PERFORMANCE AUDIT 14 September 2021

Measuring emergency department patient wait time

Report 2: 2021–22

Queensland Audit Office
Better public services

As the independent auditor of the Queensland public sector, including local governments, the Queensland Audit Office:

- provides professional audit services, which include our audit opinions on the accuracy and reliability of the financial statements of public sector entities
- provides entities with insights on their financial performance, risk, and internal controls; and on the efficiency, effectiveness, and economy of public service delivery
- produces reports to parliament on the results of our audit work, and on our insights, advice, and recommendations for improvement
- supports our reports with graphics, tables, and other visualisations, which connect our insights to regions and communities
- conducts investigations into claims of financial waste and mismanagement raised by elected members, state and local government employees, and the public
- shares wider learnings and best practice from our work with state and local government entities, our professional networks, industry, and peers.

We conduct all our audits and reports to parliament under the *Auditor-General Act 2009* (the Act). Our work complies with the *Auditor-General Auditing Standards* and the Australian standards relevant to assurance engagements.

- Financial audit reports summarise the results of our audits of over 400 state and local government entities.
- Performance audit reports cover our evaluation of some, or all, of the entities' efficiency, effectiveness, and economy in providing public services. Depending on the level of assurance we can provide, these reports may also take the form of:
  - Audit insights, which provide some evaluation and share our insights or learnings from our audit work across government
  - Audit briefs, which set out key facts, involve some evaluation, and may include findings and recommendations
  - Audit overviews, which help clients and stakeholders understand complex issues and subjects.

Learn more about our publications on our website.

The Honourable C Pitt MP
Speaker of the Legislative Assembly
Parliament House
BRISBANE QLD 4000

14 September 2021

This report is prepared under Part 3 Division 3 of the *Auditor-General Act 2009*.

Brendan Worrall
Auditor-General

ISSN 1834-1128

Contents

Auditor-General's foreword

Across the globe, COVID-19 demonstrated the need for efficient and effective ambulance services and emergency departments as many organisations planned for and responded to the crisis. This audit topic was—and continues to be—an important matter for Queensland.

In 2020, during the worst of the pandemic, I temporarily paused this audit in support of the Queensland health entities that were preparing for a potentially large influx of COVID-19 patients. We aimed to be realistic and flexible with our audit requirements to ensure we were auditing the right matters at the right time, so that our insights remain pertinent and practicable.

The vital need for preparedness as the pandemic hit, but a lesser number of COVID-19 patients than anticipated, gave health entities the opportunity to focus on improving patient flow through hospitals. However, more work needs to be done, with our emergency departments and the Queensland Ambulance Service providing critical care to more people every year. In 2019–20, there were over 1.6 million presentations to public hospital emergency departments, over a third of which arrived by ambulance.

Many issues contribute to the performance of emergency departments, in particular funding, staffing, and the availability of emergency and inpatient beds. There has also been recent attention to the challenges surrounding ambulance ramping at hospitals. All of these issues are frequently topical and concerning, but they are outside the scope of this report. This report follows on from our previous 2015 audit that focused on the performance of emergency departments against specific targets. These other issues may be the subject of future audits, and I have included a topic on delivering ambulance services in my *Forward work plan 2021–24.*

In *Planning for sustainable health services* (Report 16: 2020–21), tabled in parliament on 25 March 2021, I highlighted the need for whole-of-service planning that uses up-to-date data and involves key stakeholders. There are similar themes in this report. It is important that emergency departments and the Queensland Ambulance Service have accurate, readily available, time-based performance measures. This will help them identify performance issues so they can work with and across other clinical areas to address the causes of delays. We provide five recommendations in this report that will help them achieve this.

Brendan Worrall
Auditor-General

Report on a page

This audit follows on from *Emergency department performance reporting* (Report 3: 2014–15). It assesses whether Queensland Health:

- is effectively managing performance in terms of emergency length of stay (ELOS—the amount of time people spend in emergency departments (EDs) before being admitted or discharged) and patient off stretcher time (POST—the amount of time it takes to transfer people from the care of ambulance staff to the care of emergency departments)
- has implemented all the recommendations we made in Report 3: 2014–15 concerning the reliability of the data being reported.

Increasing demand is putting pressure on EDs

The Department of Health—which includes the Queensland Ambulance Service (QAS)—and hospital and health services (collectively referred to as Queensland Health) are working together to improve emergency department (ED) patient wait time. However, more people are arriving at EDs for treatment, and these presentations are becoming more complex. This has put pressure on Queensland Health's ability to improve ELOS and POST performance.

While each year EDs continue to treat more patients within required time frames, their performance against these two measures has gradually declined and they are consistently unable to meet their targets.

Decision-makers need more accurate and timely information

Operational entities within Queensland Health are working together to improve ED performance. There have been a range of strategies implemented to help improve patient flows; however, the overall performance of the system has not improved. Furthermore, Queensland Health has identified that strategies are not consistently evaluated and understood to ensure the effective rollout across the state.

Despite the Queensland Ambulance Service becoming part of Queensland Health from 1 October 2013, there is a lack of system integration with integrated electronic medical record (iEMR) modules in hospitals. This limits Queensland Health from being more successful in improving performance and identifying root cause issues in the short term.

In Report 3: 2014–15 we concluded that 'controls over ED data have been and remain, weak or absent'. In 2021, controls still must be improved to ensure QAS and ED data is complete, accurate, and validated in a timely manner. Queensland Health does not currently have an adequate and efficient approach for detecting and correcting data errors relating to a patient's length of stay and time taken to be moved off an ambulance stretcher.

Progress towards our previous recommendations

Queensland Health has implemented two of the four recommendations we made in Report 3: 2014–15. It has not effectively addressed the risk of inappropriate use of short-term treatment areas and has not identified how to detect unauthorised data entries and changes.

Our recommendations

We have made five recommendations to help Queensland Health improve its processes for data reliability, ED performance measures, the appropriate use of ED short-term treatment areas, and the interface between ED and QAS systems.

1. Recommendations

We recommend that the Department of Health (including the Queensland Ambulance Service (QAS), and hospital and health services (HHSs)):

Data reliability

1. improves the accuracy of emergency department (ED) data recorded, and quality of data checks and corrections (data cleansing) required by HHSs.

   This should include:

   - implementing system controls in FirstNet (a module of Queensland Health's integrated electronic medical record system) to prevent or alert users to invalid data entry
   - ensuring a consistent approach in scope and resourcing across hospitals to the cleansing of ED data, including a focus on the accuracy of all data, not just that relating to instances that do not meet targets (Chapter 3)
2. improves how patient off stretcher time is recorded or reported, including:
   - implementing validation controls for recording arrival and handover times (Chapter 3)
   - resuming the system integration project to improve real-time (instant) sharing of QAS data with EDs (Chapter 2)

Performance measures

3. continues with the current initiatives to promote measures of performance and outcomes in all parts of care affecting ED performance, and implements measures that provide a more holistic view of ED performance (Chapter 2)
4. develops and implements guidelines for HHSs to identify measures of success before starting improvement initiatives and to evaluate the effectiveness of initiatives to improve ED performance (Chapter 2)

Short-term treatment areas

5. monitors and reports on the use of short-term treatment areas within EDs (such as short stay units, clinical decision units, and any other equivalent units that stop the clock on measuring emergency length of stay) (Chapter 2).

Reference to comments

In accordance with s. 64 of the *Auditor-General Act 2009*, we provided a copy of this report to relevant entities. In reaching our conclusions, we considered their views and represented them to the extent we deemed relevant and warranted. Any formal responses from the entities are at Appendix A.

2. Recognising demand on emergency departments and their performance

This chapter is about how well the Department of Health—which includes the Queensland Ambulance Service—and the hospital and health services (collectively referred to as Queensland Health) are working together to manage emergency department performance.

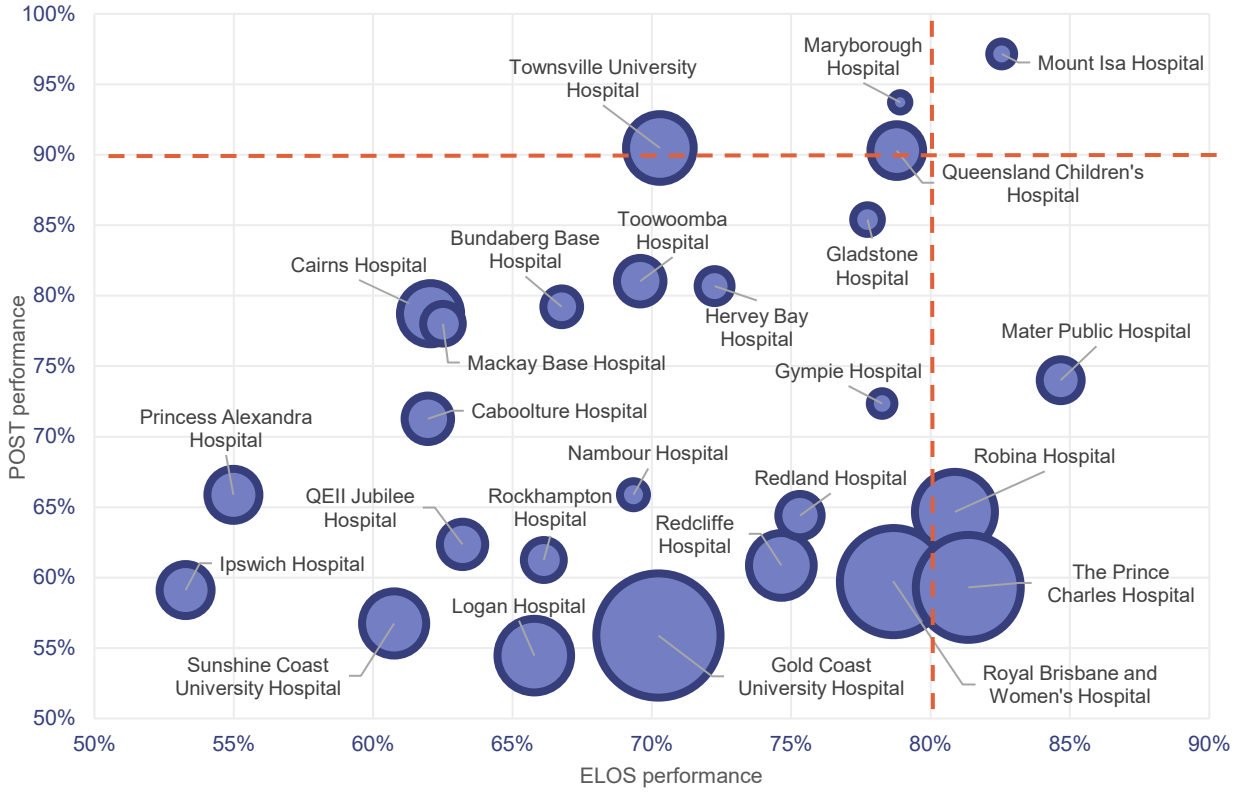
Has emergency department performance improved since our audit in 2014–15?

Demand for emergency departments (EDs) is growing at a faster rate than population growth, and more people are arriving (presenting) at EDs with complex issues. The EDs have been treating more people within recommended time frames each year. However, as a percentage of the entire patient population, their performance has been declining.

The overall emergency length of stay (ELOS—the length of time people stay in EDs) target is to complete treatment within four hours for 80 per cent of patients. The patient off stretcher time (POST—the amount of time it takes to transfer patients off ambulance stretchers, with a completed clinical handover, to EDs) target is to transfer 90 per cent of patients within 30 minutes.

Figure 2A shows that during the period from July 2020 to February 2021, only one of the top 26 reporting hospitals met the targets for both ELOS and POST. All of Queensland's top 26 reporting hospitals are listed in Appendix F.

Figure 2A
ELOS and POST performance for the top 26 reporting hospitals
July 2020–February 2021



Notes:

- The size of the circles corresponds to the number of presentations and includes COVID-19 fever clinic activity. The orange lines represent the ELOS and POST targets.
- Queensland's top 26 reporting hospitals are listed in Appendix F.
- Despite some volatility at individual hospitals, performance outcomes were materially the same for the prior year, which was impacted by the full COVID-19 lockdown. Figure 2A also includes some volatility at individual hospitals over shorter targeted lockdowns to deal with localised COVID-19 outbreaks.
- The Mater Adult Public Hospital (Mater Public) is jointly funded by Queensland Health grants, and revenue generated by Mater Private Hospitals. It is one of Queensland Heath's public reporting hospitals.

Source: Queensland Audit Office from emergency department data collection and POST data for the top 26 reporting hospitals.

DEFINITION

Reporting hospitals—Queensland Health publicly reports on the performance of its hospitals. Not all hospitals provide 24/7 emergency care.

The current public ED performance reporting covers the hospitals in Queensland that have:

- purposely designed and equipped areas for assessment, treatment, and resuscitation
- the ability to provide resuscitation, stabilisation, and initial management of all emergencies
- availability of medical staff in the hospital 24 hours a day
- designated emergency department nursing staff 24 hours per day, seven days per week, and a designated emergency department nursing unit manager.

This report includes the top 26 hospitals that treat approximately 77 per cent of Queensland's emergency department presentations and are the 'reporting hospitals' referred to in this report. It aligns with the hospitals we reported on in our 2014–15 audit.

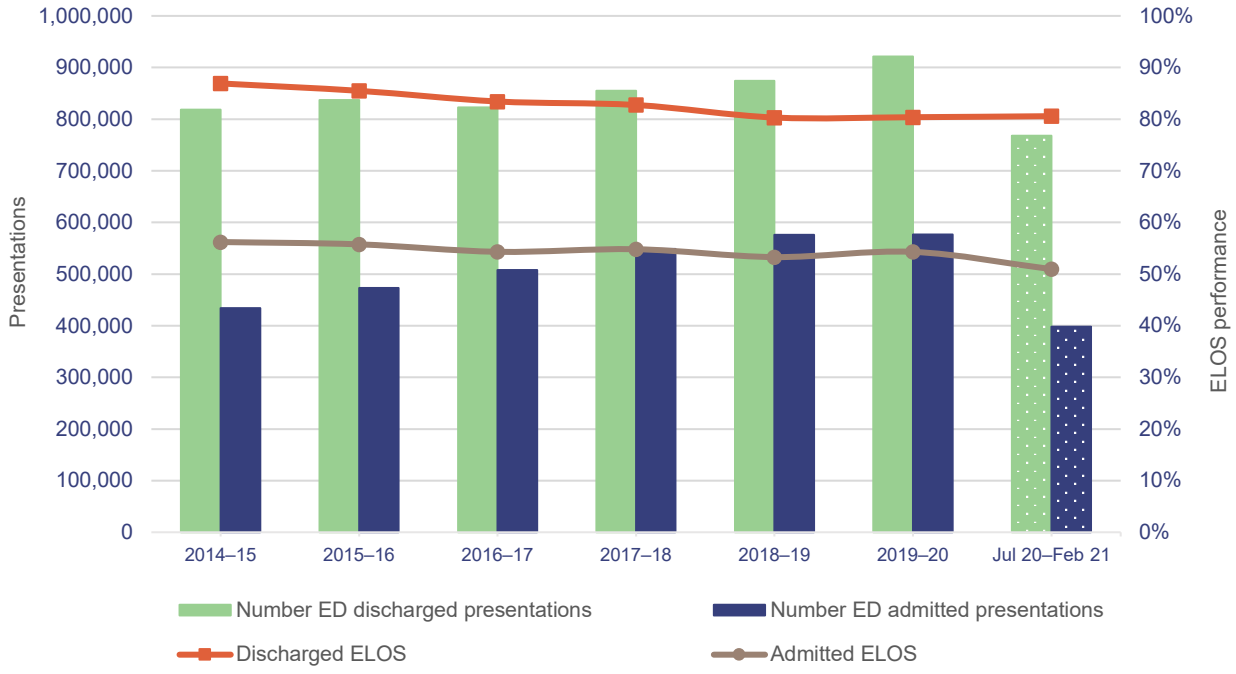
There have been significant increases in demand and in the number of complex cases

In response to recommendation 4 in *Emergency department performance reporting* (Report 3: 2014–15) Queensland Health implemented separate evidenced-based performance targets for the patients it admits and those it discharges. Admitted patients usually require more complex care, and their ELOS relies on the availability of beds in the hospital (inpatient beds). For this reason, a 60 per cent target is set for admitted ELOS, compared to 90 per cent for discharged patients.

Figure 2B compares the increase in presentations for patients who are admitted and discharged to performance against the ELOS target from 1 July 2014 to 28 February 2021.

It shows that statewide ELOS performance for admitted and discharged patients has gradually declined, while the number of presentations has increased. The performance for discharged patients has declined at a greater rate compared to admitted patients. However, the growth in admitted patients has been at a faster rate than discharged patients.

Figure 2B
ED presentations and ELOS performance for admitted and discharged patients from 1 July 2014 to 28 February 2021



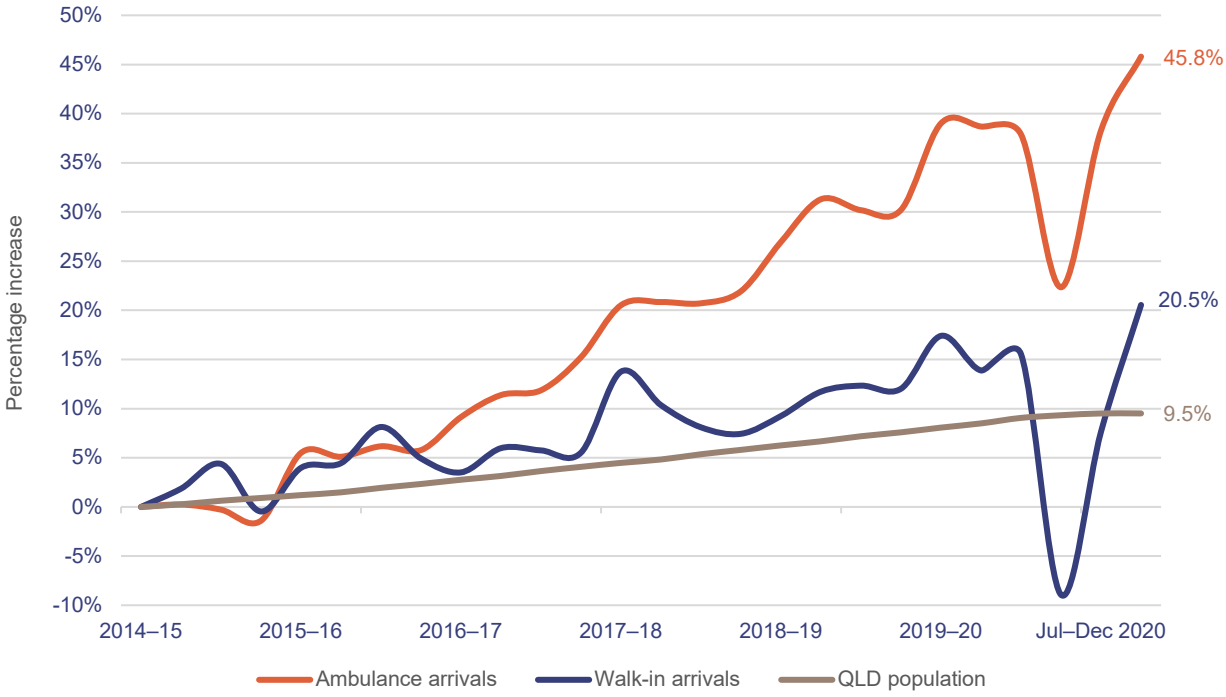
Notes: Excludes deaths in the ED, patients who did not wait, patients who left at own risk, and transfers to another hospital. Includes COVID-19 fever clinic activity. 2014–15 to 2019–20 are full financial years; July 2020 to February 2021 is a partial year.

Source: Queensland Audit Office from emergency department data collection for the top 26 reporting hospitals.

Demand for service has outpaced population growth

As shown in Figure 2C, between July–September 2014 and October–December 2020, 'walk-in' ED presentations (people who do not arrive by ambulance) increased by 20.5 per cent, and ambulance arrivals to EDs increased by 45.8 per cent. Population growth over the same period was 9.5 per cent.

Figure 2C
Cumulative quarterly growth in ED walk-in presentations and ambulance arrivals compared to population growth from July 2014 to December 2020



Notes: The most up-to-date population data available was the September 2020 quarter. QLD—Queensland. Excludes COVID-19 fever clinic activity.

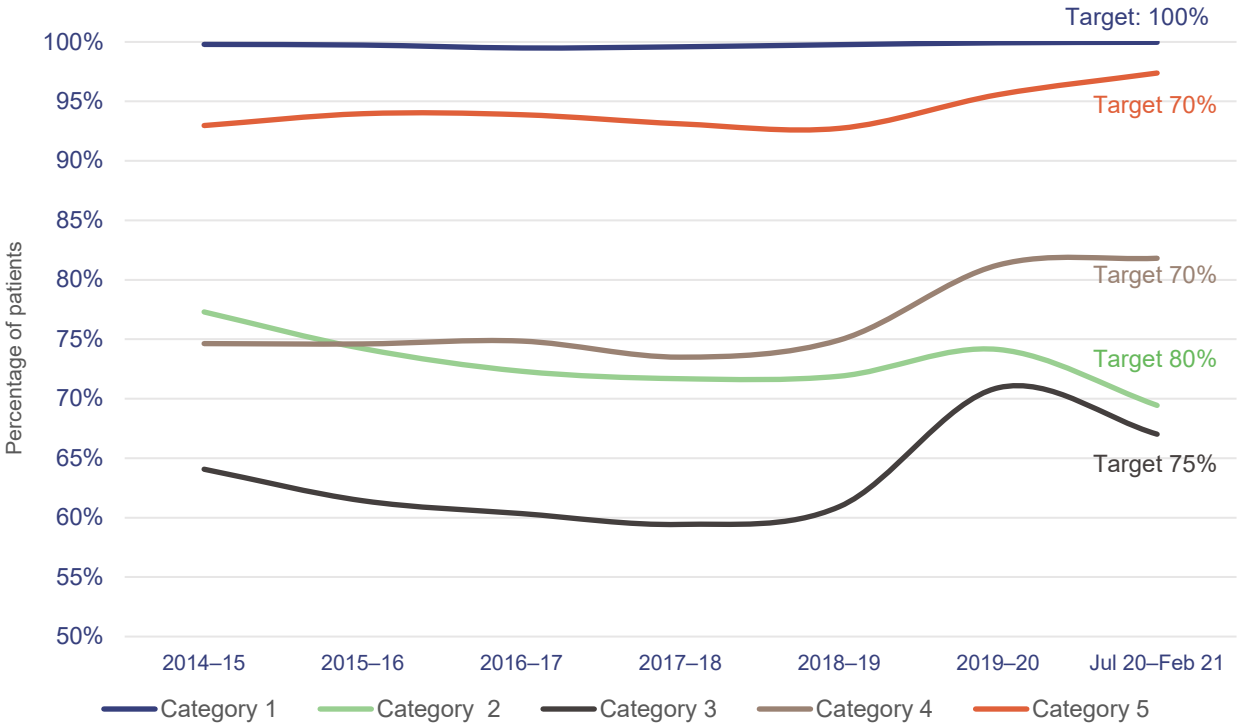
Source: Queensland Audit Office from emergency department data collection for the top 26 reporting hospitals and quarterly Australian Bureau of Statistics population data.

Patients seen within the clinically recommended time

Queensland Health measures how soon an ED patient is seen by a treating doctor or nurse upon their arrival at the ED, triaging patients according to a national framework in categories of 1 (immediately life-threatening) to 5 (less urgent).

Figure 2D shows that since 2014–15, Queensland Health has consistently outperformed its targets for categories 4 and 5, and mostly hit its target for category 1. However, it has not met its targets for categories 2 or 3.

Figure 2D
Percentage of patients seen within clinically recommended time by triage category, 2014–15 to July 2019–February 2021



Notes: Includes COVID-19 fever clinic activity. Category 1—immediately life-threatening (treatment within two minutes). Category 2—imminently life-threatening, or important time-critical treatment, or very severe pain (treatment within 10 minutes). Category 3—potentially life-threatening, or situational urgency (treatment within 30 minutes). Category 4—potentially serious, or situational urgency (treatment within 60 minutes). Category 5—less urgent (treatment within 120 minutes).

Source: Queensland Audit Office from emergency department data collection for the top 26 reporting hospitals.

Patient off stretcher time performance

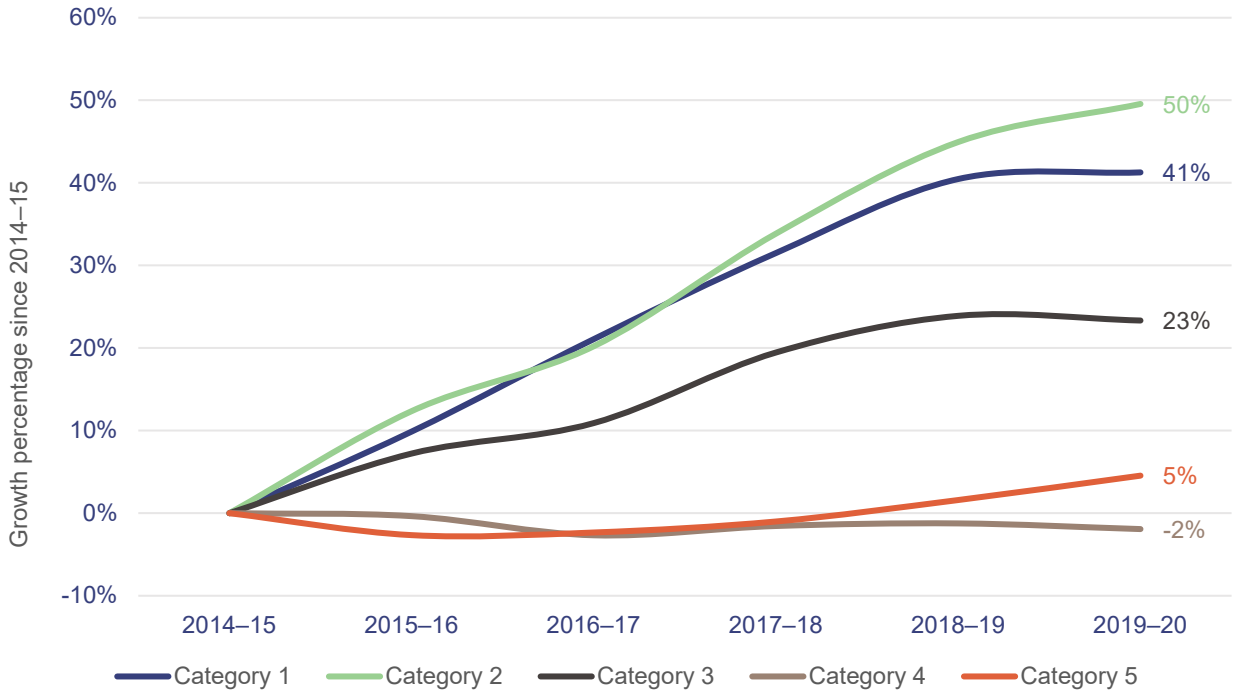
Queensland's target for POST is to have 90 per cent of patients transferred off stretchers into the care of the ED within 30 minutes. This target has not been met at the statewide level in the past seven years.

The overall POST performance for the top 26 reporting hospitals has steadily decreased from 85.9 per cent in 2014–15 to 68.5 per cent for the period July 2020–February 2021. Our *Forward work plan 2021–24* includes a proposed audit on delivering ambulance services that may address the root causes contributing to this decline in performance.

The number of complex presentations has increased

ED presentations have become more complex. Figure 2E shows that since 2014–15 category 1 presentations (immediately life-threatening) has grown by 41 per cent and category 2 presentations (imminently life-threatening or important time-critical treatment, or very severe pain) by 50 per cent. Categories 1 and 2 are often significantly more resource intensive to treat in emergency departments than categories 3 to 5. The slowdown in growth in 2019–20 is partly attributable to statewide and localised lockdowns.

Figure 2E
Growth in ED presentations by triage category from July 2014 to June 2020



Note: Excludes COVID-19 fever clinic activity.

Source: Queensland Audit Office from emergency department data collection for the top 26 reporting hospitals.

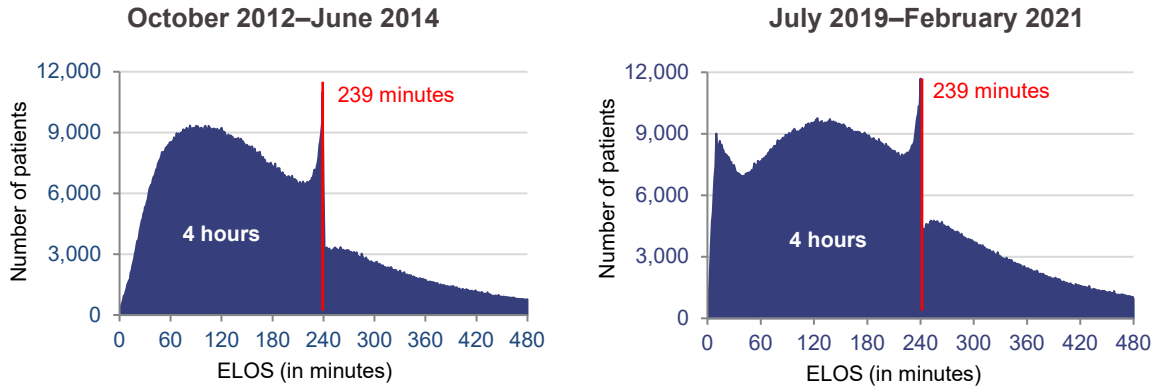
Are Queensland Health entities effectively monitoring emergency department performance?

ELOS and POST are both time-based measures; they do not assess quality of patient care or patient outcomes directly. They do provide an indication of some elements of ED performance, but they are summary measures for a complex health system, and they have limitations.

The pattern of target-based emergency care has not changed

In our 2014–15 audit, we observed a pattern of EDs seeming to meet targets, but not being able to support their ELOS times with clear patient records. The departure of patients from EDs spiked just before the patient stays reached the four-hour (or 240 minute) target. One of the reasons given by clinicians was that they were working to time-based care, where patients are either discharged, admitted to a ward or admitted to a short-stay treatment area before the four-hour target. This trend has continued since our previous audit, as shown in Figure 2F.

Figure 2F
Comparison of ELOS for the top 26 reporting hospitals



Note: the red line represents the four-hour target for ELOS.

Source: Queensland Audit Office—Emergency department performance reporting (Report 3: 2014–15).

Note: the red line represents the four-hour target for ELOS.

Source: Queensland Audit Office from emergency data collection for the top 26 reporting hospitals.

Contributing factors to ED performance outcomes

How quickly EDs can receive and treat patients depends on a variety of factors, including the available emergency and inpatient beds, ED staffing, and inpatient ward staffing. Any block to accessing inpatient wards will significantly impact on an ED's ability to meet performance targets.

Queensland Health does not consistently publicly report on these factors, safety measures or on other key issues affecting patient flow, such as adequacy and affordability of primary care in the community, increasing demand for ambulance services, or a lack of inpatient bed capacity.

The wait time between ambulance arrival and triage is not monitored

To determine the root cause of any time-based performance issue, it can be useful to break the total time into its separate components. This helps in identifying where delays occur and in targeting improvement activities.

A 2012 Queensland Health report on ED access identified that time between ambulance arrival and triage (time to triage) is a critical component in measuring off-stretcher performance. As a result, a previous Queensland Health protocol included a five-minute target for time to triage.

Queensland Health removed this target in December 2019 due to the ways in which arrival and triage times are recorded. Despite Queensland Ambulance Service (QAS) becoming part of Queensland Health on 1 October 2013, ambulance arrival time and ED triage time are captured in two different systems that do not talk to each other—an ambulance system and a hospital system. EDs capture triage time but not patient arrival time at the ED. QAS captures ambulance arrival time, but it does not always have the complete patient identity data required for the arrival time to be linked to the ED triage time.

As a result, Queensland Health is unable to assess whether there are any delays in commencing the triage process for ambulance arrivals and any impact on the off-stretcher time.

Performance of short-term treatment areas is not monitored and measured

Our 2014–15 report identified the risk of using short stay units inappropriately to reduce ED wait times (in order to achieve performance targets). The department has development guidelines to address this risk but not all hospitals have effectively implemented them.

Since 2014–15, several Queensland public hospitals have introduced initiatives similar to short stay units within EDs. One hospital has a pre-discharge area within its ED for patients who require ongoing care (for example, for medications to be administered, ongoing observation, or further imaging or scans). Others have clinical decision units where patients are placed either while they wait for test results or short-term treatment to manage symptoms. In this report, they are collectively referred to as short-term treatment areas.

Admission to short-term treatment areas stops the clock for ELOS, meaning the time spent in these areas is not counted for ELOS purposes.

Hospitals recording data in FirstNet (a module of Queensland Health's integrated electronic medical record) do not submit their short-term treatment data to the Department of Health (the department) because this data is captured as part of the inpatient journey outside of FirstNet. The department is currently not measuring and monitoring the length of stay in short-term treatment areas for those EDs that use FirstNet.

The department does not receive data from EDs to analyse how short-term treatment areas are used to manage patients, and how long patients remain within them.

In March 2021, Queensland Health commenced an ED Admission Interface Project to examine the use of admission units from the ED, such as clinical decision units and mental health units.

Are Queensland Health entities working effectively together to manage performance?

During our site visits in August and September 2019, we observed coordination and collaboration between QAS, hospital and health services (HHSs), and the department. This included regular meetings at the state, HHS and individual hospital levels; consultations when developing operational procedures and protocols; and joint decision-making to address daily operational issues.

The responsibility for overseeing QAS transferred from the then Department of Community Safety to the Department of Health on 1 October 2013. This followed structural reforms designed to ensure a more integrated and effective health system. QAS formally and informally communicates improvement opportunities at the HHS and whole-of-system levels—this includes communication channels such as the Patient Access Advisory Committee and the Emergency Services Management Committee. However, real-time (instant) patient data is not being shared between QAS and hospitals' patient files, and from hospitals to QAS.

The Queensland Ambulance Service is sharing real-time data with selected hospital and health services

While ED and QAS data is recorded in different systems, QAS provides some real-time information sharing with hospitals, using ambulance arrivals dashboards, which are generally located at hospital triage areas. These dashboards provide hospitals with information about ambulance-related triple zero calls, patients being transferred from other facilities or general practitioner (GP) clinics, and ambulances on the way to hospital, and gives details on how long ambulances have been at the hospital. This helps ED staff plan over the immediate term. The dashboards are part of the patient access coordination hubs; these are discussed further in Case study 1 (Figure 2G) below.

Queensland Health has advised it will be expanding the use of dashboards and patient access coordination hubs across the state by the end of 2021.

In our planned audit on delivering ambulance services, for tabling in 2022–23, we will likely delve further into the extent of integration of ambulance and health services.

Patient records are manually shared

Paramedics use iPads to record detailed treatment and transportation information for each patient they attend. The iPads are not linked into the digital hospital system through the integrated electronic medical record.

In the absence of a real-time system interface, QAS paramedics print out digital ambulance report forms and provide hard copies to EDs. This is not an efficient use of time but is a critical process for sharing information. In instances where ambulances are dispatched urgently to the next incident, paramedics are expected to hand over their paper forms at the next available opportunity, which may not be until the next shift.

Queensland Health has asserted that the risk of key patient condition and treatment information not being communicated to ED staff is partially mitigated by paramedics providing treatment information verbally to hospitals at triage and handover.

System interface project

In February 2019, Queensland Health began a system interface project to improve patient handover at EDs through enhanced data sharing and integration. This included the dashboards at patient access coordination hubs.

It put the project on hold in April 2020 to focus on the COVID-19 planning and response effort.

At the time when the project was put on hold, Queensland Health had been trialling a pilot digital solution called the Digital Ambulance Report Application at the Princess Alexandra Hospital. This solution aims to enable the sharing of QAS patient data with EDs, specifically the electronic ambulance report form. The project was put on hold as part of the Queensland Government's debt and savings plan. Because of the pause, Queensland Health has not compiled any findings from the trial.

The Queensland Ambulance Service only provides summary reports to key teams

QAS currently only provides a summary POST report to other relevant teams within the department. This contains information on the total number of patients transported and the number and percentage of patients transferred in under 30 minutes for each hospital and HHS.

HHSs do not receive aggregated patient-level data from QAS. This limits the HHSs' ability to understand performance data and develop improvement plans.

Despite this, several HHSs are working on improvements. As an example, the Gold Coast HHS has been trialling a way to link ED and QAS data to identify specific issues with ambulance wait times.

Initiatives to improve emergency department performance

The department plays a key coordinating and oversight role of many improvement initiatives in the emergency department setting. HHSs may also proactively trial initiatives and report their findings and the outcomes to the department, recommending a wider roll out.

At each of the three hospitals we visited, we observed initiatives to improve patient flow through the ED. Case study 1 (Figure 2G) provides examples.

Figure 2G
Case study 1

Initiatives to improve ED performance

Patient access coordination hubs

Seven HHSs have established a patient access coordination hub (PACH). These aim to improve patient flow through better collaboration between QAS and the HHSs.

The PACH model uses real-time data including emergency capacity, ambulance operations, hospital-wide bed availability and scheduled inpatient stays.

The department coordinated a review of the Metro South HHS PACH and identified that the PACH should evolve to focus on improving overall patient flow through the hospital, rather than focusing on managing rapid patient transfer from QAS to the ED.

Queensland Health has been promoting the uptake of a new dashboard for the PACH at selected hospitals. This dashboard provides a range of measures regarding time at ED, hospital occupancy, and status of inter-hospital transfers. On 11 May 2021, the government announced the expansion of PACHs to an additional five HHSs by 30 June 2021, and the remaining HHSs will be included by 31 December 2021.

Rapid transfers or Transfer Initiative Nurse model

Metro South HHS, Gold Coast HHS and West Moreton HHS have processes in place at their main hospitals for the rapid transfer of patients from QAS to EDs. The processes involve the PACH and/or clinical staff identifying the most appropriate patient for priority transfer in response to high QAS demand in the community.

Metro South HHS introduced a new role—a transfer initiative nurse—who aims to support the rapid transfer process by accepting handover of patients from QAS when no ED treatment spaces are immediately available after triage. A transfer of care procedure outlines the QAS's and HHS's responsibilities and identifies an escalation process through to ED doctors and nurses and the Metro South PACH.

On 11 May 2021, the government announced this model would be expanded to Metro North HHS's and Sunshine Coast HHS's main hospitals and will add additional capacity to their existing models. The selection of hospitals was made based on demand, ELOS and POST performance, and availability of space to establish the model.

Nursing autonomy trifecta trial

Logan Hospital has implemented a nursing autonomy trifecta trial, which involves training and authorising nurses to initiate pathology, medication, and x-rays. The initiative is designed to start tests and/or treatment earlier for patients to reduce the patient's length of stay. For example, if a patient requires an x-ray and the process takes two hours to complete, initiating the x-ray earlier should reduce the patient's time in the ED.

This initiative had the greatest effect on patients waiting for acute care. For these patients, average ED stay decreased from six hours and 20 minutes in January 2018 to just under four hours in February 2019 during the trial period.

FRAIL initiative

The FRAIL initiative at Townsville Hospital aimed to improve patient flow for the elderly. It involved having a dedicated nurse for elderly patients in the ED.

Townsville Hospital found that elderly patients assisted as part of the initiative had an average ED stay of 4.8 hours, while those who were not assisted under the initiative had an average ED stay of 5.3 hours. Reviewed patients also had a lower rate of coming back (re-presenting) to the ED for the same condition within a short period of time, and a shorter length of stay for those who were admitted. Funding has been provided to continue and expand the FRAIL initiative to additional EDs.

Source: Queensland Audit Office from information provided by Queensland Health.

Initiatives are not always evaluated

While Case study 1 (Figure 2G) provides some examples where the HHSs and the department have evaluated improvement initiatives to assess their effectiveness, they have not always done so. For example, hospitals we visited were not always able to provide evidence that they evaluated their initiatives, for example the use of short-term treatment areas within EDs. In other cases, the evaluations of strategies trialled have not always been able to identify the key learnings that would lead to improvement in the overall performance of the system as a whole.

Queensland Health has a lack of guidance on how to develop and assess the success of these types of initiatives. Analysing direct cause and effect correlation between improvement activities and outcomes can be difficult due to the complex nature of patient flows, and the nature and growth of emergency activity statewide. These reasons limit its ability to define what success would look like for each initiative.

Despite the difficulties, it remains critical for HHSs and the department to be able to evaluate the initiatives and measure the effectiveness of changes in the EDs. This would allow key learnings to be captured and successful programs to be quickly rolled out to other EDs.

This is particularly important when hospitals have implemented several initiatives in a short time. Logan Hospital acknowledged this in its analysis of nurse-initiated pathology (the nursing autonomy trifecta trial), noting that it was difficult to determine if an improvement in performance could be attributed to the success of a single initiative.

3. Improving data reliability

Queensland's public emergency departments (EDs) are gradually transitioning to FirstNet, a module of Queensland Health's integrated electronic medical record. Currently, half of the 26 reporting hospitals' EDs use FirstNet. Our Report 10: 2018–19 *Digitising public hospitals* found that the hospitals we audited were not experiencing the emergency department performance benefits expected from implementing the digital hospital suite of modules.

We assessed whether performance data on the proportion of patients admitted or discharged from EDs within the four-hour target time is accurately recorded and reported in FirstNet.

In doing so, we examined how ED performance data is:

- recorded, calculated, and checked
- reported within Queensland Health and to the public.

Having effective checks and processes (controls) in place helps prevent human error and assists in delivering accurate and reliable recording of data. At the hospital level, accurate and reliable data assists managers to identify root causes of poor performance and develop solutions.

Our findings from our 2014–15 audit found a lack of controls around data reliability in the previous emergency department information system. We have found similar issues in FirstNet.

Is emergency department four-hour performance data accurate and verifiable?

We found the accuracy and reliability of four-hour performance data recording and reporting is at risk due to a lack of system controls, highly manual processes, and limited and inconsistent data validation practices. We found good practices in monitoring, tracking, and correcting data errors at one of the three hospitals we visited.

FirstNet does not prevent the recording of incorrect data

While FirstNet provides flexibility and functionality for clinicians to record patient treatment information, it does not have robust system controls to prevent errors in data entry. For example:

- it is possible to enter a physical departure time that occurs before the patient arrives (presentation time)—which results in a negative length of stay
- a patient may have a departure status of 'discharged home', but the departure destination may be recorded as an inpatient (hospital) ward. This means that data has been entered incorrectly.

Case study 2 (Figure 3A) gives examples of negative times occurring in FirstNet data. These examples were reported by hospital and health services (HSSs).

Figure 3A
Case study 2

Examples of negative times recorded in FirstNet

ED presentations have five important timestamps: presentation, triage (assessing urgency of treatment), clinical treatment start, clinical treatment end, and physical departure. A negative time will occur if these times occur out of order. The following examples illustrate this.

Hospital A: *Clinical treatment starts after physical departure*

A patient's clinical treatment cannot start after they physically depart the ED. This means that one or more times have been entered incorrectly.

Hospital B*: Presentation time occurs after physical departure*

It is not possible for a patient to physically depart the ED prior to their presentation. In the above example, it appears that the incorrect date was recorded for the physical departure time, resulting in a negative length of stay.

Source: Queensland Audit Office from HHSs' data cleansing reports.

Manual data corrections have improved data quality—but at a cost

In the absence of robust system controls, staff must manually review FirstNet to ensure the data is accurate. Each of the three hospitals we visited had staff dedicated to validating and cleansing (correcting) ED performance data in FirstNet.

Incorrect data may lead to inaccurate performance reporting to the Commonwealth and the community, and may hinder the ability of HHSs to identify root causes for poor ED performance.

The Department of Health (the department) funded temporary data validation officer roles for hospitals using FirstNet from April to July 2019. This was in response to the increased workload involved in maintaining clinical and performance data integrity after these hospitals made the transition from EDIS (Emergency Department Information System—the previous system) to FirstNet.

Queensland Health has also developed a dashboard that highlights potential data validation issues for data teams to review. The aim was to reduce data errors and improve performance reporting. The department recommended that HHSs continue to fund dedicated data managers and data validation roles. However, not all HHSs have the financial resources to do so.

The data cleansing teams at the three hospitals we visited perform a labour-intensive daily data validation process. The scope of the data validation and cleansing activities is limited to:

- data with invalid time durations (such as negative or excessive times)
- instances where the four-hour performance target was not met.

This means data cleansing will generally lead to improved performance against the four-hour wait time target. The quality of the remaining FirstNet data is not being managed and may contain errors relating to patient demographics and treatment provided.

As a result, the performance reported to the Commonwealth and the community may not be accurate, funding for EDs may be at incorrect levels, and demographic data used for planning may not accurately reflect each hospital's current needs.

Two of the three hospitals we visited reported that the extent of errors has decreased over time as ED staff became more familiar with FirstNet. For example, the Gold Coast University Hospital data team made amendments to 37.5 per cent of presentations in May 2019, but this had reduced to a still high 25 per cent in August 2019.

Better practice

We observed good practices at Logan Hospital, where the data team monitored error types and provided weekly feedback to clinical and administrative staff. Its amendment rates decreased from 12.2 per cent in July 2019 to 1.3 per cent in September 2019.

Audit logs of data changes are not monitored

Compared to the previous system EDs used, FirstNet has a better audit log function for tracking changes made to patient records, including timestamps for calculating emergency length of stay.

However, we found that none of the hospitals we visited had processes in place for reviewing changes made to FirstNet data. In the absence of proper monitoring, there is a risk of patient records, including treatment and departure timestamps, being altered and of these alterations not being detected.

DEFINITION

An **audit log** is a chronological list of all entries and amendments to records. It provides documentary evidence of activities that have been changed or affected by a system operation, procedure, or event.

Submission of FirstNet data to the department occurs manually, which may lead to errors

The department collects ED data for performance reporting and funding purposes. The department has issued an Emergency Department Data Collection Manual, which outlines the appropriate process for managing and submitting data to ensure accuracy.

Hospitals using FirstNet need to manually extract data and submit it to the department monthly through a central portal. In comparison, hospitals using the older system do not need to submit data, as the department's enterprise licence allows it to directly access that data.

The submission process for FirstNet data is manual and inefficient. It involves converting all clinical diagnosis codes to the different codes used by the older system, in order to maintain statewide consistency. Coding conversion involves manually copying and pasting data from Microsoft Excel files to text files. This increases the risk of undetected accidental data deletion.

As part of the submission process, hospitals can access system-generated validation reports, which identify invalid records, but only hospitals with dedicated data cleansing teams have the capacity to review validation reports.

Hospitals are unable to check if their submission is correct until after it has been received and uploaded by the department. The hospitals we visited reported instances when they needed to resubmit data multiple times until the department advised the data was complete and accurate.

Is the publicly reported performance of patient off stretcher time reliable?

The reliability of QAS's publicly reported performance of patient off stretcher time (POST) is affected by a lack of system integration and real-time (instant) data validation checks.

In particular, completed records with invalid time intervals and incomplete forms are removed from reported data and are not being reviewed or corrected by QAS, the department, or the HHSs. This means that the number of patient transfers included in performance reporting is less than actual transfers. At some hospitals this can represent up to seven per cent of monthly transfers.

We are planning to undertake an audit on delivering ambulance services in 2022–23. The audit will examine how effectively and efficiently Queensland Health is addressing root cause issues impacting on ambulance performance.

DEFINITION

Patient off stretcher time (POST) starts when an ambulance arrives with an emergency or urgent patient at the hospital. It ends when a patient has been physically transferred from the QAS's stretcher to a treatment area in the emergency department and clinical handover to a clinician has been completed.

There is limited review of invalid time intervals

We analysed a sample of records for our three selected EDs and found that 4.63 per cent of completed forms had an invalid POST interval. The majority of the invalid intervals (3.17 per cent) were negative times.

QAS does not review invalid time intervals due to resource constraints. A review would involve investigating individual ambulance transfer records and identifying the correct time to be recorded. Because QAS does not undertake reviews, it is also unable to provide targeted training and advice to individual staff who frequently make data entry mistakes.

Invalid time intervals are primarily caused by data entry errors. For example, we observed multiple instances of the incorrect year being entered for handover time on the QAS's iPads (used by paramedics to record detailed treatment and transportation information for each patient they attend), resulting in an invalid time interval.

The digital ambulance report form on the QAS's iPads does not have validation controls to prevent incorrect dates or times being entered. In part, this is because the handover time is recorded in a different system from the ambulance dispatch system, which prevents real-time reporting and system validation.

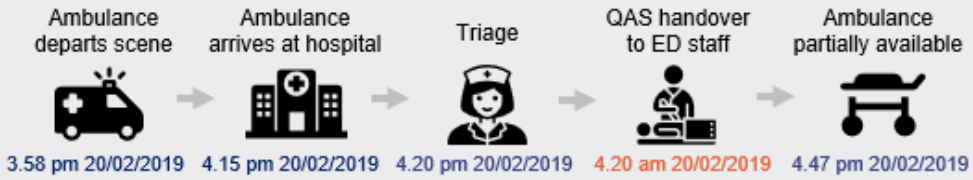
Case study 3 (Figure 3B) shows examples of invalid POST intervals.

Figure 3B
Case study 3

Invalid POST intervals

QAS records timestamps for the status of ambulances and patient transport. These are: depart scene, arrival at hospital, triage time, handover to ED staff, and partially available. Invalid POST intervals can occur when data is entered incorrectly. For example:

1. *Negative POST interval where handover time is before arrival at hospital*

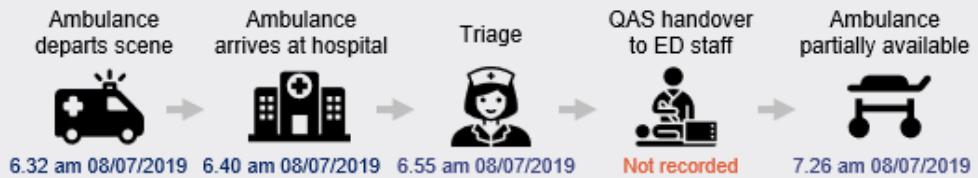


Handover time cannot occur prior to an ambulance arriving at a hospital. In the example above, it appears the handover time has incorrectly been entered as 4.20 am instead of 4.20 pm, which resulted in a POST interval of negative 11.9 hours.

2. *POST interval where handover time is more than eight hours after arrival at hospital*

While it is possible that a patient is not transferred off stretcher after eight hours, a POST interval above eight hours can also be the result of data entry errors. QAS assumes that a POST greater than eight hours is an error. In the example above, the handover time is more than 24 hours after the time the ambulance arrived at the hospital. The handover time is also after the time the ambulance was made partially available, which indicates the incorrect date was recorded for handover time.

3. *POST interval unable to be calculated*



Where a handover time is not recorded, a POST interval cannot be calculated, and the record is excluded from reporting as an invalid POST interval. In the example above, the ambulance arrived at the hospital and triage was completed; however, a handover time was not recorded. This means the POST interval for this patient is unknown. In February 2018, QAS made the handover time field mandatory when a patient has been 'treated and transported by QAS'.

Source: Queensland Audit Office from QAS data.

User access reviews have been infrequent

QAS has a formal process in place to set up new user accounts for accessing the corporate network, dispatch systems, iPads, and databases. However, there has been limited or infrequent reviews of user access to ensure it is current and appropriate, and protecting patient confidentiality.

As a result, we found a number of employees who no longer worked for QAS but still had active user accounts. For example, corporate network accounts for 28 of the 71 employees who left QAS in April 2019 had not been deactivated by November 2019. We found seven of the 28 accounts were accessed after the staff separation date. QAS's review found that the seven accounts did not access patient records after termination.

As a result of our finding, QAS initiated a number of user access quarterly reviews, including network access and critical systems. In October 2020, QAS's ICT Management Committee approved the deactivation of 300 inactive user accounts. QAS now undertakes quarterly reviews of user accounts to ensure appropriate system access.

We reported similar risks in Report 10: 2018–19 *Digitising public hospitals,* where terminated staff could access integrated electronic medical record (ieMR) modules.

4. Implementing the 2014–15 recommendations

Have entities effectively implemented our recommendations?

The Department of Health (the department) and the hospital and health services (HHSs) have fully implemented two of the four recommendations we made in *Emergency department performance reporting* (Report 3: 2014–15).

Figure 4A summarises our assessment. (Our assessment criteria are defined in Appendix B.)

Figure 4A
Implementation status of recommendations made in Report 3: 2014–15

Recommendations made in Report 3: 2014–15	Status
It is recommended that the Department of Health and the hospital and health services:	
1. ensure the definition of 'did not wait' is clearly understood by: 1.1 aligning the Emergency Department Information System (EDIS) terminology reference guide definition of 'did not wait' with the National Health Data Dictionary 1.2 clearly communicating and explaining to emergency department staff how the definition is to be applied 1.3 publicly reporting both the number and percentage of patients who did not wait for treatment and those who left after treatment commenced	Recommendation fully implemented
2. review the role of short stay units and formalise guidelines on their operation and management to reduce inappropriate inpatient admissions	Recommendation partially implemented
3. ensure data sets are accurate and verifiable by: 3.1 reviewing and implementing controls to ensure timely and accurate recording of patient information in EDIS 3.2 recording retrospective amendments that are evidenced and authorised 3.3 reassessing the constraints that led to audit logs being turned off, with a view to re-enabling audit logs and improving accountability	Recommendation partially implemented
4. prior to the completion of the *National Health Reform Agreement—National Partnership Agreement on Improving Public Hospital Services*, undertake a clinical, evidence-based review of the emergency access target to determine an achievable target or targets encouraging timely decision-making without compromising patient safety.	Recommendation fully implemented

Source: Queensland Audit Office.

Recommendation 1—classifying patients who did not wait for treatment

Recommendation 1 was concerned with the correct classification of patients who left an emergency department (ED) without receiving treatment. These included those who did not wait for treatment and those who left after their treatment began.

DEFINITION

- **Did not wait for treatment**—patients left before any treatment commenced.
- **Left after treatment commenced**—patients received some treatment but did not wait to be fully treated.

The difference between the two categories is important, as Queensland public hospitals receive Commonwealth funding for patients who leave after treatment commences but not for those who do not wait for treatment.

The department has fully implemented this recommendation.

In November 2014, the department aligned the definitions of 'did not wait' and 'left after treatment commenced' with those in the National Health Data Dictionary. It communicated the updated definition to hospital and health services (HHSs) through the emergency department terminology reference document published on the Queensland Health intranet. This addressed recommendations 1.1 and 1.2.

The Queensland Health hospital performance website now publicly reports on the number and percentage of ED patients who do not wait and those who leave after treatment commences. This addressed recommendation 1.3. Queensland Health suspended public reporting from February 2020 to September 2020 because of the national agreement to cease routine activities in order to increase capacity and manage the impact of the COVID-19 pandemic.

Recommendation 2—using short stay units

Failure to fully implement this recommendation continues to result in inconsistent use, and a false level of assurance about ED performance.

In our previous report, we found that formal guidelines were not in place for short stay units and as a result, these units may have been incorrectly used to meet the four-hour emergency access targets (the target time period for emergency department length of stay—ELOS). When a patient is admitted to a short stay unit, this stops the clock for the ED four-hour waiting time.

DEFINITION

Short stay units are managed by, and form part of, emergency departments. They are designated treatment areas to manage acute problems for patients with an expected stay greater than four hours but less than 24 hours.

The department published guidelines in December 2014 that clarified the role of short stay units and has since updated them, but we found evidence of inconsistent practices. This means that the risk of inappropriate use remains. The guidelines specify that short stay units are not to be used:

- as a temporary ED overflow area
- to keep patients for the sole purpose of awaiting an inpatient bed, medical imaging, or treatment in the ED.

All three of the hospitals we visited for this follow-on audit had local procedures in place for short stay units. However, two of these were inconsistent with the department's guidelines.

One local procedure allows for patients awaiting diagnostic procedures (such as computerised tomography (CT) scanning or ultrasound) to be admitted to the short stay unit. The procedure also allows stable patients to be physically moved to the short stay unit due to flow surge, in which case they are not to be recorded as a short stay unit admission in the system.

Another local guideline refers to short stay units accommodating patients for a stay of up to 48 hours. It also allows 'anticipated discharge within 24 hours' as a criterion for using short stay units.

All hospitals should ensure their local procedures are in line with statewide guidelines.

Recommendation 3—ensuring data is accurate and verifiable

Failure to fully implement this recommendation continues to expose Queensland Health to the risk of not detecting unauthorised data entries or changes.

Recommendation 3 proposed additional controls in the system, including enabling an audit log function to ensure ED data is accurate and verifiable. Hospitals are not fully funded to implement controls and not all hospitals review data quality. This is discussed for hospitals that use FirstNet in Chapter 3. This means that recommendation 3.1 is not fully implemented.

When our previous report was published, all public hospitals used the Emergency Department Information System (EDIS) to record and report performance against emergency access targets. The department advised that re-enabling EDIS audit log functionality slowed the application to a non-usable speed. Hospitals have not implemented additional controls to evidence that changes are authorised and accurate; meaning recommendation 3.2 is not fully implemented.

Changes to emergency department systems since 2014–15

Since November 2015, 13 of the 26 reporting hospitals in Queensland have moved to FirstNet on a staggered approach. FirstNet is a module of the integrated electronic medical record (ieMR). (A list of these hospitals is available at Appendix F.) The remaining 13 hospitals are expected to move to FirstNet as part of future ieMR rollouts.

Recommendation 4—reviewing the emergency access target

Between 2011 and 2015, the Australian and state governments agreed on a national emergency access target that required hospitals to measure the proportion of patients admitted or discharged from emergency departments within four hours of arrival.

In our 2014–15 report, we recommended Queensland Health undertake a clinical, evidence-based review of the emergency access target to determine an achievable target that would encourage timely decision-making without compromising patient safety. In 2014–15, no Australian state or territory was meeting the then four-hour target of 90 per cent.

Queensland Health fully implemented this recommendation.

In May 2016, Queensland Health clinicians led research into the effectiveness and impacts of four-hour targets. They studied acute ED presentations in 59 Australian hospitals over a four-year period. They found that reducing the four-hour target to 83 per cent of cases would not result in an increase in adverse clinical outcomes.

In 2016, as a result of this research, Queensland Health implemented a performance target of at least 80 per cent of patients having an emergency length of stay of four hours or less.

Appendices

A. Full responses from entities

As mandated in s. 64 of the *Auditor-General Act 2009 (*the Act), the Queensland Audit Office (QAO) gave a copy of this report with a request for comments to:

- the Department of Health, including the Queensland Ambulance Service
- all 16 hospital and health services.

QAO provided this report to the above for consideration and formal comment on 23 June 2021. Per the Act, QAO gave entities 21 days to provide a response for inclusion in the report. Given the pressures health entities are under during COVID, as an exception, we agreed to extend this timeline for the Department of Health. With follow-up, we received a response from the Minister for Health and Ambulance Services on 7 September 2021 and the Director-General, Department of Health on 8 September 2021.

This appendix contains the detailed responses that we received.

The heads of these entities are responsible for the accuracy, fairness, and balance of their comments.

Comments received from Minister for Health and Ambulance Services

Queensland Government

Hon Yvette D'Ath MP
Minister for Health and Ambulance Services
Leader of the House

1 William Street Brisbane Qld 4000
GPO Box 48 Brisbane
Queensland 4001 Australia
Telephone +61 7 3035 6100

C-ECTF-21/9429

Mr Brendan Worrall
Auditor-General
Queensland Audit Office
PO Box 15396
CITY EAST QLD 4002

Email:

Dear Mr Brendan Worrall

Thank you for your email dated 23 June 2021 providing an opportunity to consider and respond to the Queensland Audit Office proposed report to Parliament: *Managing emergency department patient wait time*. I acknowledge receipt of the Report and the contents proposed to be included in the Report and I am aware the Queensland Health Director-General has provided a formal response to the Report.

As you note in the Report, Queensland's public emergency departments continue to experience growth in presentations, specifically with respect to growth in the more complex and acute presentations. Despite this growth however, our public emergency departments continue to see more patients within the clinically recommended time upon their arrival to the emergency department. This is a credit to the hard work of our front-line clinical staff.

Queensland Health is continuously looking to improve the safety, quality and effectiveness of its services and welcomes the report as a contribution to this process. Queensland Health accepts the recommendations in the final report and is committed to ensuring Queenslanders can access emergency care when they need it the most.

I would like to acknowledge the important work undertaken by your team and the opportunity your recommendations provide for Queensland Health to continually improve its processes and practices.

Yours sincerely

Yvette D'Ath

YVETTE D'ATH MP
Minister for Health and Ambulance Services
Leader of the House

Comments received from Director-General, Department of Health

Queensland Government

Queensland Health

Enquiries to:
Healthcare Purchasing and System Performance Division
Telephone:
Our ref:

Mr Brendan Worrall
Auditor-General
Queensland Audit Office
PO Box 15396
CITY EAST QLD 4002

Email:

Dear Mr Worrall

Thank you for your email dated 23 June 2021, regarding the Queensland Audit Office report to Parliament: Managing emergency department patient wait time.

I note the primary objective of the report is to comment on the management of performance and the implementation of the previous report, Report 3: 2014-15 recommendations. Since the original review in 2014-15, and since the commissioning of this 2020-21 review, significant change has occurred in the overall management and system focus of Emergency Department (ED) performance.

I am pleased to report in relation to two of the recommendations from the 2014-15 (Report: 1 Short Stay Unit access guidance and 2) ensuring data is accurate and verifiable, the following:

1. Short Stay Units: the Department of Health (the Department) has provided a detailed, and consistent guideline for Hospital and Health Service use. It is anticipated a current project nearing completion will provide further recommendations around the use of Short Stay Units and virtual wards, including Clinical Decision Units, across Queensland. Noting there is variation in local health needs and the models of care that are best suited to respond to local circumstances; and
2. Data accuracy: the Department continues to work with Hospital and Health Services (HHSs) to develop and implement appropriate solutions leveraging the available functionality of the EDIS system.

The implementation of any administrative or process recommendations must always take into consideration the prioritisation of clinical care and must not inadvertently divert resources from patient care or affect the timeliness of care delivery.

In recognising that care will always take precedence over data entry, the Queensland Data Manager and Business Practice Improvement Officer Forum was established in 2018/19 as a subgroup of the Queensland ED Strategic Advisory Panel. This community of practice has representation from across all Queensland Health EDs with the objective of:

- Supporting the direction and recommendations for current practice/considerations relating to, quality of data and reporting;

Level 37
1 William St Brisbane
GPO Box 48 Brisbane
Queensland 4000 Australia

Website health.qld.gov.au
Email DG_Correspondence@health.qld.gov.au
ABN 66 329 169 412

- Providing leadership, monitoring, mentoring, consistency, and support to the Queensland Data Manager/Business Practice Improvement Officers Forum in meeting the reporting requirements for the State-wide Forum; and
- Ensuring organisational/departmental improvement initiatives are taken and aligned with current and best practice, state, and national quality reform and KPI agendas.

This community of practice supports HHSs in their responsibilities for the validation of the data they submit to the department.

I would like to take this opportunity to articulate further the critical work and resultant progress that has been achieved. The Department, Queensland Ambulance Service and HHSs have progressed strategies across the care continuum to improve patient flow, remove access blockages and support improved performance against emergency access targets. These strategies have played a critical role in improving emergency care for patients and have been implemented as part of a whole-of-hospital approach that supports the patient journey.

A few examples to improve care in the right setting or patient flow across the state include:

- Nurse Navigators to support mental health patients, frequent presenters and those with chronic diseases;
- Residential Aged Care Facility (RACF) support for frail older persons including mobile imaging services to reduce the need to bring aged care patients into the ED after a fall;
- Using remote monitoring for patients with chronic diseases to support care in the community;
- Minor injury illness clinic at Sunshine Coast;
- GP linking service at Redland ED;
- Geriatric Emergency Department Intervention (GEDI) by a group of specifically trained clinicians to see older people presenting to an ED and streamlining the care pathway; and
- Virtual fracture clinics at Redland and Logan hospitals.

Underpinning these strategies is the National Safety and Quality Framework which requires HHSs to ensure that the delivery of patient-focused care is respectful of, and responsive to, the preferences, needs and values of patients and health consumers.

As you recognise in your report, over the last few years there has been significant growth in demand for unplanned care prior to the COVID-19 pandemic. Since the commencement of the pandemic our EDs have been placed under additional pressure with further demands for services in addition to managing the lasting operational impacts of COVID-19 precautions. As the front door to our acute hospitals, EDs have had to adopt new infection control measures critical for the safety of both staff and patients such as social distancing and Personal Protective Equipment requirements. These processes have increased the time required to provide treatment, impact patient flow and therefore emergency length of stay performance. In addition, several Queensland hospitals are providing COVID-19 fever clinics from their EDs.

To support our EDs respond to service demands and manage the realities of COVID-19, Queensland Health has made a range of investments to support the sustainable management of unplanned care demand. These investments have focused on delivering change across three strategic aims:

1. Investments to expand the options to provide care in the right setting, outside acute hospitals and EDs where clinically appropriate. To support this strategy investments have been made to establish and expand the joint QAS and Queensland Health mental health co responder model which supports patients accessing mental health care and avoid an attendance at an ED. This strategy was also supported by the Care in the Right Setting program, expanding Hospital in the Home services and other innovative service models across the state;
2. Investment to support patient flow within hospital and between the QAS and our public EDs. The Transfer Initiative Nurse model is an example of an investment that supports

this strategic aim. This model enables transfer of care from the QAS to a public ED earlier, supporting ambulance response times in the community; and

3. Investment to increase bed capacity available to Queenslanders accessing public services. To support increased bed capacity in the second half of 2020-21, the Department invested over $25 million to rapidly expand acute bed capacity for public patients.

Building on these strategic aims, aligned with the unprecedented demand being experienced by the public system, Queensland Health has launched the Care4Qld strategy. By delivering this phased investment strategy, Queensland Health will enhance access to emergent unplanned care where and when Queenslanders need it most. Care4Qld will reshape service delivery to support the healthcare system response to current and future demand. Care4Qld will streamline access to emergency care to Queenslanders by:

- Delivering care where and when it is needed by an appropriate clinician - delivering virtual care and care closer to home;
- Supporting Queensland Ambulance response times through timely handover and acceptance of care into public EDs; and
- Improving flow through bed occupancy management strategies to support efficient patient flow leveraging a whole of system perspective. That is, improving the utilisation of existing public hospital beds and increasing the number of hospital beds available for public activity.

In 2021-22 Queensland Health initially invested $100 million across a range of initiatives to improve Queenslanders access to emergency care. Care4Qld has invested in models of care to support care in the right setting, and for those who present to hospital, keep their stay as short as clinically appropriate. Leveraging the scale and spread of proven, effective models to support sustainable healthcare. This strategy will support Queenslanders access to unplanned care via the following initial investment:

- Over $50 million to increase bed availability. For example, additional beds have been commissioned at Ipswich Hospital and QEII Hospital in 2021-22;
- Over $20 million to deliver care where and when it is needed. Including expansion of the successful Mental Health Co-responder model and the Residential Aged Care Support Service program;
- Over $13 million to improve the interface between EDs and the community, either via walk in presentations or via the QAS. This investment includes the expansion of the Transfer Initiative Nurse model; and
- Over $17 million to maximise utilisation of Hospital in the Home and virtual care.

Parallel to this, the existing ED key performance measures have been reviewed to deliver a more holistic reporting on the interfaces between QASs, ED and Hospital in patient bed capacity.

More recently, through the 2021-22 State Budget, the Government committed funding to deliver on Queensland Health's key priorities. The Budget included additional funding of $482.5 million in 2021–22 to address pressures in emergency patient flow through our public hospitals, elective surgery and specialist outpatient waitlists and to support the opening of the Nambour General Hospital Redevelopment.

This significant funding boost has enabled the rapid expansion of the Care4Qld strategy to respond to the unprecedented emergency and unplanned care demand being experienced by the Queensland public health system.

Specifically, a key pillar of the Care4Qld strategy is increasing the number of beds available for our communities accessing public care. Care4Qld Phase 2 was announced on 30 July 2021 with an additional investment of $163.7 million. This investment is supporting the system to rapidly increase capacity by 351 beds. The rapid bed expansion aims to improve access to

emergency and unplanned care, by expanding the inpatient bed capacity for Queenslanders who have care needs best suited to inpatient hospital care.

Finally, you may be aware in late 2020, the Queensland Government committed to invest $265 million to deliver seven new innovative Satellite Hospitals across South East Queensland to help take the pressure off EDs and provide hospital care closer to home.

Should you or officers of your Department require further information, the Department of Health's contact is [redacted] Healthcare Purchasing and System Performance Division, on telephone [redacted]

Yours sincerely

Dr John Wakefield PSM
Director-General
03/09/2021

4

Responses to recommendations—Department of Health

Queensland Audit Office
Better public services

Queensland Health

Measuring emergency department patient wait time

Response to recommendations provided by Dr John Wakefield, Director-General, Queensland Health on 8 September 2021.

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
We recommend that the Queensland Health (including QAS and HHSs): 1. improve the accuracy of emergency department (ED) data recorded and quality of data checks and corrections (data cleansing) required by HHSs. This should include: • implementing system controls in FirstNet (a module of Queensland Health's integrated electronic medical record system) to prevent or alert users to invalid data entry • ensuring a consistent approach in scope and resourcing across hospitals to the cleansing of ED data, including a focus on the accuracy of all data, not just that relating to instances that do not meet targets	Agree		Queensland Health continues to work in partnership with HHSs to improve accuracy and quality of emergency department data: • a dashboard has been developed that highlights potential data validation issues which are then reviewed by the HHS Data Managers, responsible for data integrity, to assist in alerting users of data entry errors. • to support the integrity of time stamps and implement stronger controls, processes have been developed to improve the validity of the data reported, instruction manuals and training to support data entry officers and data managers along with providing sufficient time to validate data prior to submission to the Department. • coordinating live data feeds from QAS into the HHSs and the Department via the state wide patient access coordination hubs. The QAS also provides an officer to work alongside HHS staff to better coordinate emergencies and inter hospital transfers. The Department and HHSs continue to identify appropriate workable solutions for consistency between systems. However, the age of the system and the impact the audit function could have on the clinical workforce and associated costs (given the current QH version of EDIS does not have the ability to add new functionality such as radio-frequency identification), needs to be taken into consideration. The Department of Health will partner with clinical networks and the system vendor to uplift functionality in FirstNet to improve controls to enhance the quality of the data.

1

Queensland Audit Office
Better public services

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
2. improve how patient off stretcher time is recorded or reported, including: • implementing validation controls for recording arrival and handover times • resuming the system integration project to improve real-time (instant) sharing of QAS data with EDs	Agree		Through The Emergency Department Data Collection guidelines, appropriate processes for managing and submitting data to ensure accuracy of data submission is outlined with clear data definitions available via the data manual. The Department will work with QAS and Hospital and Health Services to resume the state-wide rollout of the Digital Ambulance Report Application, enabling electronic transfer of the 'electronic Ambulance Report Form (eARF)' data to Queensland Health emergency departments (currently in pilot at Princess Alexandra Hospital), whilst further scoping work is undertaken to integrate systems and provide real-time data sharing.
3. continue with the current initiatives to promote measures of performance and outcomes in all parts of care affecting ED performance, and implement measures that provide a more holistic view of ED performance	Agree		The recommendation is agreed, with change already occurring prior to the release of the report to better reflect a suite of performance measures and outcomes that provide a more holistic view of Emergency patient flow. In 2021 updates have occurred to the key performance indicators that inform the Performance and Accountability Framework associated with HHS Service Agreements. These changes include amending the admitted emergency length of stay indicator to a hospital access target to better reflect the interactions between emergency department capacity and inpatient bed capacity. This measure will also be enhanced by the addition of a new patient flow measure which will monitor the time between the decision to admit a patient and when the patient leaves the emergency department. The performance measures of patients in an emergency department greater than 24 hours, and Emergency Department wait time by triage continue to remain, with a further addition of an emergency surgery measure currently under development and planned to be implemented in 2021-22. This suite of KPIs in addition to the existing broader system KPIs will support a more holistic view of the emergency department and its relationship with both the Queensland Ambulance Service and inpatient hospital capacity. Queensland Health is delivering the Care4Queensland Strategy; through this Strategy, the establishment of the Patient Flow Collaborative will look to implement the SAFEST bundle to support patient flow and address KPIs and measures to support each stage of the patient journey.

2

Queensland Audit Office
Better public services

	Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
4.	develop and implement guidelines for HHSs to identify measures of success before starting improvement initiatives and to evaluate the effectiveness of initiatives to improve ED performance	Agree		The recommendation is agreed. QH regularly evaluates projects prior to continuation/expansion of improvement initiatives - the Transfer Initiative Nurses (TIN) is an example. This project focused on facilitating safe practices when transferring the clinical care of a patient from a paramedic to a Transfer Initiative Nurse. It has demonstrated positive impacts including improving timely handover of care and better load sharing when the program was introduced. QH is delivering the Care4Queensland Strategy; through this Strategy, the establishment of the Patient Flow Collaborative will look to implement the SAFEST bundle to support patient flow and address KPIs and measures to support each stage of the patient journey. Already in existence are processes and committees, part of their remit to support the effective development and evaluation of emergency department strategies. In 2018 the Patient Access Advisory Committee (PAAC)was reconstituted. The Committee has the remit of providing strategic advice to the System Management advisory Committee on issues affecting consumer access to public acute health services and timely flow through the episode of patient care. The peer exchange program was established as an extension of PAAC. The program sees a group of Emergency Department clinical experts review an existing Emergency Department and their strategies to manage demand with the intent to provide independent analysis and recommendations of the effectiveness of the existing strategies and to also offer further recommendations for consideration. The Department will work with PAAC to strengthen the approach in reviewing and assessing the effectiveness of ED improvement strategies.

3

Queensland Audit Office
Better public services

	Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
				From a system perspective further governance, advice and evaluation occurs in partnership with the Queensland Emergency Department Strategic Advisory Panel (QEDSAP) which draws on the State's Emergency Departments together to utilise their combined knowledge, clinical and operational expertise to influence, progress, develop and reform emergency care in Queensland. The Promoting Value-based care in Emergency Departments (PROV-ED) Project supports widespread implementation of locally established, value-based healthcare initiatives in Queensland Emergency Departments (EDs). Selection of initiatives disseminated under the PROV-ED Project includes a state-wide EOI, with the selection process culminating in shortlisted applicants presenting at the "PROV-ED Pitchfest". Six initiatives were selected at the inaugural Pitchfest in 2019, and a further four at the 2020 event. With each of these proposals being robustly evaluated and recommendations for rollout post the annualised trial. The Department will assess the viability of extending the PROV-ED methodology to a broader range of ED initiatives in partnership with PAAC and QEDSAP.
5.	monitor and report on the use of short-term treatment areas within EDs (such as short stay units, clinical decision units, and any other equivalent units that stop the clock on measuring emergency length of stay)	Agree		Queensland Health is nearing finalisation of the ED-AIR Project. This will provide recommendations around the use of Short Stay Units (SSU) and virtual wards including Clinical Decision Units mental health units across Queensland. It will likely include the need to: • Update Emergency Department (ED) Data Collection to ensure standard ED data definitions • Develop clear clinical principles for patient care • Review of the 'SSU Guideline' and the 'Queensland Health Admission' guidelines

4

Responses to recommendations—Queensland Ambulance Service

Queensland Audit Office
Better public services

Queensland Health

Measuring emergency department patient wait time

Response to recommendations provided by QAS on 28th July 2021

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
We recommend that the Queensland Health (including QAS and HHSs): 1. improve the accuracy of emergency department (ED) data recorded and quality of data checks and corrections (data cleansing) required by HHSs. This should include: • implementing system controls in FirstNet (a module of Queensland Health's integrated electronic medical record system) to prevent or alert users to invalid data entry • ensuring a consistent approach in scope and resourcing across hospitals to the cleansing of ED data, including a focus on the accuracy of all data, not just that relating to instances that do not meet targets	Agree	N/A	QAS has no concerns/issues with this recommendation and is of the opinion that this recommendation pertains to QHealth.

1

Queensland Audit Office
Better public services

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
2. improve how patient off stretcher time is recorded or reported, including: • implementing validation controls for recording arrival and handover times • resuming the system integration project to improve real-time (instant) sharing of QAS data with EDs	Agree	QAS last met with the CIO on Friday 16th July 2021 and is ready to progress when QH indicates their ability to do so.	QAS recognises that this recommendation pertains to both QAS and QHealth. QAS remains supportive of resuming the system integration project. If the initiative resumes QAS would respectfully suggest that a review of the business requirements is undertaken to ensure the current as built state meets future expectations. If it does continue in its current state QAS recognises the requirement to collaborate on testing the solution to ensure a safe rollout. If the current as built state does not meet expectations, it would be best to start with specifying business requirements towards developing a robust solution. For either option QAS recognises the need to review supplier arrangements for this next phase of the program. In terms of QAS involvement to date QAS has worked towards collaborative approaches to data integration which is exampled through the DARA project. QAS has met on multiple occasions to discuss the required data sets and the more specific content. Additionally, the QAS has also provided sample POST related data (excluding the actual handover time as this will be a QH timestamp) to assist with this project and evidenced in *Appendix 1*. The Computer Aided Dispatch (CAD) data can be provided in near real-time. It contains QAS data related to the timestamps that QAS capture. This can then be supplemented with Triage, Off Stretcher and Handover times sourced from QH timestamps. Currently our Operational Business Intelligence and Planning Unit provide daily data (dashboards/raw data) via Cognos which doesn't contain sensitive data. The QAS undertakes many measures to improve the accuracy of QAS data and this includes measures of cleansing. QAS remains supportive to maintaining this current approach, along with the opportunity to provide data to the HHS on an ongoing basis. In addition, since the introduction of the Care4Queensland initiative, the QAS has improved the supply of data to the department with weekly performance and POST related data supplied, in addition to daily POST data being supplied to each HHS executive. QAS remains committed to improving eARF data collection through regular staff engagement and the importance of accurate 'paramedic to nurse handover' record keeping improving patient care outcomes. This will include improved validation procedures and learning aids, targeted at improving the current 4% rate of invalid timestamps.

2

Queensland Audit Office
Better public services

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
3. continue with the current initiatives to promote measures of performance and outcomes in all parts of care affecting ED performance, and implement measures that provide a more holistic view of ED performance	Agree	N/A	QAS is of the opinion that these two recommendations pertain to QHealth, however believes that there could be further improvement through mandating and enforcing a directive 'that no patient waits longer than 60 minutes'. Through the enforcement of a 60 minute off stretcher marker this would improve patient safety outcomes, for those in QAS care at a facility, whilst also pending in the community without medical attention. QAS has previously raised the potential for an absolute time marker to support this and put this forward as an additional opportunity for improvement. (i.e. 100% POST at 60 minutes). QAS would respectfully request that this be implemented in the form of a Directive rather than a Guideline. The audit report mentions the implementation of some initiatives in the HHSs, yet there appears to be no evaluation/review mechanisms in which some initiatives are no longer continued. QAS feels that through the implementation of a directive there is an opportunity for improved rigour around measurement and compliance, which ultimately will assist drive improved outcomes.
4. develop and implement guidelines for HHSs to identify measures of success before starting improvement initiatives and to evaluate the effectiveness of initiatives to improve ED performance	Agree	N/A	
5. monitor and report on the use of short-term treatment areas within EDs (such as short stay units, clinical decision units, and any other equivalent units that stop the clock on measuring emergency length of stay)	Agree	N/A	QAS has no concerns/issues with this recommendation and is of the opinion that this recommendation pertains to QHealth.

Appendix 1.

QH PATIENT ARRIVALS				
Column Name	**ID**	**Null**	**Data Type**	**Description**
T_INCIDENT	1	Y	Varchar2(12)	Incident Number
C_UNIT	2	Y	Varchar2(10)	Unit number of the assigned vehicle.
T_MPDS	3	Y	Varchar2(50)	Medical Priority Dispatch System code.
D_RECEIVED	4	Y	Date	Date / Time the call was received.
D_ATDEST	5	Y	Date	Date / Time the unit arrived at the hospital.
D_AVAILABLE	6	Y	Date	Date / Time the unit called partially available.
D_CLEAR	7	Y	Date	Date / Time the unit called clear.
T_HOSPITAL_NAME	8	Y	Varchar2(256)	Name of the Hospital the unit transported the patient to.
T_TPT_PRIORITY	9	Y	Varchar2(12)	The Transport priority.
T_PRIORITY_DESC	11	Y	Varchar2(10)	Priority Description. This is the priority code derived from the MPDS code.

3

Responses to recommendations—Cairns and Hinterland Hospital and Health Service

Queensland Audit Office
Better public services

Queensland Health

Measuring emergency department patient wait time

Response to recommendations provided by Cairns and Hinterland Hospital and Health Service 12.07.21.

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
We recommend that the Queensland Health (including QAS and HHSs): 1. improve the accuracy of emergency department (ED) data recorded and quality of data checks and corrections (data cleansing) required by HHSs. This should include: • implementing system controls in FirstNet (a module of Queensland Health's integrated electronic medical record system) to prevent or alert users to invalid data entry • ensuring a consistent approach in scope and resourcing across hospitals to the cleansing of ED data, including a focus on the accuracy of all data, not just that relating to instances that do not meet targets	Agree	Department to determine timeframe for modifying FirstNet	. The CHHHS will look at existing roles and functions of staff allocated to cleansing ED data. To address this recommendation there may a requirement for additional funded dedicated positions above the current FTE.

1

Queensland Audit Office
Better public services

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
2. improve how patient off stretcher time is recorded or reported, including: • implementing validation controls for recording arrival and handover times • resuming the system integration project to improve real-time (instant) sharing of QAS data with EDs	Agree	Q4 2021	With the introduction of FirstNet, POST data is no longer reported by the CHHHS and is supplied by QAS. There are often discrepancies between the data reported by QAS and the local data recorded in FirstNet and the POST data is seen as unreliable. One reason for this is the definition of POST, with varying view of what constitutes 'off stretcher' and 'arrival time at ED'. A consistent statewide process agreed by both QAS and QH is required.
3. continue with the current initiatives to promote measures of performance and outcomes in all parts of care affecting ED performance, and implement measures that provide a more holistic view of ED performance	Agree	Q3 2021	CHHHS has dashboards displaying performance metrics for all ED site that update in near real time. For Cairns Hospital, the use of 2:1:1 report is used to measure effectiveness with 2 being the first 2 hours of the patients time in ED and largely focusses on the ED treatment, the first 1 being the time taken for an inpatient team to attend to the patient once a referral is received and the final 1 being the time taken for the patient to depart the ED to an inpatient ward where required.
4. develop and implement guidelines for HHSs to identify measures of success before starting improvement initiatives and to evaluate the effectiveness of initiatives to improve ED performance	Agree	Q3 2021	
5. monitor and report on the use of short-term treatment areas within EDs (such as short stay units, clinical decision units, and any other equivalent units that stop the clock on measuring emergency length of stay)	Agree	Q3 2021	Measure currently used is percentage of patients subsequently admitted to another inpatient unit (aim for < 15%)

2

Responses to recommendations—Central West Hospital and Health Service

Queensland Audit Office
Better public services

Queensland Health

Measuring emergency department patient wait time

Response to recommendations provided by **Central West Hospital & Health Service on 13 July 2021**

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
We recommend that the Queensland Health (including QAS and HHSs):			
1. improve the accuracy of emergency department (ED) data recorded and quality of data checks and corrections (data cleansing) required by HHSs. This should include: • implementing system controls in FirstNet (a module of Queensland Health's integrated electronic medical record system) to prevent or alert users to invalid data entry • ensuring a consistent approach in scope and resourcing across hospitals to the cleansing of ED data, including a focus on the accuracy of all data, not just that relating to instances that do not meet targets	Agree		No concerns/issues with Central West Hospital and Health service
2. improve how patient off stretcher time is recorded or reported, including: • implementing validation controls for recording arrival and handover times • resuming the system integration project to improve real-time (instant) sharing of QAS data with EDs	Agree		No concerns/issues with Central West Hospital and Health service
3. continue with the current initiatives to promote measures of performance and outcomes in all parts of care affecting ED performance, and implement measures that provide a more holistic view of ED performance	Agree		If necessary
4. develop and implement guidelines for HHSs to identify measures of success before starting improvement initiatives and to evaluate the effectiveness of initiatives to improve ED performance	Agree		If necessary
5. monitor and report on the use of short-term treatment areas within EDs (such as short stay units, clinical decision units, and any other equivalent units that stop the clock on measuring emergency length of stay)	N/A		

1

Responses to recommendations—Children's Health Queensland Hospital and Health Service

Queensland Audit Office
Better public services

Queensland Health

Measuring emergency department patient wait time

Response to recommendations provided by Children's Health Queensland HHS on 15 July 2021.

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
We recommend that the Queensland Health (including QAS and HHSs): 1. improve the accuracy of emergency department (ED) data recorded and quality of data checks and corrections (data cleansing) required by HHSs. This should include: • implementing system controls in FirstNet (a module of Queensland Health's integrated electronic medical record system) to prevent or alert users to invalid data entry • ensuring a consistent approach in scope and resourcing across hospitals to the cleansing of ED data, including a focus on the accuracy of all data, not just that relating to instances that do not meet targets	Agree		
2. improve how patient off stretcher time is recorded or reported, including: • implementing validation controls for recording arrival and handover times • resuming the system integration project to improve real-time (instant) sharing of QAS data with EDs	Agree		
3. continue with the current initiatives to promote measures of performance and outcomes in all parts of care affecting ED performance, and implement measures that provide a more holistic view of ED performance	Agree		
4. develop and implement guidelines for HHSs to identify measures of success before starting improvement initiatives and to evaluate the effectiveness of initiatives to improve ED performance	Agree		
5. monitor and report on the use of short-term treatment areas within EDs (such as short stay units, clinical decision units, and any other equivalent units that stop the clock on measuring emergency length of stay)	Agree		

1

Responses to recommendations—Darling Downs Hospital and Health Service

Queensland Audit Office
Better public services

Queensland Health

Measuring emergency department patient wait time

Response to recommendations provided by:

Darling Downs Hospital and Health Service on 26 July 2021

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
We recommend that the Queensland Health (including QAS and HHSs): 1. improve the accuracy of emergency department (ED) data recorded and quality of data checks and corrections (data cleansing) required by HHSs. This should include: • implementing system controls in FirstNet (a module of Queensland Health's integrated electronic medical record system) to prevent or alert users to invalid data entry • ensuring a consistent approach in scope and resourcing across hospitals to the cleansing of ED data, including a focus on the accuracy of all data, not just that relating to instances that do not meet targets	Agree	Already occurring	Darling Downs Health (DDH) undertakes daily auditing to ensure accuracy of data within the EDIS platform, centred around ELOS, SIT, POST etc. Triage auditing also occurs on a monthly basis. Auditing (data cleansing) will continue.
2. improve how patient off stretcher time is recorded or reported, including: • implementing validation controls for recording arrival and handover times • resuming the system integration project to improve real-time (instant) sharing of QAS data with EDs	Agree	Already occurring	DDH undertakes daily auditing (data cleansing occurs) in relation to POST. There are escalation processes in place between DDH and QAS for delayed off stretcher time and this also ensures accuracy of data. There are also monthly liaison meetings which occur between DDH and QAS at an executive level whereby POST and QAS lost time reports are tabled and discussed.
3. continue with the current initiatives to promote measures of performance and outcomes in all parts of care affecting ED performance, and implement measures that provide a more holistic view of ED performance	Agree	Already occurring – ongoing	Continuous reporting and engagement of whole of hospital approach to identify and implement measures to improve patient flow.
4. develop and implement guidelines for HHSs to identify measures of success before starting improvement initiatives and to evaluate the effectiveness of initiatives to improve ED performance	Agree	Ongoing	Continuous reporting occurs in which to determine effectiveness of change of process/initiatives etc.

1

Queensland Audit Office
Better public services

	Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
5.	monitor and report on the use of short-term treatment areas within EDs (such as short stay units, clinical decision units, and any other equivalent units that stop the clock on measuring emergency length of stay)	Agree	Already occurring	Daily reporting to continue regarding use of admitted spaces within ED to ensure consistent and appropriate use – guidelines/procedures in place.

2

Responses to recommendations—Gold Coast Hospital and Health Service

Queensland Audit Office
Better public services

Queensland Health

Measuring emergency department patient wait time

Response to recommendations provided by Gold Coast Hospital and Health Service (GCHHS) on 14 July 2021

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
We recommend that the Queensland Health (including QAS and HHSs): 1. Improve the accuracy of emergency department (ED) data recorded and quality of data checks and corrections (data cleansing) required by HHSs. This should include:	Agree	GCHHS has dedicated data management staff to ensure timely rectification of any data errors	IEMR is State based and any changes require State consultation and then execution by CERNER. The CERNER application suite is a shared platform and enhancements need to consider state-wide impacts. The GCHHS has initiated a project to facilitate improved clinical documentation by providing clear guidance and support for clinicians.
• ensuring a consistent approach in scope and resourcing across hospitals to the cleansing of ED data, including a focus on the accuracy of all data, not just that relating to instances that do not meet targets	Agree	In place since the implementation of FirstNet	The senior data cleansing staff focus is to identify trends in errors made by clinicians. An education and upskilling plan is then implemented. Staff orientation includes education in the use of FirstNet and the importance of accurate documentation.

1

Queensland Audit Office
Better public services

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
2. Improve how patient off stretcher time is recorded or reported, including:			
• implementing validation controls for recording arrival and handover times	Agree	Needed this financial year	Currently reliant on QAS data/ processes. The preference would be a State-wide system which could be part of the FirstNet encounter or alternatively implemented through MIS. GCHHS have live data feeds into DSS and MIS which assists with accurate reporting. This could be rolled out State-wide and requires a joint project plan with QAS engagement.
• resuming the system integration project to improve real-time (instant) sharing of QAS data with EDs	Agree	Requires detailed analysis and project plan	Currently have real time data through PATCH and arrival boards in coordination hub and ED triage. ED clinician engagement is required to ensure that any changes are fit for purpose and result in improved ED performance. At GCHHS, collaboration between ED leadership and MIS has resulted in a superior product which could be rolled out State-wide.

2

Queensland Audit Office
Better public services

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
3. Continue with the current initiatives to promote measures of performance and outcomes in all parts of care affecting ED performance, and implement measures that provide a more holistic view of ED performance	Agree	Project methodology to implement agreed initiatives that promote timely, quality care and support flow through the ED and broader system	Patient flow initiatives are focused across the organisation and are data driven to ensure success. The GCHHS has invested in the System view hospital analytics system for near real time trending of activity to allow clinicians to respond to changing factors that ultimately impact on efficiency. AT GCHHS, ED performance is a shared responsibility across the organisation. Strategies to improve bed management and bed allocation identified and progressed. Need improved utilisation of PFM and fund State-wide PFM enhancements. Engagement with HHSs to determine further enhancements. Strategies to improve coordination of scheduled and unscheduled care have been identified and planned to progress. These strategies include: ▪ Review of bed configuration at both hospitals ▪ Hub review and bed management enhancements ▪ Discharge and patient flow ▪ Complex care management ▪ Opening of Complex Management Unit 26 July ▪ Criteria led discharge initiative with General Medicine commenced 6 July ▪ Re-opening of Day Medical and Clinical Trials Unit 2 August ▪ Crisis Stabilisation Unit and community support model commences 9 August ▪ Planning for urgent care centre has commenced ▪ Relocation of fever clinic at GCUH to provide space for urgent care centre ▪ Opening of Broadbeach Vaccination Centre to allow re-opening of Day Medical and Clinical Trials Unit ▪ EPIC and TIN positions rostered at both EDs ▪ Community Services Redesign progressing well ▪ Interim Demand Measures planning progressing well

3

Queensland Audit Office
Better public services

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
4. Develop and implement guidelines for HHSs to identify measures of success before starting improvement initiatives and to evaluate the effectiveness of initiatives to improve ED performance	Agree	This financial year	Consistent with a State-wide approach to guide HHSs and support benchmarking
5. Monitor and report on the use of short-term treatment areas within EDs (such as short stay units, clinical decision units, and any other equivalent units that stop the clock on measuring emergency length of stay)	Agree	This financial year	Data is currently available. State-wide discussion continues re Off Clock areas. The management of MH beds within ED needs to be consistent across the State. At GCHHS, mental health patients are only admitted (off clock) when patient is in the CDU area. The guideline in relation to MH presentations needs to be reviewed and consistently applied.

4

Responses to recommendations—Mackay Hospital and Health Service

Queensland Audit Office
Better public services

Queensland Health

Measuring emergency department patient wait time

Response to recommendations provided by Mackay Hospital and Health Service on 13 July 2021

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
We recommend that the Queensland Health (including QAS and HHSs): 1. improve the accuracy of emergency department (ED) data recorded and quality of data checks and corrections (data cleansing) required by HHSs. This should include: • implementing system controls in FirstNet (a module of Queensland Health's integrated electronic medical record system) to prevent or alert users to invalid data entry • ensuring a consistent approach in scope and resourcing across hospitals to the cleansing of ED data, including a focus on the accuracy of all data, not just that relating to instances that do not meet targets	Agree	Q1 2021 – 2022. Timeline for further enhancements for data quality dependent on Department of Health implementation. Timelines for implementation of alerts for users on invalid data entry subject to Department of Health.	Existing data quality checks and corrections at Mackay Base Hospital. Consistent approach in scope and resourcing across hospitals for the cleansing of data subject to Department of Health advice and resourcing.
2. improve how patient off stretcher time is recorded or reported, including: • implementing validation controls for recording arrival and handover times • resuming the system integration project to improve real-time (instant) sharing of QAS data with EDs	Agree	Timeframe for implementation subject to integrated planning between QAS and Department of Health	HHS will implement local processes once a consistent Statewide process is confirmed.
3. continue with the current initiatives to promote measures of performance and outcomes in all parts of care affecting ED performance, and implement measures that provide a more holistic view of ED performance	Agree	Q3 2021-22	HHS will continue with current initiatives including implementation of dashboards to support holistic performance monitoring.
4. develop and implement guidelines for HHSs to identify measures of success before starting improvement initiatives and to evaluate the effectiveness of initiatives to improve ED performance	Agree	Timeframe for implementation subject to Department of Health	HHS will adopt guidelines once available
5. monitor and report on the use of short-term treatment areas within EDs (such as short stay units, clinical decision units, and any other equivalent units that stop the clock on measuring emergency length of stay)	Agree	Q2 2021-22	HHS will continue to monitor and report on use of short-term treatment areas within EDs, as applicable

1

Responses to recommendations—Metro North Hospital and Health Service

Queensland Audit Office
Better public services

Queensland Health

Measuring emergency department patient wait time

Response to recommendations provided by Metro North Hospital and Heath Service on 15 July 2021

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
We recommend that the Queensland Health (including QAS and HHSs): 1. improve the accuracy of emergency department (ED) data recorded and quality of data checks and corrections (data cleansing) required by HHSs. This should include: • implementing system controls in FirstNet (a module of Queensland Health's integrated electronic medical record system) to prevent or alert users to invalid data entry, and an appropriate solution for EDIS. • ensuring a consistent approach in scope and resourcing across hospitals to the cleansing of ED data, including a focus on the accuracy of all data, not just that relating to instances that do not meet targets	Agree	Quarter	Investigate the option of mandating the maximum number of data entry fields in both systems as possible This will require a seismic cultural shift in the practices within the Emergency Department, particularly around the data entry of seen times, consult times in EDIS/FirstNet. QR code check ins could be developed. A number of departments use a generic log-ins which makes it hard to track who/which role is entering the data. This is particularly about EDIS.
2. improve how patient off stretcher time is recorded or reported, including: • implementing validation controls for recording arrival and handover times. • resuming the system integration project to improve real-time (instant) sharing of QAS data with EDs	Agree	Quarter	This will require a collaborative with QAS and QLD Health to define a solution. Currently there are gaps between QAS ambulances arriving at the Emergency Department and commencement of triage. Recommend manual data study over several HHS's to identify the magnitude of this issue.
3. continue with the current initiatives to promote measures of performance and outcomes in all parts of care affecting ED performance, and implement measures that provide a more holistic view of ED performance	Agree	Quarter	The current data capture in EDIS does not reflect the actual delays in patient processing and journey through the Emergency Department due to inaccuracy, missing data points. Recommend manual data collection across a number of HHS's to capture data and compare with EDIS/Firstnet data. There is a need to establish an agreed baseline of data that not only includes the Emergency Department but also those inpatient and bed management processes that impact on Emergency Department Performance.

1

Queensland Audit Office
Better public services

	Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
4.	develop and implement guidelines for HHSs to identify measures of success before starting improvement initiatives and to evaluate the effectiveness of initiatives to improve ED performance	Agree	Quarter	As above, there are several processes within the Emergency Department that occur with staff from outside of the Emergency Department. There is a need to establish an agreed baseline of data that not only includes the Emergency Department but also those inpatient and bed management processes that impact on Emergency Department Performance. The initiatives should be implemented and tracked against a baseline understanding of the entire patient journey through an Emergency Department.
5.	monitor and report on the use of short-term treatment areas within EDs (such as short stay units, clinical decision units, and any other equivalent units that stop the clock on measuring emergency length of stay)	Agree		Identify the reasons for inappropriate admissions to the EDSSU and ensure initiatives are implemented to specifically address these. These often lie outside of the Emergency Department.

Cleared by:

Metro North Health
16 / 07 / 2021

2

Comments received from Chief Executive, Metro South Hospital and Health Service

Queensland Government

Metro South Health

Enquiries to: Metro South Health
Telephone:
Your Ref:
Date: 13 July 2021

Office of the Chief Executive

Mr Brendan Worrall
Auditor-General
Queensland Audit Office

By email: qao@qao.qld.gov.au

Dear Mr Worrall

Thank you for the opportunity to provide comment on your follow-up report on emergency department performance reporting.

Metro South Health (MSH) is proud to have been associated with initiatives to increase timelines of care to patients in emergency departments and coordination with the Queensland Ambulance Service. As your report highlights these have included the patient access co-ordination hubs, the transfer initiative nurses and enabling nurses work to a higher scope by ordering appropriate tests.

However, MSH acknowledges more needs to be done. As you have shown, demand for service has outpaced population growth.

MSH agrees that performance does depend on available emergency and inpatient beds and staffing. MSH notes that since the report in 2014-15, the Queensland Government has provided capital funding to narrow the gap in MSH between beds in hospitals and the statewide and national averages of 2.5 beds per 1000 population.

MSH notes, and agrees with, your comments regarding short stay units and their use. However, when ramping or ambulance activity increases and other beds are in short supply, it is necessary to utilise all beds available to maintain flow.

Thank you again for the opportunity to provide comment. Please find attached MSH's response to your recommendations.

Yours sincerely

Dr Peter Bristow FRACP, FCICM, FRACMA, GCM, GAICD
Chief Executive
Metro South Hospital and Health Service

Responses to recommendations—Metro South Hospital and Health Service

Queensland Audit Office
Better public services

Queensland Health

Measuring emergency department patient wait time

Response to recommendations provided by Metro South HHS on 8 July 2021.

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
We recommend that the Queensland Health (including QAS and HHSs): 1. improve the accuracy of emergency department (ED) data recorded and quality of data checks and corrections (data cleansing) required by HHSs. This should include: • implementing system controls in FirstNet (a module of Queensland Health's integrated electronic medical record system) to prevent or alert users to invalid data entry • ensuring a consistent approach in scope and resourcing across hospitals to the cleansing of ED data, including a focus on the accuracy of all data, not just that relating to instances that do not meet targets	Agree.		This was largely achieved through the Data Validation Officer Project by QH which was defunded as noted by the QAO. Technical system controls are required but to date have been elusive due to their impact on provision of clinical care

1

Queensland Audit Office
Better public services

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
2. improve how patient off stretcher time is recorded or reported, including: • implementing validation controls for recording arrival and handover times • resuming the system integration project to improve real-time (instant) sharing of QAS data with EDs	Partially Agree		This report highlights the systemic inaccuracies in trying to use a measure that relies on one system for its commencement and another for its cessation. It also highlights the difficulties in using a system for a function for which it was not designed and then relying on that function as a major KPI. Arrival to triage time can only be recorded in the ambulance system, as Triage is the first step in the hospital system. The first two phases of the now paused data integration project were not going to deliver real-time patient level data sharing and integration. They were focusing on better visibility of existing clinical information between record systems. Achieving real-time data integration would likely be very expensive.
3. continue with the current initiatives to promote measures of performance and outcomes in all parts of care affecting ED performance, and implement measures that provide a more holistic view of ED performance	agree		MSH will continue to identify opportunities to improve ED performance as we have done with the patient access coordination hub, transfer initiative nurse model and the nursing autonomy trifecta trial.
4. develop and implement guidelines for HHSs to identify measures of success before starting improvement initiatives and to evaluate the effectiveness of initiatives to improve ED performance	noted		MSH notes this as an action for the Department.
5. monitor and report on the use of short-term treatment areas within EDs (such as short stay units, clinical decision units, and any other equivalent units that stop the clock on measuring emergency length of stay)	agree		Is subject to a current state-wide project (EDAIR) which will provide recommendations on the contemporary use and reporting of short stay and equivalent units. MSH will review its short stay unit local procedure to ensure it is consistent with the department's guidelines for short stay units. However, MSH notes the need to utilise available beds.

2

Responses to recommendations—North West Hospital and Health Service

Queensland Audit Office
Better public services

Queensland Health

Measuring emergency department patient wait time

Response to recommendations provided by [redacted] Emergency Department Mount Isa on 9th July 2021.

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
We recommend that the Queensland Health (including QAS and HHSs):			
1. improve the accuracy of emergency department (ED) data recorded and quality of data checks and corrections (data cleansing) required by HHSs. This should include:			
• implementing system controls in FirstNet (a module of Queensland Health's integrated electronic medical record system) to prevent or alert users to invalid data entry	Disagree	N/A	NWHHS is currently using EDIS. The EDIS application support unit has confirmed the NWHHS will not change to FirstNet for a number of years due to the complex process of conversion of systems (IMER & FirstNet)
• ensuring a consistent approach in scope and resourcing across hospitals to the cleansing of ED data, including a focus on the accuracy of all data, not just that relating to instances that do not meet targets	Disagree	N/A	EDIS does not currently use the audit log function as it slows the application down to a non-useable speed. The NWHHS ensures daily, weekly, and monthly manual audits and reviews data quality. It also utilises QHERS to save and send monthly data extracts to ED management. Manual data corrections have improved data quality (BPIO role).
2. improve how patient off stretcher time is recorded or reported, including:			
• implementing validation controls for recording arrival and handover times	Agree	Currently Implemented	Mount Isa ED does not have a delay in off stretcher time as Mount Isa does not have an access block. EDIS records ramping times in location screen in triage which we can validate via QHERS reporting.
• resuming the system integration project to improve real-time (instant) sharing of QAS data with EDs	Agree	Currently Implemented	KPI target reporting and reoccurring audits.

1

Queensland Audit Office
Better public services

	Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
3.	continue with the current initiatives to promote measures of performance and outcomes in all parts of care affecting ED performance, and implement measures that provide a more holistic view of ED performance	Agree	Currently Implemented	Reoccurring audits
4.	develop and implement guidelines for HHSs to identify measures of success before starting improvement initiatives and to evaluate the effectiveness of initiatives to improve ED performance	Agree	Currently Implemented	Reoccurring audits
5.	monitor and report on the use of short-term treatment areas within EDs (such as short stay units, clinical decision units, and any other equivalent units that stop the clock on measuring emergency length of stay)	Agree	Currently Implemented	Currently we audit the SSU in relation to KPI targets. Though the use of EDIS and QHERS the NWHHS automatically submit short stay data to the Department of Health.

2

Responses to recommendations—Sunshine Coast Hospital and Health Service

Queensland Audit Office
Better public services

Queensland Health

Measuring emergency department patient wait time

Response to recommendations provided by Sunshine Coast Hospital and Health Service on 12 July 2021

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
We recommend that the Queensland Health (including QAS and HHSs):			
1. improve the accuracy of emergency department (ED) data recorded and quality of data checks and corrections (data cleansing) required by HHSs. This should include:			
• implementing system controls in FirstNet (a module of Queensland Health's integrated electronic medical record system) to prevent or alert users to invalid data entry	Agree		System Wide
• ensuring a consistent approach in scope and resourcing across hospitals to the cleansing of ED data, including a focus on the accuracy of all data, not just that relating to instances that do not meet targets	Agree		System wide
2. improve how patient off stretcher time is recorded or reported, including: • implementing validation controls for recording arrival and handover times • resuming the system integration project to improve real-time (instant) sharing of QAS data with EDs	Agree		

1

Queensland Audit Office
Better public services

	Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
3.	continue with the current initiatives to promote measures of performance and outcomes in all parts of care affecting ED performance, and implement measures that provide a more holistic view of ED performance	Agree		Performance measures should be broader than ED as access and flow is a whole of hospital and whole of system issue not just an ED issue. TIN nurse (P.13). Concerns that this model validates the corridor care of patients in hospital instead of addressing the root cause of the problem (ED over crowding most commonly caused by ward access block). It is not evidence based. While this may slightly decompress QAS and reduce their clinical risk it increases the clinical risk in the ED (the area already carrying the highest amount of clinical risk in the hospital). It would be safer to pursue a 'corridor care' approach in wards (ward ramp) or transit/discharge units - as these patients are either worked up and treatment commenced, or about to go home.
4.	develop and implement guidelines for HHSs to identify measures of success before starting improvement initiatives and to evaluate the effectiveness of initiatives to improve ED performance	Agree		
5.	monitor and report on the use of short-term treatment areas within EDs (such as short stay units, clinical decision units, and any other equivalent units that stop the clock on measuring emergency length of stay)	Agree		

2

Responses to recommendations—Townsville Hospital and Health Service

Queensland Audit Office
Better public services

Queensland Health

Measuring emergency department patient wait time

Response to recommendations provided by Townsville Hospital and Health Service Chief Executive on 26/07/21.

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
We recommend that the Queensland Health (including QAS and HHSs): 1. improve the accuracy of emergency department (ED) data recorded and quality of data checks and corrections (data cleansing) required by HHSs. This should include: • implementing system controls in FirstNet (a module of Queensland Health's integrated electronic medical record system) to prevent or alert users to invalid data entry • ensuring a consistent approach in scope and resourcing across hospitals to the cleansing of ED data, including a focus on the accuracy of all data, not just that relating to instances that do not meet targets	Agree	Subject to state-wide response. Current strategies ongoing.	Whilst we agree in principle with this recommendation, we acknowledge that locally, from a HHS perspective, we can not wholly implement. The implementation of system controls in FirstNet is state-wide action which we support. Enhanced integration and system data validity controls will reduce the burden on HHS staff in performing daily (manual) data validity checks. We agree with the benefits of a consistent approach in scope and resourcing across hospitals to cleanse all ED data. Locally, we will continue current strategies, including: • Medical & Nursing orientation to current systems; • Education days for ED staff; • Robust daily data cleansing and quality checks.

1

Queensland Audit Office
Better public services

	Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
2.	improve how patient off stretcher time is recorded or reported, including: • implementing validation controls for recording arrival and handover times • resuming the system integration project to improve real-time (instant) sharing of QAS data with EDs	Agree	Subject to state-wide response. Current strategies ongoing.	We agree with this recommendation and acknowledge it has been an ongoing challenge for hospitals. In the absence of better system integration between QAS and HHSs, implementing validation controls is likely to be manually intensive. Locally, we have designed processes to better monitor this data, in the absence of system integration, such as: ▪ Agreed process in place regarding recording off-loading time (QAS/Triage Nurse); ▪ Additional patient time stamp in FirstNet to better measure patient arrival time; ▪ Nurse education regarding off-stretcher times; ▪ Daily senior review and cross-reference with QAS reports; ▪ Ambulance arrival screens in key areas within the ED to enable pre-emption of potential bottlenecks; ▪ Escalation process established. We support the re-commencement of the system integration project.
3.	continue with the current initiatives to promote measures of performance and outcomes in all parts of care affecting ED performance, and implement measures that provide a more holistic view of ED performance	Agree	Q3 2022 Subject to any state-wide response	Locally driven initiatives will be monitored through the HHS's central Programs Management Office (PMO) which includes identification and oversight of tangible success measures. We encourage further conversation across the state to consider and define more holistic ED performance measures.

2

Queensland Audit Office
Better public services

	Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
4.	develop and implement guidelines for HHSs to identify measures of success before starting improvement initiatives and to evaluate the effectiveness of initiatives to improve ED performance	Agree	Q3 2022 Subject to state-wide response	We acknowledge and agree with the comments within the report regarding the challenges in analysing the direct cause and effect relationship between improvement activities and outcomes, due to the complexities of patient flow and outside influences impacting demand on Emergency Departments. We agree with this recommendation, however implementation is not wholly within the HHSs control. Notwithstanding this, the HHS is working toward centralised oversight of improvement activities (via our PMO), which will include evaluation of success measures. We will review these monitoring and evaluation systems upon the release of any state-wide guidelines of same.
5.	monitor and report on the use of short-term treatment areas within EDs (such as short stay units, clinical decision units, and any other equivalent units that stop the clock on measuring emergency length of stay)	Agree	Subject to state-wide response	This is not a recommendation that can be implemented directly be the HHS. Notwithstanding this, locally, patient length of stay in the Short Stay Unit (SSU) is captured and monitored. The use of TUHs short-term treatment areas (Short Stay Unit) forms part of our model of care, with the primary purpose of providing optimal health care to our consumers. THHS continues to monitor key performance indicators in this area.

3

Responses to recommendations—West Moreton Hospital and Health Service

Queensland Audit Office
Better public services

Queensland Health

Measuring emergency department patient wait time

Response to recommendations provided by West Moreton Health on 13 July 2021.

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
We recommend that the Queensland Health (including QAS and HHSs): 1. improve the accuracy of emergency department (ED) data recorded and quality of data checks and corrections (data cleansing) required by HHSs. This should include: • implementing system controls in FirstNet (a module of Queensland Health's integrated electronic medical record system) to prevent or alert users to invalid data entry • ensuring a consistent approach in scope and resourcing across hospitals to the cleansing of ED data, including a focus on the accuracy of all data, not just that relating to instances that do not meet targets	Agree	Suggest 6 months	Requires QEDSAP and ieMR inputs into definitions and time-stamps on ieMR.
2. improve how patient off stretcher time is recorded or reported, including: • implementing validation controls for recording arrival and handover times • resuming the system integration project to improve real-time (instant) sharing of QAS data with EDs	Agree	Suggest 3 months	Needs audit of QAS data regularly
3. continue with the current initiatives to promote measures of performance and outcomes in all parts of care affecting ED performance, and implement measures that provide a more holistic view of ED performance	Agree	Suggest 3 months	Keep focus on initiatives aimed at access OUT of the Emergency Department such as PACHs, access to inpatient beds, HITH, etc.
4. develop and implement guidelines for HHSs to identify measures of success before starting improvement initiatives and to evaluate the effectiveness of initiatives to improve ED performance	Agree	Suggest 6 months	New targets to be placed to measure success (inpatient targets rather than ED targets) as well as impact (lost minutes in an ED).
5. monitor and report on the use of short-term treatment areas within EDs (such as short stay units, clinical decision units, and any other equivalent units that stop the clock on measuring emergency length of stay)	Agree	Suggest 6 months	Monitor length of stay as well as admission rates from the relative areas, especially SSUs.

1

Responses to recommendations—Wide Bay Hospital and Health Service

Queensland Audit Office
Better public services

Queensland Health

Measuring emergency department patient wait time

Response to recommendations provided by Wide Bay Hospital and Health Service on 14 July 2021

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
We recommend that the Queensland Health (including QAS and HHSs): 1. improve the accuracy of emergency department (ED) data recorded and quality of data checks and corrections (data cleansing) required by HHSs. This should include: • implementing system controls in FirstNet (a module of Queensland Health's integrated electronic medical record system) to prevent or alert users to invalid data entry • ensuring a consistent approach in scope and resourcing across hospitals to the cleansing of ED data, including a focus on the accuracy of all data, not just that relating to instances that do not meet targets	Agree	TBD	
2. improve how patient off stretcher time is recorded or reported, including: • implementing validation controls for recording arrival and handover times • resuming the system integration project to improve real-time (instant) sharing of QAS data with EDs	Agree	TBD	
3. continue with the current initiatives to promote measures of performance and outcomes in all parts of care affecting ED performance, and implement measures that provide a more holistic view of ED performance	Agree	TBD	
4. develop and implement guidelines for HHSs to identify measures of success before starting improvement initiatives and to evaluate the effectiveness of initiatives to improve ED performance	Agree	TBD	
5. monitor and report on the use of short-term treatment areas within EDs (such as short stay units, clinical decision units, and any other equivalent units that stop the clock on measuring emergency length of stay)	Agree	TBD	

1

B. Audit objectives and methods

Performance engagement

This audit was performed in accordance with the *Auditor-General Auditing Standards*—December 2019 and the Standard on Assurance Engagements ASAE 3500 *Performance Engagements,* issued by the Auditing and Assurance Standards Board. This standard establishes mandatory requirements and provides explanatory guidance for undertaking and reporting on performance engagements.

The conclusions in our report provide reasonable assurance that the objectives of our audit have been achieved. Our objectives and criteria are set out below.

Audit objective and scope

The objective of this audit was to assess whether:

- the Department of Health (including the Queensland Ambulance Service) and the hospital and health services (HHSs) are effectively managing emergency length of stay (ELOS—the length of time people stay in emergency departments) and patient off stretcher time (POST—the amount of time it takes to transfer patients off ambulance stretchers, with a completed clinical handover, to emergency departments) performance
- the department and HHSs have effectively implemented the recommendations made in *Emergency department performance reporting* (Report 3: 2014–15).

The audit addressed the objective through the criteria set out in Figure B1.

Figure B1
Audit criteria

Criteria	Specific criteria
1. Are entities effectively managing ELOS and POST to reduce length of stay in emergency departments and patient time on stretchers?	1.1 The entities work effectively together to manage the targets
	1.2 The publicly reported performance of POST is reliable
2. Have the department and HHSs effectively implemented the recommendations of Report 3: 2014–15?	2.1 The department and HHSs have actioned the recommendations
	2.2 The department and HHSs have addressed the underlying issues that led to the recommendations

Source: Queensland Audit Office.

Scope exclusions

We did not review any patient records, assess any clinical decisions made within Queensland Health entities, or review performance in other aspects of a hospital setting that would impact emergency department (ED) and Queensland Ambulance Service (QAS) performance.

Entities subject to this audit

This audit covered:

- the Department of Health, including the Queensland Ambulance Service
- all hospital and health services.

We conducted the audit at the emergency departments of the following public hospitals and corresponding local ambulance service networks:

- Gold Coast University Hospital and the Gold Coast local ambulance service network
- Logan Hospital and the Metro South local ambulance service network
- Townsville Hospital and the Townsville local ambulance service network.

Audit approach

We completed most of our site visits, testing, and analysis work in 2019 and planned to report in the early part of 2020. In March 2020, the Auditor-General temporarily suspended the audit in support of Queensland Health's response to the COVID-19 pandemic, which presented an unprecedented challenge to our health system. We recommenced our audit in late 2020.

The audit included:

- interviews with staff from the department (including QAS) and three HHSs
- review of documents and analysis of data
- site visits to three emergency departments, including observation of patient handover
- interviews with key stakeholders.

Assessing implementation

We assessed whether each recommendation was fully implemented, partially implemented, not implemented (with the recommendation either accepted or not accepted), or no longer applicable. Figure B2 provides the definition we use for each status.

Figure B2
Definitions of implementation status

Status		Definition
Fully implemented		Recommendation has been implemented, or alternative action has been taken that addresses the underlying issues, and no further action is required. Any further actions are business as usual.
Partially implemented		Significant progress has been made in implementing the recommendation or taking alternative action, but further work is required before it can be considered business as usual. This includes where the action taken was less extensive than recommended, as it only addressed some of the underlying issues that led to the recommendation.
Not implemented	*Recommendation accepted*	No or minimal actions have been taken to implement the recommendation, or the action taken does not address the underlying issues that led to the recommendation.

Status		Definition
	Recommendation not accepted	The government or the entity did not accept the recommendation.
No longer applicable		Circumstances have fundamentally changed, making the recommendation no longer applicable. For example, a change in government policy or program has meant the recommendation is no longer relevant.

Source: Queensland Audit Office.

C. Our 2014–15 report

In *Emergency department performance reporting* (Report 3: 2014–15), we examined the performance of Queensland's public emergency departments (EDs) in achieving targets under the national emergency access target (the national target), with a focus on the reliability of the data being reported. (The national target required measurement of the proportion of patients admitted to hospital or discharged from emergency departments within four hours of arrival.)

What we found

We found efforts made to achieve the four-hour target did not compromise patient safety or quality of care. However, controls (checks and processes) over ED data were weak or absent, with no assurance over the integrity of the data reported.

Contributing to the data integrity concerns were:

- the lack of an audit log to track changes made to data
- human error
- time pressures involved in data entry due to the nature of EDs.

The quality of the data reported relied primarily on the integrity and diligence of individuals entering and validating the data.

The lack of controls over ED data meant that reported performance may not have reflected actual performance. The absence of some controls left data open for manipulation, both systemically and deliberately, possibly affecting the credibility of publicly reported data and potentially impacting on budget and investment decisions made by the government.

We identified a 'spike' in discharges of patients in multiple ED reports just before the four-hour target. System limitations, the practice of retrospective entering of data due to time constraints, the ability for data to be modified, and a push by medical staff to meet performance targets contributed to this outcome.

We also found a spike in the admission to hospital short stay units just before the four-hour discharge target was reached, indicating the units were being used to manage patient overflow. Short stay units are designated treatment areas to manage acute problems for patients with an expected stay greater than four hours but less than 24 hours. Using this space as an overflow area for patients who do not require admission results in unavailability of bed space for patients who meet the short stay unit requirements.

We found the reporting of patients who did not wait for treatment was impacted by hospitals having no standard definition of what 'did not wait for treatment' meant. The definition guidance by the Department of Health contradicted the National Health Data Dictionary. This affected the reporting on this measure and subsequent Commonwealth funding available to the state.

What we recommended

In the 2014–15 audit, we recommended a collaborative approach for the department and hospital and health services.

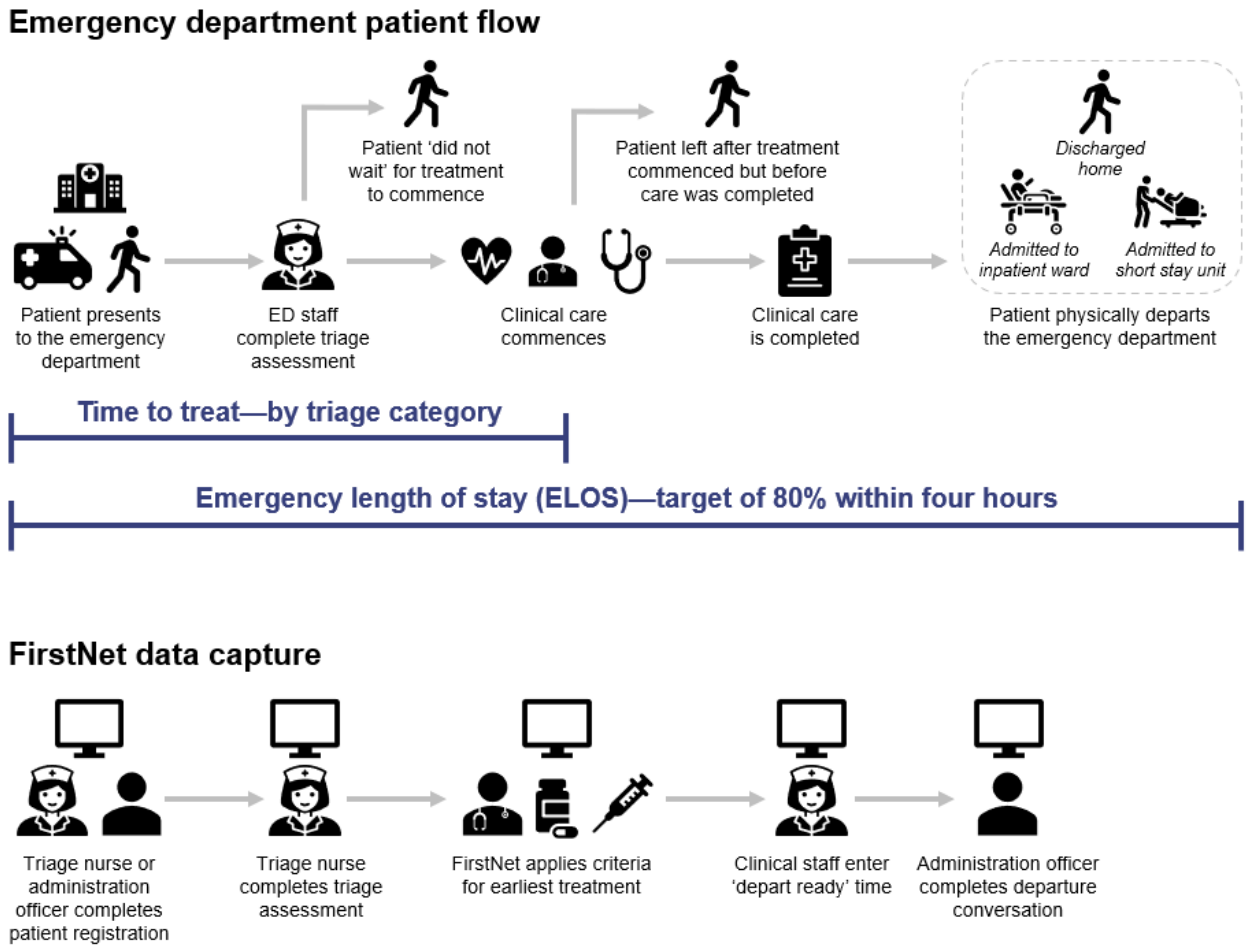
Three of the four recommendations addressed concerns we found with how data was recorded, managed, and checked. The fourth recommendation addressed the expiry of the *National Health Reform Agreement—National Partnership Agreement on Improving Public Hospital Services*. This related specifically to a review of the emergency access targets to determine an achievable target that continued to encourage timely decision-making without compromising patient safety.

The department and hospital and health services agreed to our recommendations.

D. Overview of patient flow

Figure D1 provides an overview of the patient journey through the emergency department (ED), from arrival to departure, including the important points at which data is recorded.

Figure D1
Overview of patient journey through the ED

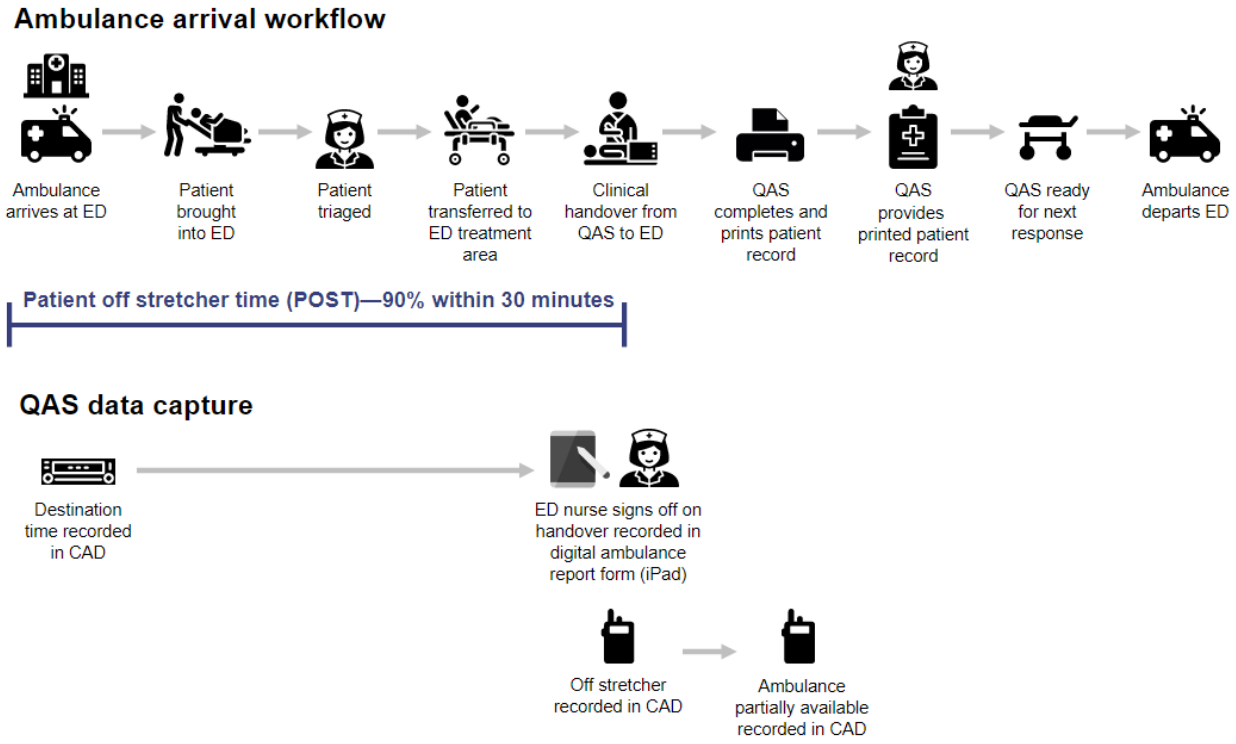


Note: In some EDs, a separate process for registering patient administrative records may occur prior to triage assessment. FirstNet is a module of the integrated electronic medical record system.

Source: Queensland Audit Office.

Figure D2 provides an overview of patient arrivals by ambulance, including the points at which data is recorded by the Queensland Ambulance Service (QAS) in its dispatch system.

Figure D2
Overview of ambulance arrival process



Note: CAD—computer-aided dispatch system.

Source: Queensland Audit Office.

E. Comparison with other jurisdictions

In 2019–20, none of the Australian states or territories met their performance target for the four-hour emergency length of stay (ELOS—length of time people spend in emergency departments before being admitted to hospital or discharged).

As shown in Figure E1, while Queensland had the best ELOS performance for patients who were admitted to hospital (admitted ELOS performance), its overall ELOS performance of 70.8 per cent (which included discharged ELOS performance) was third in Australia.

Figure E1
ELOS performance by state and territory for 2019–20

State or territory	Admitted ELOS performance	Overall ELOS performance	Overall ELOS performance target
Queensland	54.3%	70.8%	80%
New South Wales	40.0%	71.3%	81%
Australian Capital Territory	34.9%	57.6%	90%
Victoria	48.2%	64.9%	75%
South Australia	43.3%	62.4%	90%
Tasmania	26.7%	60.0%	80%
Western Australia	52.1%	75.4%	90%
Northern Territory	35.6%	67.1%	78%
Australia-wide	**46.3**%	**69.2**%	–

Note: Australia-wide does not have an overall ELOS performance target, as these targets are set at a state or territory level.

Source: Queensland Audit Office from Australian Institute of Health and Welfare emergency department care 2019–20 data (actual figures) and relevant annual reports, monthly reports, or service delivery statements 2019–20 (target figures).

As shown in Figure E2, in 2019–20 none of the jurisdictions met their performance target for patient off stretcher time (POST—which measures how long it takes for a patient to be transferred from an ambulance stretcher to the care of an emergency department). POST performance may not be comparable across all jurisdictions due to differing performance measures and data collection methods.

Figure E2
POST performance by state for 2019–20

State	Performance measures for POST	POST performance target	POST performance actual
Queensland	30 minutes	90%	76.1% state-wide 73.15% top 26 hospitals
New South Wales	30 minutes	90%	88.33%
Victoria	40 minutes	90%	77.8%
South Australia	30 minutes	90%	63.8%
Tasmania	Two measures: • 15 minutes • 30 minutes	 85% 100%	 15 minutes: 68.8%–92.7% 30 minutes: 75.6%–96.2%

Note: Tasmania reports performance separately for each of its four major hospitals.

Source: Queensland, Victoria, South Australia, Tasmania: Department of Health annual reports 2019–20; New South Wales: Bureau of Health Information Healthcare quarterly reports 2019–20.

F. Queensland's top 26 reporting hospitals

The figures and data presented in this report are for the top 26 reporting public hospitals in Queensland, unless otherwise specified. They treated 77 per cent of emergency department presentations in 2018–19. Figure F1 lists them and the information system they used at the time of the audit.

Figure F1
Top 26 reporting hospitals

Hospital and health service (HHS)	Hospital and emergency department system
Cairns and Hinterland HHS	Cairns Hospital—*FirstNet*
Central Queensland HHS	Gladstone Hospital—*EDIS* Rockhampton Hospital—*EDIS*
Children's Health Queensland HHS	Queensland Children's Hospital—*FirstNet*
Darling Downs HHS	Toowoomba Hospital—*EDIS*
Gold Coast HHS	Gold Coast University Hospital—*FirstNet* Robina Hospital—*FirstNet*
Mackay HHS	Mackay Base Hospital—*FirstNet*
Mater Health Services	Mater Hospital Brisbane Public Hospital—*EDIS*
Metro North HHS	Caboolture Hospital—*EDIS* Redcliffe Hospital—*EDIS* Royal Brisbane and Women's Hospital—*EDIS* The Prince Charles Hospital—*EDIS*
Metro South HHS	Logan Hospital—*FirstNet* Princess Alexandra Hospital—*FirstNet* QEII Jubilee Hospital—*FirstNet* Redland Hospital—*FirstNet*
North West HHS	Mount Isa Hospital—*EDIS*
Sunshine Coast HHS	Gympie Hospital—*EDIS* Nambour Hospital—*FirstNet* Sunshine Coast University Hospital—*FirstNet*
Townsville HHS	Townsville University Hospital—*FirstNet*
West Moreton HHS	Ipswich Hospital—*FirstNet*
Wide Bay HHS	Bundaberg Base Hospital—*EDIS* Hervey Bay Hospital—*EDIS* Maryborough Hospital—*EDIS*

Source: Queensland Audit Office from emergency data collection January 2011–February 2021.

qao.qld.gov.au/reports-resources/reports-parliament

Suggest an audit topic

Contribute to an audit in progress

Subscribe to news and our blog

Connect with QAO on LinkedIn

T: (07) 3149 6000
E: qao@qao.qld.gov.au
W: www.qao.qld.gov.au
53 Albert Street, Brisbane Qld 4000
PO Box 15396, City East Qld 4002

Queensland Audit Office
Better public services