The AHSN Network

Implementing Structured Judgement Reviews for Improvement

Acknowledgements

This toolkit is based on the Royal College of Physicians' National Mortality Case Record Review Programme and the regional work carried out by the Academic Health Science Networks (AHSN) in Yorkshire and Humber and in the West of England.

YORKSHIRE & HUMBER
ACADEMIC HEALTH SCIENCE NETWORK
IA Improvement Academy

Royal College of Physicians

Mortality Review Steering Group

We would like to thank the members of the mortality review steering groups who have engaged with the regional programmes and enabled us to put this toolkit together.

Yorkshire & Humber AHSN:

Acute Trusts: Airedale NHS Foundation Trust, Barnsley Hospital NHS Foundation Trust, Bradford Teaching Hospitals NHS Foundation Trust, Calderdale and Huddersfield NHS Foundation Trust, Doncaster and Bassetlaw Teaching Hospitals NHS Foundation Trust, Harrogate and District NHS Foundation Trust (national pilot site), Hull and East Yorkshire Hospitals NHS Foundation Trust, Leeds Teaching Hospitals NHS Trust, Mid-Yorkshire Hospitals NHS Trust, North Lincolnshire and Goole NHS Foundation Trust, Rotherham NHS Foundation Trust, Sheffield Teaching Hospitals NHS Foundation Trust, York Teaching Hospital NHS Foundation Trust (national pilot site).

Mental Health Trusts: Bradford District Care NHS Foundation Trust, Humber NHS Foundation Trust, Leeds and York Partnership NHS Foundation Trust, South West Yorkshire Partnership NHS Foundation Trust

West of England AHSN:

Acute Trusts: University Hospitals Bristol NHS Foundation Trust, North Bristol NHS Trust, Royal United Hospitals Bath NHS Foundation Trust, Great Western Hospitals NHS Foundation Trust, Gloucestershire Hospitals NHS Foundation Trust, Weston Area Health NHS Trust, Taunton & Somerset NHS Foundation Trust, Salisbury NHS Foundation Trust.

Mental Health Trusts: 2Gether NHS Foundation Trust, Avon and Wiltshire Mental Health Partnership NHS Trust (from November 2017).

Aim

This toolkit aims to support the implementation of the Structured Judgement Review (SJR) process to effectively review the care received by patients who have died. This will in turn allow learning and support the development of quality improvement initiatives when problems in care are identified.

This toolkit also provides information and links to resources on change management and quality improvement methodologies.

Who will benefit from this document?

This document is for those wishing to implement the SJR process at a regional or local level, with specific reference to clinicians, managers, commissioners and trainers in secondary and tertiary care. It should also be useful as a reference for community and primary care providers.

Licence

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Glossary

AHSN	Academic Health Science Network
CQC	Care Quality Commission
DNACPR	Do not attempt resuscitation
EOL	End of Life
HSMR	Hospital Standardised Mortality Ratio
LD	Learning Disability
LFD	Learning from Deaths
NHSE	NHS England
NHSI	NHS Improvement
NMCRR	National Mortality Case Record Review
PPI	Patient and Public Involvement
RCP	Royal College of Physicians
SJR	Structured Judgement Reviews
SMHI	Summary Hospital-level Mortality Indicator
TEP	Treatment Escalation Plan

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What is the role of AHSNs?

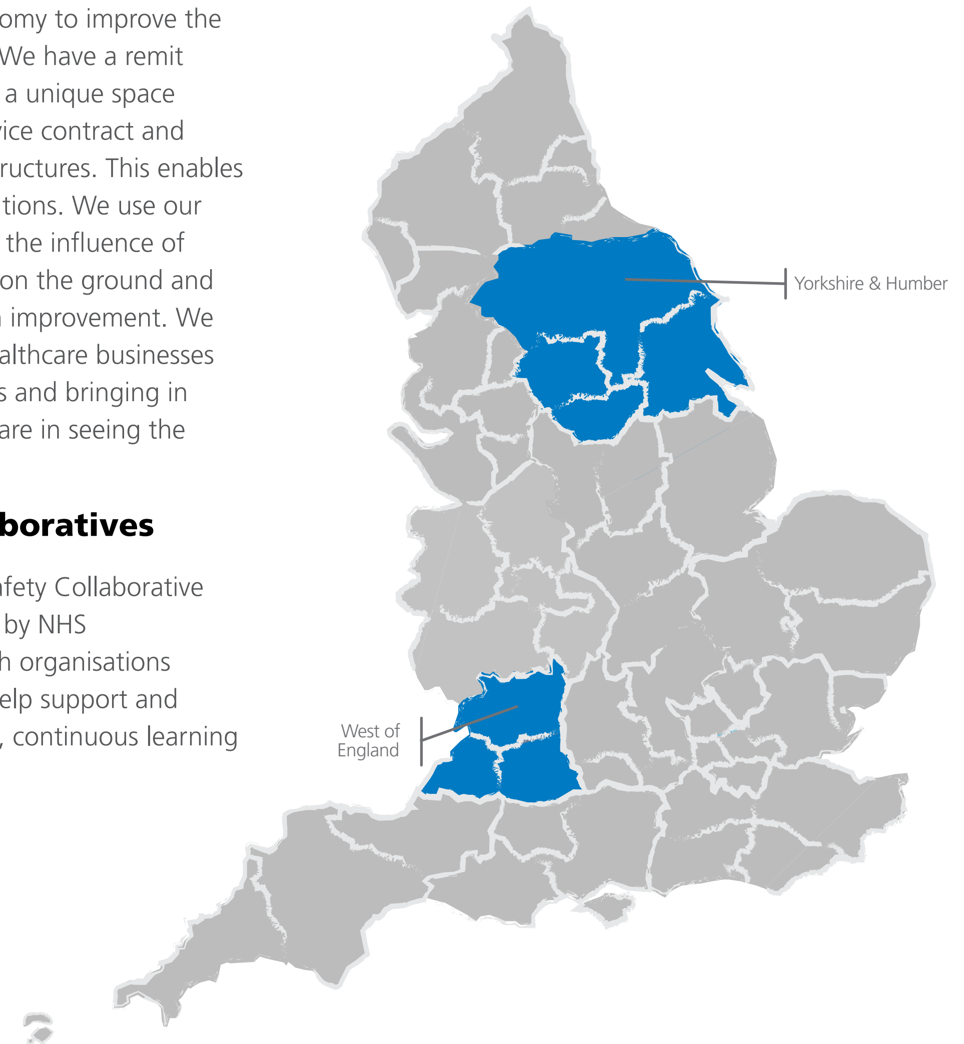
As the only bodies that connect NHS and academic organisations, local authorities, the third sector and industry, we are catalysts that create the right conditions to facilitate change across whole health and social care economies, with a clear focus on improving outcomes for patients. This means we are uniquely placed to identify and spread health innovation at pace and scale; driving the adoption and spread of innovative ideas and technologies across large populations. Although small organisations – which ensures we remain flexible and responsive to emerging opportunities and challenges – we lead large regional networks. Hence our impact rests in our ability to bring people, resources and organisations together quickly, delivering benefits that could not be achieved alone.

How are AHSNs different and distinct?

Everything AHSNs do is driven by two imperatives: improving health and generating economic growth in our regions. We are the only partnership body that bring together all partners across a regional health economy to improve the health of local communities. We have a remit from NHS England to occupy a unique space outside of the usual NHS service contract and performance management structures. This enables us to foster collaborative solutions. We use our local knowledge and harness the influence of our partners to drive change on the ground and integrate research into health improvement. We are as interested in seeing healthcare businesses thrive and grow, creating jobs and bringing in investment to the UK, as we are in seeing the healthcare system improve.

Patient Safety Collaboratives

Each AHSN hosts a Patient Safety Collaborative (PSC) which is commissioned by NHS Improvement. PSCs work with organisations nationally and regionally to help support and encourage a culture of safety, continuous learning and improvement.



Yorkshire & Humber AHSN Improvement Academy academy@yhahsn.nhs.uk
www.improvementacademy.org
www.yhahsn.org.uk
Twitter @improve_academy

West of England AHSN
contactus@weahsn.net
www.weahsn.net
Twitter @WEAHSN

The National Mortality Case Record Review programme

Most Acute Trusts have systems in place to ensure patient safety and quality of care. Many of these include ways of reviewing hospital deaths, often by detailed review of the case notes, to identify areas that could be improved and areas of good practice that could be expanded. However, it has been noted that there is often variability in such review processes and the extent from which learning is gathered and utilised to inform practice.

In order to standardise mortality reviews across the country the National Mortality Case Record Review (NMCRR) programme was commissioned by Healthcare Quality Improvement Partnership (HQIP) and funded by NHS Improvement in 2016. This programme is being delivered across England and Scotland by the Royal College of Physicians in partnership with the Yorkshire and Humber AHSN Improvement Academy and DATIX.

This programme is based on the Yorkshire and Humber mortality review programme set up by the YHAHSN Improvement Academy in 2014.

The NMCRR pilot phase ran from July 2016 to January 2017 and the pilot sites were:

- NHS Highland (Scotland)
- York Teaching Hospital NHS Foundation Trust
- Harrogate and District NHS Foundation Trust
- University Hospital of South Manchester NHS Foundation Trust
- St George's University Hospitals NHS Foundation Trust
- West of England AHSN.

Aim

The NMCRR programme's aim is to improve understanding and learning about problems and processes in healthcare associated with mortality, and also to share best practice. It helps healthcare professionals to identify themes and address deficiencies in processes and patient care.

The programme aims to introduce the standardised and evidence based Structured Judgement Review (SJR) methodology for reviewing case records of adult patients who have died in acute general hospitals. The primary goal is to improve healthcare quality through qualitative analysis of mortality data using a standardised, validated approach linked to quality improvement activity.

The programme is enabling closer work between AHSNs and healthcare colleagues to address deficiencies in patient care that are identified, through continuous quality improvement, and sharing of best practice.

Background

A 2016 Care Quality Commission (CQC) report[1] found that some organisations were not giving learning from deaths sufficient consideration and therefore missed valuable opportunities to identify and make improvements in quality of care.

This review was carried out in response to the identification of the low rates of review or investigations into deaths noted at Southern Health NHS Foundation Trust.[2] Additionally the review was influenced by reports into care quality at Mid-Staffordshire NHS Foundation Trust[3] and University Hospitals of Morecambe Bay NHS Foundation Trust.[4]

Based upon the findings of the review the National Quality Board (NQB) published the first edition of the National Guidance on Learning from Deaths for Trusts.[5]

Learning From Deaths Guidance

The National Quality Board Guidance, published in March 2017, sets out the following key requirements which will ensure organisations effectively respond to and learn from patient deaths.

Each Trust should at a minimum ensure there is:

- Meaningful engagement and support of bereaved families and carers.
- The introduction of structured case record reviews when reviewing patient deaths.

It is noted that Trusts must have mechanisms to review all deaths of people:

1. With a Learning Disability
2. With a Serious Mental Health Illness
3. Those aged under 18 years
4. Perinatal and maternal deaths

Additionally it is advised that Trusts review all inpatient deaths:

1. Where family or staff concerns have been raised.
2. Where the patient was not expected to die, for example an elective procedure.
3. Where an alarm has been raised such as a Dr Foster alert or CQC concerns.
4. Where the learning will inform a provider's quality improvement work e.g. end of life care.

There is an expectation from the Department of Health that Trusts will publish quarterly data.

Trusts must also develop a learning from deaths policy to identify how they will meet the requirements outlined in the national guidance.

NHS Improvement have released a number of resources to support trusts implement the requirements of the national guidance which can be accessed at: improvement.nhs.uk/resources/learning-deaths-nhs

[1] Care Quality Commission. Learning, candour and accountability. A review of the way NHS trusts review and investigate the deaths of patients in England. 2016. www.cqc.org.uk/sites/default/files/20161213-learning-candour-accountability-full-report.pdf

[2] Independent review of deaths of people with a Learning Disability or Mental Health problem in contact with Southern Health NHS Foundation Trust April 2011 to March 2015. December 2015. www.england.nhs.uk/south/publications/ind-invest-reports/wessex/southern-health/

[3] Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry ("Francis report"). February 2013. www.midstaffspublicinquiry.com/

[4] Report of the Morecambe Bay Investgation ("Kirkup report"). 2015. www.gov.uk/government/organisations/morecambe-bay-investigation

[5] National Quality Board. National Guidance on Learning from Death: A Framework for NHS Trusts and NHS Foundation Trusts on identifying, reporting, investigating and learning from deaths in care. March 2017. www.england.nhs.uk/wp-content/uploads/2017/03/nqb-national-guidance-learning-from-deaths.pdf

Background

SJR is a standardised, yet not rigid, case notes review methodology usable across services, teams and specialties. SJR blends traditional, clinical-judgement based, review methods with a standard format. This approach requires reviewers to make safety and quality judgements over phases of care, to make explicit written comments about care for each phase, and to score care for each phase.[1]

Since 2014, the Yorkshire & Humber AHSN Improvement Academy has supported the uptake of SJR by its acute and mental health trusts.[2] The Improvement Academy has successfully standardised mortality review methodology across all 13 acute trusts in Yorkshire and Humber. This work has subsequently led to the NMCCR programme and to SJR being one of the recommended tools for the review of patient deaths, as outlined by the NHS Improvement guidance on implementing the National Quality Board's learning from deaths framework.[3]

Strengths of an SJR

The benefits of utilising the SJR methodology is that it provides a structured and replicable process to review deaths, which examines both interventions and holistic care giving reviewers a rich data set of information.[4]

The SJR methodology allows organisations to ask 'why' questions about things that happen to enable learning and actions where required.

SJR allows the identification and feedback of good care in the same detail as 'problematic' care, which is integral as evidence suggests most care is of good or excellent quality and that there is much to be learned from the evaluation of high-quality care.

How the SJR method works

A SJR is usually undertaken by an individual reviewing a patient's death and mainly comprises of two specific aspects; namely explicit judgement comments being made about the care quality and care quality scores being applied. These aspects are applied to both specific phases of care and to the overall care received.

The phases of care are as follows:

- Admission and initial care – first 24 hours.
- Ongoing care.
- Care during a procedure.
- Perioperative/procedure care.
- End-of-life care (or discharge care).
- Assessment of care overall.

Whilst the principle phase descriptors are noted above, dependant on the type of care or service the patient received not all phase descriptors may be relevant or utilised in a review.

[1] Hutchinson A, Coster JE, Cooper KL, Pearson M, McIntosh A, Bath PA. A structured judgement method to enhance mortality case note review: development and evaluation. *BMJ Quality and Safety* 2013;22:1032–1040. DOI: 10.1136/bmjqs-2013-001839

[2] Hutchinson A, McCooe M & Ryland E. 2015. A guide to safety, quality and mortality review using the structured judgement case note review method. Bradford, The Yorkshire and the Humber Improvement Academy. www.improvementacademy.org/documents/Projects/mortality_review/IA%20SJR%20Report-%202015.pdf

[3] National Quality Board. National Guidance on Learning from Death: A Framework for NHS Trusts and NHS Foundation Trusts on identifying, reporting, investigating and learning from deaths in care. March 2017. www.england.nhs.uk/wp-content/uploads/2017/03/nqb-national-guidance-learning-from-deaths.pdf

[4] Royal College of Physicians. Using the Structured Judgement Review method - A guide for reviewers. London: RCP, 2017. www.rcplondon.ac.uk/sites/default/files/media/Documents/NMCRR%20guide%20England_0.pdf

Explicit Judgement Comments

Here the reviewer makes explicit judgement comments on the phase/overall care reviewed which allows the reviewer to concisely describe and assess the safety and quality of care provided.

Judgement comments can be made on anything the reviewer thinks is pertinent to a particular case, including technical aspects of care such as management plans, whether care meets good practice and the interventions undertaken. More holistic aspects of care such as end-of-life decision making and involvement of families are also reviewed.

It is recommended that explicit statements use judgement words and phrases e.g. 'good', 'unsatisfactory', 'failure' or 'best practice'.

RCP examples of explicit judgement comments:

Very good care – rapid triage and identification of diabetic ketoacidosis with appropriate treatment.

Overall, a fundamental failure to recognise the severity of the patient's respiratory failure.

Phase of care scores

Once explicit judgement comments are made, the reviewer then applies a phase of care/overall care score.[1]

Only one score is given per phase of care and is not required for each judgement statement.

This allows the reviewer to come to a rounded judgement on the phase of care being reviewed, which is particularly useful when there is a mix of good and poor elements of care.

Therefore a phase of care could identify elements of poor care and still be rated a positive score overall if there were also elements of care that were very good.

The following care scores are used:

1. Very poor care
2. Poor care
3. Adequate care
4. Good care
5. Excellent care

[1] Royal College of Physicians. Using the Structured Judgement Review method - Data collection form. London: RCP, 2017 https://www.rcplondon.ac.uk/file/5065/download?token=ad_j5n6M

Assessment of problems in healthcare

Whilst the explicit judgement comments and care scoring are the main two elements of an SJR, reviewers will subsequently be asked to make an assessment of problems in healthcare. The reviewer is asked to comment on whether one or more specific types of problems were found and, if so, identify if it is deemed this led to harm. Problem types are listed in the box to the right.

Overall care scores and further review

Overall care scores are integral to the review process. A score of 1 or 2 is given when the reviewer judges the care overall is either poor or very poor.

If a first stage review judges that the overall care score is less than three and either poor (2) or very poor (1) then the case should be subject to further scrutiny.

This may take a number of forms depending upon the detail of the governance structure within organisations.

The purpose of the on-going review in these circumstances is to define any further action needed. Typically poor or very poor care will attract an analysis or investigation which aims to understand the reasons for poor care and to provide comment on the possibility of the care having contributed to the death of the patient.

It is important to note that the SJR cannot comment on, nor describe, the "avoidability" of a patient's death.

Problem types

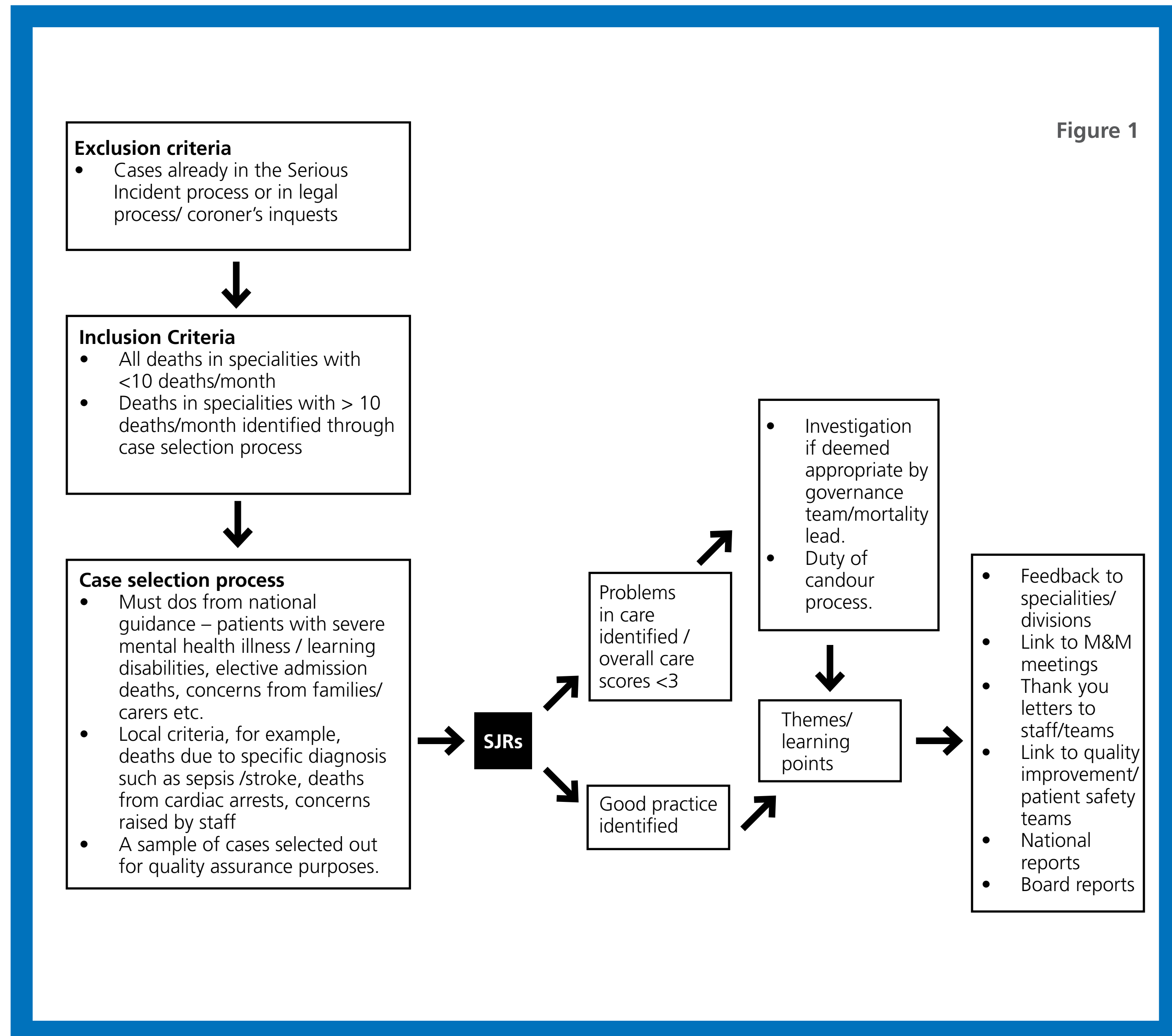
1. Problem in assessment, investigation or diagnosis (including assessment of pressure ulcer risk, venous thromboembolism (VTE) risk, history of falls).
2. Problem with medication / IV fluids/ electrolytes/ oxygen (other than anaesthetic).
3. Problem related to treatment and management plan (including prevention of pressure ulcers, falls, VTE).
4. Problem with infection management.
5. Problem related to operative/ invasive procedure (other than infection control).
6. Problem in clinical monitoring (including failure to plan, to undertake, or to recognise and respond to changes).
7. Problem in resuscitation following a cardiac or respiratory arrest (including cardiopulmonary resuscitation (CPR)).
8. Problem of any other type not fitting the categories above including communication and organisational issues.

Operational process

This flowchart (**Figure 1**) provides an example of the operational processes a trust may follow when undertaking an SJR.

It should be noted that this is simply an interpretation of the inclusion and exclusion criteria, governance processes and feedback mechanisms a trust could potentially follow and is not meant to be prescriptive.

Figure 1



The following case study provides a fictional account of a patient death which has undergone an SJR. It outlines the processes for case selection, explicit judgement comments and care scores allocated.

Key learning points from this case include the potential need for earlier ceiling of treatment decisions and end of life recognition.

Explicit judgement comments from the reviewer are shown as handwritten notes in blue.

89 Year old male admitted 28/09/2017 - 23:05 - from Nursing Home.

Presenting complaint – Increasing shortness of breath

Past Medical History – Myocardial Infarction x2, Hypertension, Type 2 Diabetes Mellitus, Dementia. Admitted to Nursing Home 10 weeks previously due to functional decline. No community Do Not Attempt CPR (DNACPR) or Treatment Escalation Plan (TEP) in place.

Background – GP review 27/09/2017 – diagnosed likely Lower Respiratory Tract Infection (LRTI), started on oral Amoxicillin.

Initial Assessment – Observations stable – NEWS 1 – HR -92, purulent sputum – sample sent to micro, oral antibiotics to continue.

Patient treated for LRTI. Increased confusion noted in morning 29/09/2017 – NEWS 2 – HR 99, Sp02 – 95% on air. Further deterioration in condition noted in evening 29/09/2017 – NEWS 5 – BP 102/70, HR – 110, Temp 38.3, Sp02 – 92% on air. Sepsis bundle started, consolidation on chest x-ray – IV Tazocin commenced. Catheterised to monitor fluid output – although recording accuracy limited (6 hours without urine output measure)

30/09/2017 continued deterioration of condition despite treatment including micro recommended IV antibiotic regime.

01/10/2017 – Developed Type 2 Respiratory Failure, review by ITU – not for Non Invasive Ventilation – ward level ceiling of treatment.

Re-cannulated for intravenous fluids as cannula tissued. DNACPR subsequently signed – symptom trigger started and active intervention stopped.

Family informed of decision.

Patient died at 21:35 – 01/10/2017.

02/10/2017 – Discussion with Bereavement Office, family raised concerns regarding involvement in care and end of life decisions.

Case meets automatic inclusion criteria outlined in Figure 1 – as family concerns had been raised. Case therefore subject to an SJR. Due to overall care score and no problems in care identified not for further review.

Phase of care: Admission and initial management (approximately the first 24 hours)

Please record your explicit judgements about the quality of care the patient received and whether it was in accordance with current good practice (for example, your professional standards or your professional perspective). If there is any other information you think is important or relevant that you wish to comment on then please do so.

- Thorough admission clerking, with clear and concise notes and management plan.
- Good background history obtained from patient and wife.
- Early senior review on Acute Medical Unit with prompt and effective handover of care to Care of the Elderly ward.
- Handover from ambulance documented no community DNACPR or TEP in place, however unfortunately no early discussion with patient and family documented regarding escalation plans despite patient being an elderly gentleman with co-morbidities. This is suboptimal practice.

Please rate the care received by the patient during this phase. Please circle only one score.

1. Very poor care 2. Poor care 3. Adequate care 4. Good care 5. Excellent care

Phase of care: Ongoing care

Please record your explicit judgements about the quality of care the patient received and whether it was in accordance with current good practice (for example, your professional standards or your professional perspective). If there is any other information you think is important or relevant that you wish to comment on then please do so.

- Despite increased confusion, medical team not specifically asked to review patient. Patient only seen by junior staff on ward round which is inadequate.
- Good escalation of concerns when NEWS increased, with senior registrar review who commenced sepsis bundle as per guidelines, resulting in prompt administration of IV antibiotics and IV fluids.
- Patient catheterised which was adequately documented and clinically indicated for accurate fluid output. However accuracy of fluid output recording in nursing notes was poor.
- Relatively timely review requested from ITU.

Please rate the care received by the patient during this phase. Please circle only one score.

1. Very poor care 2. Poor care 3. Adequate care 4. Good care 5. Excellent care

Phase of care: Care during a procedure

Please record your explicit judgements about the quality of care the patient received and whether it was in accordance with current good practice (for example, your professional standards or your professional perspective). If there is any other information you think is important or relevant that you wish to comment on then please do so.

Not applicable, no procedures performed.

Please rate the care received by the patient during this phase. Please circle only one score.

1. Very poor care 2. Poor care 3. Adequate care 4. Good care 5. Excellent care

Phase of care: Perioperative care

Please record your explicit judgements about the quality of care the patient received and whether it was in accordance with current good practice (for example, your professional standards or your professional perspective). If there is any other information you think is important or relevant that you wish to comment on then please do so.

Not applicable, no procedures performed.

Please rate the care received by the patient during this phase. Please circle only one score.

1. Very poor care 2. Poor care 3. Adequate care 4. Good care 5. Excellent care

Phase of care: End of Life Care

Please record your explicit judgements about the quality of care the patient received and whether it was in accordance with current good practice (for example, your professional standards or your professional perspective). If there is any other information you think is important or relevant that you wish to comment on then please do so.

- It was noted that there was a delay in identifying patient was reaching end of life (EOL), resulting in a delay in DNACPR being signed. Due to delay patient was unnecessarily cannulated on day of death.
- Whilst family were informed of decision made by senior medic, they were not involved in discussions which was inappropriate.
- Once patient was identified as EOL a symptom trigger was commenced which was regularly completed resulting in patient receiving appropriate EOL care with symptom control.

Please rate the care received by the patient during this phase. Please circle only one score.

1. Very poor care 2. Poor care 3. Adequate care 4. Good care 5. Excellent care

Phase of care: Overall assessment

Please record your explicit judgements about the quality of care the patient received and whether it was in accordance with current good practice (for example, your professional standards or your professional perspective). If there is any other information you think is important or relevant that you wish to comment on then please do so.

- Patient received generally good care during inpatient stay, which involved good quality initial clerking and deterioration identification and treatment.
- However opportunities were missed to discuss treatment escalation plans early which resulted in a delay in patient commencing an EOL pathway. Additionally the patient's family were not appropriately involved in this discussion.

Please rate the care received by the patient during this overall phase. Please circle only one score.

1. Very poor care 2. Poor care 3. Adequate care 4. Good care 5. Excellent care

Please rate the quality of the patient record. Please circle only one score.

1. Very poor 2. Poor 3. Adequate 4. Good 5. Excellent

Assessment of problems with healthcare

In this section, the reviewer is asked to comment on whether one or more specific types of problem(s) were identified and, if so, to indicate whether any led to harm.

Were there any problems with the care of the patient? (Please tick)

☒ *No (please stop here)*

☐ *Yes (please continue below)*

If you did identify problems, please identify which problem type(s) from the selection below and indicate whether it led to any harm. Please tick all that relate to the case.

Problem types

1. *Problem in assessment, investigation or diagnosis (including assessment of pressure ulcer risk, venous thromboembolism (VTE) risk, history of falls)*

   ☐ *Yes* ☐ *No*

   Did the problem lead to harm?

   ☐ *No* ☐ *Uncertain* ☐ *Yes*

2. *Problem with medication / IV fluids/ electrolytes/ oxygen (other than anaesthetic)*

   ☐ *Yes* ☐ *No*

   Did the problem lead to harm?

   ☐ *No* ☐ *Uncertain* ☐ *Yes*

   Problem related to treatment and management plan (including prevention of pressure ulcers, falls, VTE)

   ☐ *Yes* ☐ *No*

   Did the problem lead to harm?

   ☐ *No* ☐ *Uncertain* ☐ *Yes*

3. *Problem with infection management*

   ☐ *Yes* ☐ *No*

   Did the problem lead to harm?

   ☐ *No* ☐ *Uncertain* ☐ *Yes*

4. *Problem related to operative/ invasive procedure (other than infection control)*

   ☐ *Yes* ☐ *No*

   Did the problem lead to harm?

   ☐ *No* ☐ *Uncertain* ☐ *Yes*

5. *Problem in clinical monitoring (including failure to plan, to undertake, or to recognise and respond to changes)*

   ☐ *Yes* ☐ *No*

   Did the problem lead to harm?

   ☐ *No* ☐ *Uncertain* ☐ *Yes*

6. *Problem in resuscitation following a cardiac or respiratory arrest (including cardiopulmonary resuscitation (CPR))*

   ☐ *Yes* ☐ *No*

   Did the problem lead to harm?

   ☐ *No* ☐ *Uncertain* ☐ *Yes*

7. *Problem of any other type not fitting the categories above*

   ☐ *Yes* ☐ *No*

   Did the problem lead to harm?

   ☐ *No* ☐ *Uncertain* ☐ *Yes*

Adapted from Hogan H, Zipfel R, Neuberger J, Hutchings A, Darzi A, Black N. Avoidability of hospital deaths and association with hospital-wide mortality ratios: retrospective case record review and regression analysis. BMJ 2015;351:h3239/ DOI: 10.1136/bmj.h3239

Reviews, SJR and Case Investigations

The terms **review**, **structured judgement review** or just SJR and **case investigation** that appear in this document have clear definitions.

A **review** of the case notes, which is also in some cases referred to as a **screening** of the case notes is any non-validated, variously structured and usually relatively brief review of the case notes. As such these reviews are variable in quality and cannot create a validated care score. Some simple reviews of this type may be lengthy and complex but still do not generate a validated care score.

The **SJR** is a validated research methodology which is able to create an overall care score. The methodology used is explained in more depth elsewhere in this toolkit.

Both simple reviews and the SJR are retrospective analyses of case notes and both have the ability to generate comment on the quality of care that is delivered. In addition, the SJR methodology allows the reviewer to comment as to whether harm had occurred. Both methods can be used to "flag up" poor care and trigger further inquiry into that quality of care.

It is important to recognise that neither the review nor the SJR methodology can generate an outcome which describes if the care that was observed was more likely than not to have contributed to the death of the patient.

Investigations into the quality of care received by patients' is therefore a fundamentally different process from the retrospective case note reviews described. An investigation is a formal process where an opinion is formed, usually by a group of clinicians and clinical governance experts, on the standard of care delivered and crucially, in the context of this document, whether the care received was more likely than not to have contributed to the death of the patient. The investigation will usually draw on evidence from a variety of sources which will in many circumstances include the outcome of the validated SJR.

Serious incident reporting framework and Duty of Candour

As part of the SJR methodology reviewers make an assessment of problems in healthcare which may have resulted in harm. Some deaths may subsequently be identified as being subject to the NHS England (NHSE) Serious Incident Reporting Framework and the CQC Duty of Candour requirements.

It is therefore recommended that Trusts undertake SJRs in a timely manner, ideally within 6 weeks, to ensure Duty of Candour processes can be followed at the most appropriate time.

Issues with care which meet the definition of a patient safety incident (any unintended or unexpected incident which could have or did lead to harm to one or more patients receiving NHS care) should be reported via local risk management systems to the National Reporting and Learning System (NRLS).

Further information regarding the requirements of the NHSE Serious Incident Reporting Framework and CQC guidance on the Duty of Candour can be found at improvement.nhs.uk/uploads/documents/serious-incidnt-framwrk.pdf and www.cqc.org.uk/sites/default/files/20150327_duty_of_candour_guidance_final.pdf

Data collection and reporting

A key part of the NMCRR programme has been to develop and build an on-line platform to enable mortality reviews to be aggregated by Trusts and Health Boards and to conduct analysis to facilitate learning and quality improvement initiatives. Since June 2017, the NMCRR core team has implemented the RCP National Mortality Review platform in 15 Trusts and Health Boards throughout England and Scotland with a further 40 signed up to implement during early 2018. We continue to actively recruit Trusts and Health Boards wishing to implement the on-line platform.

The data entered into the on-line system will allow Trusts to collate cases to enable them to report the numbers and types of reviews undertaken. The data is not intended to contribute to the national reporting framework described in Learning from Deaths neither will allow any comparisons of outcomes to be constructed.

More complex governance processes within Trusts will be required to allow these latter metrics to be created and published.

The following pages outline how organisations may approach the development of their learning from problems in care.

Identify project team members & roles and responsibilities

Depending on your organisation, set up your team. The group could be incorporated as part of an existing mortality or patient safety group, or alternatively it could be established as a distinct group.

In either case, you will need to ensure it is made up of key representatives of groups that will be affected by subsequent changes.

Table 1 offers some suggestions about who might be included. The list is not prescriptive and may be dependent on your organisation.

Table 1: Key representatives to consider

- Executive Board sponsorship, including the Trust Medical Director and a Non-Executive Director responsible for overseeing learning from deaths (as outlined in the National Guidance)
- A project leader, who has change and quality improvement experience. (Ideally a senior clinician)
- Senior medical representation from each relevant clinical division
- Managerial representation.
- Non-medical clinical representation including nursing, allied health professionals and pharmacy
- Trust Quality Improvement team member
- Managerial representation
- Community representation including a GP, a clinician with experience in mental health and a clinician with experience with learning disabilities.
- A safeguarding team member and clinical risk team member.
- A patient experience team member, bereavement office / patient advice and liaison service team member and a Chaplain.
- Support function team members including an audit team member, IT professional, administrative support and legal team member.
- Patient and public representatives

Spreading SJR within your organisation: public and family involvement

It is advisable for your team to include public and family representatives, which may include existing trust public and patient involvement (PPI) representatives, who are able to provide the group with appropriate insights on how the changes could best meet the needs of families and carers who suffer bereavement. This involvement can take a number of formats; however it is best if such team members are involved in co-producing these processes.

Example 1. Within the West of England AHSN area, PPI representatives have been present on the Mortality Review Steering Group and have provided significant insight and influence on how structured judgement reviews could be implemented to best meet families and carers needs.

Example 2. Within the Yorkshire & Humber region, a Carers and Relatives Involvement subgroup has been set up to inform the regional steering group. See page 25.

The PPI team at the West of England AHSN have produced a PPI toolkit which provides useful resources for professionals who are looking to understand how to best involve the public, patients and families, available at www.weahsn.net/ wp-content/uploads/PPI_Toolkit.pdf

The Yorkshire & Humber AHSN Improvement Academy has produced three manuals on how to plan for PPI in projects, work with PPI panels and budgeting available at www.improvementacademy.org/about-us/patient-and-public-engagement/

Guidance on developing PPI role descriptions can be found at www.rds-yh.nihr.ac.uk/wp-content/uploads/2015/01/RDS_PPI-Handbook_2014-v8-FINAL-11.pdf

"As a public contributor on the Mortality Review Steering Group we are, in partnership with our colleagues from the acute hospital trusts and the West of England AHSN pleased that the importance of the public voice in informing the valuable work of the group is recognised. Together, we aim to ensure that a system which reviews all deaths of elective patients and a proportion of those admitted as an emergency is established by all acute hospital trusts in the West of England, so that learning from such reviews, results, as appropriate, in improved health services delivery."

Christine Teller, Public contributor
West of England AHSN

"It is very encouraging that the public is involved in this very important work, so that the mortality review programme is not only driven by clinical and/or budget pressures, but the voices of the family/carer are heard loud and clear."

Barbara Stephenson, Public contributor
Yorkshire & Humber AHSN

A large part of the role of the team will be to ensure that the learning from SJRs translate into improvement actions. The team will need to establish where barriers to implementation exist and discuss these at team meetings.

Commitment planning is a useful way of looking at stakeholders' commitment thus articulating where barriers exist, and prompting where actions may be required to address these (see **Figure 2**).

Some barriers can be avoided by the way that the steering group is established and because of the skills of the membership. Others are external to the group.

The list in **Figure 3** is another approach that can be used to help you think through the various factors that might be the cause of the resistance. The list is not exhaustive and will depend on your context. You may find it helpful to use a forcefield diagram (see **Figure 4**) to analyse the forces for and resistance to change.

Figure 2. Commitment planning diagram

Current position = ● Degree of commitment needed = X

Person or group	Opposed	Not committed	No resistance	Help it happen	Make it happen
A	●			X	
B		●	X		
C	●			X	
D		●		X	

Figure 3: Example barriers to implementation

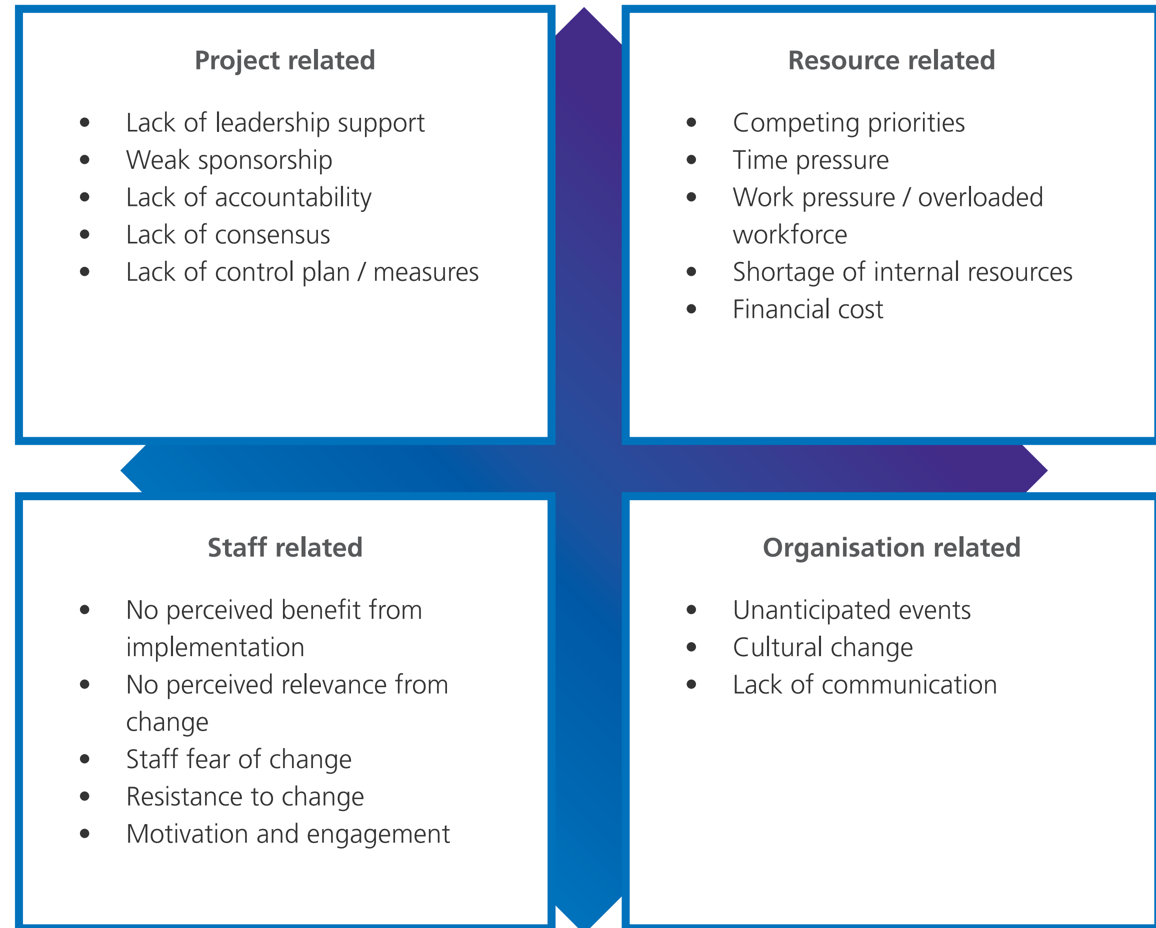


Figure 4: Forcefield analysis

Spreading SJR within your organisation

Culture

Culture can play a significant influencing role on the speed, effectiveness and lifespan of improvement initiatives within organisations.

Whilst the implementation of the practical processes of SJR may occur relatively quickly, developing an environment in which the learning and actions gathered through the SJR process are effectively utilised to deliver high quality care requires an open, honest and learning focused culture.

A number of publications located in the recommended resources section of this toolkit explore the role of culture on change in more detail and include recommendations on how high performing and learning organisational cultures can be developed.

Leadership

It is apparent that effective trust and divisional leadership is integral to the implementation of SJR, with a specific focus on clinical leadership. Such leadership will not only be the driving force for implementing and spreading the use of SJR but will also be intrinsic in developing the open and learning focused culture discussed above.

Training

Although this toolkit provides an overview of the processes and benefits of SJRs, it should not negate the need to undergo specific SJR methodology training.

Integral to the NMCRR programme is the training of healthcare professionals to conduct mortality reviews. Following the publication of Learning from Deaths by the National Quality Board in March 2017, the approach to training in England changed. In an effort to ensure that capacity and capability exists to train in-hospital mortality reviewers more quickly, it was decided not to visit Trusts and Health Boards to train reviewers but instead to hold a minimum number of training sessions throughout August 2017 – January 2018 aimed at training Tier One Trainers. These trainers sit regionally as a resource for Trusts to access to train in-hospital reviewers.

A list of Tier One Trainers, their locations and contact details is available via the RCP mortality webpage www.rcplondon.ac.uk/mortality

By the end of the training phase we will have trained around 360 Tier One Trainers throughout England. We are currently working with Scottish colleagues to continue their training throughout 2018.

Within the Yorkshire & Humber area over 750 clinical staff from thirteen acute and four mental health trusts have been trained across specialties, departments and roles from consultants and registrars to specialist nurses and patient safety leads.

Within the West of England AHSN all six acute trusts within the region, and two outside the region, have been trained in undertaking SJRs by West of England AHSN regional Tier One trainers. In total over 135 cascade trainers now exist in the region with cascade training delivered to over 400 clinica staff.

Make contact with others

Whilst each Trust is likely to follow a different implementation process with regards to SJRs; making contact with others and having a collaborative platform for shared learning is highly recommended.

West of England experience

Within the West of England, Clinical and mortality leads from across the region meet on a quarterly basis, interspersed with monthly Steering Group calls to share progress and the learning from implementation, as well as the number and outcomes of reviews. The Collaborative is supported by 2 GPs and 2 public contributors who aid the discussions on involving relatives and carers, and how to take the out of hospital learning forward. The 2 Mental Health trusts in the region have recently joined the group.

Non-executive and Executives of our participating organisations were periodically invited to attend the quarterly face to face meetings to apprise them of individual and regional progress. This enabled us to gain buy in at a senior level for this work that supported those making changes at team level.

The inclusion of such members has enabled the steering group to develop the processes for shared learning across the system, which has been recognised as integral for delivering higher quality and safer care as patients are rarely cared for by an individual organisation alone.

The West of England AHSN has supported the development and sharing of resources for member organisations including operational process maps and educational material.

Yorkshire & Humber experience

Within Yorkshire & Humber, Acute and Mental Health Trusts' mortality leads come together quarterly to share learning, achievements and challenges; shaping the programme bottom-up.

Mortality leads tell us they feel empowered by these meetings and being able to share their local challenges and explore solutions as a group.

Challenges addressed as a group include the development of robust local case selection tools and systematic identification of learning disabilities deaths.

A separate carers and relatives involvement subgroup informs the steering group.

What is the challenge?

During the implementation of SJRs within the Yorkshire and Humber and West of England AHSN regions a number of shared issues and challenges became apparent.

Such challenges and potential solutions will be explored in further detail within this section.

What are the potential ways forward?

When it comes to problem solving through issues, you can use this framework:

- What is the problem?
- Why is it a problem?
- When is it a problem?
- Where is it a problem?
- How is it a problem?
- Who is it a problem for?

If you don't truly understand the problem, you cannot solve it! The cornerstone of any effective root cause analysis is having an accurately defined problem.

Using robust problem solving techniques will ensure you address the 'real' issue – not just the symptoms. It's not difficult - just have a questioning attitude. Never stop with the first reason given or the obvious.

There may be multiple root causes for any given problem. Make sure you follow all of them through – they may all need fixing!

The five whys is a tool that helps to identify the root cause of a problem by verbally questioning the reasons given. It enables the peeling away of layers through a process of questions repeatedly asking "why" until you reach the root cause.

What is the challenge?

Often, Acute Trusts have difficulties in identifying and tracking people with learning disabilities (LD) through the system to ensure that deaths of people with a LD undergo a mortality review..

Nationally, the Learning Disabilities Mortality Review (LeDeR) Programme, delivered by the University of Bristol, is developing and rolling out a review process for the deaths of people with learning disabilities, helping to promote and implement the new review process, and providing support to local areas to take forward the lessons learned in the reviews in order to make improvements to service provision.

Further information can be found at: www.bristol.ac.uk/sps/leder

What are the potential ways forward?

The LeDeR review team have produced a number of briefing papers which include the programme's definition of a learning disability and guidance on identifying the scale of this disability. These resources can be accessed at:

- www.bristol.ac.uk/media-library/sites/sps/leder/Briefing%20paper%201%20-%20What%20do%20 we%20mean%20 by%20learning%20disabilities%20V1.2.pdf
- www.bristol.ac.uk/media-library/sites/sps/leder/12.%20Identifying%20the%20degree%20of%20a%20 person's%20 learning%20disabilities.pdf

Trusts within the West of England AHSN steering group are working with Mental Health Trust partners to identify an agreed definition for the steering group.

Within the Yorkshire and Humber AHSN region, Acute Trusts work closely with their local LD liaison nurses and coding departments ensuring that patients with LD who have died as an inpatient are flagged up for a SJR. For example, in Leeds Teaching Hospitals NHS Trust, all deaths coded as LD are reviewed for appropriateness of coding by the lead LD nurse. The nurse, additionally, performs a holistic assessment of care which is triangulated with the SJR findings. Trust wide learning is reported through the Mortality Improvement Group. All LD reviews are also referred to the regional LeDeR programme.

Nationally, to help with the tracking of people with a learning disability between primary and secondary care, some learning disability liaison teams utilise information contained within the GP QOF learning disability register to flag people with a learning disability who are admitted to hospital.

Some areas are also utilising summary care records (SCR) with additional information to ensure a person's learning disability is included in their record.

Within West of England AHSN , a steering group member is working within their local partners towards ensuring all who are on the GP QOF learning disability register have a SCR with additional information. It should additionally be noted that NHS Digital is working to develop a process that will flag the records of people with a learning disability on the NHS Spine which is accessible to all providers.

What is the challenge?

Under the National Quality Board guidance, organisations must review deaths of all patients with severe mental health illnesses. However, it is noted that there is no nationally agreed definition for severe mental health illness (SMI) or what methodology should be used when undertaking these reviews.

What are the potential ways forward?

NHS Improvement currently recognises that while there is no single definition of the conditions which would constitute a SMI, that this is generally restricted to the psychoses such as schizophrenia and bipolar disorder.

However, it recognises that personality disorders, eating disorders, obsessive compulsive disorder and substance misuse can be just as severe and disabling. It therefore currently recommends that whilst the former disorders meet the criteria for a SMI, trusts can also choose to review the deaths of those with other significant mental health needs, as mentioned, if this can be done proportionately and effectively.

Nationally, work is underway by the Royal College of Psychiatrists to better clarify the expectations of mortality reviews of people with mental health illnesses, including definitions, and develop a review methodology for those under the care of mental health and community services. It is currently recommended that Acute Trusts utilise SJR or another suitable methodology to review the acute care of those with severe mental health needs.

A number of Acute Trusts within the Yorkshire and Humber AHSN and West of England AHSN areas have been reviewing deaths of patients under the following categories:

- under section,
- under a deprivation of liberty safeguard (DoLS)
- under the care of a secondary care mental health team such as a mental health liaison team.

Within the Yorkshire and Humber AHSN area , the Improvement Academy has been working with four mental health trusts since 2014, supporting the uptake of SJR for the review of mental health deaths. We have adapted the SJR tool to create phases of care headings more suitable for mental health reviews such as risk assessment and allocation of care. It is also important to understand the life lived by the person, the range of comorbidities and not just what happened at their death. More information on our experience is available in Annex J of the National Quality Board Guidance:
www.england.nhs.uk/wp-content/uploads/2017/03/nqb-national-guidance-learning-from-deaths.pdf

Additionally, the Improvement Academy has recently set up a separate mental health mortality review programme using an adapted SJR tool. For more information visit
www.improvementacademy.org/patient-safety/mortality-review-programme.html

What is the challenge?

Nationally, Trusts have recognised the challenge of systematically embedding the voices of bereaved families and carers into their local mortality review processes.

What are the potential ways forward?

It is crucial for Trusts to have systems in place to capture concerns and complaints from bereaved families and carers. Within Yorkshire & Humber AHSN region, a number of methods have been adopted by organisations to allow for families' and carers' voices to feed into mortality review processes.

The format depends largely on local organisational structures and availability of resources. For example, Hull and East Yorkshire Hospitals NHS Trust issues questionnaires to all bereaved families through its bereavement office aiming to provide a route for families' concerns to inform its case selection process. Another Trust sends letters to families of patients whose deaths have been identified as requiring SJRs. The letter requests families to feedback to the mortality lead any identified potential issues in the care received by the deceased.

Since November 2017, Yorkshire & Humber AHSN Improvement Academy has also been working with its Carers and Relatives Involvement Subgroup to develop a flexible framework for the systematic embedding of families'/ carer's voices at the various steps of the mortality review process including case selection, review and learning. For more information on when the framework will be available please contact the Improvement Academy.

In the future, changes to the process of death certification, in which deaths will be scrutinised by a medical examiner, will result in bereaved families being systematically given an opportunity to raise concerns regarding their relatives care. However, it is noted that the introduction of the medical examiners role is not expected until April 2019 and therefore Trusts should endeavour to develop effective and appropriate mechanisms for families to raise concerns. Further information regarding the medical examiner role can be found at: www.gov.uk/government/uploads/ system/uploads/attachment_data/file/517184/DCR_Consultion_Document.pdf

Where a review identifies problems in care, Duty of Candour processes should be followed. Families should be offered a genuine apology, be informed and involved in the investigation process, be given an appropriate lead point of contact to discuss questions and concerns with and finally be informed of the learning and actions developed from the investigation.

Additional resources regarding family involvement and bereavement support can be found in the recommended resources section. NHS England are due to develop guidance on how best to engage bereaved families and carers.

What is the challenge?

To enable SJR to be effectively utilised for organisational learning and improvement, it is integral to ensure that there is effective engagement with clinicians. Such engagement relates to both the workload implications of routinely undertaking SJRs and the implications of feeding back review outcomes to the clinicians/teams involved in the care.

What are the potential ways forward?

Workload

It is recognized that undertaking SJRs often requires significant dedicated organisational resources and reviewers time. Within the Yorkshire & Humber AHSN and West of England AHSN regions, Trusts have found it useful to develop case selection processes to identify cases that require structured judgement reviews. This ensures all appropriate deaths are reviewed whilst reducing workload on clinicians. It is suggested that trusts review a sample of those deaths 'selected out' for quality assurance purposes. Some trusts in the West of England have spread reviews across specialties to help with workload, whereas others have kept reviews within specialty, but completed by a reviewer independent of care.

Furthermore, within the West of England AHSN steering group, one Trust has utilised a charitable donation to fund a case selection nurse, who will review all deaths against the selection tool to identify cases to be taken forward to an SJR, thus, releasing clinician capacity. Finally, the trust also agreed that reviews would be undertaken at a rate of 2 reviews per clinician per month, with clinicians recording how long they spend conducting mortality reviews to enable this to be included in subsequent year's job plans.

Feedback

Feedback is an essential component of learning. Departmental and speciality specific themes can be fed back through a number of routes including M&M meetings , speciality level dashboards or via divisional leads. When problems in care are identified feedback should be carried out in a no blame manner. The onus is on the mortality/governance group rather than the reviewers to carry out this task.

It is important to recognise good care provided. Within the Yorkshire & Humber AHSN region, Doncaster and Bassetlaw Teaching Hospitals NHS Trust routinely acknowledges exemplary practice by either individuals or ward teams by way of a letter from the Deputy Medical Director.

Finally, steering group members have recognised the importance of feeding back and reviewing good and excellent care, alongside poor care, to identify, learn from, and spread examples of high quality care.

What is the challenge?

Hospital teams in both AHSNs have highlighted challenges regarding feeding back review outcomes to external partners including community and primary care providers and also reviewing deaths post discharge (within 30 days). CCGs and General Practitioners have been similarly concerned.

What are the potential ways forward?

With respect to exploring ways to feed back review outcomes, the West of England AHSN steering group has provided a useful forum to discuss such communication issues and identify potential solutions. Such discussions have been enhanced by , for example, the inclusion of representation from local GP's and a CCG clinician. Similar initiatives have occurred in the YHAHSN.

Some Trusts within the West of England AHSN steering group are now feeding back review outcomes to their local CCG Quality Boards, in addition to mandatory reporting requirements, enabling the dissemination of information across the wider health community.

Additionally, a number of trusts have agreements in place that where a patient dies within a trust, but aspects of their care has been delivered in another trust, there is agreement to share this information and undertake a SJR in the locality where concerns have been raised.

Data exchange can be a challenge across institutional boundaries, despite there being a willingness to collaborate. One trust has approached the challenge of post-discharge review by developing an area wide data sharing agreement, which is currently awaiting national agreement. Once agreed this will grant the Trust access to patient identifiers for post discharge deaths, resulting in such deaths being brought into scope for SJR review. Another trust has undertaken post-discharge reviews by means of joint reviewing with both General Practioners and hospital teams accessing their electronic data separately while working in the same setting.

West of England AHSN Experience

The West of England Academic Health Science Network (WEAHSN) has a strong patient safety portfolio. As part of our work on needless harm we partnered with the Royal College of Physicians in late 2016 to pilot and be an early adopter of their Structured Judgement Review (SJR) process.

Using our experience in delivering collaborative events and workstreams we approached all acute hospitals in the region to improve learning from deaths with the aim of standardising the mortality review process, share learning and issues, triangulating outcome themes and facilitate local and region-wide quality improvement (QI) initiatives.

Our Mortality Reviews Breakthrough Collaborative (using the IHI model) commenced in September 2016 and saw two trusts from out of the West of England region join our six acute trusts in establishing the Collaborative Steering Group. The group membership also included two GPs, two public contributors and more recently our two mental health trusts.

Whilst all the acute trusts were involved from the outset, we took a step-wise approach using three trusts as early implementers to refine the method and gain confidence before bringing in other Trusts. This reflected our awareness that mortality reviews can be a challenging process to standardise within organisations never mind across them.

This also allowed the other five trusts to accelerate their implementation plans when the National Learning from Deaths guidance was announced in March 2017.

We sought regular senior leadership involvement that enabled local teams to reconfigure their approach to learning from deaths and worked together regionally to review mortality in a standardised way.

The West of England AHSN has delivered the SJR training to eight organisations, which has resulted in over 135 cascade trainers being trained within the region, who directly support the roll-out of the SJR process to their respective Trusts.

The most consistent theme to emerge from the West of England Patient Safety Collaborative Mortality Reviews implementation has been the failure to quickly recognise end-of-life palliative care across settings.

It has also been identified that patients are being sent to hospital inappropriately, with limited conversations happening with the family, patient or carers about their wishes. Once patients enter the hospital, there is initially a focus on pathways for treatments such as sepsis care.

Through the review outcomes we have learnt the importance of timely and compassionate last phase of life conversations and means we have been able to swiftly move to initiate work on the ReSPECT process.[1] This directly supports care at the end of life to ensure that the whole system seeks to meet the wishes of the patient.

[1] Recommended Summary Plan for Emergency Care and Treatment www.respectprocess.org.uk/

Yorkshire & Humber AHSN Improvement Academy Experience

The Improvement Academy consists of a team of improvement scientists, patient safety experts and clinicians who are committed to working with frontline services, patients and the public to deliver real and lasting change. It was established as part of the Yorkshire & Humber AHSN in May 2013.

The Yorkshire & Humber Mortality review programme was set up in 2014 to support the uptake of the Structured Judgement Review methodology by both our acute and mental health trusts. To date all 13 of our acute trusts have adopted SJR as review methodology and 4 of our 6 mental health trusts are using an adapted SJR tool with phases of care to suit mental health mortality reviews.

The Improvement Academy has trained more than 750 reviewers from the multidisciplinary team across departments and specialities. Trained reviewers include specialist nurses, consultant surgeons/physicians, senior registrars, and senior allied health professionals.

Mortality leads come together quarterly as the steering group to share learning ,experience and challenges, thus shaping the programme bottom up. A lay subgroup involving carers and relatives informs the programme steering group.

Locally, Trusts have developed case selection processes and since 2014 approximately 7000 SJRs have been carried out in the region. A number of Trusts have aligned their review processes with their local incident reporting systems allowing for concerns from staff to be captured.

Our common themes include:

- recognising and managing the deteriorating patient, including end of life care.
- communication within organisations, including handover and documentation.
- recognition and management of sepsis.

The Improvement Academy has set up learning events bringing together improvement experts and trusts to support the translation of themes into practical improvement steps. Our work is also aligned with our regional Patient Safety Collaborative (PSC) programme so that problems in care identified through the review process can be tackled through PSC priority themes such as patient deterioration.

Systematic analysis of problems in care and emergent themes feed quality improvement initiatives locally, contributing to real and sustainable improvements. These include:

22% increase in appropriate and timely start of end-of-life care pathways in Doncaster and Bassetlaw Teaching Hospitals NHS Trust since January 2016.

A fall in HSMR associated with septicaemia (except in pregnancy) from 139 to 103 in Mid-Yorkshire Hospitals NHS Trust over a two year period.

19% reduction in cardiac arrest events per 1,000 bed nights in Sheffield Teaching Hospitals NHS Foundation Trust.

Improved care is seen across the community-hospital interface. For example, a trust is collaborating with their ambulance service to improve recognition of ‘red-flag’ sepsis, allowing prompt administration of life-saving antibiotics on the way to hospital.

Our work over the past four years has demonstrated how standardised retrospective mortality case notes review can provide a robust method for organisations to assess their care systems and identify problems in care.

Our support for organisations in Yorkshire & Humber learning together has yielded demonstrable benefits to organisations, leading to less organisational isolation and improved patient experience across the whole healthcare journey.

Utilising learning and developing actions for improvement are the most important benefits of implementing a structured case note review methodology.

Structured case note reviews will provide trusts with a rich data set from which they can derive themes, learn where improvements can be made and ultimately develop improvement plans which will deliver higher quality care.

Whilst this toolkit focuses on SJR, the following section outlines how Trusts may utilise the learning gathered to develop, measure and evaluate improvement projects.

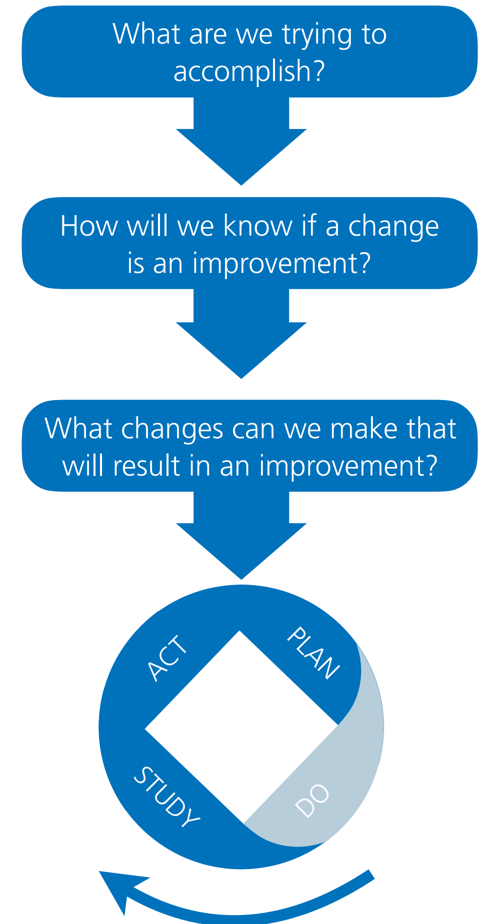
The IHI Model for Improvement

Quality Improvement science is the application of a systematic approach to improvement using specific methods and techniques in order to deliver measurable improvements in quality, care and safety. Our approach uses the methodology developed by the Institute for Healthcare Improvement called the **IHI Model for Improvement**.

The model asks three questions:

1. What are you trying to accomplish?
2. How will we know if a change is an improvement?
3. What changes can we make that will result in an improvement?

The model then asks you to test out emergent change ideas using Plan, Do, Study, Act (PDSA) cycles.



Question 1: What are you trying to accomplish?

This is made up of three stages:

1. Understanding your problem
2. Diagnosing why the problem is occurring
3. Agreeing the aim of your improvement activities.

The learning and themes identified from thematic analysis of cohort of SJRs allow the identification of problems in care, which is the first step in the 'improvement journey'.

A number of diagnostic tools can be used to help gain a better understanding of your problem. Some examples:

- Existing data e.g. local /national audits or surveys
- New/bespoke data e.g. brief patient/staff surveys
- Brainstorming
- Process mapping
- Fishbone diagram
- Driver diagrams
- 5 Whys

Once you are confident that you understand your problem, you can move on to agree an **aim**.

An **aim** is an explicit description of the team's desired outcome. It is important to keep this aim as SMART (specific, measurable, achievable, realistic and time-bound) as possible. It should be meaningful to staff, patients and families. For example, for a patient falls reduction project, the aim might be 'to reduce patient falls on Ward A by 50% within 6 months'.

How will we know if a change is an improvement?

This second question relates to the need to measure whether improvement is happening.

There are different types of measures:

- **Process measures**. These relates to the parts of the system that affect delivery of the required outcome. In essence, they tell us whether the system is behaving the way we would wish, e.g. adherence to agreed timelines for reviews.
- **Outcome measures**. This relates to the aim, so if your aim is to improve sepsis management, your outcome measure might be time from sepsis diagnosis to antibiotic administration.
- **Balancing measures**. This would be included if it was felt that the delivery of one improvement goal could have a negative consequence for another part of the system e.g. completing SJRs impacting negatively on clinic numbers.

Reasons for measuring:

When we talk about measurement in healthcare there are two types of measurements that are more familiar to healthcare professionals and can cause confusion when we talk about measurement in an improvement context.

- **Measurement for judgement**: where measures are used to judge us against performance targets, other Trusts, etc. Improvement is not about judgement, however, you can use measures to judge and manage your own progress
- **Measurement for research**: where large amounts of data are gathered in order to test a hypothesis.

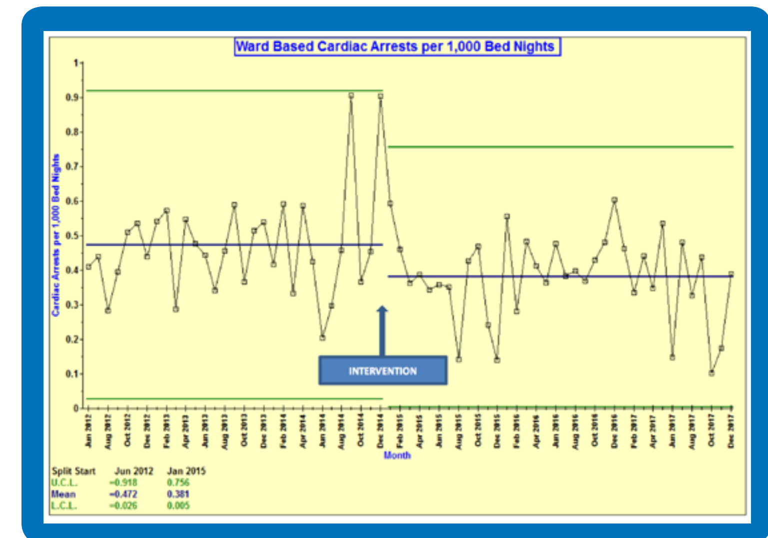
Measurement for improvement gathers just enough data to show that improvement is happening and we present this data using run chart.

Run charts

A run chart is a tool that measures your progress over time.

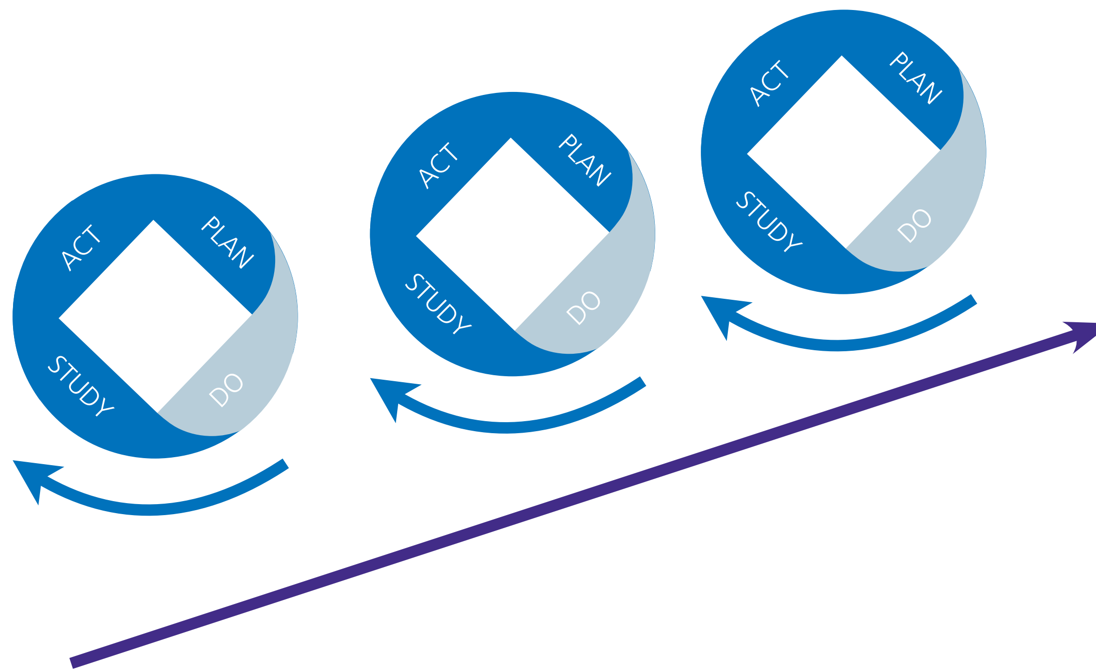
Whilst being visually accessible, they are underpinned by a robust statistical evidence-base that can prove whether or not improvement has occurred. The rules associated with reading runcharts can be found here: http://qualitysafety.bmj.com/content/20/1/46

For more information on measuring visit MindSetQI on measurement.



As you go about answering the first two questions, you are likely to generate a number of change ideas along the way.

If you have not, there are a number of sources such as the evidence-base and other services/ colleagues.



The PDSA cycle

Once a change idea has been identified, it should be tested using rapid PDSA cycles.

PDSA is an effective method that helps teams plan the actions, test it on a small scale, and review before deciding how to continue.

Using PDSA cycles is a powerful and rapid way of taking ideas, trying them in practice, learning what works, and what doesn't to help you achieve success.

You can then broaden the scale of the test, or adjust your ideas through more than one PDSA cycle. It may take a few cycles before the idea starts to work reliably.

For a fun way to introduce a team to quality improvement, check out this blog post www.weahsn.net/2016/01/anyone-for-tennis/

For an introduction to PDSA cycles watch this video https://youtu.be/xzAp6ZV5ml4

It is important for organisations to adopt credible improvement tools and approaches when trying to understand the problems in care identified through the mortality review process, and introduce improvements.

It is essential when developing action plans, to try understand what factors might be at play, including systems factors and behavioural attitudes.

The following tried and tested tools can support you to develop your local approaches to improving care.

Human Factors

Human Factors is an established scientific discipline considered in the design of 'human system interfaces' in many safety-critical, high-reliability industries. Coupling the concepts from human factors and patient safety is now widely accepted by patient safety experts. Human factors principles can be applied in the analysis of problems in care and development of improvement actions.

Yorkshire & Humber Improvement Academy have developed a free Bronze level e-learning to support front-line staff to improve the safety of their care available at www.improvementacademy.org/training-and-events/bronze-human-factors-training.html

Achieving Behaviour Change (ABC)

The problems with implementing best practice are well recognised, and interventions to change practice, such as education, audit and feedback, do not consistently lead to change.

The two main issues are:

- a failure to understand barriers and levers to implementation of best practice
- a failure to use behaviour change theory to design implementation strategies

Yorkshire & Humber Improvement Academy, through the Yorkshire Quality and Safety Group, works with internationally-recognised behaviour change experts to apply psychological insights to implementation problems where behaviour change is required.

Yorkshire and Humber ABC for Patient Safety Toolkit: http://www.improvementacademy.org/tools-and-resources/abc-for-patient-safety-toolkit.html

Positive Deviance

This asset based approach to quality improvement is built on the premise that solutions to problems already exist within communities. Certain individuals, teams, or organisations – positive deviants – identify these solutions and succeed despite facing the same constraints as others in their community. As these solutions are identified from within, the behaviours and strategies that facilitate success are likely to be affordable to implement, sustainable over time, and acceptable to others in the community. More information is available in the resource section.

The Learning from Excellence approach, developed by the Birmingham Children's Hospital, aims to identify, appreciate, study and learn from episodes of excellence in frontline healthcare. www.learningfromexcellence.com

Yorkshire Contributory Factors Framework

In 2012, a systematic review of 83 research studies focusing on the causes of hospital patient safety incidents was conducted. The result of this piece of work is the first evidence based framework of accident causation in hospitals: the Yorkshire Contributory Factors Framework. This is a tool which has an evidence base for optimizing learning and addressing causes of patient safety incidents (PSIs) by helping clinicians, risk managers and patient safety officers identify contributory factors of PSIs. Finding the true causes of patient safety incidents offers an opportunity to address systemic flaws effectively, for the benefit of all our future patients.

Available at: www.improvementacademy.org/tools-and-resources/the-yorkshire-contributory-factors-framework.html

Project Management

Project management tools such as Project Initiation Documents (PIDs), Gantt charts, stakeholder and engagement plans and risks and issues logs may be useful to outline and plan the project dependent on scale. Further information can be accessed at: www.weahsn.net/what-we-do/west-of-england-academy/improvement-resources-and-tools/the-improvement-journey/steps-in-the-improvement-journey/step-2-develop-a-shared-purpose/project-management

Evaluation

Evaluation allows those undertaking change to assess whether their change was actually an improvement, as not all change will lead to an improvement. Evaluation can take a number of forms and can include different evaluation designs.

The West of England Academic Health Science Network Quality Improvement team have produced a number of resources regarding evaluation which can be accessed at: www.weahsn.net/what-we-do/west-of-england-academy/improvement-resources-and-tools/the-improvement-journey/steps-in-the-improvement-journey/step-4-test-and-measure-improvement/evaluation-for-a-qi-project/

Further evaluation resources can be found in the recommended resources section.

Sustainability

The final challenge when you have identified changes that result in improvements is ensuring it becomes sustainable and is embedded into everyday practice.

The West of England AHSN Quality Improvement team have identified a number of resources which can help sustain and spread a change and can be accessed from: www.weahsn.net/what-we-do/west-of-england-academy/improvement-resources-and-tools/the-improvement-journey/ steps-in-the-improvement-journey/step-5-implement-embed-and-sustain/

Training in Quality Improvement

For training in Quality Improvement, the Yorkshire & Humber AHSN's free Bronze QI e-learning modules can be accessed here: www.improvementacademy.org/training-and-events/bronze-quality-improvement-training.html

You can find out more about the Model for improvement through the MINDSet quality improvement toolkit. Although aimed at people involved in providing and commissioning services for people with mental health projects, it is an excellent resource for practical quality improvement guidance. Available at http://mindsetqi.net/ as as a PDF to download.

Celebration

On project completion, even though there may be a recognition that there is still much to do, it is important to remember celebration.

- Celebrate project completion with the team:
- Ensure the sponsor and stakeholders are involved (if possible).
- Acknowledge everybody's efforts.
- Share and reflect on the positive lessons learned.
- Use corporate recognition systems.
- Avoid "institutionalised recognition" – be sincere.
- Say "thank you" and mean it.

Authors

Authors:

Dr Usha Appalsawmy
Mortality programme lead
Yorkshire & Humber AHSN Improvement Academy

Kevin Hunter
Patient Safety Programme Manager
West of England AHSN Patient Safety Collaborative

Maureen McGeorge
Quality Improvement Trainer
Yorkshire & Humber AHSN Improvement Academy

Dr Seema Srivastava MBE
Clinical Lead
North Bristol NHS Trust

Contributors:

Ryan Doherty
NHS Graduate Management Scheme trainee
West of England AHSN Patient Safety Collaborative

Dr Andrew Gibson
NMCRR Clinical Lead
Royal College of Physicians

Professor Allen Hutchinson
Lead Methodologist
Yorkshire & Humber AHSN Improvement Academy

Dr Mark Juniper
Clinical Lead
Great Western Hospitals NHS Foundation Trust

Dr Michael McCooe
Associate Clinical Director
Yorkshire & Humber AHSN Improvement Academy

Beverley Slater
Director
Yorkshire & Humber AHSN Improvement Academy

Clare Wade
NMCRR Programme Manager
Royal College of Physicians

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LifeQI

LifeQI is a Web-Software platform built to support and maintain Quality Improvement work in Health and Social Care. It makes it easy for teams to run QI projects and organisations to report on QI activities.

Across the Patient Safety Collaboratives, a number of organisations are using LifeQI as the platform for recording and sharing data.

Contact details for LifeQi

lifeqisystem.com

help@lifeqisystem.com

@lifeqisystem

Contact your Academic Health Science Network to find out if you have access to the Life System.

Notes

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The most recent version of this toolkit and supporting resources are available at **www.weahsn.net**
www.improvementacademy.org
www.yhahsn.org.uk
www.rcplondon.ac.uk