Sepsis Forum

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Introduction

Welcome/Housekeeping/registration

Intro to the IPC Team.

Presentation/Activities

Evaluation forms/paper or online/certificate of attendance.

Aims of todays session are:

This session will discuss Sepsis and the tools and how it is used to recognise early signs of deterioration, support decision making and promote effective communication between health services.

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What is Sepsis?

The body's immune system overreacts causing widespread inflammation, swelling and blood clotting. These reactions cause a significant reduction in blood pressure, which can decrease the blood supply to vital organs and starve them of oxygen. If not treated quickly, sepsis may lead to multiple organ failure and death.

(NHS England, 2015)

THE UK SEPSIS TRUST

[It's Sepsis - not Flu! Information for the Public - YouTube]

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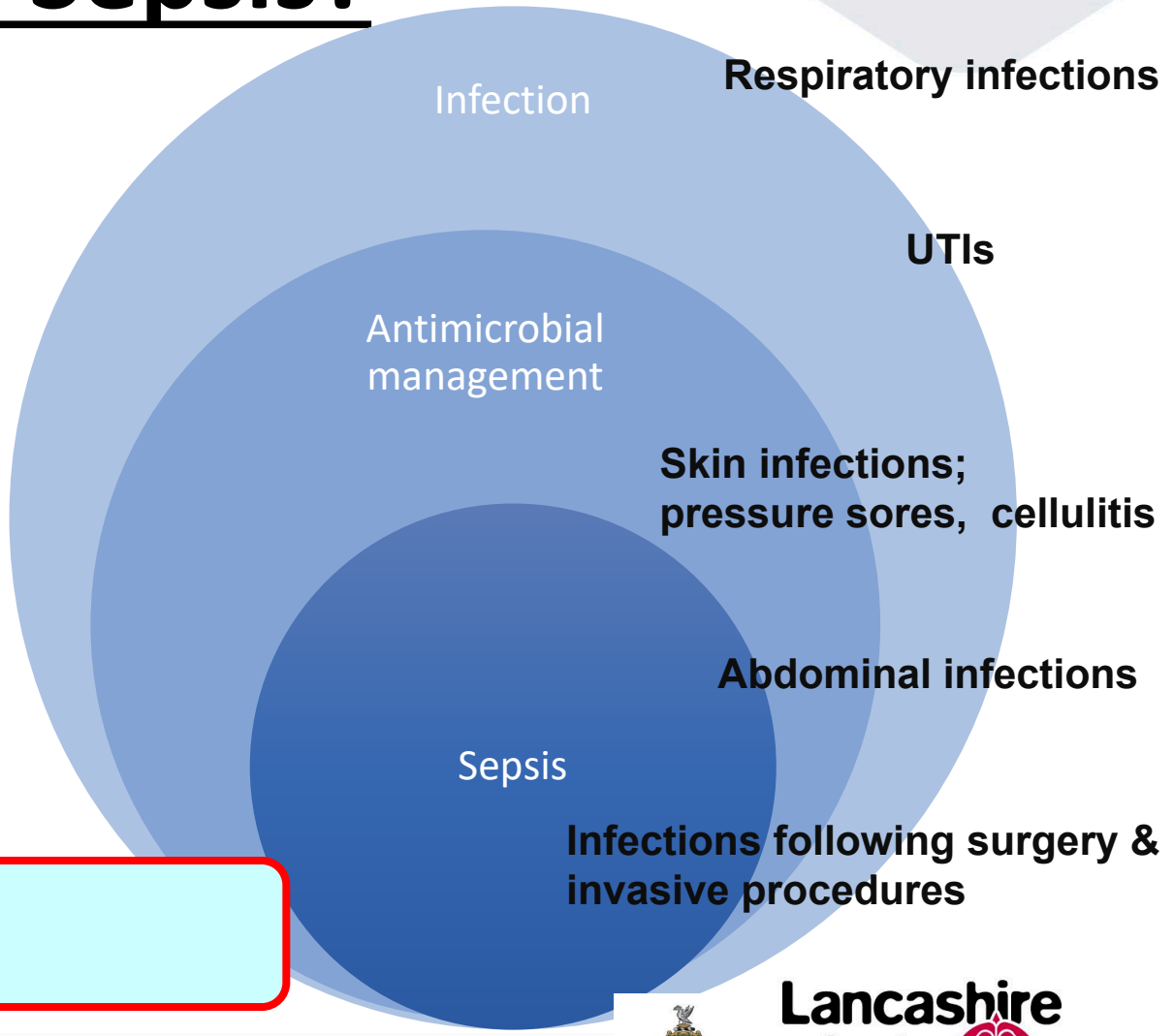
Could it be Sepsis?

Sepsis Risk factors (care home population)

- Age > 75
- Impaired immunity (e.g. diabetes, steroids, chemotherapy)
- Recent trauma / surgery / invasive procedure
- Indwelling lines
- Broken skin



Remember: Sepsis can affect healthy people at any age

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Symptoms of Urosepsis

Changes to urine colour/smell

Abdominal pains/feeling generally unwell

Dehydration /thirst

About 65% of acute kidney injury starts in the community

Decrease in urine output

Nausea / Vomiting

Confusion / Drowsiness

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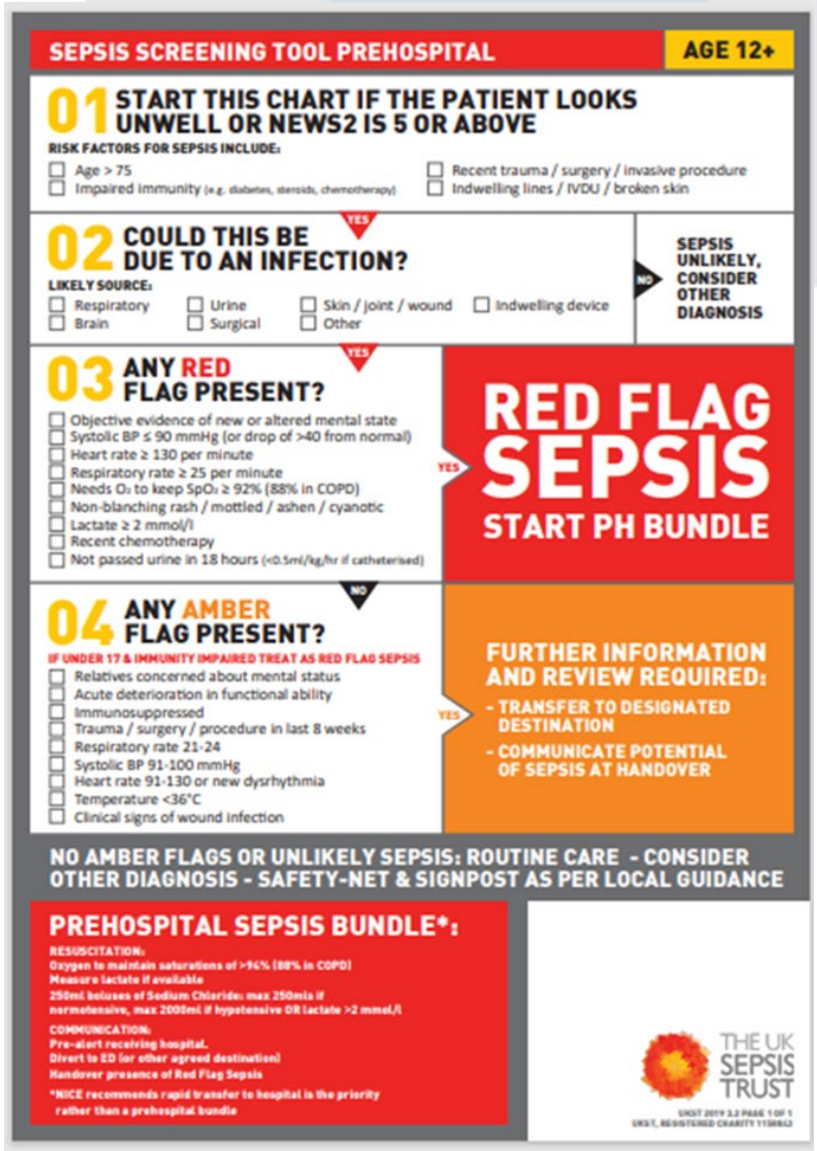
Sepsis Screening Tool (Pre-hospital)

- High temp (fever) or low body temp
- Chills and shivering
- Fast heartbeat
- Fast breathing
- No urine output in the last 12 hours
- Cold clammy and pale or mottled skin



Sepsis-Prehospital-12-231219.pdf (sepsistrust.org)

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Sepsis Red Flags

If signs of sepsis or red flag symptoms dial 999 or follow the person's advanced plan for accessing urgent medical help

- **Sepsis red flags:**
  - Objective evidence of new or altered mental state
  - Systolic BP ≤ 90 mmHg (or drop of >40 from normal)
  - Heart rate ≥ 130 per minute
  - Respiratory rate ≥ 25 per minute Needs O2 to keep SpO2 ≥ 92% (88% in COPD)
  - Non-blanching rash / mottled / ashen / cyanotic
  - Lactate ≥ 2 mmol/l
  - Recent chemotherapy
  - Not passed urine in 18 hours (<0.5ml/kg/hr if catheterised)

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The soft signs of Physical Deterioration

What are soft signs?

PHYSICAL

MENTAL

BEHAVIOUR

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Soft Sign Game

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What is the National Early Warning Score (NEWS)

NEWS2 launched in December 2017

NEWS2 is a tool developed by the Royal College of Physicians, it is recognised as a highly effective system for detecting patients at risk of clinical deterioration or death.

What does obtaining a NEWS2 Score involve?

- Respiration rate
- Oxygen saturation levels
- Blood pressure (in particular – systolic blood pressure = top reading)
- Pulse rate
- **Level of consciousness or new onset of confusion**
- Temperature

National Early Warning Scores

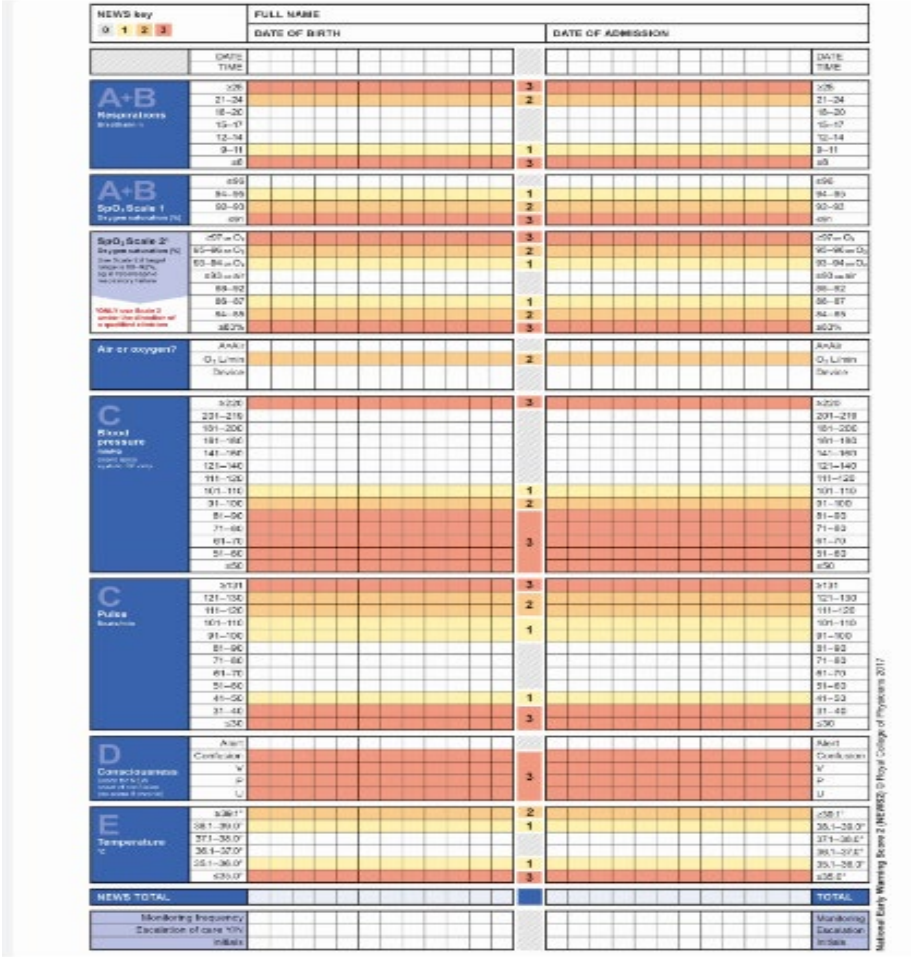

Chart 1: The NEWS scoring system

Physiological parameter	Score 3	2	1	0	1	2	3
Respiration rate (per minute)	≤8		9–11	12–20		21–24	≥25
SpO_2 Scale 1 (%)	≤91	92–93	94–95	≥96			
SpO_2 Scale 2 (%)	≤83	84–85	86–87	88–92 ≥93 on air	93–94 on oxygen	95–96 on oxygen	≥97 on oxygen
Air or oxygen?		Oxygen		Air			
Systolic blood pressure (mmHg)	≤90	91–100	101–110	111–219			≥220
Pulse (per minute)	≤40		41–50	51–90	91–110	111–130	≥131
Consciousness				Alert			CVPU
Temperature (°C)	≤35.0		35.1–36.0	36.1–38.0	38.1–39.0	≥39.1	

[11 Calculating and recording a NEWS score - YouTube]

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NEWS Scenario Game

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You do a set of observations on Simon

- Breathing: 24bpm
- Oxygen saturation: level 96%
- Air/oxygen: Air
- Systolic Blood pressure: 181/68
- Heart rate: 91
- Level of alertness: confused
- Temperature: 37.8

NEWS = 6

You do a set of observations on June

- Breathing: 20bpm
- Oxygen saturation: level 95%
- Air/oxygen: Air
- Systolic Blood pressure: 223/56
- Heart rate: 113
- Level of alertness: alert
- Temperature: 39.1

NEWS = 8

You do a set of observations on Mike

- **Breathing: 20bpm**
- **Oxygen saturation: level 98%**
- **Air/oxygen: Air**
- **Systolic Blood pressure: 178/60**
- **Heart rate: 120**
- **Level of alertness: awake**
- **Temperature: 39.0**

NEWS = 7

You do a set of observations on Eric

- **Breathing: 36bpm**
- **Oxygen saturation: level 98%**
- **Air/oxygen: Air**
- **Systolic Blood pressure: 187/55**
- **Heart rate: 145**
- **Level of alertness: alert**
- **Temperature: 39.2**

NEWS = 8

You do a set of observations on Fiona

- Breathing: 25bpm
- Oxygen saturation: level 96%
- Air/oxygen: Air
- Systolic Blood pressure: 168/45
- Heart rate: 125
- Level of alertness: Confused
- Temperature: 35.9

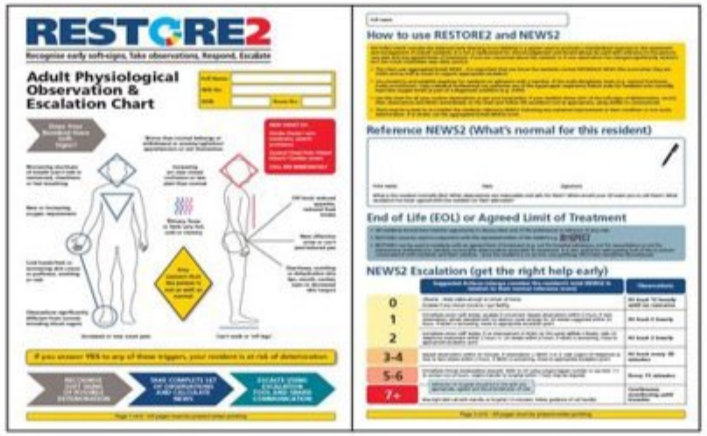
NEWS = 9

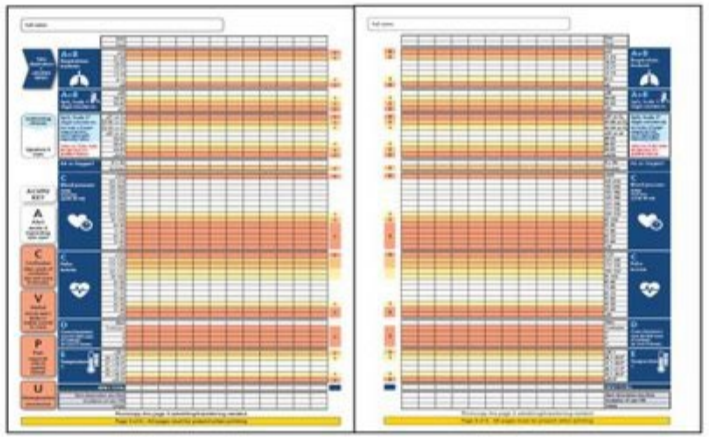
Now we understand NEWS2 why do we need to know about RESTORE2

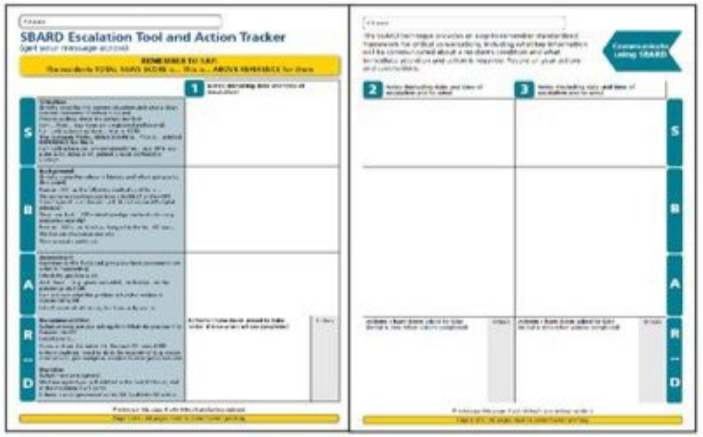
TheAHSNNetwork

What is RESTORE2?

NHS Improvement







RESTORE2 is designed to support homes and health professionals to:

- Recognise when a resident may be deteriorating or at risk of physical deterioration
- Act appropriately according to the residents care plan to protect and manage the resident
- Obtain a complete set of physical observations to inform escalation and conversations with health professionals
- Speak with the most appropriate health professional in a timely way to get the right support
- Provide a concise escalation history to health professionals to support their professional decision making.

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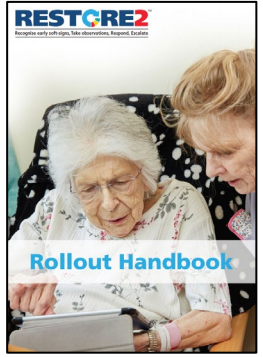

Introduction to RESTORE2

Recognise early soft-signs, Take observations, Respond, Escalate

RESTORE2 is a tool to help staff:

- Recognise when a resident/service user is deteriorating
- In a timely manner speak to a health professional
- Act promptly to the residents/service users care plan and treatment plan
- Provide an escalation history plan to support professionals
- Complete vital observations to commence escalation
- Make sure staff/residents get the right care at the right time

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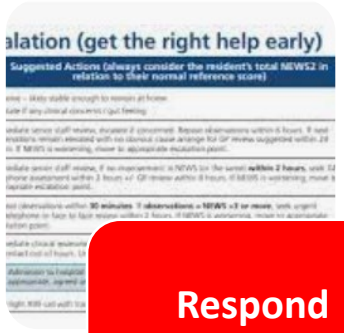
How does RESTORE2 Work?

Soft signs

Recognising early signs of deterioration

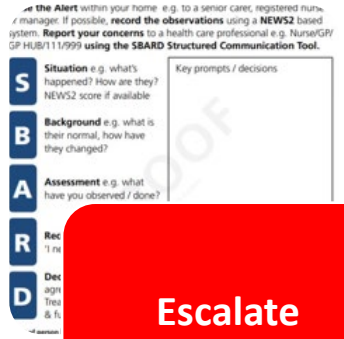
Take observations

Using the NEWS2 score



Respond

A tool to support decision making



Escalate

'getting the right help'

Get your message across

Structured communication approach

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NEWS + infection + soft signs = escalation

Clinical/care judgement

Is there suspicion of infection?

Full set of observations
Suspect Sepsis if NEWS ≥ 5

Suspected sepsis*

GP ambulance hotline

Give the physiological observations and NEWS to call handler
Tell the call handler "Suspected Sepsis"
Blue light Ambulance & Pre Alert if NEWS ≥ 7 or ≥ 5 if concerned *

Suspect infection if there is: General:
fever/rigors, altered mental state/ hyper/hypoglycaemia, hypotension, recent antibiotic treatment.
Specific:
Resp: Cough, SOB, pleurisy
Urine: frequency, dysuria, loin pain
Cellulitis/wound/ulcer
Red tender skin or discharge
Abdominal pain, diarrhoea, vomiting

Soft signs: can't pass urine/walk/new confusion/concern/resident/carer/ clinician

*This should trigger a 60 minute ED arrival to treatment time

(With thanks to Dr Matt Inada-Kim)

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Monitoring

Based on a residents NEWS you should carry out repeat observations at the following suggested frequency.

This should be followed unless there is a clear indication not to (for example if the resident is receiving care whilst dying).

0		at least 12 hourly until no concerns
1		at least 6 hourly
2		at least 2 hourly
3-4	Single Observation 3	at least every 30 minutes
5-6		every 15 minutes
7+		continuous observation and monitoring until transfer

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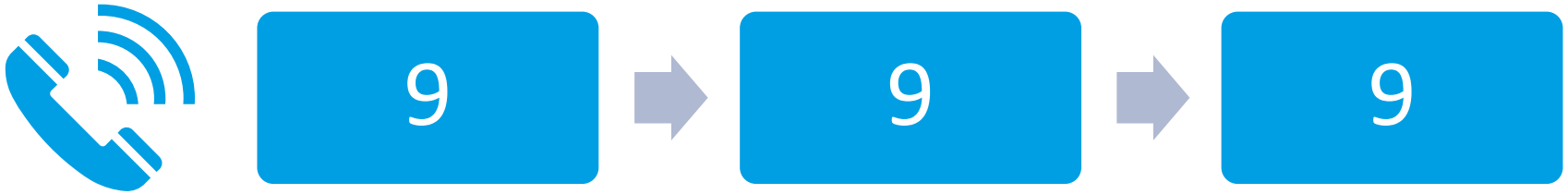
Calling 999

- Always know your direct line number
- Use a portable device or mobile phone so you can be at the residents side when calling
- Have the necessary information available before commencing the call
- Use a communication tool you have been trained in.
- Obtain a copy of the RESTORE2 chart to send with the resident if they are to be transferred to hospital. Do not send the original. If using a digital version print off the observations for the crew.



SBAR

S	SITUATION e.g. what's happened ?how are they? NEWS2 score if available	R	RECOMMENDATION 'I need you to…..'
B	BACKGROUND e.g. what is their normal, how have they changed?	D	DECISION what have you agreed? (including any treatment escalation plans and further observations)
A	ASSESSMENT e.g. what have you observed/done?		

Don't ignore your 'gut feeling' and what you know and see.

[12 Structured communications and escalation - YouTube](https://vimeo.com/814910714)

https://vimeo.com/814910714

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Example answers: SBARD

Situation

XX calling from Sunny Hollow Residential Home. I am a carer

Direct line 01276 623 9833

Calling about Simon, 81 year old resident. His NEWS is 5. His normal NEWS is 0 or 1.

Concerned that he is chesty with a higher than normal breathing rate and more confused than usual.

Background

Simon has dementia. He always recognises his daughter but struggled to recognise her today and thought that she was his mother.

Simon has a DNACPR in place but is for full treatment of any reversible illness, including hospital admission. He gets recurrent chest infections.

He is currently on a blood pressure medication only. He does have antibiotics in the home.

He has deteriorated in the last XX hours and his observations are:

- Breathing 24
- Oxygen saturations 96%
- Air/Oxygen Air
- Systolic Blood Pressure 181
- Heart rate 89
- Level of alertness Confused
- Temperature 37.8°C

Assessment

I think he has a chest infection. I have sat him up.

Recommendation

Please could you come and see him in the next hour. I will repeat his observations in 15 minutes. Would you like me to start his antibiotics?

S	**Situation** **(briefly describe the current situation and give a clear, concise overview of relevant issues)** (Provide address, direct line contact number) I am… from… (say if you are a registered professional) I am calling about resident… (Name, DOB) **The residents TOTAL NEWS SCORE is…** **Their normal NEWS/condition is…** I am calling because I am concerned that… (e.g. BP is low, pulse is XX, temp is XX, patient is more confused or drowsy)
B	**Background** **(briefly state the relevant history and what got you to this point)** Resident XX has the following medical conditions… The resident does/does not have a care plan or DNACPR form / agreed care plan with a limit on treatment/hospital admission They have had… (GP review/investigation/medication e.g. antibiotics recently) Resident XX's condition has changed in the last XX hours The last set of observations was… Their normal condition is… The resident is on the following medications…
A	**Assessment** **(summarise the facts and give your best assessment on what is happening)** I think the problem is XX And I have… (e.g. given pain relief, medication, sat the patient up etc.) **OR** I am not sure what the problem is but the resident is deteriorating **OR** I don't know what's wrong but I am really worried
R -- D	**Recommendation** **(what actions are you asking for? What do you want to happen next?)** I need you to… Come and see the resident in the next XX hours **AND** Is there anything I need to do in the meantime? (e.g. repeat observations, give analgesia, escalate to emergency services) **Decision** **(what have you agreed)** We have agreed you will visit/call in the next XX hours, and in the meantime I will do XX If there is no improvement within XX, I will take XX action.

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SBAR Game

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Sepsis Quiz

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Sepsis Evaluation Form

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