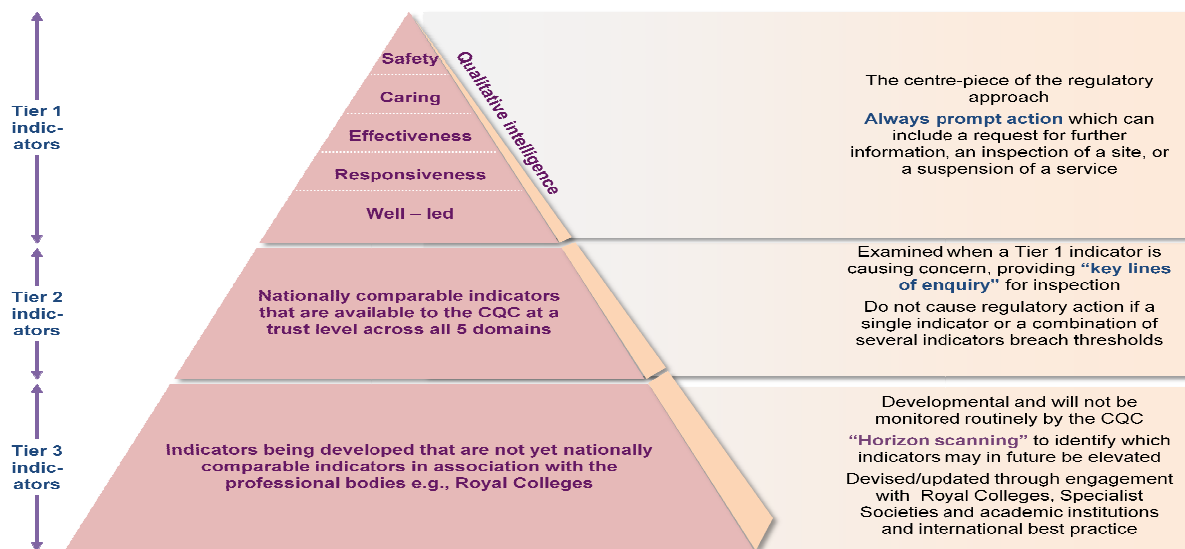
The indicators contained within the framework include:

- avoidable infections (e.g. Methicillin-Resistant *Staphylococcus aureus*)
- notifications of deaths, severe and moderate harm and abuse
- number of 'never events'^{*}
- mortality rates in various healthcare areas
- information from the 'Your Experience' (patient experience) form on the CQC website
- information from patient and staff surveys
- complaints

* The term 'never event' was first introduced in 2001 by Ken Kizer, MD, former CEO of the National Quality Forum (NQF) in the United States, in reference to particularly shocking medical errors (such as wrong-site surgery) that should never occur. Never events now comprise 29 events grouped into six categories: surgical, product or device, patient protection, care management, environmental, radiologic, and criminal.⁽³⁹⁾

- clinical audits
- waiting times.

Figure 2: New approach – CQC tiered indicator model⁽³⁸⁾



5.4.5 The three tiers of indicators

The first set of indicators is the centrepiece of the new model. It includes data and evidence such as mortality rates, never events, specific results from NHS staff and patient surveys nationally, information from whistleblowers and information from members of the public who make complaints, raise concerns and provide feedback.

They have been selected because they are measures of potential issues. An example of an alert or trigger would be higher than expected deaths for people who have had operations that would not normally carry that level of risk. Any indicator in this set which points to a potential concern or a decline in quality over a period of time will trigger questions. The response will vary depending on the concern. For example, CQC may ask the trust responsible for the hospital for more information and explanation; they may carry out an inspection; or in extreme cases they may suspend a service. The indicators are used to pursue lines of enquiry; regulatory judgments leading to ratings will take place only after any inspection has been carried out.

5.4.6 Surveys of patient experiences⁽⁴⁰⁾

The reality of people's experiences of care is a key source of information for CQC, as well as being a core focus of inspections. It uses people's experiences to help

determine which hospitals and services to inspect and the issues to follow up on in inspections. CQC analyses individual patient experience alongside the national survey programme and the NHS 'Friends and Family Test' survey.⁽⁴⁰⁾

Sources include:

- Healthwatch England recommendations[†]
- complaints investigated by the Ombudsman
- number and themes of complaints made to CQC's National Customer Service Centre
- 'Share Your Experience' comments submitted via CQC's website
- comments posted on the NHS Choices and Patient Opinion websites
- experiences shared through patient organisations
- concerns raised directly by staff.

5.4.7 CQC Quality Risk Profiles⁽⁴²⁾

The system for business intelligence that was in place before the introduction of the Intelligent Monitoring model, was the use of Quality Risk Profiles (QRP); this is still in place for other, non-acute parts of the NHS. This system involved the development of complex risk models based on a large number of datasets. An explanation of the QRP system is presented below.

Quality Risk Profiles were designed to be used by providers, commissioners and CQC staff to monitor compliance with the essential standards of quality and safety. Each profile contained information from a number of sources. CQC analysed this information to identify areas where the organisation may not be meeting standards. Quality Risk Profiles were shared with providers and commissioners, (but not the general public). They aimed to help in assessing where risks lie and to support providers' own internal monitoring as well as informing the commissioning of services. Some of the metrics and indicators used in the CQC's quality and risk profiles were created by Dr Foster Intelligence.

CQC used different data sources for the six different types of NHS trust:

- acute and specialist
- ambulance
- learning and disability
- mental health

[†] Healthwatch England is the national consumer champion in health and care. They have significant statutory powers to ensure the voice of the consumer is strengthened and heard by those who commission, deliver and regulate health and care services.⁽⁴¹⁾

- care
- community.

Specific reports listing the individual indicators and a myriad of different data sources are listed by topic. To give an impression of the level of information collated, in the acute and specialist trusts alone the report is 731 pages long, containing over 548 data items in the Quality and Risk Profile from dozens of data sources, for example:⁽⁴³⁾

- Health and Social Care Information Centre (HSCIC)
- hospital episode statistics (HSCIC and Department of Health)
- CQC survey of adult inpatients
- CQC survey of NHS staff
- National Patient Safety Agency, Patient Environment Action Team
- delayed transfer of care (Department of Health).

These data items are grouped under the 16 outcomes described in the CQC's *Guidance about compliance: Essential standards of quality and safety*.⁽⁴⁴⁾

The profiles were not used to make judgments about providers, but they are used by inspectors as a starting point to respond to risks with front-line regulatory action such as scheduled inspections or targeted inquiries. The 548 data items for acute and specialist trusts provide a large number of examples of key performance indicators (KPIs). CQC does not give the full definitions of KPIs but these are frequently available from other sites. The Picker Institute Europe, a private charity, coordinates patient surveys on behalf of CQC.⁽⁴⁵⁾

5.4.8 Example of reporting of one KPI – mortality rate reporting

Reporting of mortality rates in a hospital may be an indicator of the quality of care. The following details how CQC collates information in relation to hospital mortality for England.

CQC Quality and Risk Profiles⁽⁴²⁾ included:

- (i) The mortality rates calculated by Dr Foster Intelligence (see below):
- (ii) Mortality rates by procedure.

There were separate indicators for standardised in-hospital mortality and total mortality (in-hospital or in-hospital plus Office for National Statistics deaths). For both types of indicator, the denominator was based on discharges with valid age and sex. The indicators excluded regular attenders and patients with cancer diagnoses. Standardisation was by five-year age band, gender, Healthcare Resource Group and admission method. There were indicators for 17 separate procedure groups.

HSCIC – Summary Hospital-level Mortality Indicator (SHMI)⁽²⁷⁾

The Health and Social Care Information Centre publishes the definition of the Summary Hospital-level Mortality Indicator. This was developed in 2010 as the Hospital Standardised Mortality Rate (HSMR) was being used patchily and inconsistently in NHS hospitals.⁽⁴⁶⁾ The SHMI was designed by an independent working group on behalf of the National Quality Board (a Department of Health body), following the Mid-Staffordshire inquiry. The SHMI is for in-hospital death, or death within 30 days of discharge. The rate is adjusted for age, gender, admission method (acute or elective), year index, Charlson co-morbidity Index (3 levels: 0, 1-5, >5) and diagnosis grouping. The SHMI includes 100% of deaths (HSMR includes 83%), and 30 day mortality (HSMR includes only in-hospital deaths).⁽⁴⁷⁾ Out-of-hospital death is based on Office of National Statistics data. NHS Hospital Episode Statistics carry out the linkages.

Dr Foster – Hospital Standardised Mortality Rates (HSMR)⁽²⁹⁾

Dr Foster Intelligence calculates a number of mortality rates but it also produces the composite HSMR. This is in-hospital mortality adjusted for: admission method, age, sex, deprivation (Carstairs index), diagnosis, co-morbidity, emergency admissions in previous 12 months, palliative care, month of admission, ethnicity and source of admission.

Of note is that the HSMR has been subject to increasing scrutiny as a proxy for quality of care generally.

5.5 Overview of data that CQC publishes

In addition to the individual reports CQC publishes for each NHS service that it inspects, it produces an annual report entitled *The state of health care and adult social care in England*⁽⁴⁸⁾ looking in detail at the quality and safety aspects of health and social care.

The first part of the latest report (2012-13), gives a high level broad-sweep overview of health and social care provision in England. The second part uses the findings from inspections, themed inspection programmes and thematic reviews, sector by sector, as well as other published reports and statistics to give an overall impression of what is working well in each care sector and where issues of poor care were found. The sector by sector findings focus on the provision and quality of care services in the following areas:

- adult social care
- NHS services
- independent health care

- primary dental care.

The results in relation to monitoring hospital mortality trends are published in reports produced by the CQC (these results are taken from analyses by CQC themselves, some provided by the Dr Foster Unit at Imperial College London, and by different care providers).

In addition, there are reports produced by independent agencies. For example, the Kings Fund⁽⁴⁹⁾ (an independent charity in the UK that works to improve healthcare by providing research and health policy analysis) has produced a report entitled *How is the health and social care system performing.*⁽⁵⁰⁾

In addition to the above CQC publish the following:⁽⁵¹⁾

Annual report

CQC publishes annual reports on care in England and corporate aspects of CQC, such as on their progress and strategy.

- *Annual Report 2012/13*
- *Deprivation of Liberty Safeguards 2011/12*
- *Care Update* (Issue 2)
- *Mental Health Act Annual Report 2011/12*
- *State of Care Report 2011/12*
- joint inspections
- mortality outlier reports.

Themed inspections

Themed inspections are targeted to look at specific standards, sectors or types of care and are carried out by compliance inspectors. Below are some of the themes the inspections follow:

- transition arrangements for young people with complex health needs from children's to adult services
- dignity and nutrition for older people
- review of home care services
- review of learning disability services
- child safeguarding and looked-after children inspection programme
- thematic review of emergency mental healthcare.

Surveys

CQC also publishes surveys, which collect feedback on the experiences of people using a range of healthcare services provided by the NHS:

- accident and emergency 2012
- community mental health survey 2013
- inpatient survey 2012
- outpatient survey 2011
- maternity services survey 2010.

Other reports

Reports on findings on services, themes in health and social care and pathways of care:

- defence medical services
- meeting the healthcare needs of people in care homes
- services for people who have had a stroke and their carers
- social services' response to people's first contact with them
- support for families with disabled children.

5.6 Key recommendations and learnings suggested by CQC

- The engagement with stakeholders is a key factor towards improving health and social care.
- When starting a business intelligence function, it is recommended that the function should start small and build up gradually.
- At the outset, the focus should be on high impact indicator data, such as mortality rates, never events, staff and patient surveys, complaints from public, and concerns data. This indicator data can then be used to trigger 'key lines of enquiry.'
- Qualitative information such as patient experience is valuable information, and it is of benefit to collect it, to further inform the quality and safety of care provided.
- The overriding message was to avoid over-reliance on statistically based risk profiling.

6. Netherlands

The Netherlands has a population of 16.8 million.

6.1 Overview of regulation and quality improvement structures in the Netherlands

The regulator of healthcare in the Netherlands is called Inspectie voor de Gezondheidszorg (IGZ) (Dutch Healthcare Inspectorate).⁽⁵²⁾ The formal regulatory remit of IGZ is to 'promote public health through effective enforcement of the quality of health services, prevention measures and medical products'. IGZ advises the responsible ministers and applies various measures, including advice, encouragement, pressure and coercion, to ensure that healthcare providers offer only 'responsible' care. The Inspectorate investigates and assesses in a conscientious, expert and impartial manner, independent of party politics and unaffected by the current care system.⁽⁵²⁾

IGZ is responsible for overseeing some 40,000 healthcare organisations (including all health organisations, clinics and practices) and approximately 800,000 individual healthcare professionals.⁽³⁵⁾ Both public and private healthcare organisations are regulated including the areas of curative healthcare, long-term care, public health, pharmaceuticals and medical devices, as are health professionals, including general practitioners. A broad definition of 'healthcare' is used and the organisations regulated also include home/residential care for the elderly.

6.1.1 Dutch Institute for Healthcare Improvement (CBO)

The core business of the Dutch Institute for Healthcare Improvement⁽⁵³⁾ (CBO) is to develop, implement and review quality in healthcare. CBO has taken over the work of the Netherlands Institute for Health Promotion (NIGZ) which focuses on supporting health promotion practice (e.g. in the area of school health, health for vulnerable groups and healthy ageing). As an international centre for expertise and innovation in the field of quality of care in the Netherlands and Europe, CBO works with a wide range of strategies, taken from both healthcare and other sectors. CBO is also involved in research, innovation and development of health promotion.

In 2014, there are changes taking place in the area of quality improvement in the Netherlands with the establishment of the newly founded Quality Institute.⁽⁵⁴⁾ This will be the government agency tasked with quality improvement and brings together several initiatives, like the Visible Care programme (see section 6.6.1). However, parties like CBO will work closely with the Quality Institute.

The focus of the rest of this review in relation to the Netherlands will be on the healthcare regulator – IGZ.

6.2 Links to external agencies

IGZ is now part of the Ministry for Health, Welfare and Sport, but it remains partially independent. It was formed from the merger of four separate inspectorate agencies in 1995.

IGZ obtains indicator data from many stakeholder parties in the field, including the acute hospital sector. They link in with a number of government agencies, such as the CIBG agency (www.cibg.nl). CIBG is an executive organisation within the Ministry of Health, Welfare and Sport which, based on legislation or established policy, makes decisions, registers data, issues permits and permissions, and provides support to committees and boards that have an oversight function in healthcare.

6.3 Resources and workforce of IGZ

- 500 staff in total⁽⁵⁵⁾
 - 300 inspectors/senior inspectors
 - 200 support staff, including legal advisors
 - 20 staff approximately involved in the Intelligence/analysis area
- Annual turnover: EUR55 million.

6.4 The Health Care Inspectorate and risk analysis

The Health Care Inspectorate (IGZ) is the official regulatory body charged with safeguarding the quality of care services, prevention activities and medical products. The Inspectorate will take action against any care provider or manufacturer who fails to comply with current legislation. Its approach is 'risk-led', i.e. the Inspectorate focuses on sectors and activities in which the risks are greatest, as identified by a system of risk analysis.

6.4.1 Risk-led regulation

IGZ applies a two-pronged approach. On the one hand, the Inspectorate works proactively based on its own analysis of information provided by the field. On the other, it works reactively in response to incoming incident reports and information from various sources. In the Inspectorate's proactive risk-led activities, the focus is on those sectors, healthcare providers and manufacturers whose activities are seen to represent a high (or higher than average) level of risk to patient safety. Alongside specific health-related indicators such as patient outcomes, the Inspectorate gathers information relating to operational and commercial aspects. In the reactive incident-

led approach, the Inspectorate's activities are prompted and guided by reports, complaints and other indications of shortcomings in professional performance.

6.4.2 Phased supervision

Phased supervision/regulation is the method by which the Inspectorate ensures efficient and effective enforcement of the legislation for which it is responsible. First, the inspectorate identifies where the greatest risks to the quality of care are to be seen. By means of inspection visits and/or enforcement action, it then prompts care providers to make the necessary improvements.

Phased supervision is a refined form of risk-based supervision based on quality indicators as well as other information about healthcare providers and health services.

Phased supervision involves three phases:

- First phase: identification of risks based on an analysis of the quality information and any additional information about the care provider and the care services. This is in preparation for the second phase.
- Second phase: inspection visits, assessment and selection of appropriate measures.
- Third phase: imposition of administrative or disciplinary measures, or institution of criminal proceedings where appropriate.

6.4.3 Risk analyses

The results of the risk analyses are collated to form performance 'dashboards'. If the results of a risk analysis suggest a higher-than-average level of risk, the Inspectorate will visit the care provider or manufacturer concerned. Based on all available information and its own findings, it will determine whether the standard of care provided can be termed 'responsible'. The risk analyses and dashboards are subject to ongoing development and refinement. Financial information is also included so as to identify any risks affecting quality of care which may result from the governance and management of an organisation. This will enhance the predictive value of the risk analyses, providing a more rounded impression of any situations in which there are unacceptable risks to patient safety.

6.5 Use of information by IGZ

The data gathered to support the Inspectorate's risk analyses falls within five main categories:

1. Care-related indicators.
2. Corporate information.

3. Incident reports.
4. External signals.
5. The Inspectorate's own observations and information received from other regulatory bodies.

6.5.1 Care-related indicators

Performance indicators offer an impression of the quality and safety of the care services provided. The indicators relate to various aspects, including organisational structure, procedures and patient outcomes. The combined information is used to determine whether the care process is organised in an effective and efficient manner, and whether the care itself is of adequate quality. Care-related performance indicators vary from one sector to another.

6.5.2 Corporate information

Much of this type of information is gleaned from the annual social responsibility report of the organisation concerned. All care providers who fall within the scope of the Health Care Institutions Accreditation Act (*Wet toelating zorginstellingen, WTZI*) are required to produce this report, in which they account for their healthcare activities. The report also provides insight into the financial position of the organisation, its personnel turnover and the rate of staff absenteeism due to illness. All this contextual information can have a great predictive value with regard to current or potential risks within the care process itself. Where a residential care home has a high rate of staff absenteeism, for example, the risk of there being insufficient staff on duty to provide good, responsible care is that much greater.

6.5.3 Incident reports

Each year, the Inspectorate receives some 10,000 reports of incidents and 'near misses,' both from care providers and from members of the public. Care providers are required by law to report certain types of incident, which the Inspectorate will always investigate. The Inspectorate will also launch an investigation if it receives an unusually high number of reports relating to a particular care provider or manufacturer, or if those reports allege especially serious shortcomings. This 'incident-led regulation' is subject to set procedures and guidelines (see [here](#)).

The Inspectorate also uses information from the reports for the purposes of risk-led regulation. It assesses the degree to which institutions learn from incident reports and take appropriate remedial action, and it identifies any common features within the reports which may suggest a general trend.

6.5.4 External signals

The Inspectorate's risk analyses also draw on the results of various patient satisfaction surveys and the comments left on public review sites. A pilot project has recently been launched in which information is also drawn from social media.

6.5.5 Observations and information received from other regulatory bodies

The findings of inspectors who have visited a location, as well as information from other regulatory bodies are included in the dashboards. In certain cases, a (further) inspection may be scheduled as a matter of priority.

6.5.6 Ongoing improvement

The Health Care Inspectorate is constantly striving to improve its risk analyses by combining and collating the various types of information. Doing so provides an even more accurate indication of situations which pose a risk to patient safety. For example, it can be useful to set the patient outcomes of a care provider alongside financial information. The Inspectorate has formulated a set of financial indicators which have a high predictive value in terms of risks to the quality and safety of care services.

6.5.7 IRIS

The computer system in which the Inspectorate collates all information for risk analysis purposes is known as IRIS. All data with predictive value is entered into the system, which then produces the dashboards. IRIS reveals trends in the quality of healthcare services. It generates a 'league table' in which healthcare providers and manufacturers are ranked according to the degree of risk represented by their activities, allowing the Inspectorate to prioritize its inspection visits accordingly. The system output also includes individual scores for each of the performance indicators relating to safe and responsible care, together with a list of any aspects which have been the subject of several reports and which therefore warrant closer scrutiny during an inspection visit.

IRIS is still in development. The system now includes information relating to hospitals, pharmacies, psychiatric services, residential care facilities and domiciliary care services. Information relating to private clinics is to be added shortly. In time, IRIS will be expanded to include all health care segments, institutions, organisations and individual care providers which fall under the regulatory responsibility of the Health Care Inspectorate.

6.6 Quality indicators

Quality indicators are intended to render the quality of healthcare services measurable and transparent. The indicators are developed by the field itself, not by

the Inspectorate. However, in each care sector, the Inspectorate works jointly with healthcare providers, insurers, and patients representative groups as well as people with disabilities and the elderly to produce appropriate indicator sets.

The quality indicator sets provide information to support patient choice. They also enable healthcare providers to derive the benefit of a good rating, or to improve the quality of their services. Health insurers can use the indicators to substantiate purchasing and contracting decisions. For its part, the Inspectorate uses the indicators to support a system of risk-based supervision, since it is then able to identify areas in which potential risks to the quality of care exist.

6.6.1 The Visible Care programme

The Minister of Health originally appointed the Inspectorate to supervise the production of quality indicator sets, resulting in the Visible Care programme. In the majority of sectors, quality indicators are defined and compiled by the Visible Care programme. In some sectors, such as hospitals, the Inspectorate collects its own quality information and/or defines the relevant quality criteria. Different indicator sets are used for the different sectors. This programme has very recently been taken over by the newly founded Quality Institute⁽⁵⁴⁾ in the Netherlands.

6.6.2 Approach taken by IGZ in relation to standard setting

There are different regulatory standards for different sectors. There is some commonality between them but the standards are set by the individual sector and then overseen by IGZ. Although IGZ does not set the regulatory standards themselves, it works closely with the professional associations and sectors to assist them in setting standards which are then used in inspection visits.⁽³⁵⁾ As a result, the level/stringency of the standards varies.

The indicators which are developed and used in each sector are based on these standards. There is no pre-defined threshold or required level for compliance for each standard; instead the indicators may measure proportion of compliance with different elements of standards. Within a particular sector, the indicator dataset will be used to collect information uniformly from organisations.

How are results of measurement against standards aggregated to give an overall assessment?

There is no defined connection between indicator dataset performance and decisions made by the regulator, though serious non-compliance is likely to result in regulatory intervention or further scrutiny.

The model of regulation is considered to be partially risk-based/proportionate. All hospitals in the Netherlands are subject to an annual inspection and if problems are

identified, then follow-up visits are arranged. IGZ has had a hospital performance indicators programme in place for at least 12 years. Data are published by IGZ and by the hospitals and IGZ states that it uses both indicators and inspector judgment to identify which providers to visit.

6.7 Overview of the data IGZ publishes

Policy of 'Proactive publication'

Virtually all reports produced by the inspectorate are made public further to the national Freedom of Information Act. The reports can therefore be accessed by anyone who wishes to consult them.⁽⁵²⁾

In the case of reports concerning specific healthcare institutions, there is no statutory obligation to publish, but the inspectorate will generally do so in accordance with its policy of proactive publication. Proactive publication simply means that the Inspectorate does not wait until it is asked for information about a healthcare institution, but makes its inspection reports available on the website as soon as they have been finalized. This policy has been in place since 1 July 2008 and applies to the inspection reports for healthcare institutions in many sectors. Each report remains on the Inspectorate's website for a period of three years.

Not all reports concerning incidents, accidents or unacceptable situations within health care institutions are made public. The inspectorate will nevertheless publish such documents where there is significant political or public interest. Inspection reports relating to individual health care providers, or those which concern events which are subject to criminal or disciplinary proceedings, are not proactively published.

The Inspectorate has three reasons for publishing its reports on healthcare institutions:

- To maintain compliance: publication encourages all healthcare institutions to devote attention to the quality of care, and motivates those which are not currently performing as well as they might to make improvements.
- To inform patients, health insurers and other stakeholders: good information regarding the quality of care assists them in making an informed choice, which is particularly important now that greater competition has been introduced to the healthcare sector.
- To contribute to the transparency of government: the Inspectorate wishes to provide clear information about its methods and the manner in which it arrives at its conclusions about the quality of care.

Summary of publications

- annual reports
- inspection reports
- performance reports (*The Result Matters – Performance indicators as an independent measure of the quality of hospital care*).⁽⁵⁶⁾

6.8 Key recommendations and learnings suggested by IGZ

These points were raised in the course of the discussion with IGZ:⁽⁵⁵⁾

- In terms of developing quality indicators, it is advisable to work with what the system is already collecting and using.
- To gradually build up the intelligence capacity, for instance in IGZ, they started their data collection in simple excel worksheets and worked up towards data warehousing and dashboards.
- To develop standardised annual reports that not only accounts for healthcare activities of each service provider, but will also highlight a number of corporate indicators, such as a change in management in an organisation, personnel turnover, rate of staff absenteeism due to illness and also financial indicators, as the indicators in terms of corporate activity can reflect problems elsewhere in terms of care.

7. Scotland

Scotland has a population of 5.3 million.

7.1 Overview of regulation and quality improvement structures in Scotland

Healthcare Improvement Scotland (HIS)⁽⁵⁷⁾

Healthcare Improvement Scotland was formed on 1 April 2011.

Healthcare Improvement Scotland is made up of different parts, some of which have their own identities;

- Scottish Health Council
- Scottish Intercollegiate Guidelines Network (SIGN)
- Healthcare Environment Inspectorate
- Scottish Health Technologies Group

HIS also support the work of the Scottish Medicines Consortium and takes a lead role in co-ordinating the work of the Scottish Patient Safety Programme (SPSP)⁽⁵⁹⁾ which aims to steadily improve the safety of hospital care right across the country.

The Care Inspectorate⁽⁵⁸⁾

In April 2011 the Social Care and Social Work Improvement Scotland (SCSWIS) was created to scrutinise social care, social work and child protection services. In September 2011, the everyday name became the Care Inspectorate, although the formal name (SCSWIS) as set out in legislation was not changed. As with HIS, the role of the Care Inspectorate is to inspect, regulate and support improvement of services and provide public assurance on service quality.

7.2 Healthcare Improvement Scotland (HIS)

The key responsibility of HIS is to help NHS Scotland and independent healthcare providers to deliver high quality, evidence-based, safe, effective and person-centred care, and to scrutinise services to provide public assurance about the quality and safety of that care. It does this by:

- developing guidance and standards that are based on the latest evidence
- working with healthcare providers to help them improve the care they provide
- checking that healthcare providers are delivering services to the required standards and identifying where they need to improve.

It uses these three elements of evidence, scrutiny and improvement to help NHS Scotland deliver the highest standards of care for patients. It is building on work previously done by NHS Quality Improvement Scotland and the Care Commission.⁽⁵⁹⁾

Scope

The work programme of HIS supports Scottish government priorities, in particular those arising from the Healthcare Quality Strategy.⁽⁶⁰⁾ Activities previously undertaken within NHS Quality Improvement Scotland are now part of HIS.

In addition, HIS has responsibility for the regulation of independent healthcare services in Scotland, previously the responsibility of the Care Commission. HIS has developed an integrated cycle of improvement to explain how activities are organised, with patient focus and public involvement at the heart of all that it does.

HIS provides the coordination and quality improvement expertise to help make improvements happen using:

- evidence-based advice (internal)
- guidance and standards
- international evidence for improvement
- information from scrutiny work.

HIS works collaboratively with the staff of healthcare providers, partner organisations and the public to drive improvements which can be sustained and measured. The Scottish Health Council supports patient focus and public involvement by ensuring that NHS boards listen and take account of people's views.

Services regulated by Healthcare Improvement Scotland

HIS is currently responsible for regulating independent hospitals, voluntary hospices and private psychiatric hospitals. It took over these responsibilities from the Care Commission on 1st April 2011. Regulation of independent clinics, independent medical agencies and independent ambulance services has not yet commenced.

By inspecting care HIS helps to ensure that healthcare services are meeting the required standards of care, that good practice is identified and areas for improvement are addressed. Inspectors undertake announced and unannounced inspections of healthcare services. It conducts a programme of inspections to provide assurance that the care of older people in acute hospitals is of a high standard.

The Healthcare Environment Inspectorate's focus is to reduce the risk of healthcare associated infection to patients. It does this by inspecting all NHS acute hospitals in

Scotland against the NHS QIS healthcare associated infection (HAI) standards (2008). All inspection reports are published.

Announced and unannounced inspections

It regulates independent healthcare by inspecting services to ensure that they comply with standards and regulations, and its team of inspectors check independent healthcare services regularly, using announced and unannounced inspections.

It uses an open and transparent method for inspecting and reporting on its findings, using standardised processes.

Legislation and guidelines

In order to regulate independent healthcare, Healthcare Improvement Scotland⁽⁵⁷⁾ works to the following legislation and guidelines:

- Health and Social Care Savings and Transitional Provisions (No. 2) Order
- Public Services Reform (Scotland) Act 2010
- The Healthcare Improvement Scotland (Applications and Registration) Regulations 2011
- The Healthcare Improvement Scotland (Fees) Regulations 2011
- The Healthcare Improvement Scotland (Inspections) Regulations 2011
- The Healthcare Improvement Scotland (Requirements as to Independent Health Care Services) Regulations 2011
- The Healthcare Improvement Scotland (Requirements for Reports) Regulations 2011
- The National Care Standards
- The NHS Quality Improvement Scotland (Dissolution) Order 2011
- The Public Services Reform (Joint Inspections) (Scotland) Regulations 2011
- The Public Services Reform (Scotland) Act 2010 (Consequential Modifications) Order 2011.

7.3 Resources and workforce of HIS

Taken from the report *Workforce Plan 2013/14 – Healthcare Improvement Scotland*.⁽⁶¹⁾

Total workforce March 2013: 304 (headcount); 288.1 (WTE)*
Evidence and Improvement Directorate: 122 (headcount); 117.5 (WTE)

* Whole time equivalent

Data, Measurement & Business Intelligence team: 7 staff members (although they link in with other directorates in HIS and external agencies).

7.4 Links to external agencies

- National Statistical Authority
- NHS National Services Scotland – Public Health and Intelligence
- NHS Boards
- NHS Education for Scotland
- Professional bodies e.g. Royal Colleges

7.5 Use of Information by HIS

7.5.1 Use of information and evidence to support regulation and quality improvement

Scotland was the first country in the world to attempt to improve care in acute hospitals across the whole country with the assistance of expert faculty from the Institute for Healthcare Improvement from Boston in the United States. When the Scottish Patient Safety Programme (SPSP) was implemented, it was recognised that there was the need to capture the impact associated with the programme. A Data Consideration Group was set up which considered the types of information that could be derived from existing NHS Scotland sources to assess impact. One clear route was the examination of existing data from routine longstanding national data sources (e.g. Hospital Standardised Mortality Rate data) to detect any evidence of changes over the life of the programme. The consideration of these national data, and the impact of the SPSP on these data, is the focus of the published report *Reviewing the Patient Safety Data Landscape*.⁽⁶²⁾

To ensure the most appropriate datasets were examined, the expert panel developed explicit selection criteria. This ensured that the robustness and relevance of the datasets were considered first without being biased by any findings. The criteria considered to be important were:

- relevance to SPSP aims
- reliability of data
- time period over which data were available.

The specific SPSP aims under consideration were:

- reduce mortality by 15%
- reduce adverse events by 30%
- reduce healthcare associated infections

- reduce adverse surgical incidents
- reduce adverse drug events
- improve critical care outcomes
- improve the organisational and leadership culture on safety.

No national data sets were identified to enable robust assessment of the aims to reduce adverse drug events, to reduce adverse surgical events or to improve the organisational and leadership culture on safety. National datasets were available, however, to enable in-depth assessment of data on mortality, healthcare associated infections and critical care outcomes. Data were only available up to 2010 for most datasets, so only early potential impacts of SPSP could be examined.

The Healthcare Environment Inspectorate (HEI) was established in April 2009 to undertake at least one announced and one unannounced inspection of all acute hospitals across NHS Scotland every three years.

7.5.2. Quality Indicators

HIS is an authority on the development of evidence-based advice, guidance and standards.⁽⁵⁷⁾

- It supports improvements in the quality of healthcare people receive through its quality indicators. The quality indicators focus on the areas of prevention, testing and assessment, treatment and support, and service organisation.
- It collaborates with national and international experts to identify, develop and share evidence for improvement. This evidence is accessible to healthcare professionals to support them in providing safe and effective care, and to the public to inform them of the quality of care they can expect to receive.
- It also assesses new technologies in healthcare through the Scottish Health Technologies Group, and the clinical- and cost-effectiveness of newly licensed medicines through the Scottish Medicines Consortium.
- The national standards HIS develops use Scottish Intercollegiate Guidelines Network (SIGN) guidelines, and may also draw on sources such as National Institute for Health and Care Excellence (NICE) guidelines, evidence notes, health technology assessments and systematic reviews.

Following publication of its standards, HIS continues to work with NHS boards and voluntary organisations to support their implementation and, consequently, improvements to patient care.

In 2012-2013, Healthcare Improvement Scotland published quality indicators for the following areas:

- hepatitis C infection,
- cancer quality performance indicators (QPIs)
 - breast cancer
 - renal cancer
 - prostate cancer
 - hepato-pancreato-biliary
 - upper GI cancer
 - colorectal cancer
 - lung cancer
 - ovarian cancer
 - lymphoma
- pregnancy and newborn screening indicators
- primary care out-of-hours services
- palliative and end of life care indicators
- pulmonary resuscitation care.

7.5.3 HEAT – system overview⁽⁶³⁾

Each year, the Scottish Government agrees a suite of national NHS performance targets known as 'HEAT' targets grouped as follows:

- **H** Health Improvement
- **E** Efficiency and Governance
- **A** Access to services
- **T** Treatment appropriate to individuals.

In return the NHS boards state how they will commit to meet their targets as outlined in their annual local delivery plans. NHS Scotland performance against the HEAT targets and standards contributes towards the delivery of the Scottish government's purpose and national outcomes; and NHS Scotland's quality ambitions.

The HEAT system is a web-based information tool supported and maintained by the Information Service Division (ISD) Scotland on behalf of the Scottish Government.⁽⁶⁴⁾ The system allows NHS boards and the Scottish government to monitor boards' performance against national HEAT targets and progress is published on the Scottish

government's Scotland Performs website. Data for many of the performance measures used to monitor targets are sourced directly from ISD and, where this is the case, ISD aims to publish timely and useful data on these performance indicators on the website.

There are two main elements to HEAT performance measurement:

- Key measures relate to targets currently in operation and performance against a target is monitored by one or more key performance measures.
- Standard measures are measures for targets that have passed their target date but are maintained to monitor their progress or used for other purposes such as benchmarking.

7.6 Overview of data that HIS publishes

An important development was the publication of the first review of the quality and safety of care for acute adult patients in Scotland in December 2013.⁽⁶⁵⁾ At the point of initiating this review in August 2013, each one of the acute hospitals in NHS Lanarkshire had had a HSMR significantly higher than the Scottish average at some point in the preceding 18 months. Therefore, the decision was taken to include all three hospitals within this region in the review.

The terms of reference for the review were to:

- Provide an independent expert diagnosis of the factors which may underlie the Hospital Standardised Mortality Rate figures, including a Rapid Review assessment of any systemic factors which may be impacting on the safety and quality of care and treatment being provided to patients in NHS Lanarkshire's acute hospitals.
- Consider whether the existing action by NHS Lanarkshire to address any key issues identified in the diagnostic phase is adequate and whether any additional steps should be taken.
- Advise if any additional support should be made available to NHS Lanarkshire to help strengthen and accelerate their improvement programme, and one of the key findings of the review team was that the experiences of patients, family and staff were considered to be central to the process and the review.

In addition to the review, HIS publishes the following:

- *Quality and Safety Review of Scotland*⁽⁶⁵⁾ – first published December 2013
- annual reports⁽⁶⁶⁾
- standards (quality and clinical)
 - clinical standards for the delivery of COPD services

- audit reports
 - *Reviewing the Patient Safety Data Landscape*
 - *Scottish Perinatal and Infant Mortality and Morbidity Report*
 - *Scottish Confidential Audit of Severe Maternal Morbidity (SCASMM) Annual Report*
- indicators
 - cancer quality performance indicators
- surveys
 - Publish surveys to evaluate their inspection programme. For example – *How well did we do our inspections? – A survey to evaluate the Healthcare Environment Inspectorate’s inspection programme (September 2009–September 2010)*⁽⁶⁷⁾
- report by the Chief Inspectors
- benchmarking reports
- performance reviews.

7.7 Overview of the Care Inspectorate (regulator of social care in Scotland)

The Care Inspectorate⁽⁵⁸⁾ is the independent regulator of social care and social work services across Scotland. The Inspectorate regulates, inspects and supports improvement of care, social work and child protection services for the benefit of the people who use them. Various kinds of organisations provide the services that it regulates: local authorities, individuals, businesses, charities and voluntary organisations.

From September 2011, the everyday name became the Care Inspectorate. Its formal name, Social Care and Social Work Improvement Scotland (SCSWIS), is set out in legislation so will not change. It is an independent organisation with its own board responsible for governance. It is funded by the registration and continuation fees it charges to providers, and by the Scottish government.

The list of services it regulates is as follows:

- adoption agencies
- adult placement
- care at home
- care homes for children and young people
- care homes for older people
- care homes for people with physical and sensory impairments
- care homes for people with learning disabilities
- care homes for people with mental health problems

- care homes for people with drug and alcohol misuse problems
- childcare agencies
- criminal justice supported accommodation
- early education and childcare up to 16
- fostering and family placement
- housing support
- nurse agencies
- school care accommodation
- secure care accommodation
- short breaks and respite care
- support services.

7.8 Use of information by the Care Inspectorate

A significant amount of intelligence and information is collated by the Care Inspectorate in relation to regulation of the social care sector in Scotland. The Intelligence and Methodologies team collects a wide range of statistical information about Scotland's care services, most of which is collected primarily to assist with regulatory activities of individual services. However, the data can also be aggregated to produce summary tables and to provide a statistical overview of the services it regulates.

Some examples of data collated are:

- childcare statistics 2012
- the provision and use of registered day-care of children and child minding services in Scotland as at December 2012.

Supporting data and tables are also made publicly available.

7.9 Overview of data that the Care Commission publishes

The following are categories of publication:

- public reports
 - *Outcome of Complaints Research for the Care Inspectorate*
 - *Child Protection Overview Report 2009 – 2012*
 - *Findings of Joint Inspections on Child Inspection Services 2009-2012*
- care news
- leaflets
- posters.

For professionals, it also publishes statistical data from performance inspections. This contains Excel spreadsheets with all the information from staff, carer and service user questionnaires/surveys reported by individual local authority. Performance data reports from these surveys are also published by local authority region.

7.10 Key recommendations and learnings suggested by Healthcare Improvement Scotland

- A business intelligence strategy is crucial.
- Have clear definitions for indicators (staff were in the middle of the Scottish Patient Safety Programme and realised that there was no agreed definition for ventilator-associated pneumonia).
- Gathering data in relation to the experiences of patients, family and staff is important.
- Focus on gathering the most important information and intelligence to inform quality and safety, as opposed to trying to collect everything and then drowning in data.

8. Denmark

Denmark's population is 5.4 million.

8.1 Overview of regulation and quality improvement structures in Denmark

The Danish healthcare sector has three political and administrative levels: the state, five regions and 98 municipalities.⁽⁶⁸⁾

The Danish national government sets the regulatory framework and does general planning and supervision of health services. Five regions own, manage, and finance hospitals, general practitioners (GPs), specialists, physiotherapists, dentists, and pharmaceuticals.

The 98 municipalities are responsible for nursing homes, home nurses, health visitors, municipal dentists (children's dentists and home dental services for physically and/or people with an intellectual disability), school health services, home help, and the treatment of alcoholics and drug addicts⁽⁶⁹⁾.

The Danish Health and Medicines Authority (DHMA) is the regulator, and as such it is responsible for surveillance, counselling and supervision. It is the result of a merger between the National Board of Health and the Danish Medicines Agency and was established in 2012.

DHMA functions include:

- medicines licensing and availability
- pharmacies and reimbursement
- pharmacovigilance and medical devices
- medical control and inspection
- disease prevention and local services
- national institute of radiation protection
- education and registration
- supervision and patient safety
- hospital services and emergency management
- Institute for Pharmacotherapy
- public health medical officers⁽⁶⁸⁾
- inspection of nursing homes
- inspection of cosmetic treatment clinics
- inspection of clinics or hospitals where doctors perform private medical treatments.⁽⁷⁰⁾

DHMA has a clear range of sanctions, providing 'intensified supervision', sanctioning boards, including temporarily suspending practices in whole or in part. It can also revoke the authorisation of individual health personnel.⁽⁷⁰⁾

- The regions: run the hospitals, psychiatry, GPs and specialised healthcare. They are responsible for the National Indicator Project, Patient Satisfaction Surveys and they work with SSI to generate and run the national health data collections. They capture data for a number of treatment areas in clinical databases and publish them on the Internet. The data are used for a variety of purposes, including patient choice of hospitals and management of hospital quality.
- The municipalities: are responsible for health prevention, rehabilitation, nursing and dependency treatment.

The Danish Institute for Quality and Accreditation in Healthcare is responsible for Denmark's Healthcare Quality Programme.

8.2 Danish Institute for Quality and Accreditation in Healthcare

IKAS (Institut for Kvalitet og Akkreditering i Sundhedsvæsenet), the Danish Institute for Quality and Accreditation in Healthcare, was founded in 2005. The initial purpose of the organisation was to develop a joint Danish model for quality in healthcare. Today IKAS develops plans and manages the Danish Healthcare Quality Programme (DDKM).

DDKM serves as a method to generate continuous and persistent quality development across the entire healthcare sector in Denmark, and provides accreditation standards of good quality – along with methods to measure and control this quality.⁽⁷¹⁾

The Danish Healthcare Quality Programme has been implemented in all hospitals and is in the process of being introduced in primary care and pharmacies. The programme aims to include all healthcare delivery organisations, and applies both organisational and clinical standards. Organisations are assessed on their ability to satisfy standards in processes and outcomes. The core of the programme is a system of regular accreditation based on annual self-assessment and external evaluation (every third year) by a professional accreditation body. The self-assessment involves reporting of performance against national input, process, and outcome standards, which allows comparison over time and between organisations. The external evaluation follows on from the self-assessment to evaluate the status of providers' overall quality improvement activities and opportunities.⁽⁶⁹⁾

DDKM strives to fulfil the following objectives:

- Prevent errors from causing loss of lives, quality of life and resources.
- Ensure that knowledge achieved via research and experience is utilised in all branches of the healthcare sector.
- Document the work performed.
- Achieve a similar high level of quality across geographical boundaries and sectors.
- Generate coherence in citizens' pathways across sectors – e.g. in the transition from hospital to local healthcare.
- Render quality within the Danish healthcare sector more visible.
- Avoid that all institutions must invent their own quality assurance system.
- Strive towards excellence – at all times.⁽⁷¹⁾

8.3 Links to external agencies

The Danish Health and Medicine Authority links in with a number of external agencies to work with their data. It has a legal remit to access all health and social care data, there are no data protection issues and no fees are required for accessing the data. In some cases it has direct access to the data and in others the Authority to request the data. The agencies that it requests data from include:

- National Agency for Patients Rights and Complaints
- The Patient Insurance Association
- Health Personnel
- Adverse events
- Dentist complaints system
- National patient diagnosis and treatment register
- The scientific societies
- The Accreditation Programme (IKAS)
- The Press.

8.3.1 Statens Serum Institut, National Institute for Health Data and Disease Control (SSI)

The governance of the health data of the Danish population and data concerning all healthcare activities, economy and quality is now organised under one administration, the SSI.⁽⁷²⁾ As part of a major organisational restructure of ministries, the National Health IT and Statens Serum Institut were merged in 2012 to form a new agency, Statens Serum Institut, National Institute for Health Data and Disease Control.⁽⁷³⁾

- SSI collects and disseminates data on the Danish population's health status and data on activity, economy and quality in healthcare.

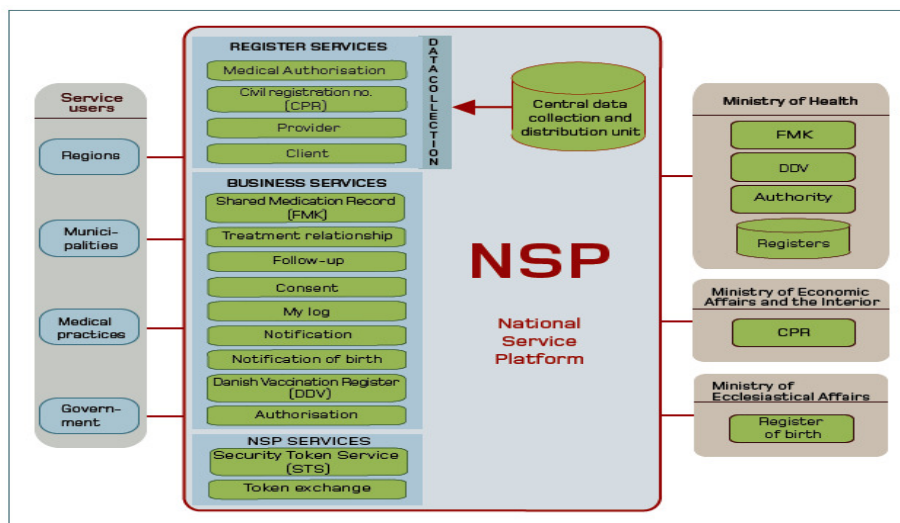
- It is responsible for a number of health registries used for central local government tasks and research, such as the National Patient Register, the Cause of Death Register and the Cancer Register.⁽⁷²⁾
- Its Public Health Service performs surveillance functions within epidemiology, infectious disease control, infection hygiene, outbreak control, diagnostics, and biological threats emergency preparedness.
- SSI is the government authority responsible for setting national standards for eHealth with powers stipulated in legislation.
- SSI is responsible for stable ICT operation and development of more than 100 systems. The systems are partly eHealth systems and registers in the national infrastructure, but the portfolio also includes production and administration ICT systems.
- It is responsible for consolidating the portfolio and providing uniform databases. One of these systems is the Shared Medication Record (FMK), a national service which allows practitioners to see a patient's current medication data via their local ICT workstation.
- Hospital productivity comparisons are published on a regular basis by SSI, allowing regions and hospital managers to benchmark performance of individual hospital departments.

SSI promotes standardisation as a precondition for efficient data sharing across the healthcare sector. It is also responsible for the National Service Platform (NSP), which is a central communication platform making it possible to cost-effectively and uniformly couple a large number of local/non-centralized health applications with national health services, registers and reporting solutions. In 2014 there will be two new services added to the NSP, namely:

- Reporting of cause of death to Statens Serum Institut's reporting system
- Reporting of use of forced restraint in the mental health sector.

The National Service Platform is a central hub for national data and business services in health, as depicted in Figure 3.

Figure 3: SSI services and data collections in operation in May 2013⁽⁷²⁾



8.3.2 The National Danish Survey of Patient Experiences

The National Danish Survey of Patient Experiences (Danish acronym: LUP) is a questionnaire survey for assessing patients' experiences with the Danish healthcare system. LUP is conducted under an agreement between the Danish government and the Danish regions. The survey was also conducted in 2000, 2002, 2004 and 2006. Since 2009, following a change of concepts, it is carried out as an annual, nationwide survey, investigating the experiences of both inpatients and outpatients in Danish hospitals. In its new form, the survey presents the results at four distinct levels: national, regional, hospital and unit level. This provides the opportunity for individual units to be evaluated and to identify areas for improvement of patient care.

The survey is conducted by The Unit of Patient Perceived Quality in The Capital Region of Denmark. The unit was established in 1998 and carries out surveys, research and development projects concerning patient-perceived quality.⁽⁷⁴⁾

8.4 Resources and workforce

The Danish Health and Medicines Authority has approximately 700 employees.⁽⁶⁸⁾ It does not have a business intelligence team and about 50 employees work with patient safety and supervision.

Statens Serum Institut had an average of 1,241 WTE employees in 2012, with 275 employed in the National Health and Surveillance and Research department.⁽⁷³⁾

8.5 Use of information by DHMA

The Danish Health and Medicines Authority uses the data to focus its inspections based on risk areas, risk personnel and risk organisations. The subjects are chosen from complaints, insurance, incidents and adverse events. Examples include:

- patients' rights, safe medication, documentation in medical records, use of antipsychotic medicine
- identification of patients
- resuscitation
- constraint in psychiatry
- mammography
- imaging
- psycho-pharmacological treatment
- treatment of substance abuse.

It is the only organisation in Denmark that can access all healthcare data. The data are also used for internal quality control by the care provider themselves, and if there are certain issues highlighted DHMA will use the data to further inform the provider or raise a supervision issue.

8.6 Overview of data that DHMA publishes

DHMA does not report on the data, but it does report on the outcomes of its investigations.

The Ministry of Health and Prevention along with the Danish regions agree to promote and prioritise initiatives that prove the best possible value for money. They intend to reduce hospital mortality by 10% over three years and reduce the number of injuries to patients by 20% over three years. They also plan to reduce:

- volume of hospital-acquired infections
- average length of hospital stays
- proportion of acute re-admissions
- contacts per patient
- increase the proportion of day surgery.

The regions' progress in this regard is reported by the Ministry in Danish.⁽⁷⁵⁾

8.7 Key recommendations and learnings suggested by DHMA

- Key performance indicators that should be considered are infections, as this is an area that can be acted on. Increased rate of infections is a reliable indication that further investigation is required.
- Another area worth consideration for key performance indicators is re-admission and prolonged length of stay in hospitals.
- While the five regions in Denmark have mortality rates, in general they find it is very difficult to use mortality rates for supervision because there are social and cultural factors that can influence these rates that may not reflect the hospitals' performance.

9. Other jurisdictions in the UK – summary

This section presents the findings of a desktop review in Wales and Northern Ireland. It is intended to provide an overview of these jurisdictions; therefore conference calls were not held with resident experts.

9.1 Summary of regulators

Wales

Healthcare regulator – Healthcare Inspectorate Wales (HIW)

Social care regulator – Care and Social Services Inspectorate Wales (CSSIW).

Northern Ireland

Regulator – Regulation and Quality Improvement Authority (RQIA).

9.2 Wales

Healthcare Inspectorate Wales

Healthcare Inspectorate Wales (HIW)⁽⁷⁶⁾ is the independent inspectorate and regulator of all healthcare in Wales. HIW's primary focus is on:

- making a significant contribution to improving the safety and quality of healthcare services in Wales
- improving citizens' experience of healthcare in Wales whether as a patient, service user, carer, relative or employee
- strengthening the voice of patients and the public in the way health services are reviewed
- ensuring that timely, useful, accessible and relevant information about the safety and quality of healthcare in Wales is made available to all.

HIW's core role is to review and inspect National Health Service (NHS) and independent healthcare organisations in Wales to provide independent assurance for patients, the public, the Welsh government and healthcare providers that services are safe and of a good quality. Services are reviewed against a range of published standards, policies, guidance and regulations. As part of this work HIW will seek to identify and support improvements in services and the actions required to achieve this. If necessary, HIW will undertake special reviews and investigations where there appears to be systematic failures in delivering healthcare services, to ensure that rapid improvement and learning takes place. In addition, HIW is the regulator of independent healthcare providers in Wales and is the local supervising authority for the statutory supervision of midwives.

HIW carries out its functions on behalf of Welsh ministers and, although part of the Welsh government, protocols have been established to safeguard its operational autonomy. HIW's main functions and responsibilities are drawn from the following legislation:

- Health and Social Care (Community Health and Standards) Act 2003
- Care Standards Act 2000 and associated regulations
- Mental Health Act 1983 and the Mental Health Act 2007
- Statutory Supervision of Midwives as set out in Articles 42 and 43 of the Nursing and Midwifery Order 2001
- Ionising Radiation (Medical Exposure) Regulations 2000 and Amendment Regulations 2006.

HIW works closely with other inspectorates and regulators in carrying out cross sector reviews in social care, education and criminal justice and in developing more proportionate and coordinated approaches to the review and regulation of healthcare in Wales.

9.2.1 Published information

The following list gives an example of the types of areas that Health Inspectorate Wales publishes information on:

- Deprivation of Liberty Safeguards
- Reviews of Homicides where Perpetrator was a Mental Health Service User
- Safeguarding and Protecting Vulnerable Adults in Wales
- Child and Adolescent Mental Health Services (CAMHS)
- safeguarding and protecting children in Wales
- Special Reviews of Gwent Maternity and Community and Mental Health Services
- All Wales Review of the Care and Management of Patients with Diarrhoea and Vomiting
- Ionising Radiation (Medical Exposure) Regulations (IR(ME)R)
- Review of Histopathology Services Provided by North East Wales NHS Trust
- Fundamental Review of the National Service Framework (NSF) for Older People in Wales
- hospital cleanliness spot checks
- cancer networks
- medium secure units
- special assurance reviews
- learning disabilities review
- All Wales Maternity Services Review
- review of infection control

- healthcare standards for Wales
- Review of Care provided to patients with a learning difficulty or mental health issue.

Healthcare Inspectorate Wales (the Welsh equivalent of the Care Quality Commission) does not publish performance indicators on its website; the process of inspection appears to be the main means of assessing the quality and safety of care.

Infection rates in Wales are monitored by Public Health Wales. Wales shares a number of reporting mechanisms with England, for instance, adverse events are reported to the National Patient Safety Agency (NPSA).

In Wales all patient safety incidents which occur are reported to the NPSA's National Reporting and Learning System. In addition, NHS Wales have produced an *Adverse Incident, Hazard and Near Miss Reporting Guide to Good Practice* which sets out how adverse incidents, hazards and near misses may be reported, investigated and acted upon within NHS Wales.⁽⁷⁷⁾ It specifies that certain incidents must always be reported. The incidents which must be reported fall under the following themes:

- surgical
- product or device events
- patient protection events
- care management events
- environmental events
- potential criminal events.

9.2.2 Welsh Healthcare Associated Infection Programme (WHAIP)⁽⁷⁸⁾

The Welsh Healthcare Associated Infection Programme is part of Public Health Wales, which is a Welsh government agency. Health boards (equivalent to English trusts) report the following indicators to WHAIP:

- MRSA rates per 100,000 bed days
- detection of clostridium difficile in stool samples per 1,000 admissions as inpatients
- orthopaedic and c-section surgical site infection: this is calculated from survey data. This follows HELICS definitions to allow comparisons (HELICS now part of European Centre for Disease Prevention and Control)
- critical care infections (central venous catheter and ventilator associated pneumonia) for patients in critical care for more than 48 hours.

9.2.3 Care and Social Services Inspectorate Wales (CSSIW)

CSSIW⁽⁷⁹⁾ carries out its functions on behalf of the Welsh government. There are a number of safeguards in place to ensure their independence.

It drives improvement in social care services by:

- regulating, inspecting and reviewing social care, early years and social services
- providing professional advice.

This work is done through its four regions (North Wales; South East Wales; Mid and South Wales and South West Wales) which are the focus for professional assessment and judgment about services and organisations. It inspects and reviews local authority social services, and regulates and inspects care settings and agencies. A set of national teams lead on managing and analysing information to deliver all-Wales reviews and provide professional advice to improve services.

In April 2009 it introduced a new overarching framework for local authority social services inspection, review and evaluation. It is a proportionate and integrated approach that is designed to be citizen focused and to encourage improvement, innovation and ownership of change by local government.

CSSIW regulates the following:

- care homes for adults, including care homes which provide nursing care
- domiciliary care agencies
- adult placement schemes
- nurses' agencies
- children's homes
- day care services for children – childminders, full day care, sessional day care, out of school care, crèches and open access play
- public sector and independent fostering agencies
- public sector and voluntary adoption agencies
- boarding schools, residential special schools and further education colleges which accommodate students under 18
- residential family centres.

9.2.4 Reports published by CSSIW

- annual report of the Chief Inspector
- national and thematic
- local authority inspection and review reports

- statistical reports
- regulated services inspection reports.

It also publishes reports on the findings of all its assessments.

9.3 Northern Ireland

9.3.1 Regulator – Regulation and Quality Improvement Authority

The Regulation and Quality Improvement Authority (RQIA)⁽⁸⁰⁾ is the independent body responsible for monitoring and inspecting the availability and quality of health and social care services in Northern Ireland, and encouraging improvements in the quality of those services. RQIA's role is to ensure that health and social care services in Northern Ireland are accessible, well managed and meet the required standards. RQIA works to ensure that there is openness, clarity and accountability in the management and delivery of all these services.

RQIA was established under the Health and Personal Social Services (Quality, Improvement and Regulation) (Northern Ireland) Order 2003. The Order also places a statutory duty of quality upon health and social care organisations, and requires the DHSSPS to develop standards against which the quality of services can be measured.

9.3.2 Role of RQIA

RQIA registers and inspects a wide range of health and social care services and inspections are based on minimum care standards which will ensure that both the public and the service providers know what quality of services is expected. Inspectors visit a range of services including nursing, residential care and children's homes to examine all aspects of the care provided, to assure the comfort and dignity of those using the facilities, and ensure public confidence in these services. RQIA is also responsible for the regulation of day care settings, domiciliary care agencies, nursing agencies and a range of independent health care services.

RQIA also has a role in assuring the quality of services provided by the Health and Social Care (HSC) Board, HSC trusts and agencies to ensure that every aspect of care reaches the standards laid down by the Department of Health, Social Services and Public Safety and expected by the public. Under the Health and Social Care (Reform) Act (NI) 2009, RQIA undertakes a range of responsibilities for people with a mental illness and those with a learning disability. These include: preventing ill treatment; remedying any deficiency in care or treatment; terminating improper detention in a hospital or guardianship; and preventing or redressing loss or damage to a patient's property.

9.3.3 RQIA – use of information for regulation

Enforcement activity definitions

Where RQIA identifies concerns in relation to a service – whether through its regulatory activity or other intelligence sources (including information from care staff, service users or family members) additional inspections may take place. In addition, where necessary, enforcement action may also take place to ensure the safety and wellbeing of service users. Prior to the issue of a notice RQIA meets with the service provider to detail its concerns, and advises the provider that RQIA publishes details of all enforcement notices to ensure service users are aware of any issues within a registered service.

9.3.4 RQIA s links to other agencies

RQIA has links to the following agencies:

- NI Department of Health, Social Services and Public Safety
- Northern Ireland Social Care Council
- NI Health and Social Care Trusts
- Access Northern Ireland.

The Department of Health, Social Services and Public Safety in Northern Ireland sets priorities for action which hospitals report on. For 2010-11 the seven priority areas were: health promotion, service performance, service integration, independent living for older people, children’s health, mental health and efficiency. In Northern Ireland serious adverse incidents are reported to and followed up by the Health and Social Care Board and the Regulation and Quality Improvement Agency, as well as to the Public Health Agency (PHA). The PHA also collects and publishes data on infection rates.

Serious adverse incidents in Northern Ireland are reported to and followed up by the Health and Social Care Board as of April 2011. The HSCB issued a procedure document in April 2010 to provide guidance to Health and Social Care (HSC) Trusts, family practitioner services and independent service providers in relation to the reporting and follow up of serious adverse incidents arising during the course of business of an HSC organisation/special agency or commissioned service.⁽⁸¹⁾ The guidance sets out the criteria which an adverse incident would need to meet to constitute a serious adverse incident reportable to the HSCB. These include:

- Serious injury to, or the unexpected/unexplained death (including suspected suicides and serious self harm) of:
 - a service user

- a service user known to mental health services (including Child and Adolescent Mental Health Services (CAMHS) or Learning Disability (LD) within the last two years)
- a staff member in the course of their work
- a member of the public whilst visiting an HSC facility
- Unexpected serious risk to a service user and/or staff member and/or member of the public.
- Unexpected or significant threat to provision of service and/or maintenance of business continuity.
- Serious assault (including homicide and sexual assaults) by a service user:
 - on other service users
 - on staff
 - on members of the public
 - occurring within a healthcare facility or in the community (where the service user is known to mental health services including CAMHS or LD within the last two years)
- Serious incidents of public interest or concern involving theft, fraud, information breaches or data losses.⁽⁸²⁾

In addition, service providers in Northern Ireland are also required to report serious adverse events to the Public Health Agency and the Regulation and Quality Improvement Authority in this area. For instance, all regulations in relation to services regulated by the RQIA make provision for the reporting of certain adverse events.⁽⁸³⁾

Adverse events which must be reported to the RQIA are as follows:

- G1 death: expected and unexpected
- G2 serious injury: fracture (hip), fracture (other) and head injury
- G3 accident: uncategorised
- G4 serious illness: uncategorised
- G5 outbreak of infectious disease: uncategorised
- G6 allegation of misconduct: physical, sexual, psychological/emotional, financial/material, neglect/acts of omission, institutional, discriminatory, damage to property, misuse of drugs
- G7 incident involving the police: uncategorised
- G8 any other incident adversely affecting service user: medication incident, behavioural issue, suicide/self harm.

RQIA has detailed the reporting requirements of the individual events listed above for specific service types and settings e.g. nursing homes, residential care homes,

and day care settings among others. In addition, certain services have additional reporting requirements. For example, adult services are required to report:

- A1 theft or burglary: uncategorised
- A2 unexplained absence: uncategorised⁽⁸⁴⁾.

Children's services are required to report:

- C1 serious complaint: uncategorised
- C2 child protection enquiry: uncategorised
- C3 allegation of serious offence: uncategorised.⁽⁸⁵⁾

9.4 Summary of publications by RQIA

- Review reports. The following are examples of RQIAs review reports:
 - RQIA Independent Review of Statutory Fostering Services, December 2013
 - Review of Specialist Sexual Health Services in Northern Ireland, October 2013
 - RQIA Review of Acute Hospitals at Night and Weekend, July 2013
 - Independent Review of the Management of Controlled Drug Use in Trust Hospitals, June 2013
 - Radiology review
- Infection control and hygiene reports
- Inspection reports.

10. Structures of regulation and quality improvement agencies

All jurisdictions have varying structures in terms of regulation and quality improvement. Information on the structures of the authorities and agencies reviewed is provided in Table 1 below.

For example, in Ontario the Ministry of Health only regulates long-term care homes. A separate organisation called the Health Quality Ontario (HQO) was set up to publicly report on the quality of the healthcare system, support quality improvement activities and make evidence-based recommendations on healthcare funding.

In Scotland, in the area of healthcare, the emphasis is more on quality improvement, with only independent healthcare agencies being regulated, not the NHS in Scotland. In the Netherlands, however, there is a very robust risk-based regulatory model in place within their healthcare regulator, IGZ.

In many jurisdictions there is a separate organisation that provides data to the regulator and/or the health quality agency. For example the Care Quality Commission in England is supported by data from the Health and Social Care Information Centre. In addition, within a number of countries such as Scotland and Wales, the regulatory functions for health and social care are managed by separate agencies.

Table 1: Summary of regulatory authorities and quality improvement agencies by jurisdiction

Jurisdiction	Regulation	Quality Improvement
New Zealand	An agency called HealthCERT (part of the Ministry for Health) is responsible for ensuring that hospitals, rest homes and residential disability care services provide reasonable and safe care for their service users as required under the Health and Disability Service (Safety) Act 2001. HealthCERT's role is to administer and enforce the legislation, issue certificates, review audit reports and manage legal issues.	The Health Quality and Safety Commission (HQSC) in New Zealand is focused on driving quality improvement across health and social care and also primary care, disability services, home and community services and the wider mental health sector. Its remit includes professional bodies, non-governmental organisations and private providers.

Jurisdiction	Regulation	Quality Improvement
Canada - Ontario	Long-term care homes in Ontario are both funded and regulated by the Ministry of Health and Long-Term Care (MOHLTC). There are up to 630 long-term care homes.	Health Quality Ontario (HQO) reports to the public on the quality of the healthcare system, supports quality improvement activities and makes evidence-based recommendations on healthcare funding.
England	The Care Quality Commission (CQC) is the independent regulator of health and adult social care services.	CQC is also responsible for driving and supporting quality improvement in health and adult social care services.
Netherlands	Inspectie voor de Gezondheidszorg (IGZ).	Quality Institute (newly founded government agency). Dutch Institute for Healthcare Improvement (CBO; private organisation).
Denmark	The Danish Health and Medicines Agency is responsible for surveillance, counselling and supervision. The five regions run the hospitals	Danish Institute for Quality and Accreditation in Healthcare (IKAS). IKAS develops, plans and manages the Danish Healthcare Quality Programme (DDKM).
Scotland	Healthcare Improvement Scotland (HIS) regulates the <u>independent</u> healthcare sector (only) in Scotland. The Care Inspectorate (a separate agency) is the regulator of social care and social work services in Scotland.	Healthcare Improvement Scotland is also responsible for driving quality improvement in healthcare in Scotland by developing guidance and standards and quality indicators. HIS also coordinates the work of the Scottish Patient Safety Programme (SPSP).
Wales	Healthcare Inspectorate Wales (HIW) is the independent inspectorate and regulator of all NHS and independent healthcare organisations in Wales. Care and Social Services	There was an agency called the National Leadership and Innovation Agency for Healthcare in Wales but it ceased to function on 31 March 2013. Its functions, including those in relation to quality improvement programmes, have transferred to NHS Wales and the Welsh government.

Jurisdiction	Regulation	Quality Improvement
	Inspectorate Wales (CSSIW) is responsible for regulating, inspecting and reviewing all social care, early years and social services in Wales.	
Northern Ireland	The Regulation and Quality Improvement Authority (RQIA) is the independent regulator of health and social care services in Northern Ireland.	RQIA is also responsible for assuring the quality of services provided by the Health and Social Care (HSC) Board, HSC trusts and agencies to ensure that every aspect of care reaches the standards laid down by the Department of Health, Social Services and Public Safety and expected by the public.

10.1 Use of information to improve health and social care

This review clearly identifies that data is increasingly being used to inform, improve and streamline the work of healthcare regulators and quality improvement agencies. In this section there is an overview of how information is used, and how it can influence the model that regulators adopt to inform how they approach their inspections.

10.1.1 Use of information by regulators

From the jurisdictions reviewed, information is used as a regulatory tool and is seen as one of the key executive functions of modern regulators. The majority of jurisdictions reviewed identified the need for a strong strategic direction around information and its use.

The jurisdictions reviewed have developed different approaches to regulation and therefore use information in different ways.

For example, in England the Care Quality Commission (CQC) regulates 22,000 organisations in health and social care and has 1,885 staff. Because of the vast number of organisations, CQC uses information in a proactive way. This includes developing a new surveillance model to monitor information and evidence to anticipate, identify and respond more quickly to acute hospitals that are failing, or are at risk of failing. The approach will be to use indicators to raise questions about the quality of care provided in an acute hospital. The indicators on their own will not be used to draw definitive conclusions or judge the quality of care – that will be a

matter for inspection. Instead the indicators will be used as 'smoke detectors,' which will start to sound if a hospital is outside the expected range of performance or is showing declining performance over time for one or more indicators.

Another proactive approach is in use in the Netherlands where they use a model termed 'phased supervision' whereby the Dutch Healthcare Inspectorate ensures efficient and effective enforcement of the legislation for which it is responsible. First, the Inspectorate identifies where the greatest risks to the quality of care are to be seen. By means of inspection visits and/or enforcement action, it then prompts care providers to make the necessary improvements. The Inspectorate conducts various risk analyses based on the information it receives both directly from a care provider or manufacturer, and that which it receives from other sources (such as incident reports and complaints). The results of the analyses are collated to form performance 'dashboards'.

10.1.2 Risk profiling

A number of the jurisdictions reviewed use information and intelligence as a means of developing a model of risk-based or proportionate regulation.

The model that has been in place in England has involved the CQC collating information about regulated organisations in a Quality and Risk Profile (QRP). Some information is drawn from routine data, and this is supplemented by information from other sources such as CQC's own inspections, feedback from other regulators, complaints, whistleblower reports etc.. Data is statistically aggregated to form 'z-scores,' which are normalised quantitative estimates of risk. The QRPs were primarily intended as a tool to support the day to day work of the CQC inspectors, to prompt the inspector and to provide risk estimates. These profiles have been complex to develop, involving the analysis of large amounts of data and advanced statistical modelling to produce these risk estimates.

While this model is still in place, a simpler new surveillance model is currently being piloted by CQC comprising of the surveillance of key information and evidence to decide when, where and what to inspect, including listening better to people's experiences of care and importantly using, not all, but the best intelligence from across the system.

The Dutch Healthcare Inspectorate also employs a risk profiling system for the risk-led regulatory model in place in the Netherlands. The Inspectorate (IGZ) conducts various risk analyses based on the information it receives both directly from care providers, and that which it receives from other sources (such as incident reports and complaints).

The results of the risk analyses are collated to form performance 'dashboards'. If the results of a risk analysis suggest a higher-than-average level of risk, the Inspectorate will visit the care provider or manufacturer concerned. Based on all available information and its own findings, it will determine whether the standard of care provided can be termed 'responsible'. The risk analyses and dashboards are subject to ongoing development and refinement.

Financial information is also included so as to identify any risks affecting quality of care which may result from the governance and management of an organisation. This will enhance the predictive value of the risk analyses, providing a more rounded impression of any situations in which there are unacceptable risks to patient safety.

10.1.3 Use of information by quality improvement agencies

The use of information to support quality improvement was evident in the jurisdictions reviewed. The most publicly accountable regulatory instrument in the healthcare setting is mandatory public reporting. This is the public reporting of comparative information on quality of service providers, and is hailed as an increasingly popular and credible way to improve overall quality in healthcare.

Mandatory public reporting is believed to motivate quality improvement in two distinct ways:

- to provide information to service users and funders and guide their decisions, both in terms of individual provider and treatment choice and collective health policy decisions
- to catalyse improvements in quality provision, by motivating service providers to compete on quality, so as to attract more service users. Making this information publicly available has a motivating effect on hospital management and clinical leaders to improve quality of care and performance.

A number of jurisdictions require that their healthcare providers self report against a set criterion. For example, New Zealand statutorily requires that District Health Boards (DHBs) provide Quality Accounts to provide an account of the quality of their services in a similar way to financial accounts. Support is provided by HQSC in relation to guidance about content and style.⁽¹³⁾

In Denmark, the Danish Healthcare and Quality Agency requires all hospitals to provide a self-assessment, which involves reporting of performance against national input, process, and outcome standards, allowing comparison over time and between organisations.⁽⁶⁹⁾ HQO in Ontario reports to the public on the quality of the healthcare system. It reports data via a yearly quality report and also has a public reporting website.

Success of public reporting is dependent on whether the right indicators are reported, and if the information is actionable and credible.

10.2 Collaboration with external agencies in relation to information

From the jurisdictions reviewed, the majority of the regulators collaborate with external organisations that have a specific role in information. For example, the Danish Health and Medicines Authority collaborate with Statens Serum Institut and the National Institute for Health Data and Disease Control holds all the national health data for the Netherlands.

From the jurisdictions reviewed the majority have a legal remit to request anonymised data from both the national collections and at local level. They also have access to routinely collected data.

10.3 Workforce (business intelligence)

The composition of the workforce amongst the jurisdictions reviewed varies depending on the type and scope of the regulation model in situ. For example, CQC in England has 1,885 staff in total, 900 are inspectors and they have approximately 150 people working in the area of business intelligence for the organisation. In contrast to the Netherlands which has a total of 500 staff, with 20 working in the area of business intelligence.

Many of the jurisdictions are in the process of realigning their resources to provide a hub for intelligence on safety and quality of care. In many cases the skill set is available within the organisation but needs to be centralised, to provide more streamlined reporting.

Overall, many jurisdictions stressed the importance of having a strategy for business intelligence in place within their organisations. For example, in Scotland the entire focus within Healthcare Improvement Scotland is currently changing, with a strategic focus on data and intelligence and with their quality and safety reviews. It is now publishing detailed data intelligence packs containing the analytical information used to inform its findings.

10.4 Quality and safety indicators

All of the jurisdictions reviewed have developed quality and safety indicators. Some jurisdictions report on a distinct, select number of indicators, and some like England have been using extremely complex models in the past to analyse vast amounts of

data to develop their Quality Risk Profiles. This model is changing, however, and England is now moving to a surveillance model using a tiered approach, with a much smaller number of priority key quality indicators.

From the overall analysis of the jurisdictions reviewed, it is clear that no two countries are collecting exactly the same indicator data. However, there are common themes, with the majority of countries having developed indicators in the areas of avoidable infections, adverse events/never events, hospital mortality rates and hospital activity. One of the overarching themes has been the recent emphasis by almost all of the jurisdictions reviewed on patient experience and also patient/staff surveys.

Table 2 outlines at a high level the thematic areas that encompass the quality and safety indicators that are used internationally. A more detailed analysis of these indicators was prepared for internal use within the Authority.

Table 2: Summary of the themes encompassing quality and safety indicators used internationally

- infections
 - healthcare associated
 - procedure-related
 - surgical site
- hand hygiene
- medication safety
- adverse events and never events
- reporting of adverse events and never events
- surgery
- hospital mortality
- hospital activity
- structures
- clinical outcome indicators
- compliance with care pathways
- patient satisfaction/experience
- complaints
- maternity indicators
- social care specific
- population health
- staff health and wellbeing.

10.5 Reporting and presentation of information

10.5.1 Annual review of health and social care

Many jurisdictions reviewed produce an annual review of the state of health and/or social care in their jurisdiction. These reports are outlined in Table 3. A more detailed account outlining in detail what is captured in each of these reports is provided in Appendix 2.

The overriding message from all jurisdictions is to keep the annual report brief, concise, user-friendly and comprehensible to the target audience. Many emphasised the importance of the presentation of the data, for example, to consider if league tables are appropriate for the audience, and that high level statistics or funnel plots may be more appropriate. It was mentioned that the Institute for Healthcare Improvement's Statistical Process Control may be able to provide further insight.

Table 3: Overview of health and social care annual reports produced by jurisdiction

Jurisdiction	Organisation	Report name	Overview of report content
New Zealand	The Ministry of Health	Annual Report, including the Director-General of Health's <i>Annual Report on the State of Public Health</i> .	An annual report: contains the Ministry's financial, non-financial performance and Director-General of Health's annual report on the state of public health.
	Health Quality and Safety Commission	<i>Describing the quality of New Zealand's health and disability services</i> . This report is a summary.	The quality and safety indicators are a small set of summary indicators that provide the public and the health and disability sector with a clear picture of the quality and safety of health and disability services in New Zealand.
Ontario, Canada	Health Quality Ontario	<i>Quality Monitor: Report on Ontario's Health System</i>	It presents evidence-based assessment of the quality of Ontario's publicly-funded health system relative to nine attributes: accessible, effective, safe, patient centred, equitable, efficient, appropriately resourced, integrated and focused on population health. The report also includes international comparisons and profile examples of success.
England	Care Quality Commission	<i>The state of health care and adult social care in England 2012/13</i>	Gives a high level overview of health and social care provision in England. Overview of what works well in each care sector and where issues of poor care were found.

Jurisdiction	Organisation	Report name	Overview of report content
Netherlands	IGZ – the Dutch Healthcare Inspectorate	<i>The Result Matters</i>	Annual report evaluates the hospital performance indicators as an independent measure of the quality of hospital care in the Netherlands.
Scotland	Healthcare Improvement Scotland	<i>A Rapid Review of the Safety and Quality of Care for Acute Adult Patients in NHS Lanarkshire</i>	An independent expert diagnosis of the factors underlying the HSMR figures, including assessment of any systemic factors impacting on the safety and quality of care and treatment being provided.
Scotland	The Care Inspectorate	<i>Childcare statistics 2012</i>	Annual report provides summary statistics and a summary of the provision and use of registered day care and childminding services in Scotland.
Denmark	Ministry of Health	<i>Øget fokus på gode resultater på sygehusene</i> (Increased focus on good results in hospitals).	The Ministry of Health and Prevention along with the Danish regions publish the annual progress on a set of initiatives: reduction of hospital mortality, number of injuries, volume of hospital-acquired infections, average length of hospital stays, proportion of acute re-admissions, contacts per patient and increase the proportion of day surgery. ⁽⁷⁵⁾
Wales	Care and Social Services Inspectorate Wales (CSSIW)	<i>Annual report of the Chief Inspector</i>	Key findings published on an annual basis from the regulation, inspection and review of social services, early years and social care in Wales.

10.5.2 Thematic reviews in relation to the performance of health and social care sectors

Most jurisdictions reviewed produce thematic reviews in relation to health and social care. A summary of these is provided in Table 4 below.

Table 4: Examples of thematic report by jurisdiction

Jurisdiction	Organisation	Report name	Overview of report content
England	Care Quality Commission (CQC)	Themed inspections and reviews. Some examples from 2013 are provided here: <ul style="list-style-type: none"> - Themed review of dementia care - Transition arrangements for young people with complex health needs from children's to adult services - Child safeguarding and looked after children inspection programme - Thematic review of emergency mental health care. 	The themed inspections and reviews are targeted to look at specific standards, sectors or types of care and are carried out by the compliance inspectors in CQC.
New Zealand	Health Quality and Safety Commission	<i>Making Health and disability services safer – Serious Adverse Events Report 2012-13.</i>	Adverse events reported by New Zealand's 20 district health boards.
New Zealand	Health Quality and Safety Commission	<i>Atlas of Healthcare Variation</i> ⁽⁸⁶⁾	The Atlas displays easy to use maps, graphs, tables and commentary that highlight variations by geographic area in the provision and use of specific health services and health outcomes.
New Zealand	Health Quality and Safety Commission	Perinatal and maternal mortality review committee reports (Mortality review committee report).	Provides the numbers and rates of perinatal and maternal deaths, and describes risk factors.
Canada	Health Quality Ontario – Quality improvement agency	Quality improvement plan for each provider – allows province-wide comparison.	It contains a minimum set of quality indicators

Jurisdiction	Organisation	Report name	Overview of report content
Canada	Health Quality Ontario	<i>Patient Safety</i> . data available online.	32 indicators related to safety, effectiveness, resident experience and wait times.
Canada	Health Quality Ontario	<i>Primary Care</i>	Primary care performance measurement.
England	Dr Foster Intelligence	<i>Annual Hospital Guide</i>	Range of indicators.
Scotland	Healthcare Improvement Scotland	<i>Scottish Confidential Audit of Severe Maternal Morbidity</i>	Severe maternal morbidity that fulfils defined criteria.
Wales	Care and Social Services Inspectorate Wales (CSSIW)	<i>Regulated places and settings</i>	Summary statistics on the number of organisations and individuals regulated.

10.5.3 Website and displaying information

Each regulator and quality improvement agency is cognisant of how their data are displayed on their website and conveyed the importance of ensuring that their target audience can access and understand the data that they require.

Many of the jurisdictions reviewed interact with their users via a dynamic user-friendly website. The data are easily navigable and the website provides the facility to download ad-hoc and set reports.

Some websites provide users with options on how to display the information that they require, for example, it allows them to develop their own graphs and run reports. Figure 4 below provides an example of how CQC in England employed an infographic to display results in their *State of Health and social care in England* report.

Figure 4: Infographic display



10.5.4 Patient and staff experience

All of the jurisdictions reviewed have mentioned the growing importance of tools to measure patient and staff experience as essential for gathering qualitative data that provide valuable indicators/markers of quality and safety of Health and Social care. This practice aligns with the recommendations from the national advisory group on patient safety in England in the report, *A Promise to learn – a commitment to act. Improving the Safety of Patients in England*: that is, 'all organisations should seek out the patient and carer voice as an essential asset in monitoring the safety and quality of care'. The report goes on to point out that patient safety cannot be improved without active interrogation of information that is generated primarily for learning, not punishment, and is for use primarily at the front line.⁽³⁶⁾

11. Conclusion

This international review identifies how regulators and agencies responsible for improving quality and safety in healthcare use data to inform their work and improve patient safety and quality of care.

The findings across many of the jurisdictions are similar. The predominant recommendations are:

- to have a business intelligence or information strategy
- to ensure that the emphasis is always on the patient, that the data collected and reported on result in improvements to the patient experience
- to engage with as many stakeholders as possible to inform and improve the process
- to start small and gradually build upon the intelligence function
- to publish data in an intelligent, user friendly and accessible format, both in reports and online.

This review completes the first stage of a project to identify the most beneficial method to inform and promote improvements in health and social care in Ireland.

12. Next steps

The effective use of information is vital to improving health and social care in Ireland, and this report marks the first stage in an ongoing project to guide the Authority on the best approach to adopt so that information is central to its regulatory functions.

Furthermore, the findings in this report will go towards ensuring that the Authority's business intelligence strategy is based on international best practice, which will ultimately be of significant benefit to all stakeholders.

13. Appendix 1: Contributors

The Authority has spoken to a number of health and social care experts from the jurisdictions that have been reviewed. We would like to sincerely thank them for their time and input, it is greatly appreciated. Table 5 outlines those who have assisted and guided the development of the International Review.

Table 5: Contributors to provide further insight for international review

Jurisdiction	Organisation	Name	Title
New Zealand	Health and Quality Safety Commission	Richard Hamblin	Director of Health Quality and Evaluation
New Zealand	Ministry of Health	Caroline Boyd	Manager, Strategy and Policy
Ontario, Canada	Health Quality Ontario	Gail Dobell	Director of Evaluation and Research
Ontario, Canada	Health Quality Ontario	Wissam Haj-Ali	Manager (A) Performance Measurement and Reporting
England	Care Quality Commission	Neil Prime	Head of Analytics
England	Care Quality Commission	David Harvey	Team Manager
Netherlands	Inspectie voor de Gezondheidszorg (IGZ)	Perry Koevoets	Advisor – Research and Innovation
Denmark	Danish Health and Medicines Authority	Anne Mette Dons	Head of Supervision and Patient Health
Scotland	Healthcare Improvement Scotland	Dr Brian Robson	Executive Clinical Director
Scotland	Healthcare Improvement Scotland	Donald Morrison	Business Intelligence Division

14. Appendix 2: Annual reports

Each jurisdiction reviewed publishes an annual report. Table 6 provides a detailed review of the information provided in annual reports on health and social care; it is separated out by jurisdiction.

Table 6: Information provided in annual reports on health and social care

Jurisdiction, report and organisation responsible	Information reported
New Zealand	
Annual Report, including the Director-General of Health's <i>Annual Report on the State of Public Health</i> – Ministry of Health	<p>The New Zealand health and disability sector:</p> <ul style="list-style-type: none"> ▪ health sector overview ▪ government priorities ▪ minister's priorities ▪ outcomes framework ▪ organisational health and capability ▪ risk and assurance ▪ statement of service performance ▪ statement of responsibility ▪ independent auditor's report. <p>Financial statements</p> <p>Health and independence report:</p> <ul style="list-style-type: none"> ▪ health status ▪ factors that influence our health ▪ health system performance.
<i>Describing the quality of New Zealand's health and disability services</i> – Health Quality and Safety Commission	<ul style="list-style-type: none"> ▪ cancellations of elective surgery by hospital after admission ▪ deaths potentially avoidable through health care (amenable mortality) ▪ occupied bed days for older people admitted two or more times as an acute admission per year ▪ planned day case turns into unplanned overnight stay ▪ emergency re-admissions to hospital within 28 days of discharge ▪ eligible population up to date with cervical screening ▪ age-appropriate vaccinations for two-year olds ▪ healthcare cost per capita (US\$ purchasing power parity per capita) ▪ healthcare expenditure as a proportion of gross domestic product.
Ontario	
<i>Quality Monitor: report on Ontario's Health System</i> – Health Quality Ontario	Acute care hospital summary
	Primary care summary
	Home care summary
	Long-term care summary
	<p>Accessible:</p> <ul style="list-style-type: none"> ▪ wait times in EDs ▪ access to primary care

Jurisdiction, report and organisation responsible	Information reported
	<ul style="list-style-type: none"> ▪ access to long-term care and home care ▪ treatment wait times and access to specialists. <p>Effective:</p> <ul style="list-style-type: none"> ▪ potentially avoidable hospitalisations ▪ chronic disease management ▪ keeping people healthy in home care, long-term care and complex continuing care. <p>Safe:</p> <ul style="list-style-type: none"> ▪ hospital infections ▪ adverse events in hospitals ▪ mortality in hospitals ▪ minimising risks in long-term care, complex continuing care and home care. <p>Patient-centred:</p> <ul style="list-style-type: none"> ▪ patient experience in acute care hospitals and EDs ▪ patient experience in non-institutional care. <p>Efficient:</p> <ul style="list-style-type: none"> ▪ cost of service delivery ▪ right service in the right place ▪ avoidable ED visits. <p>Appropriately resourced:</p> <ul style="list-style-type: none"> ▪ Information Technology ▪ healthy work environments. <p>Integrated:</p> <ul style="list-style-type: none"> ▪ discharge/transitions from hospital and primary care. <p>Focused on population health:</p> <ul style="list-style-type: none"> ▪ unhealthy behaviour ▪ preventive measures ▪ preventable harm and deaths. <p>Equitable:</p> <ul style="list-style-type: none"> ▪ Unhealthy behaviour, preventive measures, diseases that could be avoided with a population health focus
England	
<i>The state of health care and adult social care in England 2012/13</i> – Care Quality Commission	<p>Person-centred coordinated care: Older people increasingly arriving in A&E with avoidable conditions.</p> <p>The provision of quality and care services in:</p> <ul style="list-style-type: none"> ▪ Adult social care ▪ NHS services ▪ Independent healthcare ▪ Primary dental care
Netherlands	
<i>The Result Matters</i> – IGZ the Dutch Healthcare Inspectorate	<p>What are the benefits of using performance indicators?</p> <p>Thermometer</p> <p>Development and use of performance indicators in the years ahead</p> <p>Methodology and accountability</p> <p>Results:</p> <ul style="list-style-type: none"> ▪ hospital-wide indicators

Jurisdiction, report and organisation responsible	Information reported
	<ul style="list-style-type: none"> ▪ indicators for high-risk departments ▪ indicators relating to specific conditions or interventions.
Scotland	
<i>A Rapid Review of the Safety and Quality of Care for Acute Adult Patients in NHS Lanarkshire</i> – Healthcare Improvement Scotland	<ul style="list-style-type: none"> ▪ introduction ▪ structure of the rapid review ▪ recommendations <p>Understanding the Hospital Standardised Mortality Ratio</p> <p>Patient and care experience</p> <p>Workforce – medical staffing</p> <p>Workforce – nurse staffing</p> <p>Operational effectiveness</p> <p>Leadership and governance for safety and quality</p>
<i>Childcare Statistics 2012</i> – Care Inspectorate	<ul style="list-style-type: none"> ▪ main findings ▪ background and methodology ▪ number of registered childcare services in Scotland ▪ number of registered childcare services in local authority areas, urban and rural areas by deprivation ▪ number of children using registered childcare services in Scotland ▪ number of children using registered childcare services in urban and rural areas by deprivation ▪ service provision.
Wales	
<i>Annual report of the Chief Inspector – Care and Social Services</i> Inspectorate Wales (CSSIW)	<ul style="list-style-type: none"> ▪ Chief Inspector’s overview ▪ who we are and what we do ▪ quality and improvement ▪ safeguarding people ▪ working with other inspectorates ▪ moving forward.
Denmark	
<i>Increased focus on good results in hospitals</i> – Ministry of Health	<i>Information not available.</i>

15. Glossary of abbreviations

Term	Explanation
CAMHS	Child and Adolescent Mental Health Services (Wales)
CBO	Dutch Institute for Healthcare Improvement
CDI	Clostridium Difficile Infection
CIHI	Canadian Institute for Health Information
CQC	Care Quality Commission (England)
CSSIW	Social Care Regulator – Care and Social Services Inspectorate Wales
DDKM	Danish Healthcare Quality Programme
DHB	District Health Board (New Zealand)
DHMA	Danish Health and Medicines Association
ENDPB	Executive Non Departmental Public Body (England)
FDRC	Family Violence Death Review Committee (New Zealand)
FNOF	Fractured neck of femur
GP	General Practitioner
HCAI	Healthcare Associated Infection
HIS	Healthcare Improvement Scotland
HIW	Health Inspectorate Wales
HQO	Health Quality Ontario
HQSC	Health Quality and Safety Commission, New Zealand
HSCIC	Health and Social Care Information Centre
IGZ	Inspectie voor de Gezondheidszorg (Netherlands)
IKAS	Institut for Kvalitet og Akkreditering i Sundhedsvaesenet (Danish Institute for Quality and Accreditation in Denmark)
ISD	Information Services Division
ISQua	International Society for Quality in Health Care
LUP	National Danish Survey of Patient Experiences
MOHLTC	Ministry of Health and Long-Term Care (Ontario)
MRC	Mortality Review Committee (New Zealand)

Term	Explanation
NICE	National Institute for Health and Care Excellence
NIGZ	Netherlands Institute for Health Promotion
NMDS	National Minimum Dataset
NSF	National Service Framework
NSP	National Service Platform
OBD	Occupied bed days
OECD	Organisation for Economic Co-operation and Development
PAS	Patient Administration System
QIS	Quality Improvement Scotland
QPI	Quality Performance Indicators
RQIA	Regulation and Quality Improvement Authority (Northern Ireland)
SCASMM	Scottish Confidential Audit of Severe Maternal Morbidity
SCSWIS	Social Care and Social Work Improvement Scotland
SCSWIS	Social Care and Social Work Improvement Scotland
SHMI	Summary Hospital-level Mortality Indicator
SIGN	Scottish Intercollegiate Guidelines Network
SPC	Statistical Process Control
SPSP	Scottish Patient Safety Programme
SSCC	Surgical Safety Checklist Compliance
SSI	Statens Serum Institut (National Institute for Health Data and Disease Control)
WHO	World Health Organization
WSIB	Workplace Safety and Insurance Board
WTZi	Wet toelating zorginstellingen (Health Care Institutions Accreditation Act), Netherlands

16. Glossary of terms

Term	Description
Anonymised data	All identifiers have been removed from personal data ensuring the data can no longer be linked to an individual.
Business intelligence	Business intelligence (BI) includes the applications, infrastructure and best practices that enable analysis of information to improve and optimise decisions and performance.
Data	Data are numbers, symbols, words, images, graphics that have yet to be organised or analysed.
Delphi Technique	A method for obtaining group consensus with stakeholders which continues until consensus is reached. ⁽⁸⁷⁾
Evidence	Data and information used to make decisions. Evidence can be derived from research, experiential learning, indicator data and evaluations.
Healthcare	Services received by individuals or communities to promote, maintain, monitor or restore health.
Healthcare Associated Infections	Infections that are acquired as a result of healthcare interventions.
Information	Information is data that have been processed or analysed to produce something useful.
Key Performance Indicator (KPI)	Specific and measurable elements of practice that can be used to assess quality and safety of care. ⁽³⁾
Minimum Dataset	The minimum set of data elements that are required to be collected for a specific purpose.
Outcome Indicators	Performance indicators that monitor the desired states resulting from care processes, which may include reduction in morbidity and mortality, and improvement in the quality of life ⁽⁸⁷⁾ .
Primary care	An approach to care that includes a range of services designed to keep people well. These services range from promotion of health and screening for disease, to assessment, diagnosis, treatment and rehabilitation as well as personal social services.
Process Indicators	Performance indicators that monitor the activities carried out in the assessment/diagnosis and treatment of

Term	Description
Regulation	service users. ⁽⁸⁷⁾ A sustained and focused control exercised by a public agency over activities that are valued by a community.
Risk	The likelihood of an adverse event or outcome.
Risk management	The systematic identification, evaluation and management of risk. It is a continuous process with the aim of reducing risk to an organisation and individuals.
Service Provider	Any person, organisation, or part of an organisation delivering healthcare services, as described in the Health Act 2007 Section 8(1)(B)(1)-(II). ⁽³⁾
Standard	A statement which describes the high level outcome required to contribute to quality and safety.

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Published by the Health Information and Quality Authority.

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