Evidence brief

Medical Assessment Unit

18 June 2024

Evidence check questions

Does admission or assessment through a medical assessment unit (MAU) or acute medical unit (AMU) increase hospital discharges, and improve patient outcomes and hospital resource usage?

Summary

- A medical assessment unit (MAU) or acute medical unit (AMU) can act as the first point of entry for patients referred from the community for acute medical emergencies. It provides rapid assessment, investigation, stabilisation, and treatment for patients. The design and configuration of MAU can vary depending on jurisdictions or hospitals, but usually, the ED is bypassed by providing direct access to an acute assessment.[1]
- In 2018, The National Institute for Health and Care Excellence published a guideline for organising and delivering emergency and acute medical care for people aged over 16 in the community and in hospitals. This guideline was based on evidence reviews of over 35 individual strategies, including assessment through an AMU. For evidence on AMUs, it concluded:[1]
  - **Initial admission to AMU compared to initial admission to routine medical ward** may reduce 30-day in-hospital mortality.
  - **Admission post-acute medical admissions unit (AMAU) compared to admission pre-AMAU** may reduce in-hospital all-cause mortality at three years or four years after the establishment. No difference in these outcomes two years post establishment. At one year, there was a possible increase in in-hospital mortality.
  - **Admission post-acute admissions unit (AAU) compared to admission pre-AAU** no difference two years after establishment on in-hospital all-cause mortality and length of hospital stay.
- Studies published since 2018 further reported that the implementation of acute medical units were associated with:
  - Increased admission capacity and reduced length of stay (compared to pre-implementation)[2]
  - Reduced in-hospital mortality, reduced ICU admission rates, reduced hospital length of stay and emergency department length of stay (hospitalist AMU versus non-hospitalist inpatient care)[3]
- An analysis of rates and reasons for readmission after hospitalisation in the AMU for medical same-day emergency care in the UK between 2014-2022 found:
  - The most common first admission reasons were pneumonia, chronic obstructive pulmonary disease (COPD) and sepsis

  - The overall 30-day readmission rate was 12.3%
    - The top three initial presenting conditions with the highest 30-day readmission rates were: liver disease (21.9%), COPD (21.1%) and falls (17.9%)
  - The overall 90-day readmission rate was 24.2%
    - The top three initial presenting conditions with the highest 90-day readmission rates are: liver disease (44%), COPD (39%) and falls (34%).[4]
- The following interventions or organisational characteristics of AMUs were associated with beneficial effects such as:
  - Increased consultant presence – reduction in mortality and 28-day readmissions; an increase in the proportion of patients discharged on the day they were admitted[5]
  - Enhanced pharmacy care – reduction in unintentional drug discrepancies[5]
  - Introduction of a dedicated occupational therapy service – reduction in length of stay[5]
  - Adoption of an all-inclusive consultant work pattern – reduction in the excess adjusted case fatality rate (aCFR) of weekdays versus weekend admissions[5]
  - Introduction of a rapid-access medical clinic – increase in the proportion of patients discharged on day of admission[5]
  - Formalisation of handovers – improvement in all handover metrics[5]
  - Increased allied health service – decreased hospital length of stay and occupied bed-days.[6]

Same day emergency care

- Same day emergency care (SDEC) is a model that is currently being implemented in NHS England. The NHS Long Term Plan sets out goals that every hospital with a 24-hour emergency department should have a comprehensive SDEC model and 30% of patients attending acute services should be managed in SDEC.[7]
- In this model, patients are assessed for suitability for discharge without an overnight stay. Further assessment, treatment and follow-up can be delivered via an alternative pathway such as outpatient services, virtual wards or hospital at home.[7] SDEC is often embedded within or adjacent to the AMU.[8]
- A high proportion of certain conditions such as pulmonary embolism and cellulitis (limb) may be suitable for SDEC pathways when appropriate. Disease-specific scoring systems are used and appropriate follow-up or add-on services such as virtual wards are provided.[7]
- In 2019/2020, three conditions were included in the Commissioning for Quality and Innovation scheme which specifies targets for proportion of eligible patients managed on a SDEC basis.
  - Pulmonary embolus – 50-75% of patients who are low risk
  - Tachycardia with atrial fibrillation – 50-75% of patients with a diagnosis of primary, uncomplicated atrial fibrillation
  - Community acquired pneumonia – 50-75% applies to patients with a CURB-65 score of one or zero.[9]
- In a 2022 survey of 149 acute UK hospitals, 98% of units reported providing an SDEC service. SDEC services performed higher in clinical quality indicators, such as an early warning score within

30 minutes of arrival, assessment by Tier 1 clinical decision maker within four hours, and review by consultant within target time, compared to emergency department and AMU.[10]

Methods

PubMed search terms

("acute medical unit*"[Title/Abstract] OR "acute medical admissions unit*"[Title/Abstract] OR "acute admissions unit*"[Title/Abstract] OR "medical assessment unit*"[Title/Abstract]) AND (2018:2024[pdat])

227 hits on 31 January 2024

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