Nursing dashboards – measuring quality
Executive summary

This report summarises the key messages that emerged from the nursing dashboard summit held by the RCN on 3 June 2011.

Key findings

The objective of a clinical dashboard is to provide a realtime, or near realtime, measure of nursing quality.

Delegates pointed out that the focus of clinical dashboards should be on patient-centred measures.

The choice of indicators used to measure quality of care is vital and should be based on what is important to the health care service user/patient and nursing team. Otherwise there is a risk that dashboards could be used to measure what is convenient, rather than what is necessary.

Delegates described the negative effect of data gathering when information systems are crude and where the information environment needs to be streamlined. Clinical dashboards should be seen as part of the solution, not another problem around information overload.

The purpose of dashboards is to engage staff, empowering them to improve quality, not to contribute to a ‘tick box’ approach to the issue. Dashboards are not an end in themselves. They are best viewed as a means to:

- promote appreciative inquiry
- contribute to learning and development
- foster the ownership of treatment and care of patients
- support local quality improvement initiatives
- improve nursing knowledge.

Feedback was received on how the RCN’s Principles of Nursing Practice (see Appendix A) can be used to align and underpin the use of clinical dashboards, as they are applicable to all nursing staff across all four countries.

It is important for staff to understand the relationship between principles and quality improvement so they have ownership. For example, the principles are used to provide a framework to support appraisals, mentoring and coaching processes, and can also be used to celebrate where nursing is performing well.
Introduction

The RCN summit set out to explore and discuss how clinical dashboards are being used. Additionally it reviewed how dashboards can be incorporated in the ongoing efforts to support nurse directors and share best practice experiences across all four UK countries.

This report provides an overview of the nursing dashboard summit, shares examples of how dashboards are being used and provides key messages relating to dashboards as well as the implications for the RCN around this agenda. The case studies gathered from the presenters can be found in the appendices to this report.

Context

The NHS Connecting for Health (2009) initiative defines the clinical dashboard as: ‘...a toolset developed to provide clinicians with the relevant and timely information they need to inform daily decisions that improve the quality of patient care. The toolset gives clinicians easy access to the wealth of NHS data that is being captured locally, in a visual and usable format, whenever they need it. At its core, it will display locally relevant information alongside relevant national metrics, for example best practice from royal colleges and specialist associations, as this information becomes available...’.

The use of clinical dashboards in health care is not a new concept. In its final NHS Next Stage Review report (DH, 2008) the Department of Health noted the underuse of dashboards and strongly advocated the adoption of clinical dashboards in all clinical areas as: ‘...every provider of NHS services should systematically measure, analyse, and improve quality. They will need to develop their own quality frameworks, combining relevant indicators defined nationally, with those appropriate to local circumstances...’.

Examples of clinical dashboard use

Dashboards are being used to integrate a range of items and measures. For example: workforce related issues such as vacancies; sickness and absences; workforce and skill mix numbers; capacity and capability metrics. In addition, measures of the three dimensions of quality care are included: patient safety, clinical effectiveness and patient experience.

Participants from the four UK countries were given an opportunity to share their experiences of best practice in nursing care measurement. These experiences are outlined in the following section.

Measuring standards of nursing and midwifery care, England

The Heart of England NHS Trust (HEFT) has successfully developed a dashboard incorporating a broad range of measures. These measures include standards of nursing care, what patients say about their care, vacancies, sickness, mandatory training, environmental cleanliness score, MRSA screening, single sex compliance, safeguarding training, virtual interactive teaching and learning (VITAL), and nursing and midwifery measures. A number of these nursing indicators are measured by HEFT on a monthly basis and high impact actions are measured on a quarterly basis.

The criteria include clinical measures but also monitor mandatory training and indicators from VITAL – a trust-wide online learning and development initiative. VITAL supports a benchmarking approach to assess the knowledge base of all nurses, relating to the delivery of fundamental core safety standards (for more detail see Appendix B).

Nurse sensitive indicators, Northern Ireland

A set of nurse sensitive indicators has been developed by the Public Health Agency in Northern Ireland to support patient-led decision-making in commissioning. They can be applied by anyone wishing to measure nursing care. Currently, all trusts are using measures derived from the productive ward series, safer patient initiatives and a regional record keeping initiative.

A number of areas have been identified for the first phase of this initiative. They are: falls, health care acquired pressure ulcers, medication errors, nutrition and hydration, nursing records and documentation.

Some considerations for the future, in terms of the nurse sensitive indicators, are: agreeing a set of nurse sensitive outcomes focused on key performance indicators (KPIs), evidence to demonstrate the nursing contribution to KPIs, measures to support KPIs and a system for supporting these measures (for more detail see Appendix C).
National quality measurement framework, Scotland

The NHS Scotland measurement initiative comprises a three-level measurement framework. First level measures are:

- care experience
- staff engagement
- health care associated infection
- emergency admissions/bed days
- adverse events
- hospital standardised mortality ratio
- premature mortality
- patient reported outcome measures/self-assess general health
- percentage of time in last six months spent at home/community
- early years measure and resource use measure.

The measures reflect progress towards the six quality outcomes:

- People have the best start in life and are enabled to live longer healthier lives.
- People are supported to live well at home or in the community.
- Everyone has a positive experience of health care.
- Staff feel supported and engaged.
- Health care is safe for every person every time.
- Best possible use is made of available resources.

And three quality ambitions:

- Mutually beneficial partnerships between patients, their families and those delivering health care services.
- No avoidable injury or harm from the health care they receive.
- The most appropriate treatments, interventions, support and services will be provided at the right time to everyone who will benefit with no wasteful or harmful variation.

The second level consists of HEAT (H – health improvement for the people of Scotland, E – efficiency and governance improvements, A – access to services, T – treatment appropriate to individuals) targets that align with quality ambitions.

Finally, the third level is local and national measures reported in real time or near real time, for quality improvement and assurance from point-of-care to NHS board.

The nursing dashboard will be aligned at level three and a measurement framework will ensure that what is important to service users is measured. In addition, there will be: agreed national measures, valid reliable measurement tools, reduction in data burden, frequency to balance monitoring and quality improvement, and information accessible to clinicians. This national initiative will ensure that a number of person-centred safety and effectiveness of care outcomes can be measured (for more detail see Appendix D).

Nursing and midwifery dashboard for Wales

The aim of this all-Wales initiative is to develop a set of indicators and metrics to: demonstrate the impact of nursing on patient care in Wales, establish standards for data capture and interpretation of the information, and to present the information in a dashboard format.

In addition, the Chief Nursing Officer and Directors of Nursing for Wales incorporated the core principles of care set out in the Welsh Government’s Designed to realise our potential and the RCN’s Principles of nursing practice when developing their nursing dashboard. The main indicators chosen for the nursing dashboard are: hand hygiene, health care acquired pressure ulcers, nutrition score completed and appropriate action taken, complaints regarding nursing care, compliance with nursing cleaning schedule, percentage of nurses who have had an appraisal and PDP completed within the previous 12 months.

The nursing dashboard will enable nurses and midwives to be empowered with up-to-date information, lead to the development of a new clinical information system for nurses, and a nursing and midwifery dashboard for use across Wales (for more detail see Appendix E).
Different approaches, common elements
The examples demonstrate a variety of approaches to the design and implementation of clinical dashboards.

The nursing and midwifery dashboard for Wales was the first example of nursing measurement being applied across the country.

Meanwhile, NHS Scotland has had a core set of continuous quality improvement indicators (CQIs) for nursing relating to food, fluid and nutrition, falls and pressure area care since 2008. These indicators are complemented by the ‘ward profile’ and are being built on to support the measurement of caring behaviours and patient experience.

In England, HEFT is using VITAL as a key measurement tool which, in addition to measuring nursing performances, also measures some aspects of nursing behaviour.

In Northern Ireland the Belfast Health and Social Care Trust (BHSCT) has used nursing dashboards to measure the contributions of ward sisters/charge nurses and community team leaders towards patient outcomes.

Despite these differences there was agreement on a number of aspects. It was understood that the objective of using dashboards is to give access to, as accurately as possible, real time or near real time measures of nursing quality and that the focus of dashboards should be on patient-centred measures.

Future work
The RCN will act as a broker in identifying robust measures linked to the Principles of nursing practice (see Appendix A). In addition, the college will continue to facilitate networking with leaders in the field of nursing measurement and performance. It will also continue to act as a key stakeholder in developing and promoting strategies to reduce the data burden for nursing.

The RCN will demonstrate how the Principles of nursing practice can be linked to the quality strategies in each country. It will share examples of how the principles are being applied, and how this intelligence could be used alongside clinical dashboards.

The principles could be used to provide a united voice across all four countries in terms of what the purpose of nursing is. They can be also be used to map the measures in use, highlighting any gaps in current nursing measures.

Finally, the RCN will provide examples of how outcomes or the impact of practice have been mapped to the eight principles. The principles should be seen to be supporting staff in their quality improvement efforts, and not to confuse or overcomplicate measures or the day-to-day job of data collection for nurses.
Appendix A – Principles of nursing practice

The Principles of nursing practice tell us what patients, colleagues, families and carers can expect from nursing.

Nursing is provided by nursing staff, including ward managers (in hospitals) or team leaders (in the community), specialist nurses, community nurses, health visitors, health care assistants or student nurses.

• **Principle A**: nurses and nursing staff treat everyone in their care with dignity and humanity – they understand their individual needs, show compassion and sensitivity, and provide care in a way that respects all people equally.

• **Principle B**: nurses and nursing staff take responsibility for the care they provide and answer for their own judgments and actions – they carry out these actions in a way that is agreed with their patients, and the families and carers of their patients, and in a way that meets the requirements of their professional bodies and the law.

• **Principle C**: nurses and nursing staff manage risk, are vigilant about risk, and help to keep everyone safe in the places where they receive health care.

• **Principle D**: nurses and nursing staff provide and promote care that puts people at the centre, and involves patients, service users, their families and their carers in decisions to help them make informed choices about their treatment and care.

• **Principle E**: nurses and nursing staff are at the heart of the communication process they assess, record and report on treatment and care, handle information sensitively and confidentially, deal with complaints effectively, and are conscientious in reporting the things they are concerned about.

• **Principle F**: nurses and nursing staff have up-to-date knowledge and skills, and use these with intelligence, insight and understanding in line with the needs of each individual in their care.

• **Principle G**: nurses and nursing staff work closely with their own team and with other professionals, making sure patients’ care and treatment is co-ordinated, is of a high standard, and has the best possible outcome for the patient.

• **Principle H**: nurses and nursing staff lead by example, develop themselves and other staff, and influence the way care is given in a manner that is open and responds to individual needs.

For further information on the Principles of nursing practice please visit the RCN website: www.rcn.org.uk/nursingprinciples
Appendix B – England

Measuring standards of nursing and midwifery care, Heart of England NHS Foundation Trust

The ability to monitor key indicators of nursing and midwifery practice, workforce and performance has been a priority for Heart of England NHS Foundation Trust (HEFT) for several years. The context for development is centred on:

• the need to provide assurance to trust board commissioners, regulators, governors, patients and the public around quality and safety
• counteracting adverse media coverage and professional concerns around nursing and midwifery practice
• development of nurse-led Commission for Quality and Innovation’s (CQUIN) schemes – for example, tissue viability
• value for money, as nursing and midwifery is by far the largest proportion of the trust’s wages with a total cost of £137 million in 2010-11.

HEFT has implemented a robust performance management framework around nursing and midwifery. The establishment of a formal nursing and midwifery performance meeting, chaired by the deputy director of finance, has encouraged rigour and a more businesslike approach to the way senior nurses present the data. The following issues are captured monthly:

• standards of nursing and midwifery care (utilising our nursing and midwifery metrics)
• what patients say about their care (patient experience metrics)
• nursing and midwifery vacancies
• nursing and midwifery sickness levels (trained and untrained)
• mandatory training
• environmental cleanliness
• MRSA screening
• single sex compliance
• safeguarding training
• VITAL (virtual interactive teaching and learning)
• nursing and midwifery values (sign up rates).

VITAL is an initiative HEFT developed inhouse and all registered nurses and midwives are expected to participate. It encompasses 14 key areas of fundamental care and comprises a self-assessment (to test the practitioner’s knowledge base), associated e-learning modules and a summative assessment. HEFT’s nursing and midwifery values detail standards of professional behaviour and the qualities that are expected in a nurse or midwife working at HEFT. Figure 1 outlines the 14 key areas of fundamental care.

All of HEFT’s monthly data collection can be provided by ward, department, directorate, hospital site and trust wide.
Figure 1: HEFT nursing and midwifery dashboard
The components measured monthly on the current HEFT dashboard comprise areas of importance in relation to patient safety and quality. In addition, metrics that are linked to CQUIN’s and national performance measures are included, as these are of particular concern to the organisation and where nursing has a significant influence.

The dashboard plays an important role as a high-level overview of nursing and midwifery governance. There is no doubt that the introduction of a robust performance and management framework has driven up standards and this is evidenced through quantifiable data. The provision of this data has proved invaluable to regulators, commissioners, governors and the local community.

Additional work in this area includes the development of ‘stretch’ targets for wards, directorates and hospital sites, further triangulation of data with outcomes, and a ‘costing quality’ initiative, which utilises recognised tools to calculate the financial resource implications of improving nursing performance.

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Appendix C - Northern Ireland

Maximising the contribution of nursing and midwifery, BHSCT
BHSCT is one of five health and social care (HSC) trusts providing health and social services across Northern Ireland. The trust provides both acute hospital and community services and is committed to delivering safe, high-quality health and social care services as highlighted in the trust’s corporate objectives below. These are:

- **quality and safety** – to provide safe high quality effective care
- **modernisation** – to reform and renew our health and social services
- **partnerships** – to improve health and wellbeing through partnerships with users, communities and partners
- **people** – to show leadership and excellence through organisational and workforce development
- **resources** – to make best use of resources by improving performance and productivity.

The trust recognises the importance of strong clinical leadership within nursing and midwifery in the delivery of these objectives. Furthermore, the role of ward sisters/charge nurses and community team leaders is considered key in determining the context and culture in which care is delivered and what impact patients/clients experience, as well as outcomes of care, staff morale and job satisfaction.

With this in mind, the Support, Improvement and Accountability Framework (SIAF) was developed to maximise the contribution of ward sisters/charge nurses and community team leaders. SIAF collates data that informs continuous assessment, leading to improvements in practice and enhanced team performance. It is integral to the trust’s accountability process. The purpose of SIAF is summarised in Table 1.

**Figure 1: HEFT nursing and midwifery dashboard**

- Valuing the contribution that ward sisters/charge nurses and community team leaders can and do make to patient and staff experience and outcomes of care.
- Making explicit the expectations of the role of ward sisters/charge nurses and community team leaders.
- Improving effectiveness through initiatives to support ward sisters/charge nurses and community team leaders.
- Gathering information that helps ward sisters/charge nurses and community team leaders to identify areas of concern/good practice, supporting them to be accountable clinical leaders and managers of person-centred care that is safe, effective, efficient, timely and equitable.
- Integrating managerial and professional accountability within the single framework and process.
A broad range of indicators were selected for inclusion in SIAF, drawing from a number of sources: Safer Patient Initiative (SPI) indicators, Investors in People (IiP) standards, regional specific productivity indicators, and Cleaner, Safer Hospital standards. A set of indicators was tested for their appropriateness and relevancy with ward sisters/charge nurses and community team leaders, encouraging individuals to consider the difference between what would be ideal, what was needed and what was achievable. In addition, specific work was undertaken concurrently, leading to the development of a set of indicators reflecting key aspects of patient experience (McCance et al, 2011).

The combination of this work resulted in 20 indicators grouped under the trust’s five strategic objectives and covering three broad areas: the clinical aspects of care, aspects relating to the patient experience, and organisational components. Figure 2 demonstrates the interconnectedness of these areas and provides examples of indicators.

**Figure 2: Sample of indicators included within SIAF**

The process for implementation included the development of a dashboard approach using a traffic light system, identification of appropriate benchmarks, cycles of self-assessment, action planning and improvement work, and upward reporting of themes and trends as a key mechanism in providing assurance for the quality of nursing and midwifery care. A phased approach to implementation has been used, moving from pilot testing to widespread rollout, which will be subject to ongoing evaluation.

The expected outcome from the implementation of SIAF within the trust is the development of more accurate diagnostic information that will be central to informing continuous quality improvement, with the opportunity to recognise and celebrate achievement. While indicators cannot provide a complete picture or solution, they can offer a powerful mechanism to incentivise quality by making the contribution of nursing and midwifery more visible.

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Appendix D – Scotland

National quality measurement framework Scotland
There are a number of nurse-led initiatives underway across Scotland that are contributing to the person-centred, safe and effective quality ambitions set out within NHS Scotland’s Healthcare Quality Strategy. NHS Scotland is continually seeking new opportunities to build on these and increase the nursing contribution to quality.

A significant initiative currently underway is Leading Better Care (LBC), which launched in July 2008 and is based on the recognition that NHS Scotland requires effective leadership at all levels of service. This includes a senior charge nurse (SCN) level, to meet the health care needs of the people of Scotland now and in the future.

Part of the LBC initiative focuses on Clinical Quality Indicators (CQIs), which were developed in response to an Audit Scotland’s recommendation that NHS Scotland should create nursing-specific measures of clinical care quality that focus on continuous improvement. The CQIs are evidence-based process indicators that measure aspects of nursing care and which support nurses to continually monitor and improve the quality of care they provide.

The core set of CQIs for nursing relate to food, fluid and nutrition, falls and pressure area care. These indicators are complemented by the ‘ward profile’, which allows SCNs to collect data on a number of significant factors such as staffing, sickness and absence levels and patient activity. This data provides real support to SCNs in improving health care quality and allows them and their team to measure compliance in their area against defined standards. This includes issues such as assessment, management and structures and processes related to the CQIs.

A compliance rate is determined and measured weekly until a rate of 95 per cent is reached, after which measurements continue for seven weeks to ensure that level of compliance is maintained. Measurements are then taken once a month. Improvement methodologies are used throughout the process of measuring compliance to make necessary changes to improve patient care. One SCN said: “The team take the CQI results very personally and feel it is a reflection on their work and always want to improve the care delivered.”

These three CQIs are now being integrated into national clinical data sets to assess and support the delivery of safe and effective, person-centred nursing care. Currently, work is underway to review nursing measures collected. This is likely to result in an expansion of the indicators collected nationally across NHS Scotland in the future, addressing gaps and ensuring consistency of data definitions and reporting.

However, NHS Scotland wants to assure person-centred care sits within a wider framework of care governance, which will complement clinical and corporate governance by offering point-of-care to board assurance for all aspects of care. NHS Scotland is currently looking at care and caring behaviours which relate to every day care and the experience of patients. The majority of caring behaviours fall within the themes of care, compassion and communication, with a number of support themes that relate to collaboration, safety, continuity of care and clinical excellence.
To ensure that current and future indicators and measures are fit for purpose, informatics principles have been identified. These support the collection and reporting of measures on a real-time or near real-time basis at ward or team level, to enable those who are accountable for the delivery care to make informed decisions that promote and sustain high quality direct care and provide the assurance that this is happening at board level. These principles promote:

- a balance of process, outcomes and balancing measures from the perspective of health care service users, staff, practice and the organisation
- measures based on what is important to health care service users, in line with professional values and based on evidence
- qualitative and quantitative measures to ensure a range of perspective of quality
- measurement tools that are valid and reliable, with clear and unambiguous data definitions
- measures collected once only and used for multiple purposes
- delivering benefits that outweigh the cost of collecting that data
- a balance between monitoring to detect possible quality concerns while allowing time to investigate and take action before measuring again
- reducing the frequency of measurement once quality is embedded
- measures that are reported in a way that is open, easily understood and that has been interpreted meaningfully, where possible related to other relevant information.

NHS Scotland’s e-Health strategy supports these principles through strategic objectives that promote solutions to provide the best information for health care workers. These are further supported by tools to help them use and communicate that information to improve quality.

The complexity of health care and the range of factors that influence the quality of care and caring suggest that a multifaceted approach to improvement is required. Recognising this, improvement approaches to enhance quality of care are being developed and tested alongside other initiatives that support teamwork, professional accountability and a caring culture.

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Nursing and midwifery dashboard, Wales

In April 2010, the Chief Nursing Officer for Wales requested the development of a nursing and midwifery dashboard for Wales, which would give a picture of the quality of care being delivered to patients.

To deliver the dashboard a steering group was established comprising nursing, information, and performance representatives from each of the health boards and trusts in Wales. The group also includes representatives from NHS Wales Informatics Service, 1000 Live Plus and the Partnership Forum.

An initial review of existing systems in Wales showed that half of the information to be collected when monitoring patient care required the development of a new clinical information system.

An approach was agreed by the Chief Nursing Officer and Directors of Nursing for Wales to develop the care metrics module (CMM) based on the work undertaken by Abertawe Bro Morgannwg University Health Board. The system, first introduced in 2009, piloted a suite of care metrics that had been developed following national and international benchmarking and by working closely with nursing and midwifery staff at all levels.

Through collaboration with the NHS Wales Informatics Service the CMM was developed using an existing all Wales audit tool, initially developed to support the *Free to Lead, Free to Care* initiative. The module facilitated quick and easy electronic data capture, with the ability to produce ward and community team level run graphs as well as a variety of ‘ward to board’ reporting run charts and safety cross reports that would then form part of the national nursing and midwifery dashboard.

The immediate impact of the introduction of the care metrics and dashboard was highlighted from the findings of a ward where their own initial audit showed a 16.1 per cent compliance with the nutritional screening assessments. After alerting the ward team (who were shocked at this poor outcome) to this objective measurement, teaching sessions were organised. The effect of close monitoring was obvious the following month when compliance increased to 75 per cent and then 83 per cent.

A key factor in the success of this work has been the collaboration between all nursing units in Wales through sharing their best practice in terms of the care metrics and clinical dashboard developments, with a common goal to improve patient experience for those seen and treated in Wales.

Figure 4 provides an example of the dashboards set up in Wales.

*Figure 4: Nursing and midwifery dashboard for Wales*
The quotes below highlight the positive outcomes of the national nursing and midwifery dashboard in Wales:

“I don’t know how I managed my ward before we had the care metrics.”
Sarah Wilcox, Ward Sister, Morriston Hospital, Abertawe Bro Morgannwg University Health Board

“Utilising the care metrics and clinical dashboard to audit completion and appropriate action of nutritional scores, has supported the team to highlight and respond to concerns more quickly and optimise patient outcomes.”
Tina Jurkojc, Sister, Wrexham Maelor Hospital, Betsi Cadwaladadr University Health Board

“The dashboard has provided a more robust system of monitoring, and accurate picture of the whole service, ensuring that child protection and safeguarding issues are dealt with effectively.”
Julie Morris-Cude, Head of Nursing, Child and Adolescent Mental Health Services, Cwm Taf Health Board

“I would like all local nursing information presented in the care metrics format as soon as possible.”
Lorna Luter, Matron, Powys Teaching Health Board

“The dashboard is proving to be a powerful and easy way to raise awareness among staff and improve the quality of care that we provide.”
Judith Bowen, Clinical Practice Development Nurse, Hywel Dda Health Board

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References


