Organisational Survey

Interventions to detect and rescue deteriorating inpatients

The aim of this study is to describe the current approaches to detecting and rescuing deteriorating patients in adult general wards in the NHS in England and assess whether interventions have improved patient outcomes. This questionnaire asks about interventions in your hospital and is part of a study commissioned by the NIHR Health Services and Delivery Research Programme (Project: 12/178/18).

To return your survey via email or post, or to contact us with questions, please use the following:

Email: deteriorate@lshtm.ac.uk

Tel: 020 7958 8288

Fax: 020 7927 2701

Mail: Dr Helen Hogan, Dept of Health Services Research and Policy, LSHTM, 15-17 Tavistock Place, London, WC1H 9SH

Guidance

- All questions refer to **adult general inpatient wards only**.

- You will probably **need to speak to colleagues** to complete all the questions. We recommend you skim the questions now so you can gather everything you'll need and read the **hints and tips in the user guide** attached to the survey invitation to help you.

- The information collected will be used for research purposes only. We need to temporarily identify Trusts and hospitals in order to match this survey information with information from the National Cardiac Arrest Audit. **No hospital or individual will be publicly identified in any output.**

- Your name and contact details are required so that we can get in touch if we need to clarify responses to questions.

Please provide your contact information below:

• Name	
• Job title	
• Email	
• Hospital *(that survey answers pertain*	

A. Detection of deteriorating patients

These questions focus on how deteriorating patients are detected in your hospital. Questions include references to track and trigger systems which involve checking a patient's observations and the triggering of a response based on those observations - some examples are early warning scores, modified early warning scores and the national early warning score.

A1. We are interested in changes over time in the track and trigger systems used in your hospital from 2009 to present. We appreciate it is difficult to be precise with historical answers, but please consult others as needed and just be as accurate as you can.

Complete the table below, selecting your responses from the options listed here. There are multiple rows because we would **also like you to note the start and end dates of periods of significant variation in COVERAGE (number of adult general wards using the system) and COMPLIANCE**.

System

- Paper: National Early Warning Score
- Paper: Locally modified NEWS
- Paper: Other
- Electronic: Based on NEWS (Specify below)
- Electronic: Based on another scoring system (Specify below)
- NONE

Adult general ward coverage

- All adult general wards
- 50%-99%
- Less than 50%

Compliance

Requires two elements: full and accurate completion of the chart AND escalation of patients in line with local policy:

- **>90%** of charts are completed in full and accurately *AND* patients are escalated in line with local policy
- **75-90%** of charts are completed in full and accurately *AND* patients are escalated in line with local policy

- **<75%** of charts are completed in full and accurately ***AND*** patients are escalated in line with local policy
- **UNKNOWN** No assessment of compliance possible

Dates

In the format YEAR and QUARTER (with Q1 starting in January) *e.g. Start: '2012 Q4' End: '2015 Q2'*. Range of valid dates: 'Prior to 2009' to 'Currently in use'. If the quarter is unknown please state this accompanied by the year *e.g. 2010 Q unknown*

A **completed example can be found in the user guide** emailed to you at the same time as this survey link.

SYSTEM	ADULT GENERAL WARD COVERAGE	COMPLIANCE	START DATE	END DATE

If you used an electronic system, please state the name of the system used in that year (e.g. 2015: VitalPac)

A2. If you have any comments you'd like to add to clarify your response to the above question, please enter them here:

Having asked about the history of track and trigger systems at your hospital, we'd now like to focus on the present. The following questions are only in reference to the interventions in place to identify deteriorating patients in your hospital TODAY.

A3. For your <u>CURRENT</u> system please <u>EITHER</u> (tick one box):

☐ A. Send us a copy of your paper chart or electronic system specification via email (deteriorate@lshtm.ac.uk), mail or fax.

Proceed to question A12 (Page 8)

---OR---

☐ B. Describe your form in detail

Proceed to question A4 (Page 6)

You have opted to describe your existing track and trigger system, therefore please answer A4-A11 in as much depth as possible.

A4. List all of the parameters on the chart, noting which contribute to the early warning score and the cut-offs for each parameter e.g. BP: >220 = Score 3, 110-220 = Score 0 etc.

A5. Describe the scoring method (adding up numbers or counting coloured boxes etc.)

A6. Describe the chart's use of colour coding and its physical size

A7. Describe the escalation protocol (e.g. 1-3 increase obs and inform senior nurse, 4-6 call junior doctor etc)

A8. List any additional protocols included on the chart (e.g. SBAR, Sepsis screening tool etc.)

A9. Describe any parameter setting options (e.g. target sats)

A10. Describe any use of a written monitoring plan that explicitly notes the required frequency of observations

A11. Describe any other significant features of the chart which you think impact on function/usability

A12. Thinking about your main track and trigger system, approximately what PERCENTAGE of charts on the wards are completed by the following staff? <u>Your answers should total 100%</u>:

Healthcare assistants %

Student nurses %

Registered nurses %

Other %

B. Response to deteriorating patients

These questions ask about responses to deteriorating patients in your hospital.

A rapid response team is one called to respond to an acutely unwell, deteriorating patient. Some examples include Medical Emergency Teams (MET), Critical Care Outreach Teams (CCOT) and Patient At Risk Teams (PART).

Teams which respond ONLY to cardiac arrests should not be entered.

B1. We are interested in changes over time in the hours and membership of the rapid response teams used in your hospital from 2009 to present. We appreciate it is difficult to be precise with historical answers, but please consult others as needed and just be as accurate as you can.

Please complete the table below, selecting your responses from the following options:

Hours of operation

- Monday - Friday days
- Monday - Friday nights
- Weekend days
- Weekend nights

All 4 of these options should be entered into the table at least once. For each of the 4 options please enter the start and end date for covering these hours and the team membership closest to yours during this time period.

If a time slot has never been covered by a rapid response team e.g. weekends, enter 'NEVER' as the start date and team membership. If the same hours of operation were covered but by a different team make-up please enter that information in a separate row.

Team membership

- Doctors only
- Nurses only
- Doctors and nurses
- NEVER

Dates

In the format YEAR and QUARTER (with Q1 starting in January) *e.g. Start: '2012 Q4' End: '2015 Q2'.* Range of valid dates: 'Prior to 2009 Q1' to 'currently in use'. If the quarter is unknown please state this accompanied by the year *e.g. 2010 Q unknown*

A completed example can be found in the user guide emailed to you at the same time as this survey link.

HOURS OF OPERATION	TEAM MEMBERSHIP	START DATE	END DATE

B2. If you have any comments you'd like to add to clarify your response to the above question, please enter them here.

Having asked about the history of response teams at your hospital, we'd now like to focus on the present. The following questions are only in reference to the interventions in place to respond to deteriorating patients in your hospital TODAY.

A rapid response team is one called to respond to an acutely unwell, deteriorating patient. Some examples include Medical Emergency Teams (MET), Critical Care Outreach Teams (CCOT) and Patient At Risk Teams (PART).

Teams which respond ONLY to cardiac arrests should not be entered.

B3. Do you currently have at least one team in place that meets the above definition of a rapid response team? (*Tick one*)

☐ Yes

Proceed to question B4 (Page 12)

☐ No

Proceed to question B25 (Page 24)

We would like to know about the teams in your hospital that meet the definition of a rapid response team. There will be an opportunity to provide information on up to three different teams in turn.

B4. First, please enter the name of the team primarily responsible for providing this service in your hospital. (This will be the team with the greatest number of patients covered and hours of the day served.)

These questions focus on THE TEAM YOU IDENTIFIED AS YOUR PRIMARY RAPID RESPONSE TEAM.

B5. In a typical week, please list the staff with time dedicated to membership of the team expressed as Whole Time Equivalents. (e.g. 3 full-time Band 7 nurses = 3, a Consultant for half a day/week= 0.1)

Membership of the team does not need to be limited to responding to calls. It could include, for example, Consultants with time dedicated to ward rounds with the team or to managing quality improvement projects being run by the response team.

If your team contains staff who respond to calls but do not have dedicated time to the team, please state that against the staff type instead of WTE (e.g. One F2 answering MET calls in addition to their full-time ward job, no dedicated time).

Band 6 nurses WTE

Band 7 nurses WTE

Band 8 nurses WTE

Junior/middle grade doctors (F1/F2/SHO/Core trainees/ST1/ST2) WTE

Critical care or anaesthetics Specialty Registrars (ST3 and above) WTE

Non-critical care/anaesthetics Specialty Registrars (ST3 and above) WTE

Critical care or anaesthetics Consultants WTE

Non-critical care/anaesthetics Consultants WTE

Resuscitation officers WTE

Other Allied Health Professions eg paramedics, physiotherapists *(Please specify staff group and WTE)* WTE

These questions focus on THE TEAM YOU IDENTIFIED AS YOUR PRIMARY RAPID RESPONSE TEAM.

B6. The team currently offers the following services:

	Core part of routine service provision	**Partial provision (*e.g. offered intermittently because only minority of team trained*)**	**Not provided**
Following-up ITU/HDU step downs	☐	☐	☐
Independent non-medical prescribing	☐	☐	☐

Obtaining and interpreting arterial blood gases	☐	☐	☐
Initiating DNACPR discussions with patient's clinical team	☐	☐	☐
Responding to AKI alerts	☐	☐	☐

B7. Thinking of the team as a whole, in a typical week how many <u>HOURS</u> of the team's time is PROTECTED for the following activities? 'Protected time' is set aside with no expectation of covering additional duties (e.g taking response calls) at the same time.

Round to the nearest whole hour.

Formal teaching (e.g. lectures, seminars, workshops etc) Hours

Quality improvement projects (e.g. auditing a department's cardiac arrest rate, updating the fluid balance policy etc) Hours

These questions focus on THE TEAM YOU IDENTIFIED AS YOUR PRIMARY RAPID RESPONSE TEAM.

B8. Of the calls received by the team, how often are those calls from the following groups?

	FREQUENTLY	OCCASIONALLY	RARELY	NEVER
Healthcare assistants	☐	☐	☐	☐

Registered nurses	☐	☐	☐	☐
Foundation year 1 or 2 doctors	☐	☐	☐	☐
Other doctors	☐	☐	☐	☐
Patient or relatives	☐	☐	☐	☐
Other (Please specify below)	☐	☐	☐	☐

If you selected ‘other’ please specify who:

B9. For patients admitted from the ward to ICU after review by the team, approximately what PERCENTAGE follow each of the following referral pathways? (<u>Your answers should total 100%</u>)

Direct admission to ICU %

Referral to an ICU Consultant NOT part of the response team %

Referral to an ICU Registrar NOT part of the response team %

Via the ward medical/surgical team who then refer to ICU %

Other %

These questions focus on THE TEAM YOU IDENTIFIED AS YOUR PRIMARY RAPID RESPONSE TEAM.

B10. In the last 12 months, how often did a suspension of the normal response service occur? (i.e. a period when the team would NOT respond to calls from the wards)

☐ Never

☐ 1-7 days

☐ 8-14 days

☐ >14 days

If the team is ever temporarily suspended, please specify the reason(s) below. E.g. to provide additional staffing for critical care etc.

B11. Is the use of the team regularly measured?

☐ Yes

☐ No

B12. In the last 12 months, has the demand for the service REGULARLY exceeded the team's capacity to respond in an appropriate time frame during:

	YES	NO	Service doesn't cover these hours
Weekdays	☐	☐	☐
Weeknights	☐	☐	☐
Weekend days	☐	☐	☐
Weekend nights	☐	☐	☐

If you have any comments on this subject, please enter them here.

A rapid response team is one called to respond to an acutely unwell, deteriorating patient. Some examples include Medical Emergency Teams (MET), Critical Care Outreach Teams (CCOT) and Patient At Risk Teams (PART).

Teams which respond ONLY to cardiac arrests should not be entered.

If you have a second rapid response team we would now like to know about that second team, but in much less detail than the primary team.

If your hospital:

☐ **DOES** have a second rapid response team

Proceed to question B13 (Page 17)

☐ **DOES NOT** have a second rapid response team

Proceed to question B25 (Page 24)

These questions focus on your SECOND RAPID RESPONSE TEAM.

B13. Please enter the name of your second rapid response team here.

B14. In a typical week, please list the staff with time dedicated to membership of the team expressed as Whole Time Equivalents. (e.g. 3 full-time Band 7 nurses = 3, a Consultant for half a day/week= 0.1)

Membership of the team does not need to be limited to responding to calls. It could include, for example, Consultants with time dedicated to ward rounds with the team or to managing

quality improvement projects being run by the response team.

If your team contains staff who respond to calls but do not have dedicated time to the team, please type that against the staff type instead of WTE (e.g. One F2 answering MET calls in addition to their full-time ward job, no dedicated time).

Band 6 nurses WTE

Band 7 nurses WTE

Band 8 nurses WTE

Junior/middle grade doctors (F1/F2/SHO/Core trainees/ST1/ST2) WTE

Critical care or anaesthetics Specialty Registrars (ST3 and above) WTE

Non-critical care/anaesthetics Specialty Registrars (ST3 and above) WTE

Critical care or anaesthetics Consultants WTE

Non-critical care/anaesthetics Consultants WTE

Resuscitation officers WTE

Other Allied Health Professions eg paramedics, physiotherapists *(Please specify staff group and WTE)* WTE

These questions focus on your SECOND RAPID RESPONSE TEAM.

B15. The team currently offers the following services:

	Core part of routine service provision	**Partial provision (*e.g. offered intermittently because only minority of team trained*)**	**Not provided**

Following-up ITU/HDU step downs	☐	☐	☐
Independent non-medical prescribing	☐	☐	☐
Obtaining and interpreting arterial blood gases	☐	☐	☐
Initiating DNACPR discussions with patient's clinical team	☐	☐	☐
Responding to AKI alerts	☐	☐	☐

B16. In the last 12 months, how often did a suspension of the normal response service occur? (i.e. a period when the team would NOT respond to calls from the wards)

☐ Never

☐ 1-7 days

☐ 8-14 days

☐ >14 days

If the team is ever temporarily suspended, please specify the reason(s) below. E.g. to provide additional staffing for critical care etc.

These questions focus on your SECOND RAPID RESPONSE TEAM.

B17. Is the use of the team regularly measured?

☐ Yes

☐ No

B18. In the last 12 months, has the demand for the service REGULARLY exceeded the team's capacity to respond in an appropriate time frame during:

	YES	NO	Service doesn't cover these hours
Weekdays	☐	☐	☐
Weeknights	☐	☐	☐
Weekend days	☐	☐	☐
Weekend nights	☐	☐	☐

If you have any comments on this subject, please enter them here.

A rapid response team is one called to respond to an acutely unwell, deteriorating patient. Some examples include Medical Emergency Teams (MET), Critical Care Outreach Teams (CCOT) and Patient At Risk Teams (PART).

Teams which respond ONLY to cardiac arrests should not be entered.

If you have a THIRD rapid response team we would now like to know about that third team, but in much less detail than the primary team.

If your hospital:

☐ **DOES** have a third rapid response team

Proceed to question B19 (Page 21)

☐ **DOES NOT** have a third rapid response team

Proceed to question B25 (Page 24)

These questions focus on your THIRD RAPID RESPONSE TEAM.

B19. Please enter the name of your third rapid response team here.

B20. In a typical week, please list the staff with time dedicated to membership of the team expressed as Whole Time Equivalents. (e.g. 3 full-time Band 7 nurses = 3, a Consultant for half a day/week= 0.1)

Membership of the team does not need to be limited to responding to calls. It could include, for example, Consultants with time dedicated to ward rounds with the team or to managing quality improvement projects being run by the response team.

If your team contains staff who respond to calls but do not have dedicated time to the team, please type that against the staff type instead of WTE (e.g. One F2 answering MET calls in addition to their full-time ward job, no dedicated time).

Band 6 nurses WTE

Band 7 nurses WTE

Band 8 nurses WTE

Junior/middle grade doctors (F1/F2/SHO/Core trainees/ST1/ST2) WTE

Critical care or anaesthetics Specialty Registrars (ST3 and above) WTE

Non-critical care/anaesthetics Specialty Registrars (ST3 and above) WTE

Critical care or anaesthetics Consultants WTE

Non-critical care/anaesthetics Consultants WTE

Resuscitation officers WTE

Other Allied Health Professions eg paramedics, physiotherapists *(Please specify staff group and WTE)* WTE

These questions focus on your THIRD RAPID RESPONSE TEAM.

B21. The team currently offers the following services:

	Core part of routine service provision	Partial provision (*e.g. offered intermittently because only minority of team trained*)	Not provided
Following-up ITU/HDU step downs	☐	☐	☐
Independent non-medical prescribing	☐	☐	☐
Obtaining and interpreting arterial blood gases	☐	☐	☐
Initiating DNACPR discussions with patient's clinical team	☐	☐	☐
Responding to AKI alerts	☐	☐	☐

B22. In the last 12 months, how often did a suspension of the normal response service occur? (i.e. a period when the team would NOT respond to calls from the wards)

☐ Never

☐ 1-7 days

☐ 8-14 days

☐ >14 days

If the team is ever temporarily suspended, please specify the reason(s) below. E.g. to provide additional staffing for critical care etc.

B23. **Is the use of the team regularly measured?**

☐ Yes

☐ No

B24. In the last 12 months, has the demand for the service REGULARLY exceeded the team's capacity to respond in an appropriate time frame during:

	YES	NO	Service doesn't cover these hours
Weekdays	☐	☐	☐
Weeknights	☐	☐	☐
Weekend days	☐	☐	☐
Weekend nights	☐	☐	☐

If you have any comments on this subject, please enter them here.

The section on rapid response teams ends here, please proceed to question B25 on Page 24.

Moving on from rapid response teams, we'd now like to consider the role of the on-call medical registrar.

B25. Approximately how many beds is EACH on-call medical registrar currently responsible for covering:

We appreciate this will be a best estimate and recommend you contact a relevant colleague to assist e.g. medical registrar, the associate medical director, site manager or clinical audit team.

In hours (08:00-20:00 Mon-Fri) Beds

Out of hours (Week nights 20:00-08:00, weekends and public holidays) Beds

C. Ceilings of care

These questions ask about the setting of appropriate ceilings of care for patients in your hospital, including Do Not Attempt Cardiopulmonary Resuscitation (DNACPR) orders and treatment escalation plans.

A treatment escalation plan lays outs possible interventions that may become necessary in the event of decline and indicates which are appropriate for the patient e.g. antibiotics, parenteral nutrition, ICU admission. A treatment escalation plan must include more than just cardiopulmonary resuscitation status.

C1. Do you have a formal written treatment escalation plan for patients (e.g. as a section of the clerking form or a separate form)?

☐ Yes

☐ No

If YES, when was it introduced (month and year) and which patients are eligible?

C2. Over the last 12months, what PERCENTAGE of patients eligible for a treatment escalation plan had one in place?

EITHER provide a measured answer, or if this is not measured please provide your best estimate.

We **MEASURE** this and the percentage is:	
Our **BEST ESTIMATE** is:	

C3. Do you conduct a case record review on the notes of patients who have had an in-hospital cardiac arrest?

☐ Yes

☐ No

C4. If case record review <u>IS</u> conducted following an in-hospital cardiac arrest:

Over the last 12 months, what percentage of patients who arrest have had their case records reviewed?

Have there been instances when learning from case record review has led to concrete changes in clinical practice?

☐ Yes

☐ No

IF YES, please provide examples of this learning

C5. Over the last 12 months, what percentage of in-hospital cardiac arrests SHOULD have had a Do Not Attempt Cardiopulmonary Resuscitation (DNACPR) order in place but DID NOT?

EITHER provide a measured answer, or if this is not measured please provide your best estimate.

We **MEASURE** this and the percentage is:	
Our **BEST ESTIMATE** is:	

D. Handover

These questions ask about the approach to handover in your hospital.

D1. What standardised communication tool is most commonly used to handover deteriorating patients in your hospital?

☐ SBAR (Situation, Background, Assessment, Recommendation)

☐ SOAP (Subjective, Objective, Assessment, Plan)

☐ No tool is commonly used

☐ Other (please specify name of tool and brief a brief description below)

D2. <u>IF YOU ANSWERED</u> 'SBAR' or 'SOAP' or 'Other' in Question D1, do you use the following approaches to your handover tool?

	YES	NO
New staff induction explicitly advises use of the tool	☐	☐
Posters on the adult general wards encourage use of the tool	☐	☐
Use of the tool is mandatory when calling the rapid response team	☐	☐
There are reminder notices adjacent to the majority of phones on the ward	☐	☐
A written local policy advises the use of the handover tool	☐	☐
Use of the tool is explicitly mentioned on the patient observation chart	☐	☐
Stickers of the tool exist for use in patients' notes	☐	☐
A staff training course on deteriorating patients advises use of the tool	☐	☐

Please list any other approaches used in your hospital to increase the use of your handover tool.

E. Contextual factors

These questions ask about the resource issues that may influence care in your organisation.

E1. In the last 12 months, approximately how many DAYS in the year have patients in your hospital been put on a temporarily opened overspill ward? *(If never, please enter 0).*

E2. Please provide a brief explanation of why the temporary overspill ward needed to be opened.

(If no temporary overspill opened, please enter N/A).

E3. In the last 12 months, approximately how many DAYS in the year have patients in your hospital had to be put on a different ward to the one most appropriate for their clinical needs (ie outliers)? *(If never, please enter 0).*

E4. Please provide a brief explanation of why there were outliers.

(If there were zero outliers, please enter N/A).

E5. Over the last 12 months on the general adult wards, approximately what PERCENTAGE of the following groups were staffed by agency or locum staff:

We appreciate this will be a best estimate and may be based on your experiences of the wards in your hospital. You could contact your finance department, site manager or work force planning department for assistance.

Registered nurses %

Doctors %

F. Data collection for the NCAA

These questions ask about data collection for the National Cardiac Arrest Audit (NCAA).

F1. Over the last 12 months, what PERCENTAGE of all events which meet the NCAA criteria for inclusion do you think you have been able to accurately capture and report to NCAA?

☐ 100%

☐ 95-99%

☐ 90-94%

☐ 80-89%

☐ 70-79%

☐ 60-69%

☐ 50-59%

☐ Less than 50%

F2. Do you use any of the following strategies when capturing NCAA data? (Select all that apply)

☐ A list of 2222 calls is sought and followed-up in person within 24 hours of the call

☐ There is a convenient, well-stocked location for staff to collect printed audit forms and return them

☐ Accountability for completing the form is clearly allocated to one person/job role (e.g. arrest team lead)

☐ A member of the rapid response team attends all arrest calls and is responsible for completing and/or returning the audit form

☐ Audit forms are required items on the resus trolley included in regular equipment checks

☐ Where audit forms are not returned, the manager of the staff member accountable can be contacted

☐ The hospital's NCAA data have high visibility amongst frontline staff

☐ Other (Please specify below)

Final page

Finally, have you any further thoughts on major changes or interventions which have occurred in your organisation since January 2009 that have affected the recognition and rescue of deteriorating patients?

Thank you for completing this survey.

Please return it via

Email: deteriorate@lshtm.ac.uk

or mail: Dr Catherine Carver, Dept of Health Services Research and Policy, LSHTM, 15-17 Tavistock Place, London, WC1H 9SH

Note: If you opted in Question A3 to send a copy of your track and trigger chart or electronic system specification to us, please send it at the same time.

If you have any questions or comments about the survey, please don't hesitate to contact us.

Tel: 020 7958 8288 Email: deteriorate@lshtm.ac.uk