Predlog točkovnika za prepoznavo kritično bolega

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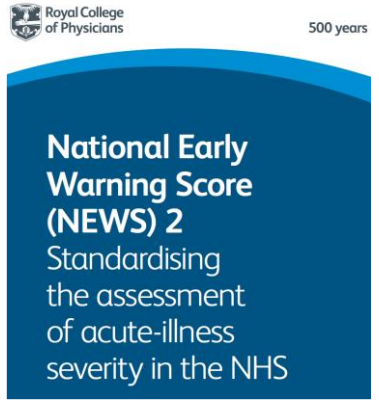
Namen

- uporabljati „skupni jezik“

Kje je problem?

- januar 2019 – 4 bolniki sprejeti v RC, reanimacija na oddelku, nenadno poslabšanje
- 74 let, AH, neopredeljena pljučna bolezen, pnevmokokna bakteriemična pljučnica
- 61 let, AH, revmatična polimialgija, gripa
- 57 let, Ca levega zgornjega pljučnega režnja, pljučnica
- 77 let, revmatoidni artritis, AH, S.aureus sepsa
- vzrok smrti: ishemična okvara možganov po reanimaciji pri 3 bolnikih, septični šok
- ali bi lahko prej prepoznali potencialno ogroženost?
- točkovnik?
  - boljše prepoznavanje „kritičnih“ bolnikov na oddelkih in v SA
  - hitrejši ukrepi
  - izboljšano beleženje vitalnih funkcij
  - ustrezna ocena ogroženosti in posledični ukrepi
  - beleženje ogroženosti – oddelčna izkaznica, vpliv na kadrovsko zasedbo? opremo? drugo?

Early warning score



- točkovnik, ki je namenjen zgodnjemu prepoznavanju življenjsko ogroženih bolnikov (tudi septičnih)
- NEWS - National Early Warning Score
  - frekvenca dihanja
  - saturacija s kisikom
  - sistolni krvni tlak
  - pulz
  - stanje zavesti/novonastala motnja zavesti
  - temperatura

Kdo?

- bolniki na oddelkih, SA, hodnik - stopnja ukrepov 1 (intenzivno zdravljenje)
- oprema: papirno/elektronsko beleženje vitalnih funkcij, oprema za merjenje vitalnih funkcij
- osebje: beleženje in izračun - medicinske sestre

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	

Chart 2: NEWS thresholds and triggers

NEW score	Clinical risk	Response
Aggregate score 0–4	Low	Ward-based response
Red score Score of 3 in any individual parameter	Low–medium	Urgent ward-based response*
Aggregate score 5–6	Medium	Key threshold for urgent response*
Aggregate score 7 or more	High	Urgent or emergency response**

* Response by a clinician or team with competence in the assessment and treatment of acutely ill patients and in recognising when the escalation of care to a critical care team is appropriate.

**The response team must also include staff with critical care skills, including airway management.

NEWS key	FULL NAME	
0 1 2 3	DATE OF BIRTH	DATE OF ADMISSION

Parameter	Range	Score	Range
	DATE TIME		DATE TIME
A+B Respirations Breaths/min	≥25	3	≥25
	21–24	2	21–24
	18–20		18–20
	15–17		15–17
	12–14		12–14
	9–11	1	9–11
	≤8	3	≤8
A+B SpO_2 Scale 1 Oxygen saturation (%)	≥96		≥96
	94–95	1	94–95
	92–93	2	92–93
	≤91	3	≤91
SpO_2 Scale 2† Oxygen saturation (%) Use Scale 2 if target range is 88–92%, eg in hypercapnic respiratory failure	≥97 on O_2	3	≥97 on O_2
	95–96 on O_2	2	95–96 on O_2
	93–94 on O_2	1	93–94 on O_2
	≥93 on air		≥93 on air
	88–92		88–92
	86–87	1	86–87
†ONLY use Scale 2 under the direction of a qualified clinician	84–85	2	84–85
	≤83%	3	≤83%
Air or oxygen?	A=Air		A=Air
	O_2 L/min	2	O_2 L/min
	Device		Device
C Blood pressure mmHg Score uses systolic BP only	≥220	3	≥220
	201–219		201–219
	181–200		181–200
	161–180		161–180
	141–160		141–160
	121–140		121–140
	111–120		111–120
	101–110	1	101–110
	91–100	2	91–100
	81–90	3	81–90
	71–80		71–80
	61–70		61–70
	51–60		51–60
	≤50		≤50
C Pulse Beats/min	≥131	3	≥131
	121–130	2	121–130
	111–120		111–120
	101–110	1	101–110
	91–100		91–100
	81–90		81–90
	71–80		71–80
	61–70		61–70
	51–60		51–60
	41–50	1	41–50
	31–40	3	31–40
	≤30		≤30
D Consciousness Score for NEW onset of confusion (no score if chronic)	Alert		Alert
	Confusion	3	Confusion
	V		V
	P		P
	U		U
E Temperature °C	≥39.1°	2	≥39.1°
	38.1–39.0°	1	38.1–39.0°
	37.1–38.0°		37.1–38.0°
	36.1–37.0°		36.1–37.0°
	35.1–36.0°	1	35.1–36.0°
	≤35.0°	3	≤35.0°
NEWS TOTAL			TOTAL
	Monitoring frequency		Monitoring
	Escalation of care Y/N		Escalation
	Initials		Initials

NEWS key	FULL NAME	
0 1 2 3	DATE OF BIRTH	DATE OF ADMISSION

	DATE		DATE
	TIME		TIME

A+B
Respirations
Breaths/min

	Score	
≥25	3	≥25
21–24	2	21–24
18–20		18–20
15–17		15–17
12–14		12–14
9–11	1	9–11
≤8	3	≤8

A+B
SpO_2 Scale 1
Oxygen saturation (%)

	Score	
≥96		≥96
94–95	1	94–95
92–93	2	92–93
≤91	3	≤91

SpO_2 Scale 2†
Oxygen saturation (%)
Use Scale 2 if target range is 88–92%, eg in hypercapnic respiratory failure

†ONLY use Scale 2 under the direction of a qualified clinician

	Score	
≥97 on O_2	3	≥97 on O_2
95–96 on O_2	2	95–96 on O_2
93–94 on O_2	1	93–94 on O_2
≥93 on air		≥93 on air
88–92		88–92
86–87	1	86–87
84–85	2	84–85
≤83%	3	≤83%

Royal College of Physicians

500 years

National Early Warning Score (NEWS) 2

Standardising the assessment of acute-illness severity in the NHS

1 We recommend that the routine clinical assessment of all adult patients (aged 16 years or more) should be standardised across the NHS, with the routine recording of a minimum clinical dataset of physiological parameters resulting in the National Early Warning Score (NEWS).

NE: za otroke < 16 let, nosečnice, bolnike po poškodbi hrbtenjače

We recommend that these triggers should determine the urgency of the clinical response and the clinical competency of the responder(s).

- **A low NEW score** (1–4) should prompt assessment by a competent registered nurse or equivalent, who should decide whether a change to frequency of clinical monitoring or an escalation of clinical care is required.
- **A single** red score (3 in a single parameter) is unusual, but should prompt an urgent review by a clinician with competencies in the assessment of acute illness (usually a ward-based doctor) to determine the cause, and decide on the frequency of subsequent monitoring and whether an escalation of care is required.
- **A medium NEW score** (5–6) **is a key trigger threshold** and should prompt an urgent review by a clinician with competencies in the assessment of acute illness – usually a ward-based doctor or acute team nurse, who should urgently decide whether escalation of care to a team with critical care skills is required (ie critical care outreach team).
- **A high NEW score** (7 or more) **is a key trigger threshold** and should prompt emergency assessment by a clinical team / critical care outreach team with critical care competencies and usually transfer of the patient to a higher-dependency care area.

22 We recommend that **sepsis** should be considered in any patient with a known infection, signs or symptoms of infection, or in patients at high risk of infection, and a **NEW score of 5 or more** – **'think sepsis'.**

NEW score of 5 or more? Think sepsis!

In a patient with a **NEW score** of **5 or more** and a known infection, signs and symptoms of infection, or at risk of infection, think **'Could this be sepsis?'** and **escalate care immediately.**

Odziv na oceno NEWS

33 We recommend that, in acute hospitals, local arrangements should ensure an appropriate response to each NEWS trigger level and should define:

- the speed/urgency of response to acute illness, including a clear escalation policy to ensure that an appropriate response always occurs and is guaranteed 24/7
- who responds, ie the seniority and clinical competencies of the responder(s)
- the frequency of subsequent clinical monitoring
- the appropriate settings for ongoing acute care, including availability of facilities, trained staff and timely access to higher-dependency care, if required.

The NEWS and frequency of clinical monitoring

37 The NEWS should be used to inform the frequency of clinical monitoring, which should be recorded on the NEWS chart.

38 We recommend that for patients scoring 0, the minimum frequency of monitoring should be 12 hourly, increasing to 4–6 hourly for scores of 1–4, unless more or less frequent monitoring is considered appropriate by a competent clinical decision maker.

39 We recommend that the frequency of monitoring should be increased to a minimum of hourly for those patients with a NEW score of 5–6, or a red score (ie a score of 3 in any single parameter) until the patient is reviewed and a plan of care documented.

40 We recommend continuous monitoring and recording of vital signs for those with an aggregate NEW score of 7 or more.

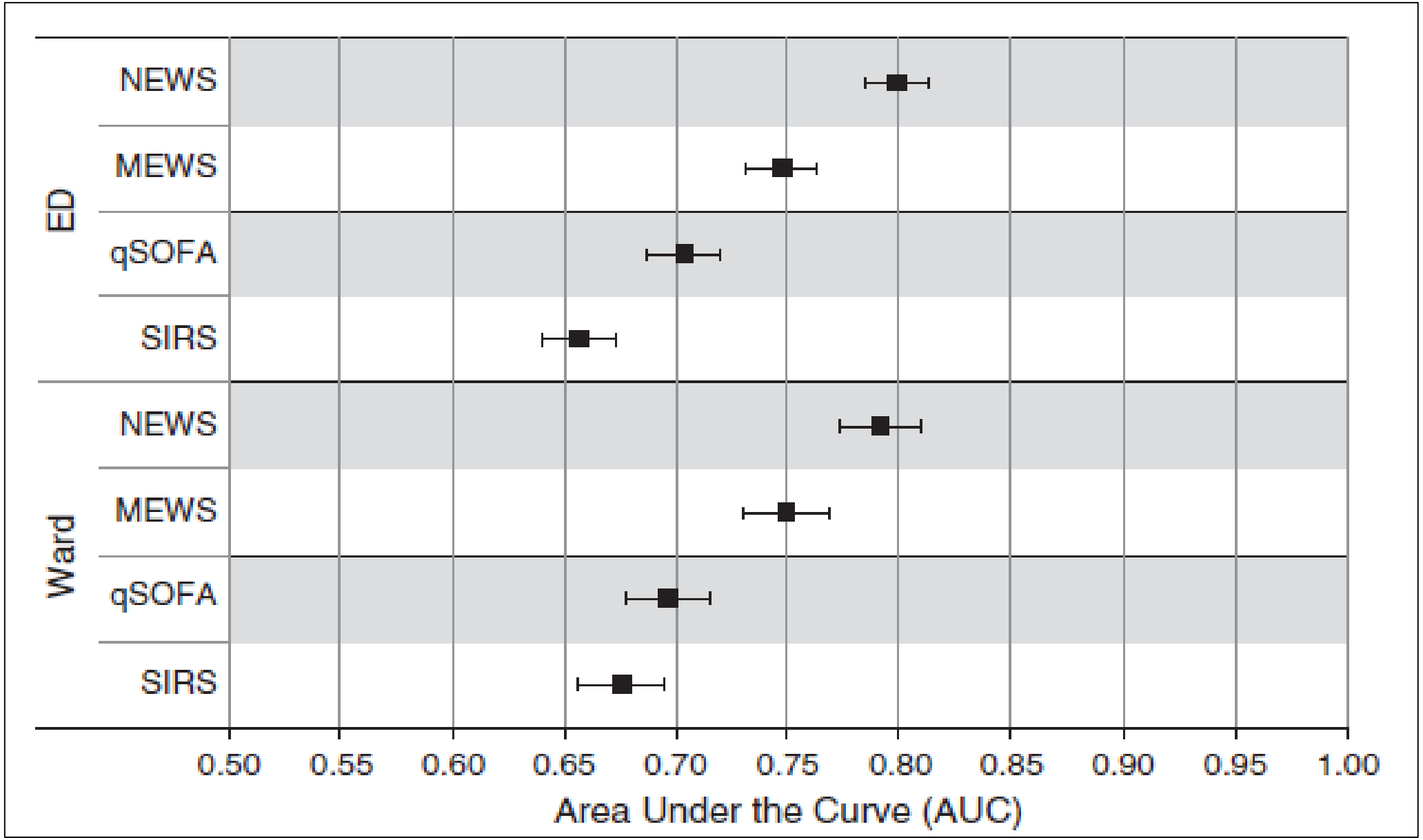
Clinical concern about a patient's condition should always override the NEWS if the attending healthcare professional considers it necessary to escalate care.

Chart 4: Clinical response to the NEWS trigger thresholds

NEW score	Frequency of monitoring	Clinical response
0	Minimum 12 hourly	• Continue routine NEWS monitoring
Total 1–4	Minimum 4–6 hourly	• Inform registered nurse, who must assess the patient • Registered nurse decides whether increased frequency of monitoring and/or escalation of care is required
3 in single parameter	Minimum 1 hourly	• Registered nurse to inform medical team caring for the patient, who will review and decide whether escalation of care is necessary
Total 5 or more Urgent response threshold	Minimum 1 hourly	• Registered nurse to immediately inform the medical team caring for the patient • Registered nurse to request urgent assessment by a clinician or team with core competencies in the care of acutely ill patients • Provide clinical care in an environment with monitoring facilities
Total 7 or more Emergency response threshold	Continuous monitoring of vital signs	• Registered nurse to immediately inform the medical team caring for the patient – this should be at least at specialist registrar level • Emergency assessment by a team with critical care competencies, including practitioner(s) with advanced airway management skills • Consider transfer of care to a level 2 or 3 clinical care facility, ie higher-dependency unit or ICU • Clinical care in an environment with monitoring facilities

NEWS

- na voljo brezplačno
- priporočajo obrazce velikosti A3
- na voljo moduli za izobraževanje
- raziskovalne možnosti



Churpek et al. AJRCCM 2017; 195:7: 906-911

Figure 3: Downloads of the NEWS document from the RCP website since the launch of the NEWS (July 2012 – June 2017), stratified by country (excluding the UK). RoW = rest of the world; UAE = United Arab Emirates