



NHS Safety Thermometer Equality Analysis

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NHS Safety Thermometer Equality Analysis

Prepared by the QIPP Safe Care team and DH Patient Safety team

Introduction

The QIPP Safe Care national work stream has developed a shared ambition with patients, clinicians, SHAs and national partners to significantly reduce harm from pressure ulcers, urinary tract infection (in patients with a catheter), falls and venous thromboembolism (VTE).

The aim of the programme is to reduce common harms.

The original programme goals included:

- Reduction in pressure ulcers in acute and community care (80% and 30% respectively)
- Reduction in catheter acquired urinary tracts infections (50%)
- Reduction in harm from falls (50%)
- Reduction in VTE (50%)

During the lifespan of the programme the aim evolved to achieving 95% harm free care. Harm free care is defined as absence of harm from: pressure ulcers (category II-IV, of any origin), falls, urine infection (in patients with a catheter) and new VTE.

A number of safety improvement programmes have been delivered over the last decade with the aim of improving the safety of healthcare. Demonstration programmes, such as the Safer Patients Initiative, Patient Safety First, Matching Michigan and Leading Improvement in Patient Safety (LIPs) have provided a platform for organisations to raise their ambition for safety. We also have demonstrable evidence that we can make change at scale. The best example of this is the systematic improvement in infection control, which has been achieved through policy and practice coming together around shared goals.

However, the UK 's leading academics in patient safety have identified that we cannot answer the simple question 'is patient care any safer?' The safe care work stream builds on strengths and successes to date in improving the care patients receive and complements governance and safety infrastructures. This programme plan takes us into new and challenging ways of working, underpinned by measurement. We will need to embed a range of quality methods at all levels within the system, across all organisations. Our national partners, SHAs and participating organisations will have to demonstrate an unparalleled commitment to deliver this agenda in a challenging environment.

A key portion of this work is the measurement of harm. The NHS Safety Thermometer is a tool developed by the QIPP Safe Care team (working with key partners) that measures the proportion of patients with a pressure ulcer (category II-IV of any origin), a urinary tract infection (in patients with catheters), a new VTE or who have suffered harm from a fall. It uses a point estimate methodology (on one day per month). It also introduces the concept of 'harm free' care where patients are assessed for the absence of all 4 'harms'.

The NHS Safety Thermometer has been developed and tested by NHS frontline teams participating in the Energising for Excellence and QIPP Safe Care programme (Safety Express) over a one-year development period. It has received scrutiny during its design and development from global content and improvement experts who have met to review and develop the instrument.

The piloting of the NHS Safety Thermometer as part of the QIPP Safe Care workstream highlighted the benefits of this data collection and the additional detail and accuracy it could provide in relation to measuring the safety of health care. It was decided therefore that to support spread of data collection using the NHS Safety Thermometer, a national CQUIN goal would be devised for inclusion in the NHS Standard Contract that would incentivise use of the NHS Safety Thermometer.

This Equality Analysis examines the likely impact of the national roll-out of the NHS Safety Thermometer on those people who share a protected characteristic to support the publication of guidance on NHS Safety Thermometer and the associated CQUIN.

Equality analysis

Title: NHS Safety Thermometer

What are the intended outcomes of this work?

The aim of the QIPP Safe Care programme is to achieve 95% 'harm free' care from a baseline of 84%.

As part of this, national roll-out of the NHS Safety Thermometer is intended to support the measurement of 'harm free' care for improvement purposes. The information derived from the NHS Safety Thermometer will also support the NHS Outcomes Framework and the wider Government Transparency agenda.

Who will be affected?

The NHS Safety Thermometer is intended to improve our understanding of the burden of harm to patients and healthcare systems and allow improvements in patient care to be measured and evidenced. The tool itself also allows immediate improvements to be made to patient care on the day of the survey.

This will contribute to wider work to improve the safety of care for all patients. The policy is intended to improve our understanding of the burden of harm to patients and healthcare systems and allow improvements in patient care to be measured and evidenced. The tool itself also allows immediate improvements to be made to patient care on the day of the survey

It will also impact on the work of the people employed by the NHS who will have responsibility for collecting the data necessary for the NHS Safety Thermometer.

Evidence.

What evidence have you considered?

Use of the NHS Safety Thermometer was piloted with over 160 organisations to date. Data is collected in relation to the sex and age of patients, potentially providing a rich source of information about any variation in the prevalence of these harms depending on these characteristics.

Evidence has also been considered in relation to published research into the impact of these four harms and patient safety incidents in general on those who share a protected characteristic. The research articles consulted were;

- Coffey, R.M., Andrews, R.M., Moy, E. (2005) Racial, Ethnic, and Socioeconomic Disparities in Estimates of AHRQ Patient Safety Indicators. *Medical Care* 43(3):I-48-I-57
- National Patient Safety Agency (NPSA) (2004) *Understanding the patient safety issues for people with learning difficulties.*

- NPSA (2007) *The third report from the Patient Safety Observatory: Slips, trips and falls in hospital* Available at <http://www.nrls.npsa.nhs.uk/resources/?entryid45=59821>
- Shimada, S.L., Montez-Rath, M.E., Loveland, S.A., Zhao, S., Kressin, N.R., Rosen, A.K. (2008) Racial Disparities in Patient Safety Indicator (PSI) Rates in the Veterans Health Administration *Advances in Patient Safety: New Directions and Alternative Approaches (Vol. 1: Assessment)* http://www.ncbi.nlm.nih.gov/bookshelf/br.fcgi?book=aps2v1&part=advances-shimada_65
- Thornlow, D.K. (2009) Increased risk for patient safety incidents in hospitalized older adults *MedSurg Nursing*, Sept-Oct. Available at (http://findarticles.com/p/articles/mi_m0FSS/is_5_18/ai_n45031856/?tag=content:col1)
- Flores, G., Ngui, E. (2006) Racial/ethnic disparities and patient safety. *Pediatr Clin North America*. 53(6):1197-215.
- Suurmond, J., Uiters, E., de Bruijne, M.C., Stronks, K., Essink-Bot, M.L. (2010) Explaining ethnic disparities in patient safety: a qualitative analysis. *Am J Public Health* 100 Suppl 1:S113-7
- Chang, D.C., Handly, N., Abdullah, F., Efron, D.T., Haut, E.R., Haider, A.H., Pronovost, P.J., Cornwell, E.E. (2008) The occurrence of potential patient safety events among trauma patients: are they random? *Ann Surg*. 247(2):327-34.
- Hauck, K., Zhao, X. (2010) A structural equation model of adverse events and length of stay in hospitals. Available at <http://www.buseco.monash.edu.au/ebs/pubs/wpapers/2010/>
- Pellowe, C. (2009) Using evidence-based guidelines to reduce catheter related urinary tract infections in England *Journal of Infection Prevention* March 2009 10(2):44-48
- Meddings, J., Rogers, M.A., Macy, M., Saint, S. (2010) Systematic Review and Meta-Analysis: Reminder systems to Reduce Catheter-Associated Urinary Tract Infections and Urinary Catheter Use in Hospitalised Patients *Clinical Infectious Diseases* 51(5):550-560
- Gould, C.V., Umscheid, C.A., Agarwal, R. K., Kuntz, G., Pegues, D.A., Healthcare Infection Control Practices Advisory Committee (HICPAC) (2009) *Guideline for Prevention of Catheter-Associated Urinary Tract Infections 2009 HICPAC*
- NICE (2010) CG92: *Venous thromboembolism: Reducing the risk of venous thromboembolism (deep vein thrombosis and pulmonary embolism) in patients admitted to hospital* NICE
- NICE (2005) CG29: *Pressure ulcers: The management of pressure ulcers in primary and secondary care* NICE
- Royal College of Nursing (RCN) (2005) *The management of pressure ulcers in primary and secondary care: A clinical Practice Guideline* RCN/NICE London
- Todd C, Skelton D. (2004) *What are the main risk factors for falls among older people and*

what are the most effective interventions to prevent these falls? WHO Regional Office for Europe (Health Evidence Network report) Available at <http://www.euro.who.int/document/E82552.pdf>

Disability

The NPSA reported in 2004 that people with learning disabilities are at greater risk from some types of patient safety incident (NPSA, 2004). In particular, there is some evidence that those with disabilities are at greater risk of developing pressure ulcers. Research by Hauck and Zhao (2010) for example indicated that hemiplegia or paraplegia increases the risk of pressure ulcers occurring by 1.7-2.0%. The NICE guideline for the management of pressure ulcers in primary and secondary care (2005) also highlights that those who are neurologically compromised and have impaired mobility are at risk from pressure ulcers.

The NHS Safety Thermometer does not collect information in relation to the disability status of patients.

Regardless of the specific impacts on those with disabilities from the four harms measured by the NHS Safety Thermometer, use of the NHS Safety Thermometer to measure the prevalence of harm is a key step in acting to reduce that harm. Where the harm does not disproportionately affect those with disabilities there will be no differential impact of the policy on them. Where a harm does disproportionately impact on those with disabilities, work to measure and therefore reduce the prevalence of that harm is likely to have an overall positive impact on the safety of care provided to those with disabilities.

Sex

We are not aware of any research evidence to suggest any unequal impact of errors, positive or negative, on different genders. This is supported, for example, by national evidence based guidelines that are available in England to reduce catheter related urinary tract infections and the development of the Department of Health's national guidelines for preventing healthcare associated infection (the 'epic' guidelines (Pratt et al, 2001,2007)). The 'epic' guidelines became the evidence base for the development of the Department of Health's Saving Lives strategy (Pellowe, 2009). This initiative provides the tools and resources for NHS Trusts to provide consistently high standards of care in everyday practice that are applied consistently to everyone, and searching of the literature has not revealed any evidence of significant differences in gender, though the evidence and findings from a systematic review and meta-analysis (Meddings et al, 2010) have identified positive impacts to both males and females of reducing urinary tract infections in patients with a catheter.

Data from the NHS Safety Thermometer surveys carried out so far does not appear to suggest an unequal distribution of harm from pressure ulcers, falls or new VTE between the sexes. There is some suggestion that urinary tract infections associated with the use of a catheter affect a slightly higher proportion of men than women. This observation has not been statistically validated, however, and may not represent a real phenomenon.

Regardless of the specific impacts on men or women from the four harms measured by the NHS Safety Thermometer, use of the NHS Safety Thermometer to measure the prevalence of harm is a key step in acting to reduce that harm. Where the harm does not disproportionately affect one sex or the other there will be no differential impact of the policy on one sex or the other. Where a harm does disproportionately impact on a particular sex, work to measure and

therefore reduce the prevalence of that harm is likely to have an overall positive impact on the safety of care provided to people of that sex.

Race

There is conflicting evidence on the link between safety and ethnicity. Some research suggests that as a whole, the likelihood of experiencing a patient safety incident does not consistently vary with racial background (Shimada et al 2008). Other research does argue there is a link but does not clearly quantify the impact (Suurmond et al 2010), or suggests it is due to factors that operate in health systems that operate differently to those in the English NHS (for example issues with access to health care in the US and disparities in the quality of health care provider accessible to different ethnic groups) (Coffey et al 2005, Flores et al 2006, Chang et al 2008). Even in studies that suggest a negative safety impact due to ethnic minority, only some types of safety events appear to impact disproportionately on ethnic minorities. Other safety incidents disproportionately affect Caucasian patients, further suggesting the causes for differential impacts are multi-factorial and specific to the type of event, rather than being consistent for minority groups.

The NHS Safety Thermometer does not collect information in relation to the race of patients.

Regardless of the specific impacts on those of different races from the four harms measured by the NHS Safety Thermometer, use of the NHS Safety Thermometer to measure the prevalence of harm is a key step in acting to reduce that harm. Where the harm does not disproportionately affect those of a particular race there will be no differential impact of the policy on them. If a harm does disproportionately impact on those of a particular race, work to measure and therefore reduce the prevalence of that harm is likely to have an overall positive impact on the safety of care provided to those of that race.

Age

There is some evidence that older people are more at risk from certain 'adverse events' (Thornlow, 2009).

The NICE guideline for the management of pressure ulcers in primary and secondary care indicates that older people are at risk of pressure ulcers (NICE, 2005). The Royal College of Nursing (2005) clinical practice guideline also highlights that older people are specifically at risk. Research by Hauck and Zhao (2010) suggests that the risk of pressure ulcers is not affected by age, but this data is limited to a comparison of a 40yr old with a 60yr old.

The Healthcare Infection Control Practices Advisory Committee's 'Guidelines for prevention of catheter-associated urinary tract infections' (Gould et al 2009) included a question within their review of the evidence regarding the populations who are at highest risk of mortality from urinary catheters. To answer this question, they reviewed the quality of evidence for those risk factors examined in more than one study. Evidence was drawn from two observational studies. The authors conclude that low-quality evidence suggested that older people were at increased risk.

The NICE VTE Guideline (NICE, 2010) does not specifically highlight older people as a population group requiring specific attention (as it does with pregnancy), though it should be noted that many patients at risk of VTE, e.g. following surgery or stroke, will be older people. It does also note that being aged over 60 is a known risk factor for VTE.

Reviewing the evidence for a WHO commissioned report, Todd and Skelton (2004) indicate that the incidence of falls is known to increase with age. The NPSA (2007) concur, suggesting that whilst the reasons for patients to falls are complex, age is a contributing factor and those aged 80 years and over are particularly susceptible.

The NHS Safety Thermometer collects information on the age of patients by banding them as either under 18 years old, 18-70 years old or over 70 years old. While not statistically validated, the pilot data indicate those under 18 are less likely to suffer a pressure ulcer than those between 18 and 70. Those over 70 are more likely still to suffer a pressure ulcer. Those under 18 are least likely to suffer a fall with harm, followed by those from 18-70 and then those over 70 most likely to suffer. The profile of urinary tract infection in those with catheters appears similar. With VTE, while those under 18 are least likely to suffer a new VTE, there is not a marked difference between those in the 18-70 age range and those above 70.

Regardless of the specific impacts on those of different ages from the four harms measured by the NHS Safety Thermometer, use of the Thermometer to measure the prevalence of harm is a key step in acting to reduce that harm. Where the harm does not disproportionately affect those of a particular age there will be no differential impact of the policy on them. If a harm does disproportionately impact on those of a particular age, work to measure and therefore reduce the prevalence of that harm is likely to have an overall positive impact on the safety of care provided to those of that age.

Gender reassignment (including transgender)

We are not aware of any evidence to suggest any unequal impact of errors, positive or negative, on transgender and transsexual people.

The NHS Safety Thermometer does not collect information in relation to gender reassignment.

Sexual orientation

We are not aware of any evidence to suggest any unequal impact of errors, positive or negative, depending on sexual orientation.

The NHS Safety Thermometer does not collect information in relation to sexual orientation.

Religion or belief

We are not aware of any evidence to suggest any unequal impact of errors, positive or negative, depending on religion.

The NHS Safety Thermometer does not collect information in relation to religion or belief.

Pregnancy and maternity

Woman who are pregnant or who have recently given birth can be at an increased risk of some harm, for example VTE. The relevant NICE guideline recommends the consideration of pharmacological VTE prophylaxis with low molecular weight heparin (or unfractionated heparin for patients with renal failure) to women who are pregnant or have given birth within the previous 6 weeks who are admitted to hospital but are not undergoing surgery, if one or more

of the identified risk factors are present. (For example, expected to have significantly reduced mobility for 3 or more days ,age over 35 years, dehydration , obesity (pre-pregnancy or early pregnancy BMI over 30 kg/m²). Full details are outlined in the NICE Clinical Guideline 92 (NICE, 2010, CG 92: Venous thromboembolism: reducing the risk: Reducing the risk of venous thromboembolism (deep vein thrombosis and pulmonary embolism) in patients admitted to hospital).

The NICE guideline for the management of pressure ulcers in primary and secondary care (2005) also suggests pregnant women are at risk of pressure ulcers.

The NHS Safety Thermometer does not collect specific information in relation to pregnancy or maternity.

Regardless of the specific impacts on pregnant women from the four harms measured by the NHS Safety Thermometer, use of the Thermometer to measure the prevalence of harm is a key step in acting to reduce that harm. Where the harm does not disproportionately affect pregnant women there will be no differential impact of the policy on them. If a harm does disproportionately impact on pregnant women, work to measure and therefore reduce the prevalence of that harm is likely to have an overall positive impact on the safety of care provided to pregnant women.

Carers

The NHS Safety Thermometer does not collect information in relation to carers and will not impact directly upon them.

Other identified groups

The evidence on the impact of socio-economic grouping on the rate of errors in health care is similar in many ways to that on ethnicity. Research suggests, for some types of error, people on lower incomes are at greater risk. However, the converse is also true in that for some types of error, those with lower incomes are at less risk (Coffey et al 2005). This research is based on the experience in the USA where socio-economic background has a greater impact on access to healthcare due to the specifics of the US healthcare system, therefore it is debatable whether such research is applicable to the UK. At the same time the research states that it is not possible to make definitive statements about the impact of socio-economic background on error rate in general, only for particular types of error, which do not map directly to any of the proposed never events.

The NHS Safety Thermometer does not collect information in relation to socio-economic grouping.

Regardless of the specific impacts on those of different socio-economic groups from the four harms measured by the NHS Safety Thermometer, use of the NHS Safety Thermometer to measure the prevalence of harm is a key step in acting to reduce that harm. Where the harm does not disproportionately affect those of different socio-economic groups there will be no differential impact of the policy on them. If a harm does disproportionately impact on those of different socio-economic groups, work to measure and therefore reduce the prevalence of that harm is likely to have an overall positive impact on the safety of care provided to those of that socio-economic group.

Engagement and involvement

At the outset of the programme, the QIPP Safe Care work stream team held a number of consultation events with key national partners and patients. The QIPP Safe Care team worked with the clinical evidence team at the British Medical Journal to review the best available evidence for the four harms selected for the programme.

The team also worked with the High Impact Actions and Energising for Excellence programmes to select the four harms and design and test the NHS Safety Thermometer.

The NHS Safety Thermometer has been developed and tested by and for the NHS. It was created by a coalition of partners from across the NHS, involving global leading improvement, data and information experts, frontline clinicians including nurses and clinical specialists. It has been extensively piloted in over 160 NHS organisations.

The construction of the NHS Safety Thermometer has been informed by discussion with expert bodies such as Royal Colleges and specialist societies and has evolved and improved significantly as a result of these discussions.

The QIPP Safe Care work stream have undertaken engagement activities on an ongoing basis throughout the programme that focussed around consultation events, the development of a coalition of national partners, the setting up of a steering group and a senior executive group and ongoing consultation with all ten SHAs and participating organisations.

The programme was delivered using the breakthrough series collaborative model, which enabled the involvement of frontline clinical teams through the SHAs. Below is an example of the engagement activity that ran throughout the programme:

- Weekly call with SHAs
- Monthly measurement webex with frontline teams
- Three learning events in each SHA cluster region throughout 2011
- Meeting of Global expert steering group quarterly
- Topic expert webexs monthly
- Input from leading organisations for specific elements of the programme (eg BAPEN for nutrition and hydration)
- Training materials developed in partnership with E4E
- Engaged with chief nurses for the development of resources for the website and e learning modules
- Engagement with frontline teams through an active website resource
- One of our key partners was a higher education institute

Summary of Analysis

The NHS Safety Thermometer is an important tool in measuring and driving improvement in the reduction of avoidable harm caused by health care. The evidence base about the differential impact of harm upon different groups that share a protected characteristic is variable. However, there is clear evidence that for at least some of the harms covered, there

are greater risks of harm for certain groups, notably the elderly and those with certain disabilities.

The driving motivation underpinning the introduction of the NHS Safety Thermometer is to reduce the incidence of harm overall. This aim is achievable as has been demonstrated by pilot work. It is very likely therefore that an overall reduction in harm, driven in part by the NHS Safety Thermometer, will have a disproportionately positive impact on any group that is disproportionately impacted by a particular type of harm.

There is no evidence to suggest that measuring harm and putting in place related improvement programmes to reduce the incidence of harm has a detrimental impact on any groups sharing a protected characteristic. One of the strengths of the NHS Safety Thermometer is that it measures a composite of harms at the patient level and therefore reduces the likelihood that action to prevent one harm could inadvertently lead to an increase in another harm (for example use of compression stockings to reduce VTE increasing the risk of pressure ulcers being masked by compression stockings that are ill-fitting). Given the overall aim of increasing the number of patients receiving 'harm free' care, this programme of work will continue to monitor the safety of care provided in relation to all four harms.

The NHS Safety Thermometer will continue to collect data in relation to certain protected characteristics, particularly age and sex, and will therefore allow further evaluation of the impact of the measurement tool upon the rates of harm in these categories going forward.

Elimination of discrimination, harassment and victimisation

There is unlikely to be any effect on discrimination, harassment and victimisation

Advancing equality of opportunity

There is unlikely to be any effect on equality of opportunity

Promoting good relations between groups

There is unlikely to be any effect on good relations between groups

What is the overall impact?

The overall impact in relation to equalities will either be neutral or more likely positive in relation to certain protected characteristics

Action planning for improvement

- The QIPP Safe Care team will maintain ongoing and open discussions with stakeholders to ensure the NHS Safety Thermometer continues to be refined and improved for use. For example, the QIPP Safe Care team have established a feedback form for use in reporting and requesting additional patient exclusions in relation to the NHS Safety Thermometer's use. This will ensure the NHS Safety Thermometer is applied appropriately and is not acting in an adverse manner either to discourage reporting or compromise the quality of care and/or data generated by it.

- The NHS Safety Thermometer will continue to measure the impact of wider harm reduction work on the protected groups already identified (age and sex). Given the responsive and NHS-led nature of the tool, if collection of further data becomes beneficial then this will be considered in the future context of the work.
- Data from the NHS Safety Thermometer will be published regularly on the NHS Information Centre website. This is the route by which commissioners will determine if data collection is being carried out in order to quality for CQUIN payment. This information, including any implications for protected characteristics, will be freely available for public access (notwithstanding Data Protection Act requirements regarding information that could identify individuals) as well as being analysed by providers, commissioners and national organisations to provide insights into the safety of services. Crucially, information at ward/service level will be used by staff to drive improvement in the services they provide to patients.

For the record

Name of person who carried out this assessment:

Matthew Fogarty, Abigail Warren, Ailsa Brotherton

Date assessment completed:

01 May 2012

Name of responsible Director/Director General:

Giles Wilmore

Date assessment was signed:

01 May 2012

Action plan template

This part of the template is to help you develop your action plan. You might want to change the categories in the first column to reflect the actions needed for your policy.

Category	Actions	Target date	Person responsible and their Directorate
Involvement and consultation	Clinical panel to review definition and exclusions requests and consultation	31 st August 2012	Maxine Power
Data collection and evidencing	CQUIN to incentivise collection of data	July 2012	All
Analysis of evidence and assessment	Data from the tool will be analysed on an ongoing basis, both locally and nationally, to inform policy development and drive improvement, including in relation to any insights it provides connected to protected groups.	Ongoing	All
Transparency (including publication)	Regular publication of data from the IC	Ongoing	NHS Information Centre

