HELSE VEST

SATS-N 4.0

Standardised emergency medicine assessment and prioritisation (triage) tool.

Version 4.0 – December 2019

1. **Discriminator list, adults and children from the age of 15 years**
2. **Footnotes, adults and children from the age of 15 years**
3. **Discriminator list, children under 15 years of age**
4. **Footnotes, children under 15 years of age**

This contains also the following Triage Early Warning Score (TEWS)

5. **TEWS, adults and children ≥ 15 years**
6. **TEWS – from newborn to 14 years of age, SATS-N**
   - TEWS, newborn < 1 month
   - TEWS, baby 1–12 months
   - TEWS, children 1–3 years
   - TEWS, children 4–6 years
   - TEWS, children 7–12 years
   - TEWS, adolescent 13–14 years

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1. Discriminator list, adults and children from the age of 15 years, version 4.0

Issue	RED	ORANGE	YELLOW
A Airways **B** Breathing	**Allergic reaction**; acute, **AND** stridor / dyspnoea or hypotensive / tachykard **Airway at risk** (ex. blockage, swelling, bleeding, injury) or **intubated / assisted ventilaton** ①	**Allergic reaction**; acute < 24 hours **Dyspnea;** acute ①	**Dyspnea;** moderate ①
C Circulation	**Hemorrhage:** Heavy and uncontrolled *or* heavy, vaginal in pregnant > 12 weeks ② **Cardiac arrest;** current or resuscitated	**Hemorrhage:** Heavy, but controlled *or* moderate, vaginal in pregnant ≥ 23 weeks ② Known **adrenal failure** and **TEWS ≥ 3** ⑨	**Hemorrhage:** Moderate vaginal, in pregnant < week 23 Known **adrenal failure** and **abdominal pain/nausea/vomiting** ⑨
D Consciousness Neurology	**Unconscious** ③ **Stroke / TIA;** symptoms < 6 hours *or* severe symptoms / neurological imparimentl < 24 hours④ **Convulsions:** current, *or* in pregnant, in labour or within two weeks after labour **Suspected gas poisoning** AND **acute symptoms** OR **TEWS > 2** ⑤	**Level of consciousness,** reduced and **TEWS ≥ 2** ⑩ **Stroke/ TIA;** symptoms 6 – 8 hours ④ **Intoxication** *or* **poisoning** ⑪ **Neurological deficit**; acute ⑫	**Level of consciousness,** reduced and **TEWS < 2** ⑩ **Stroke/ TIA;** symptoms 8 - 24 hours ④ **Intoxication** *or* **poisoning >** 6 hours since intake and TEWS < 2
E Injury	**INJURY:** **Burn** > 15 % or face/throat or inhalation, high voltage or circular injuries- **see criteria of trauma footnote 7** **Fracture** with suspected vascular injury ⑥ **Head trauma;** with reduced GCS of 2 or more or abnormal pupils - **see criteria of trauma footnote 7** **Trauma**, seriously injured patientt⑦	**INJURY:** **Fracture;** compound or displaced. **Luxated** joint ⑬ **Head trauma;** see footnote ⑭ for classification of head trauma **Abdominal trauma** or **abdominal pain in pregnant** ≥ 23 weeks **Eye injury, penetrating or caustic**	**INJURY:** **Fracture;** *diagnosed/suspected* in **ankle < 8 hours** *or* **femoral fracture close to the hip** ⑬ **Head trauma;** see footnote ⑭ for classification of head trauma **Abdominal trauma** in pregnant, no pain
Pain	**PAIN:** **Chest pain** with **ST-elevation** on EKG **Abdominal pain**; **acute, strong and constant** *and/ or* • systolic BP < 90 and/or heart rate > 110 *or* • pregnant – pain between contractions **Abdominal pain,** heavy, in **woman** that is/might be **pregnant** and shows **sign of circulatory failure** **Pain,** acute, heavy, **in scrotum** < 10 hours	**PAIN:** **Chest pain; current** or **changes in ECG** or **Suspicion of acute coronary syndrome** ⑮ **Headache:** Hyper acute and intense ⑯ *or* headache and visual impairment, epigastric discomfort and increased BP in pregnant ≥ 20 weeks **Pain,** acute, heavy ⑰	**PAIN:** **Chest pain last 24 hours**, currently pain free *or* **respiratory** chest pain ⑮ **Pain;** moderate ⑰
Infection	**INFECTION, suspected serious** ⑧**and either:** - at least two of: syst. BP ≤ 100, RR ≥ 22, change of mental status *or* - Patient with immune deficiency/chemotherapy and deviation in vital parameters *or* - Fever, headace, change in mental status, neck stiffness	**INFECTION, suspected serious** ⑧**and either:** • TEWS ≥ 3 *or* • Puerperal fever *(tp > 38 °C for at least 2 of the first 14 days post-partum)*	**INFECTION:** Infection; suspected serious ⑧
Other	**OTHER:** **Hypoglycemia**; blood-glucose < 3 S-potassium > 6,5 and ECG changes	**OTHER:** **Hyperglycemia;** blood-glucose > 11 and RR ≥ 22 ⑱ S-potassium > 6,5 and normal ECG	**OTHER:** Hb < 7

2. Footnotes, adults and children from the age of 15 years, SATS-N version 4.

①

AIRWAY AT RISK / ASS. VENTILATION / INTUBATED and/or **DYSPNOEA** with one or more of the following:	**SHORTNESS OF BREATH**	**MODERAT SHORTNESS OF BREATH**
• Pronounced dyspnea at rest/during speech, unable to speak • Cyanosis • Reduced level of consciousness • Gurgling respiration and, if relevant, frothy sputum • Very tired/exhausted patient • Little or no effect of treatment	Acute change (minutes/hours) from normal chronic condition. • Dyspnea during speech • Wheezing • Use of accessory respiratory muscles	• Dyspnea on exertion • Is capable of speaking in complete sentences, no use of accessory respiratory muscles • Subjective feeling of shortness of breath

② **Hemorrhage** can be caused by INJURY or DISEASE (such as esophageal varices, hematemesis/vomiting fresh blood, rectal hemorrhage, tonsillar hemorrhage). Patient with hemorrhage and sign of circulatory failure (elevated RR, tachycardia, hypotensive, affected level of consciousness) shall always have red priority level.

③ **Unconscious:** patient who is **unresponsive (U)**, or who only responds to pain (**P**), unable to perform motor actions on command. This applies regardless the cause of unconsciousness.

④ **Stroke/TIA**; one or more of the following symptoms (B-FAST):

B - EYES – EYE DEVIATION TOWARDS ONE SIDE
F – FACE – FACIAL PARESIS
A –ARM – ARM AND/OR LEG PARALYSIS
S – SYN – LOSS OF VISION IN ONE EYE/VISUAL FIELD LOSS
T –TALE – APHASIA OR SLURRED SPEECH

Symptoms can be either persistent or transient – the patient can be asymptomatic at examination. The priority level is assessed from the severity of the symptoms the patient had when medical emergency alarm.

Red priority if:	**Orange priority if:**	**Yellow priority if:**
• Symptoms < 6 hours • Pronounced symptoms/deficit such as eye deviation (B), paralysis in arm or/and leg (A) *or* aphasia/slurred speech/difficulty of speech (T) < 24 hours	• Moderate symptoms/deviations with a duration of 6 – 8 hours	• Easy symptoms/deviations with a duration 8 – 24 hours

For patients with pronounced/serious symptoms the window for treatment can be up to 24 hours (thrombolysis < 4,5 timer, thrombectomy < 24 hours), while it for patients with easier symptoms is shorter (thrombolysis < 4,5 timer). This severity of the symptoms will because of this affect the priority level, but within 6 hours, the priority level shall always be red. The transition towards an orange or yellow priority level is fluent.

For patients who woke up with stroke symptoms/TIA (wake-up stroke), the limits are the same (from the time of wake-up). **If in doubt of the priority level, always consult a neurologist.**

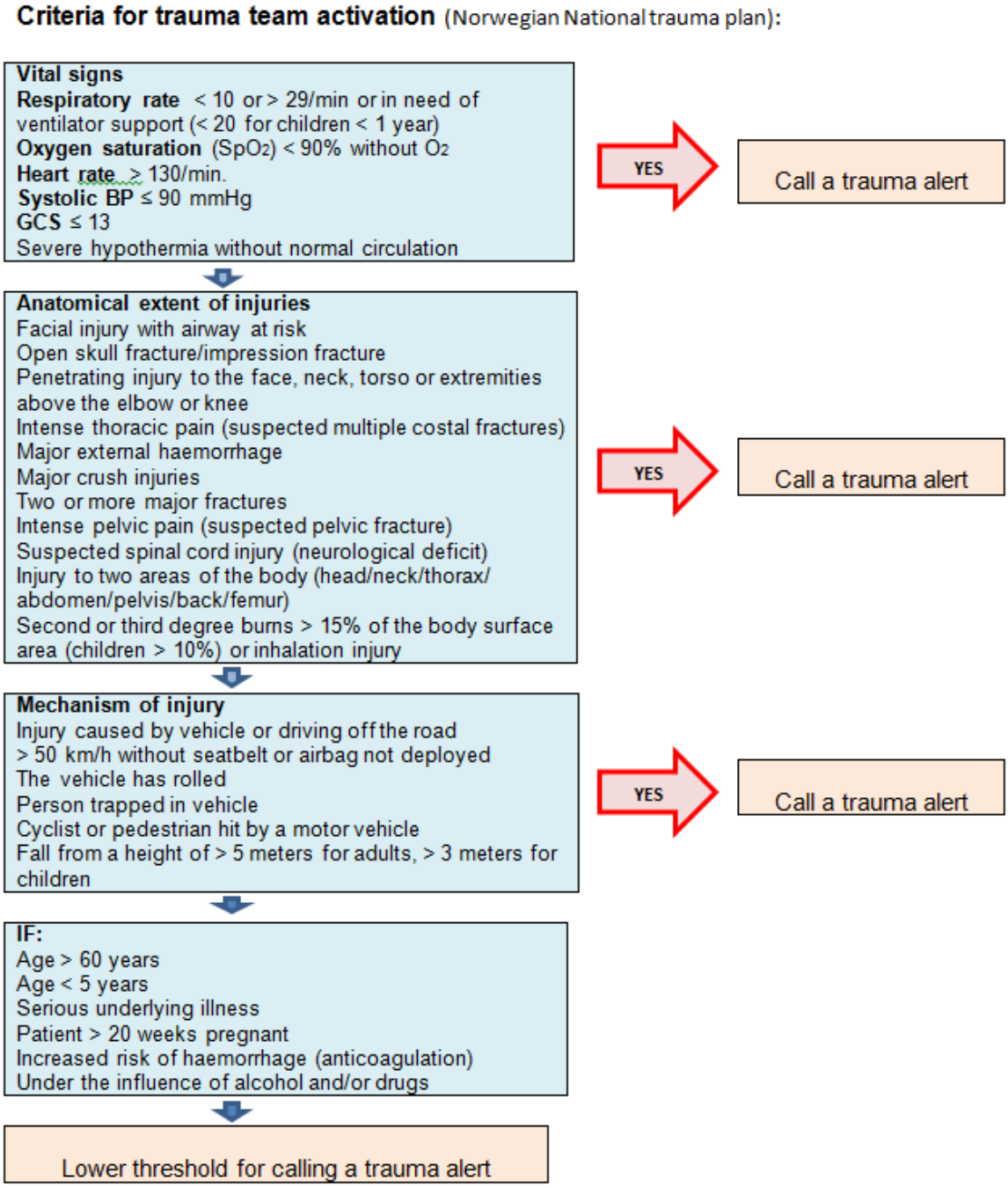
Patients with symptoms of stroke/TIA shall have a direct transport to hospital.
If the patient has:
- Eye deviation and at least one FAST symptom
  or
- Pronounced symptoms/deficit (high priority level) and more than 4,5 hours since symptom debut.

The patient shall have a transport to a centre that performs thrombectomy.

⑤ **Gas poisoning:** most people will have symptoms immediately/short time after exposure, but there are exceptions, where symptoms occur after several hours. The symptoms can vary and come from different organs (eyes, upper respiratory tract, lungs, heart, skin, CNS, abdomen/intestines).Check the Norwegian national guidelines for treatment of CBRNE – incidents with personal injury, chapter 3: https://helsedirektoratet.no/Lists/Publikasjoner/Attachments/1346/IS-2593%20Nasjonal%20faglig%20retningslinje%20for%20håndtering%20av%20CBRNE-hendelser%20med%20personskade.pdf

⑥ **Fracture** with **suspected vascular injury** – signs of distal ischemia distal to the site of injury: **PAIN** – **PALE/POORLY PERFUSED SKIN** – **REDUSED** or **ABSENT SENSATION** – **NO PULSE.** An unstable pelvic fracture is by definition a suspected vascular injury.

⑦**Trauma** – criteria for trauma team activation (Norwegian National trauma plan 2016, https://traumeplan.no/index.php?action=showtopic&topic=mxkjMqkD)



⑧ **Infection**, suspected serious, include infection, includes infection of the airways, abdomen, urogenital system, soft tissue, CNS and infection with unknown focus.

⑨ **Adrenal failure –** in patients with a known adrenal insufficiency, an acute illness or stress can experience acute adrenal failure – Addison's crisis. Symptoms might be dehydration, nausea, vomiting, abdominal pain, hypotension, fever

⑩ **Reduced level of consciousness** is a patient who is somnolent/confuse, but who responds to vocal stimuli: (**V**)

⑪ **Intoxication**: tablet intoxication the last six hours (with or without symptoms), contact medical attention or call the Norwegian poison information Centre (Giftinformasjonssentralen) (tlf. 22 59 13 00) for advice about upgrading to RED priority level.

⑫ **Neurological deficits:**

- Loss of sensation or movement following trauma, see trauma criteria in footnote 7.
- Loss of sensation or movement in cancer patient/suspected spinal cord lesion
- Back pain with paralysis and distal loss of sensation in the legs, urinary retention and/or fecal incontinence, loss of sensation in and around the genitalia, anus and the buttocks and inner thighs (saddle block anesthesia)

⑬ **Fractures and luxations:** major displacements, luxated joints and compound fractures gives an orange priority level

- Suspected **femoral fracture** – symptoms: ROTATIONAL DISPLACEMENT, ANGULATION, SHORTENING, or PATHOLOGICAL MOVEMENT. PAIN OVER THE FRACTURE, i.e. no pain in the groin areas as with hip fractures. Such fractures can cause significant hemorrhage (1-2 liters), and result in swelling of the soft tissues.
- **Hip fracture:** If a patient has and **fallen,** has **groin pain** and an **externally rotated and shortened leg**, there is reason to suspect a hip fracture (**not** to be assigned to orange priority despite displacement).

⑭ **Head trauma** AND:

GCS ≤ 13 – see criteria for trauma team activation, footnote 7 *or* pupillary abnormalities	**GCS 14 – 15** and 1 of following: • Posttraumatic epileptic seizure • Focal neurological deficit • Clinical sign of skull fracture • Shunt treatment for hydrocephalus • Anticoagulation therapy[1] • Coagulation disorder	**GCS 14 – 15** • Patient > 65 years on anticoagulation therapy[2] **GCS 14** and no risk factors **GCS 15** and 1 of the following: • suspected/confirmed loss of consciousness • repeated vomiting	**GCS 15** and no risk factors

Note! Head injury in children under 18 years shall be assessed using SATS Norge version 4.0 CHILDREN, footnote 15

⑮ **Chest pain:**

If chest pain and one or more of: **radiating / shortness of breath / cold sweat / clammy / pale / vomiting, upgrade priority level** to **RED**.

If chest pain and **syncope / paralysis / ischemia of the extremities** (NB! dissecting aortic aneurysm), **upgrade priority level** to **RED.**

⑯**Headache** – hyper acute and intense – out of the blue – reason to suspect **subarachnoid hemorrhage.**

⑰ **Pain:**

Acute and heavy pain: the worst pain the patient has ever experienced (almost unbearable). Often accompanied by symptoms such as paleness, sweaty skin, distressed patient and altered level of consciousness (Patient assessment: NRS 8 – 10)	**Moderate pain:** Intense pain, but bearable. The pain affects normal activities. No need for acute pain relief. (Patient assessment: NRS 4 – 7)	**Mild pain:** Pain, but these do not affect normal activities. (Patient assessment: NRS 1 - 3)

⑱ **Hyperglycemia**: Blood glucose level > 11 and elevated RR ≥ 22 are reasons to suspect ketoacidosis (particularly in diabetes type 1 patient).

[1] For example: warfarin, NOAKs (dabigatran, rivaroksaban, apiksiban)

[2] For example acetylsalisylic acid, dipyridamol, clopidogrel

3. Discriminator list, children under 15 years of age, SATS-N version 4.0

Issue	RED	ORANGE	YELLOW
A Airways **B** Breathing	**Allergic reaction**; acute, **AND** stridor / dyspnea or hypotensive / tachycardia **Airway at risk** (ex. blockage, swelling, bleeding, injury) or **intubated / assisted ventilation** ① **Dyspnea**, very **labored/obstructed** or **apnoea** ①	**Allergic reaction**; acute < 24 hours	**Dyspnea;** moderate ①
C **Circulation**	**Hemorrhage:** Heavy and uncontrolled ② **Cyanosis,** central (SpO2< 90%) **Cardiac arrest;** current or resuscitated	**Hemorrhage:** Heavy, but controlled ② **Dehydration**; No urine last 12 hours ⑪	**Dehydration;** small urine output last 24 hours ⑪ **Vomiting** or **diarrhea**, persistent ⑪
D **Consciousness** **Neurology**	**Unconscious** ④ **Stroke / TIA;** symptoms < 6 hours *or* severe symptoms / neurological impairment < 24 hours ⑤ **Convulsions:** current **Suspected gas poisoning** AND **acute symptoms** OR **TEWS > 2** ⑥	**Level of consciousness,** reduced ④ **Stroke/ TIA;** symptoms 6 – 8 hours ⑤ **Intoxication** *or* **poisoning** ⑫ **Neurological deficit**; acute ⑬	**Stroke/ TIA;** symptoms 8 - 24 hours ⑤ **Convulsions:** currently alert
E **Injury** **Pain** **Infection** **Other**	**INJURY:** **Burn** > 10 % or face/throat or inhalation, high voltage or circular injuries- **see criteria of trauma footnote** ⑧ **Fracture** with suspected vascular injury ⑦ **Head trauma;** with reduced GCS of 2 or more or abnormal pupils - **see criteria of trauma footnote** ⑦ **Trauma**, seriously injured patient ⑧ **PAIN:** **Pain,** acute, heavy, **in scrotum** < 10 hours **INFECTION, suspected serious** ⑨ **and either:** • TEWS ≥ 3 *or* • Limp or irritable, reduced level of consciousness, neck stiffness **Fever** ≥ 38,1 °C in neutropenic, immune deficient, or baby < 3 months ⑩ **OTHER:** **Hypoglycemia**; blood-glucose < 3	**INJURY:** **Battery**; swallowed **Fracture;** compound or displaced. **Luxated** joint ⑭ **Head trauma;** see footnote ⑮ for classification of head trauma **Eye injury, penetrating or caustic** **PAIN:** **Chest pain;** current **Headache:** Hyper acute and intense ⑰ **Pain;** acute, heavy, or inconsolable crying ⑱ **OTHER:** **Hyperglycemia;** blood-glucose > 11 and deep and rapid RR ⑲	**INJURY:** **Fracture;** compound **Head trauma;** see footnote ⑮ for classification of head trauma **PAIN:** **Pain;** moderate ⑱ **OTHER:** Baby < 2 months

4. Footnotes, children under 15 years of age, SATS-N version 4.0

① **Airway at risk/ assisted ventilation / intubated/labored respiration**

AIRWAY AT RISK / ASSISTED VENTILATION / INTUBATED and/or **LABOURED RESPIRATION**; severe labor/obstructive and one or more of following: • Apnea (episodes of cessation of breathing) • Severe inspiratory and/or expiratory stridor • Obstructive with significantly forced exhalations (wheezing, drawn-out expiration) • Severe retractions or significant use of accessory respiratory muscles • Tired and exhausted, too tired to speak, cry or resist • Dyspnoea during speech	**SHORTNESS OF BREATH; SOMEWHAT LABOURED/OBSTRUCTIVE** • Slight inspiratory stridor • Panting or obstructive with somewhat forced exhalation (wheezing, drawn-out expiration) • Slight retractions • Good general state of health, resists

② **Hemorrhage** can be caused by INJURY or DISEASE (such as esophageal varices, hematemesis/vomiting fresh blood, rectal hemorrhage, tonsillar hemorrhage). Patient with hemorrhage and sign of circulatory failure (elevated RR, tachycardia, hypotensive, affected level of consciousness) shall always have red priority level.

③ **Cyanosis,** central – in case of a blue/cyanotic child, suspect congenital heart defect or severe circulatory failure/oxygenation failure

④ **Unconscious;** patient who is unresponsive to vocal or pain stimuli (**U**), and is unable to perform motor actions on command. This applies regardless the cause of unconsciousness.
Reduced level of consciousness/limp: Patient who is drowsy, limp or irritable, but who responds to touch/vocal stimuli.

⑤ **Stroke/TIA**; one or more of the following symptoms (B-FAST):

B - EYES – EYE DEVIATION TOWARDS ONE SIDE
F – FACE –FACIAL PARESIS
A –ARM – ARM AND/OR LEG PARALYSIS
S – SYN – LOSS OF VISION IN ONE EYE/VISUAL FIELD LOSS
T –TALE – APHASIA OR SLURRED SPEECH

Symptoms can be either persistent or transient – the patient can be asymptomatic at examination. The priority level is assessed from the severity of the symptoms the patient had when medical emergency alarm.

Red priority if:	**Orange priority if:**	**Yellow priority if:**
• Symptoms < 6 hours • Pronounced symptoms/deficit such as eye deviation (B), paralysis in arm or/and leg (A) *or* aphasia/slurred speech/difficulty of speech (T) < 24 hours	• Moderate symptoms/deviations with a duration of 6 – 8 hours	• Easy symptoms/deviations with a duration 8 – 24 hours

For patients with pronounced/serious symptoms the window for treatment can be up to 24 hours (thrombolysis < 4,5 timer, thrombectomy < 24 hours), while it for patients with easier symptoms is shorter (thrombolysis < 4,5 timer). This severity of the symptoms will because of this affect the priority level, but within 6 hours, the priority level shall always be red. The transition towards an orange or yellow priority level is fluent.

For patients who woke up with stroke symptoms/TIA (wake-up stroke), the limits are the same (from the time of wake-up). **If in doubt of the priority level, always consult a neurologist.**

Patients with symptoms of stroke/TIA shall have a direct transport to hospital.
If the patient has:
- Eye deviation and at least one FAST symptom
  or
- Pronounced symptoms/deficit (high priority level) and more than 4,5 hours since symptom debut.

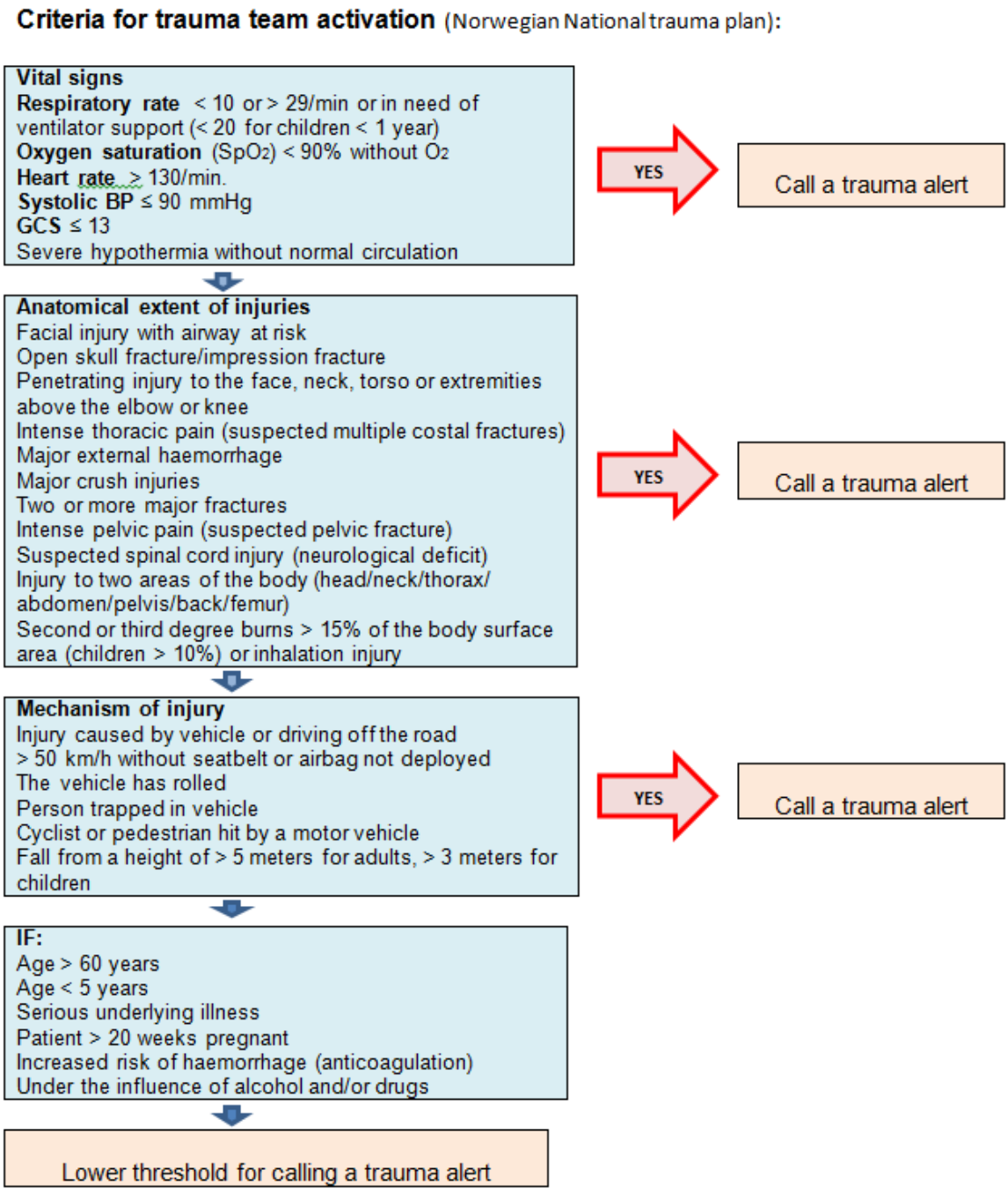
The patient shall have a transport to a centre that performs thrombectomies.

⑥ **Gas poisoning:** most people will have symptoms immediately/short time after exposure, but there are exceptions, where symptoms occur after several hours. The symptoms can vary and come from different organs (eyes, upper respiratory thract, lungs, heart, skin, CNS, abdomen/intestines).

Check the Norwegian national guidelines for treatment of CBRNE – incidents with personal injury, chapter 3:
https://helsedirektoratet.no/Lists/Publikasjoner/Attachments/1346/IS-2593%20Nasjonal%20faglig%20retningslinje%20for%20håndtering%20av%20CBRNE-hendelser%20med%20personskade.pdf

⑦**Fracture** with **suspected vascular injury** – signs of distal ischemia distal to the site of injury: **PAIN** – **PALE/POORLY PERFUSED SKIN** – **REDUSED** or **ABSENT SENSATION** – **NO PULSE.** An unstable pelvic fracture is by definition a suspected vascular injury.

⑧**Trauma** – criteria for trauma team activation (Norwegian National trauma plan 2016, https://traumeplan.no/index.php?action=showtopic&topic=mxkjMqkD)



⑨**Infection**, suspected serious, include infection, includes infection of the airways, abdomen, urogenital system, soft tissue, CNS and infection with unknown focus.

⑩ **Fever** in **neutropenia** or **immunocompromised** or **baby < 3 months**

- Baby under 3 months may have septicemia. **NB!** If the baby is older than 4 weeks from estimated term date and have a significant upper air ways infection or bronchiolitis, it shall not be prioritized from this symptom in the discriminators list.
- Fever in neutropenia (neutrophile granulocytes < 0,5), or immunocompromised – often in a cancer patient or patient undergoing immunocomprised treatment – these patients have an increased risk of rapidly developing septicemia.

⑪ **Dehydration, vomiting or diarrhea:** persistent vomiting or diarrhea increases the risk of severe dehydration. Check the child's urinary output and assess the priority level due to *Dehydration: no urine last 12 hours* or *Dehydration: low urinary output last 24 hours* (less than to wet diapers or two times to the toilet to urinate for the last 24 hours).

⑫**Intoxication**: call the Norwegian poison information Centre (Giftinformasjonssentralen), telephone 22 59 13 00, for advice on priority level after intake of medicines, plants, chemicals or other potentially poisonous substance.

⑬**Neurological deficits:**

- Loss of sensation or movement following trauma, see trauma criteria in footnote 8.
- Loss of sensation or movement in cancer patient/suspected spinal cord lesion
- Back pain with paralysis and distal loss of sensation in the legs, urinary retention and/or fecal incontinence, loss of sensation in and around the genitalia, anus and the buttocks and inner thighs (saddle block anesthesia)

⑭**Fractures and luxations:** major displacements, luxated joints and compound fractures give an orange priority level

- Suspected **femoral fracture** – symptoms: ROTATIONAL DISPLACEMENT, ANGULATION, SHORTENING, or PATHOLOGICAL MOVEMENT. PAIN OVER THE FRACTURE, i.e. no pain in the groin areas as with hip fractures. Such fractures can cause significant hemorrhage (1-2 liters), and result in swelling of the soft tissues.

⑮**Head trauma** AND:

GCS ≤ 13 – see criteria for trauma team activation, footnote 7
 	
or
 	
pupillary abnormalities
	GCS 14 – 15 and at least 1 of following:
	
	• Posttraumatic seizures
	• Focal neurological deicitl
	• Clinical sign of skull fracture or depressed fracture
	• Loss of consciousness> 1 minute
	• Patient on anticoagulation therapy[3]
	• Coagulation disorder[4]
		GCS 14 *or*
		
		GCS 15 and at least 1 of following:
		
		• Suspected/confirmed loss of consciousness < 1 minute
		• Posttraumatic amnesia
		• Severe/increasing headache
		• Hydrocephalus with shunt treatment
		• Abnormal behavior (according to parents/family)
		• Ifs under 2 years:
		  ○ Large hemorrhage (hematoma) in temple or crown
		  ○ Irritability
			GCS 15 and no risk factors

NB! This footnote applies for children up to 17 years only.

⑯ **Chest pain**: If STEMI (ST-elevation infarction) or heart rate > 200 → RED priority level. See SATS Norge 4.0 for adults.

⑰**Headache** – hyper acute and intense – out of the blue – reason to suspect **subarachnoid haemorrhage**

⑱ **Pain:**

Acute and heavy pain: Includes acute pain of any reason, included severe abdominal pain/acute abdomen. The worst pain the patient has ever experienced (almost unbearable). Often accompanied by symptoms such **as paleness, sweaty skin, distressed patient** and **altered level of consciousness**. (Patient assessment: NRS 8 – 10)	**Moderate pain:** Intense pain, but bearable. The pain affects normal activities. No need for acute pain relief. (Patient assessment: NRS 4 – 7)	**Mild pain:** Pain, but these do not affect normal activities. (Patient assessment: NRS 1 - 3)

⑲ **Hyperglycaemia**: Blood glucose level > 11 and dep and/or elevated RR are reasons to suspect ketoacidosis (particularly in diabetes type 1 patient).

[3] For example: marevan, acetylsalicylic acid, NOAKs, heparin, different platelet inhibitors (plavix, persantin etc)
[4] Condition which leads to increased risk of haemorrhage

5. TEWS, Adults and children ≥ 15 years

TEWS Adults	3	2	1	0	1	2	3
Resp. rate		< 9	9–11	12–21		22–29	≥ 30
SpO_2	< 90% with O_2	≥ 90% with O_2	< 95 % without O_2	≥ 95% without O_2			
Heart rate		< 41	41–50	51–90	91–110	111–129	≥ 130
Syst. BP	< 71	71–80	81–100	101–199		Above 199	
AVPU		Confusion, new		A: Alert	V: Responds to voice	P: Responds to pain	U: Unresponsive
Temp.		Cold or < 36		36°–38°	38.1°–39°	≥ 39.1°	
Injury				No	Yes		
Mobility?*				Yes	No		

*is capable of walking unaided, walking with support or with crutches/walking frame

6. TEWS - newborn to 14 years of age, SATS-N

- TEWS, newborn < 1 month
- TEWS, baby 1–12 months
- TEWS, children 1–3 years
- TEWS, children 4–6 years
- TEWS, children 7–12 years
- TEWS, adolescent 13–14 years

TEWS, newborn < 1 month

TEWS < 1 mth	3	2	1	0	1	2	3
Resp. rate	< 25		25–39	40–55	56–64	65–79	≥ 80
SpO_2	< 90% with O_2	> 90% with O_2	< 95 % without O_2	≥ 95% without O_2			
Heart rate	< 85		85–99	100–160	161–169	170–189	≥ 190
Capillary refill time				1–2 sec.	3 sec.		≥ 4 sec.
AVPU				**A:** Alert, normal contact	**V:** Reacts to voice	**P:** Reacts to pain	**U:** Unresponsive
Temp.		Cold or < 36°		36°–38°		≥ 38.1°	
Mobility				Normal for age		Unable to move as normal	

TEWS, baby 1–12 months

TEWS 1–12 mths	3	2	1	0	1	2	3
Resp. rate	< 20		20–34	35–45	46–54	55–69	≥ 70
SpO_2	< 90% with O_2	> 90% with O_2	< 95 % without O_2	≥ 95% without O_2			
Heart rate	< 80		80–99	100–160	161–169	170–189	≥ 190
Capillary refill time				1–2 sec.	3 sec.		≥ 4 sec.
AVPU				**A:** Alert, normal contact	**V:** Reacts to voice	**P**: Reacts to pain	**U:** Unresponsive
Temp.		Cold or < 36°		36°–38°	38.1°–39°	≥ 39.1°	
Mobility				Normal for age		Unable to move as normal	

TEWS, children 1–3 years

TEWS 1–3 yrs	3	2	1	0	1	2	3
Resp. rate	< 20		20–24	25–35	36–44	45–59	≥ 60
SpO_2	< 90% with O_2	> 90% with O_2	< 95 % without O_2	≥ 95% without O_2			
Heart rate	< 70		70–89	90–130	131–139	140–159	≥ 160
Capillary refill time				1–2 sec.	3 sec.		≥ 4 sec.
AVPU		Acute confusion		A: Alert, normal contact	V: Reacts to voice	P: Reacts to pain	U: Unresponsive
Temp.		Cold or < 36°		36°–38°	38.1°–39°	≥ 39.1°	
Mobility				Normal for age		Unable to move as normal	

TEWS, children 4–6 years

TEWS 4–6 yrs	3	2	1	0	1	2	3
Resp. rate	< 15		15–19	20–24	25–29	30–44	≥ 45
SpO_2	< 90% with O_2	> 90% with O_2	< 95 % without O_2	≥ 95% without O_2			
Heart rate	< 60		60–69	70–120	121–129	130–149	≥ 150
Capillary refill time				1–2 sec.	3 sec.		≥ 4 sec.
AVPU		Acute confusion		**A:** Alert, normal contact	**V:** Reacts to voice	**P:** Reacts to pain	**U:** Unresponsive
Temp.		Cold or < 36°		36°–38°	38.1°–39°	≥ 39.1°	
Mobility				Normal for age		Unable to walk as normal	

TEWS, children 7–12 years

TEWS 7–12 yrs	3	2	1	0	1	2	3
Resp. rate	< 14		14–18	19–22	23–29	30–39	≥ 40
SpO_2	< 90% with O_2	> 90% with O_2	< 95 % without O_2	≥ 95% without O_2			
Heart rate	< 60		60–69	70–110	111–119	120–139	≥ 140
Capillary refill time				1–2 sec.	3 sec.		≥ 4 sec.
AVPU		Acute confusion		**A:** Alert, normal contact	**V:** Reacts to voice	**P:** Reacts to pain	**U:** Unresponsive
Temp.		Cold or < 36°		36°–38°	38.1°–39°	≥ 39.1°	
Mobility				Normal for age		Unable to walk as normal	

TEWS, adolescent 13–14 years

TEWS 13–14 yrs	3	2	1	0	1	2	3
Resp. rate	< 9		9–13	14–19		20–29	≥ 30
SpO_2	< 90% with O_2	> 90% with O_2	< 95 % without O_2	≥ 95% without O_2			
Heart rate	< 45		45–54	55–95	96–114	115–129	≥ 130
Syst. BP	≥ 70	71–80	81–100	101–179		≥ 180	
AVPU		Acute confusion		**A:** Alert, normal contact	**V:** Reacts to voice	**P:** Reacts to pain	**U:** Unresponsive
Temp.		Cold or < 36°		36°–38°	38.1°–39°	≥ 39.1°	
Mobility				Normal for age		Unable to walk as normal	