1. Background

The Scottish Patient Safety Programme (SPSP) is one of the family of national improvement programmes, developed over recent years in relation to the national Healthcare Quality Strategy. These programmes draw on improvement methods advocated by the Institute for Healthcare Improvement. SPSP now contains a number of distinctly identified programmes as follows:

- Acute Adult Care
- Primary Care
- Mental Health
- MCQIC (incorporating Paediatrics, Maternal Care & Neonates)

2. Purpose of Paper

This paper provides an update on the Scottish Patient Safety Programme (SPSP) Deteriorating Patient Work-stream

The Board of NHS GG&C is asked to:

- note the progress made by Acute Services Division in implementing the Scottish Patient Safety Programme Deteriorating Patient Work-stream,

3. Introduction to Deteriorating Patient Work-stream

Improving care for the Deteriorating Patient (i.e. a person who is acutely unwell and at risk of further worsening of their condition) has been identified as one of the nine priority areas for improvement within the Scottish Adult Acute Safety Programme (SAASP). It is a continuation of preceding work within the SPSP General Ward Work-stream, which focussed on reliable implementation of Early Warning Score to support physiological monitoring of patients, but now extends significantly the areas for development.

3.1 Aim of the work-stream

The aim of the work-stream is that 95% of people with physiological deterioration in acute care will have a structured response and plan; that there will be a reduction of inappropriate interventions; and that there will be a 50% reduction in CPR attempts (with chest compressions and/or artificial respirations) in general ward settings by December 2015.

There are 3 primary drivers to meet this aim are:
Early Anticipation, collaborative planning and decision making.
Scottish Structured Response Processes Reliably Implemented
Developing a support infrastructure

This is set out in the national driver diagram below. This is an extensive set of expectations so there has been an agreed initial focus on the testing of Scottish Structured Response Processes, The expectation is for each clinical team to implement reliable early warning scoring assessment and a structured response.

### Point of Care – Deteriorating Patients

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| 95% of people with physiological deterioration in acute care will have a structured response and review | Early Anticipation, collaborative planning and decision making. | • Anticipatory planning in Primary Care,  
• Patient and family at the centre of decisions & planning  
• Reliable access of primary care information on admission- eKIS  
• Assessment of functional capability and health trajectory and detection of limited reversibility when assessing patients  
• Reliable implementation of national DNACPR policy  
• Reliable provision of information to primary care on discharge- eKIS |

A reduction of inappropriate interventions  
50% reduction in CPR attempts  
(chest compressions and/or defibrillation and attended by the hospital-based resuscitation team - or equivalent- in response to the 222 call)  
in general ward setting by December 2015

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|  | Scottish Structured Response & Review Processes Reliably Implemented | • Reliable detection of the deteriorating patient using NEWS or local EWS  
• Screen for sepsis & initiate Sepsis Six if appropriate  
• Ensure competent responder  
• Ensure senior clinical involvement in care planning  
• Appropriate and timely referral to higher level of care/palliative care  
• Reliable communication across teams of at risk patients  
• Structured wards rounds in acute care- reliable review of treatment plan  
• Reliable ongoing patient and family communication  
• Provision of patient/family information  
• Use SBAR to communicate across MDT |

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| Infrastructure |  | • Local mortality & morbidity review  
• Involve resuscitation officers in education & improvement  
• Organisational priority: Executive Sponsorship, Clinical Leadership, Executive Lead for Palliative Care  
• Consider use of electronic track & trigger tools to actively measure and manage at risk patients across the sites.  
• Link with Older Persons & Person Centred improvement teams  
• Consider hospital rounding huddles to detect & predict deterioration |

See associated Change Package/ Measurement Plan [here](http://www.knowledge.scot.nhs.uk/aepsp.aspx)

### 3.2 Measures

Demonstration of benefit and of process reliability is an important aspect of the SPSP improvement methods so there is great emphasis on measurement.

The outcome measures associated with this work stream are:

- DP01: Cardiac arrest count*
• DPO2: Cardiac arrest rate*
  o *clinical areas should display either DP01 or DPO2 depending on the number of cardiac
  arrests in their area, and the availability of a denominator

The process measures associated with this work stream are:

• GWP1b: Percent compliance with Early Warning Score (EWS) assessment – correct frequency
  of observations (goal – process reliability at 95% or greater)
• SSRP1a: Structured response count: the number of structured responses in the month
• SSRP1b: Percent Compliance with Structured Response (goal – process reliability at 95% or
  greater)**
• SSRP2: Percent compliance with structured review (goal – process reliability at 95% or
  greater)***
  o **(Measure as an all or nothing measure): A structured response has occurred when: 1) Nurse
    in charge informed; 2) Screened for SEPSIS; 3) Appropriate care givers have met and
discussed plan; 4) ePCS/Ekis reviewed (acute admission wards only); 5) Documentation of
active problems, working diagnosis, management plan and review time; 6) Frequency of
observations reviewed and documented; 7) Escalation ceiling recorded; 8) Early referral to
higher level of care considered and documented; 9) DNACPR considered and completed it
appropriate.
  o ***(Measure as an all or nothing): A structured review has occurred when: 1) Risk of
deterioration is reviewed and documented; 2) Limited reversibility assessed (e.g. with SPICT
tool); 3) Management plan reviewed and updated; 4) Anticipatory care plan considered; 5)
DNACPR reviewed and updated; 6) Communication with patient and family on management
plan

3.3 Programme Support and Governance

Work-stream implementation is supported through the established means of the Clinical Governance
Support Unit. However we have also appointed a Clinical Improvement Lead, Dr Iain Keith, to
augment medical engagement, improvement coaching and cross-system leadership for this
complicated work-stream. Dr Keith and the clinical team in Royal Alexandra Hospital (RAH) have
been the initial pilot ward and made good progress in establishing structured response.

The strategic governance of the work-stream sits within the established arrangement for SAASP
linking from the Acute Services Clinical Governance Forum to the NHS GG&C Board through the
Board Clinical Governance Forum. In acknowledgement of the challenging scope of SPSP
expectations in the driver diagram a dedicated work-stream steering group has been established
under the chair of the Deputy Medical Director, Dr David Stewart.

There is also extensive engagement with the national collaborative linking our staff to the national
safety lead in SGHD and to Healthcare Improvement Scotland. This has in particular supported
senior clinical staff in learning from other healthcare settings who have demonstrated success in
implementing reliability within their own clinical pathways.

4. Progress to date

4.1 Current position
The Acute Medical Unit at the RAH was the initial pilot site for the tested development of structured response. The following chart shows progress towards higher reliability in the team. A structured response is deemed to have occurred when:

- Nurse in charge is informed
- Patient screened for sepsis
- Appropriate caregivers met and discussed plan
- Electronic Key Information Summary reviewed (admission wards only)
- Documentation of active problems, working diagnosis, management plan & review time
- The frequency of observations is reviewed and documented
- Escalation ceiling recorded
- Early referral to higher level of care considered and documented
- DNACPR considered and completed if appropriate

The measure is an all or nothing measure so all elements need to be demonstrated to have occurred before the clinical practice is counted as having met the requirements.

Six nursing teams at Inverclyde Royal Hospital (IRH) were recruited into the work-stream in spring 2014 and are currently testing and measuring the EWS element. However much of the early work was focused on building a suitable measurement process which wasn’t established until the autumn. The next chart shows the increasing reliability being demonstrated through the testing work in these teams.
A further five teams at the RAH (Ward 24, Ward 23, AMU, CCU and A&E), one team at the Beatson (Ward B5) and one team at the GRI (wards 51-53) are at engagement/start up phase. Work is ongoing with these wards to identify medical and nursing leads, provide quality improvement skills/training where necessary, and to start the teams testing and measuring on both EWS and structured response and review.

4.2 Other strands of work

There are 2 related projects that support this work stream. These are:

- Ceilings of treatment project/Treatment Escalation Plans (TEP): Dr Scott Davidson at SGH and Dr Iain Keith at the RAH are currently testing TEP forms. The Treatment Escalation Plan (TEP) is a clinical decision making tool. The form is used for recording clinical decision making in discussions with families as to how best to manage patients in the eventuality their condition deteriorates.
- Hospital at Night project: Phase one of the project is improving the attendance and contribution at each of the hospital at night meetings. A terms of reference and agenda have been drafted to help structure the meetings and ensure that everyone knows their requirements, this is currently being piloted at the GRI. A run chart is being drafted to capture attendance at meetings with reports made available weekly for real time actions to be implemented.

4.3 Spread plan

During the course of 2014 the service was transitioning from the old SPSP programme into the safety priorities described as the Points of Care. An accelerated spread plan has been agreed for the RAH who are now working to the aim that all teams will be actively involved in the work-stream by the end of 2015. However given the recent priority of the organisational transition and the opening of the South Glasgow University Hospital is receding the Division is looking to rapidly scale up the work-stream.

5. Development needs being addressed

The following development issues were framed through the most recent meeting of the work-stream steering group, and are to be progressed with the Division.

- Given the likelihood that the national trajectory is unachievable, it was agreed the new Sector Management Teams should be approached to confirm local goals and milestones that would allow more appropriate reflection on progress.
- Each sector will also be asked to frame its own spread plan with an expectation that there is a much larger commitment of teams to the work-stream.
- The Directors will be approached to identify local clinical leads, to complement Dr Keith’s role.
- The need to fully resolve the limited availability and reliability of outcome data on cardiac arrests will be emphasized to the new Sector Management Teams.
- The potential for the switch-off of the outdated measures when wards/teams start to work on the programme, in favor of the new measurement process developed at IRH was acknowledged. This will reduce the burden of data collection for direct care teams. The feasibility needs to be confirmed with Directors and Chief Nurses.
Appendix One
Scottish Patient Safety Programme: Glossary of Terms

SPSP Scottish Patient Safety Programme
SPSP-MH Scottish Patient Safety Programme – Mental Health
SPSP – PC Scottish Patient Safety Programme – Primary Care
SPSPP Scottish Patient Safety Paediatric Programme
CVC Central Venous Catheter
CAUTI Catheter Associated Urinary Tract Infection
DMARDs Disease Modifying Anti Rheumatic Drugs
EWS Early Warning Scoring
HAI Healthcare Associated Infection
HDI High Dependency Unit
HIS Healthcare Improvement Scotland
HSMR Hospital Standardised Mortality Ratio
IHI Institute for Healthcare Improvement
ITU Intensive Care Unit
ISD Information Services Division
LES Local Enhanced Service
LVSD Left Ventricular Systolic Dysfunction (heart failure)
MCQIC Maternal Quality Care Improvement Collaborative
MDT Multi Disciplinary Team
NEWS National Early Warning Scoring
PDSA Plan, Do, Study, Act (small scale, rapid, reflective tests used to try out ideas for improvement)
PVC Peripheral Venous Cannula
QOF Quality Outcomes Framework
SBAR  Situation, Background, Assessment, Recommendation (a structured method for communicating critical information that requires immediate attention and action; can also be used effectively to enhance handovers between shifts or between staff in the same or different clinical areas.

SMR  Standardised Mortality Ratio

SSI  Surgical Site Infection

SUM  Safer Use of Medicines

Surgical Briefing  A pre-operative list briefing designed to ensure entire team understand expectations for the list and each procedure.

Surgical Pause  A pre-operative pause as an opportunity to cover surgical checklist and act as final reminder of items that must be completed prior to commencement of the operation.

Trigger Tool  A case note audit process designed to find examples where the care plan has not progressed as expected

VAP  Ventilator Associated Pneumonia

VTE  Venous Thromboembolism