

AGE/FRAILTY ADJUSTED RISK STRATIFICATION

WHY IS THIS IMPORTANT?

Older people increasingly visit the emergency department (ED), are sicker than younger patients, and have an high risk of adverse health outcomes which requires special attention to prevent further decline.

Recognition of high-risk patients is more difficult in older compared to younger patients because they present with non-specific complaints (i.e. weakness or falls), interpretation of vital signs is complicated by altered physiology, co-morbidity and polypharmacy, they are often undertriaged by frequently used triage systems, and classic risk stratification tools like NEWS have low predictive performance in older patients.

If vulnerability is recognised early, timely resuscitation, targeted interventions and disposition to the most optimal level of care, may limit the risk for adverse health outcomes, and increase awareness among ED personal to include patient's preferences in the assessment.

WHICH RISKS ARE WE STRATIFYING?

Short term: Cognitive impairment (including delirium), in-hospital mortality, unplanned avoidable re-admissions, new institutionalization to long term care facility.

Longer term: Functional decline, new institutionalisation, 3- and 12-month mortality.

HOW CAN WE RECOGNIZE OLDER PATIENTS AT HIGH RISK FOR ADVERSE OUTCOMES?

Normal primary (ABCDE) assessment also applies to older patients as long as changing physiology and polypharmacy, affecting interpretation of vital signs, are taken into account.

Screening tools for frailty and/or cognitive impairment and/or delirium that are appropriate for ED use: APOP, 6-CIT, 4-AT, Clinical Frailty Scale (CFS). See Comprehensive Geriatric Assessment (CGA) and delirium sheet.

This education material was developed by the *European Task Force for Geriatric Emergency Medicine*, which is a collaboration between the *European Society for Emergency Medicine (EUSEM)* and the *European Geriatric Medicine Society (EuGMS)*. For more information, please visit: geriEMEurope.eu and follow us on Twitter: [@geriEMEurope](https://twitter.com/geriEMEurope).

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WHAT CAN WE DO?

1. Triage systems: consider incorporation of a mobility and/or frailty measure (such as CFS) in the triage system.
2. Consider presenting complaint: non-specific complaints (feeling unwell) are associated with high in-hospital mortality.
3. Do a primary (ABCDE) assessment. **However:**



Interpretation of vital signs:

Check baseline values of individual patient and monitor trends. If the patient's individual baseline values are not available:



Systolic blood pressure:

On average below **120** (in sepsis), or **110 mmHg** (in trauma) should be considered abnormal until proven otherwise.



Heart rate:

On average heart rate below **50** or above **100 bpm** is associated with higher in-hospital mortality and should be considered abnormal.



Temperature:

Normal or low temperature is associated with higher mortality than high temperature in patients with suspected infection/sepsis.



Look for clinical signs of organ failure:

Increased respiratory rate, prolonged capillary refill time, poor peripheral circulation or low urine output, altered mental status (see below):

4. Assess for frailty, cognitive impairment, delirium (and use in conjunction with recommendation 1 and 2).
5. Assess social situation and functional status and impact before hospital discharge.

TOOLBOX

Triage or risk stratification tools potentially improving risk stratification by including frailty measures or specifically developed in older patients in the ED: **RIGAMA score, CAM-ICU, 4-AT, APOP, CFS, 6-CIT and InterRAI ED Assessment System.**

All toolboxes and additional information are available via QR-code.



REFERENCES

All relevant references to scientific publications can be found via the adjacent QR-code.

