Australasian College
for Emergency Medicine

Position Statement

Ambulance Ramping And Diversion

This document sets out the position of the Australasian College for Emergency Medicine (ACEM) on ambulance ramping/off-stretcher delay, and ambulance diversion. Both are detrimental to patient outcomes. ACEM recommends their avoidance, and that the use of key performance indicators (KPIs) for monitoring interactions between ambulance services and emergency departments (EDs) inform system optimisation.

Ambulance ramping/off-stretcher delays are caused by capacity problems within in-patient wards in the hospital. It is an indicator of systemic health care dysfunction. It reduces patient safety and increases the risk of adverse patient outcomes, including the death of patients in the ambulance and of patients in the community waiting for an ambulance.

Ambulance diversion should not be a routine occurrence, as its precipitants are largely predictable and preventable. Diversion should only occur when the patient requires access to speciality services at designated centres. In a properly functioning hospital and health system, usual and surge demand is factored into resourcing capacity (infrastructural and workforce) so that ambulance diversion only occurs in exceptional circumstances, such as an internal or external incident.[2]

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v1	Nov-13	Original version
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1. Scope

This statement is applicable to all EDs in Australia and Aotearoa New Zealand. Health system managers, including ambulance service and hospital executives and administrators are also in scope.

2. Definitions

2.1 Off-loading and Transfer of Care

Ambulance off-loading refers to an agreed process between ambulance services and ED staff which includes the transfer the care of patients from the ambulance stretcher into an appropriate area within the ED.

2.2 Ambulance Ramping/Off-Stretcher Delays

Ambulance ramping/off-stretcher delay occurs when paramedics are unable to complete transfer of clinical care of their patient to the hospital ED within a clinically appropriate timeframe, specifically due to lack of an appropriate, staffed clinical space in the hospital or the ED. This is a direct consequence of access block.[1]

2.3 Ambulance Diversion

Ambulance Diversion, also known as *Hospital Bypass,* or *Load Levelling*, is the practice of redirecting an ambulance to another hospital because the closest or most appropriate hospital has exceeded capacity.

2.4 Access Block

Access block refers to the situation where patients, who have been admitted and need a hospital bed, are delayed from leaving the ED for more than eight hours since initial presentation, because of a lack of inpatient bed capacity. This includes patients who were planned for an admission but were discharged from the ED without reaching an inpatient bed, or transferred to another hospital for admission, or who died in the ED.

3. Background

Ambulance services play a vital role in patient care, by providing essential emergency response and stabilising patients while transporting them to hospital. In Australia in 2020/21, 26.3 per cent of hospital arrivals were via ambulance, while in Aotearoa New Zealand this figure was 22.4 per cent.[3]

Access block continues to be the most frequent and significant contributor to ambulance ramping/off-stretcher delay and diversion. The nature and frequency of ambulance ramping/off-stretcher delays provide health system and hospital management with an opportunity to define KPIs that measure the effects of access block and ED overcrowding.

Ambulance ramping/off-stretcher delay challenges the 'respond, stabilise and transport' focus of ambulance services. Ramping raises an ethical dilemma for paramedics who need to continue provision of emergency medical care for patients awaiting transfer to the ED.[4-7] Adverse outcomes of ambulance ramping/off-stretcher delay include:

- Delayed access to timely pre-hospital assessment and care due to fewer ambulance crews being available.
- Delayed access to timely ED services and definitive specialist assessment and care.
- Financial implications for ambulance services and hospitals.
- Adverse publicity leading to poor staff morale and negative public perceptions of the health system.
- Increased stress and interpersonal conflict between patients, paramedics, ED, and hospital staff, including exacerbation of occupational violence.
- Extended time per assessment in the ED relating to data sharing requirements for patients diverted out of area.
- Increased repatriation costs for patients diverted out of area.
- More complexity of care for patients who transported beyond usual care provision.

4. Recommendations

4.1 Recommendations on Ramping/Off-Stretcher Delay

4.1.1 Improve Planning

Planning is urgently required to improve patient flow in the hospital system.

4.1.2 Research Effective Interventions

A more robust evidence base is required to measure the effectiveness of interventions to reduce ambulance ramping/off-stretcher delay interventions.

4.1.3 Implement Escalation Procedures

When ramping occurs, rapid escalation procedures led by the hospital executive should be instigated. An immediate action is required to resolve the access block, address causes (short and long term), and review surge capacity resourcing to prevent reoccurrence.

4.1.4 Prohibit Rapid Offload

Models of patient transfer that occur prior to the transfer of care into a clinically appropriate space, without a safe handover, should be prohibited. The practice of 'rapid offload' constitutes unsafe practice.

4.1.5 Improve Ambulance Ramping/Off-stretcher Delay Data Collection

Measures to identify and record specific ramping sites, causes and associated factors are required, along with the introduction of independently captured geographical data points on place of ambulance pickup, and place of hospital off-load. This will enable independent assessment, monitoring and accountability for out of area transports.

See Appendix for detailed breakdown of onsite measurement recommendations.

4.2 Recommendations on Diversion

4.2.1 Internal Mechanisms to Prevent Diversion

Ambulance diversion should occur only after the hospital has exhausted all internal preventative mechanisms. These may include calling in staff, opening additional beds and placing over census patients on inpatient wards, and instituting an internal disaster response. Surge capacity escalation policies should be part of a combined offload/HAT data escalation policy with accountability at an organisational, or higher level.

This should be included in hospital accreditation reviews, ensuring that hospitals have local policies to meet this surge/access block escalation policy.

4.2.2 Activate Internal Disaster Code

The decision to divert should be made in close consultation with the responsible emergency physician, in conjunction with nursing and senior hospital managerial staff. The need for ambulance diversion should result in the hospital internal disaster code and associated management procedures being activated.

4.2.3 Communication Between Hospital and Ambulance Services

Hospital and ambulance services should have working agreements to optimise patient access to emergency care. Clear lines of communication and responsibilities must be defined.

4.2.4 Mutual Decision-Making between Hospital and Ambulance Services

If diversion is considered appropriate, the decision must be acceptable to both the hospital and the ambulance services. Any periods of diversion must have a defined time limit and be as short as possible.

4.2.5 Patient Care Must be Prioritised above Financial Considerations

Hospital diversions should never be based on financial decisions.

4.2.6 Diversion Should Not be Used to Protect Workflows

Except for external disaster preparations, hospital should not divert to protect workflows.

4.2.7 High Acuity Patients Should Not be Diverted

The highest priority (Australasian Triage Scale Category 1), major trauma, pre-agreed/emergent time-critical patients and patients only able to be treated at a specific hospital should not be diverted from an appropriate hospital irrespective of diversion status. At all times paramedics have the discretion to continue irrespective of hospital decisions where the additional transport time will compromise patient safety.

5. References

1. Australasian College for Emergency Medicine (ACEM). S127 ACEM Statement on Access Block. ACEM: Melbourne, Australia
2. Australasian College for Emergency Medicine (ACEM). P33 ACEM Policy on Emergency Department Disaster Preparedness and Response. ACEM: Melbourne, Australia
3. ACEM, 2022. 2021 Annual Site Census Part One: Emergency department staffing and casemix. At https://acem.org.au/getmedia/e12640dc-8329-4b99-a98296d0e241a166/2021_Annual_Site_Census_Report_part-1
4. Perry, M & Carter, D 2017. The ethics of ambulance ramping. Emergency Medicine Australasia: 29, 116-118
5. Andrew E, Nehme Z, Cameron P, Smith K. Drivers of increasing emergency ambulance demand. Prehospital Emergency Care. 2020 May 3;24(3):385.
6. Tenbensel, T., Chalmers, L., Jones, P. et al. New Zealand's emergency department target – did it reduce ED length of stay, and if so, how, and when? BMC Health Serv Res 17, 678 (2017). https://doi.org/10.1186/s12913-017-2617-1
7. Kingswell C, Shaban RZ, Crilly J. Concepts, antecedents, and consequences of ambulance ramping in the emergency department: a scoping review. Australasian Emergency Nursing Journal. 2017 Nov 1;20(4):153-60.

6. Appendix

6.1 Recommendations Relating to Ambulance Ramping/Off-Stretcher Delay Data Collection

ACEM supports the collection and timely reporting of data that accurately identify the extent of ambulance ramping/off-stretcher delay and hospital diversion. ACEM defines the key components for data collection as follows:

6.1.1 Ambulance Arrival at the ED (a)

Ambulance arrival at the ED is the point at which the ambulance arrives at the designated entrance (i.e., the ramp) and the ambulance crew stop the vehicle.

6.1.2 ED Notification Time (b)

ED notification time is measured from when a paramedic, with or without a patient, enters the ED triage area and notifies the ED triage staff that a patient requires triage. This is the start time for the ED off-stretcher/ambulance turnaround time.

6.1.3 Patient Triage Time (c)

Patient triage time is measured from the point that a triage assessment/record is started, and the patient details have been entered into the ED clinical administration system.

6.1.4 Patient Entry to the ED (d)

Patient entry to the ED is the point at which the patient physically enters the ED triage area on the ambulance stretcher. This may be the same time as (c).

6.1.5 Transfer of Care (e)

Transfer of care is the point at which clinical handover to an appropriate ED clinician has occurred, and the patient has been moved from the ambulance stretcher to an appropriate physical space in the ED.

6.1.6 Ambulance Crew Preparation Time (f)

Ambulance crew preparation time is measured from the time clinical handover has occurred until the time that the ambulance crew notifies the ambulance dispatch service they are ready for another job.

This is the time following clinical handover of the patient, when ambulance crew activities such as cleaning, restocking and completion of paperwork may lead to further delays. These delays are distinct from ramping delays.

6.1.7 Ambulance ED Departure Time (g)

Ambulance ED departure time is measured from the time that the crew leaves the hospital ambulance bay area, either to attend to their next patient, or to await a job elsewhere.

6.1.8 Responsibility for Data Capture

ACEM considers that:

- The time recording for (a), (b), (d), (f) and (g) are the responsibility of the ambulance services.
- Time (c) is the responsibility of the hospital and/or ED.
- Time (d) and (e) should be recorded by both teams to allow for independent review.
- The time from (b) to (e) is the time that is subject to ED related delays, and should be used in measuring ramping, or off-stretcher delays, or ED related ambulance turnaround delays.

These time measurements can provide useful performance indicators provided:

- Data are reliable, reproducible, and recorded in a uniform manner across all jurisdictions.
- Data are auditable – the data must be independently analysed, reported and available for public scrutiny.
- Data collection is automated wherever possible (for example, electronic buttons, electronic tagging or push buttons) to facilitate consistency in reporting and reduce the risks of gaming.

6.1.9 Recommendations for KPIs

ACEM recommends a cooperative approach to develop consistent data collection across Australia and Aotearoa New Zealand.

6.1.10 Time to Transfer of Care

The time interval of ambulance arrival to clinical handover should routinely occur within 15 minutes and should not take more than 30 minutes.

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