

Monitoring Transforming Health (2015 – 2017)

Indicator Report

5th edition – November 2017

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Health Performance Council



Government
of South Australia

Health Performance Council

Acknowledgement

The Health Performance Council acknowledges the diverse Aboriginal peoples of South Australia and their participation in the life of South Australia. We acknowledge and respect their spiritual relationship with their respective country and we acknowledge them as the custodians of their country and that their cultural and heritage beliefs are still important to them today.

Executive summary

Transforming Health was a major South Australian state government change initiative to improve the metropolitan Adelaide public acute hospital system. It ran between 2015 and 2017, with the aim of aligning better models of health care delivery with new and upgraded hospital facilities. The Health Performance Council (HPC) is monitoring changes in indicators of access and equity before and after the implementation of Transforming Health. HPC does this in its remit as a statutory advisory body providing expert advice to the Minister for Health.

HPC has prioritised four areas for monitoring, taken from SA Health's own initial case for change in its March 2015 document, *Delivering Transforming Health – Our Next Steps*:

1. Too many deaths occur in our hospitals
2. Long waiting times for discharge or placement
3. Too many transfers between hospitals
4. Senior clinicians unavailable at night.

The focus of these reports is to look at if Transforming Health may have resulted in a widening of health outcome gaps between specific population groups: Aboriginal people, culturally and linguistically diverse communities, lower socio-economic areas, aged persons; and country residents.

This report charts hospitalisations (inpatient separations), average length of overnight stay, in-hospital deaths and hospital transfers. Results are presented as quarterly data over a ten-year period by SA Health local health network.

KEY FINDINGS

Between the July-September quarter 2007-08 and the July-September quarter 2017-18, the average length of an overnight stay at metropolitan Adelaide public acute hospitals declined from 6.6 days to 5.6 days. In comparison, the average length of overnight stay at public acute hospitals across Australia in 2015-16 was lower at 5.4 days.

In the same time period, the percentage of in-hospital deaths in metropolitan Adelaide public acute hospitals fell from 1.6% to 1.4%. The latest national figure is lower at 1.0%.

The percentage of inpatients transferred between hospitals has risen from 4.7% to 6.2%, higher than the national figure of 5.6%.

Looking at the people admitted to metropolitan Adelaide public acute hospitals this quarter:

- Over one in five (21.8%) were from culturally and linguistically diverse backgrounds. In comparison, 13.3% of South Australians are culturally and linguistically diverse.
- Around one in seven (13.9%) were from rural and regional South Australia. In comparison, over a quarter of the state's population lives outside the metropolitan area. The trend is for more country people to be transferred from their metropolitan hospital to another hospital.
- Approximately half (43.8%) inpatient hospitalisations in the Northern Adelaide Local Health Network are people who live in the lowest 20% of socioeconomic status areas of the state.
- Aboriginal people accounted for 4.1% of hospitalisations (inpatient separations), although Aboriginal persons represent 2.4% of the population of South Australia.
- In-hospital deaths for aged persons is down over the past ten years, from 3.4% to 2.7% of all hospitalisations (inpatient separations).

Please refer to this report's [appendices for more information](#) about the Health Performance Council, Transforming Health, technical notes (including list of metropolitan Adelaide public acute hospitals in scope) and references.

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Metropolitan Adelaide public acute hospital performance charts

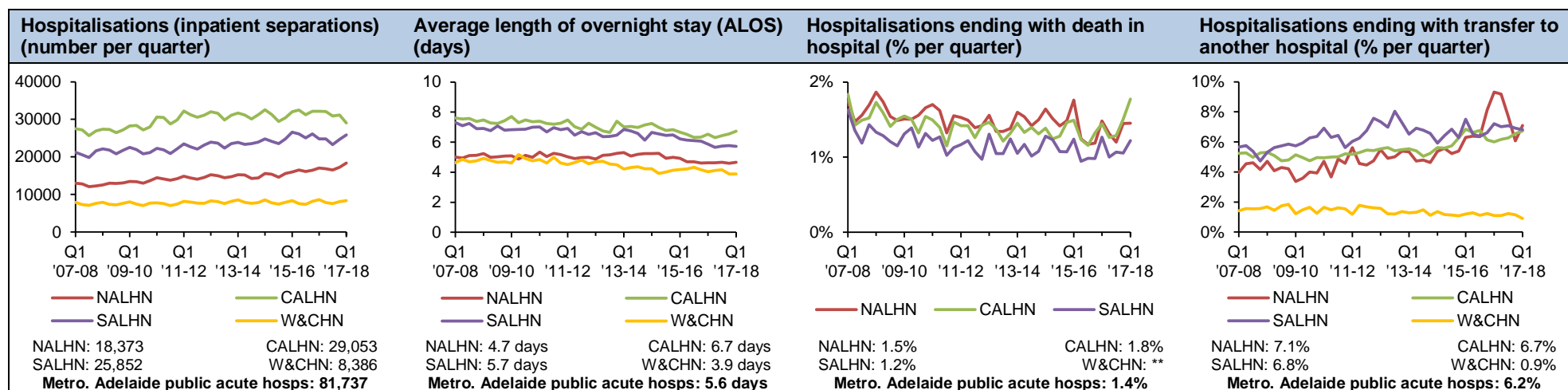
The Health Performance Council is using these indicators of inpatient activity at metropolitan Adelaide public acute hospitals to monitor emerging gaps between selected patient groups and specific population groups before and after the implementation of Transforming Health.

1. All patients

The volume of inpatient hospital activity at metropolitan Adelaide public acute hospitals increased from 69,783 hospitalisations (inpatient separations) in the first quarter (Q1) of the 2007-08 financial year to 81,737 in Q1 of 2017-18. This represents an annualised growth rate of 1.9% over the period, around double South Australia's population average annual growth rate of 1.0%¹. The average length of an overnight stay has fallen 15.2% over the period, down from 6.6 to 5.6 days. This is slightly above the most recent reported average length of overnight stay for all public acute hospitals across Australia (5.4 days in 2015-16)². The proportion of inpatient deaths in metropolitan Adelaide public hospitals is relatively small compared to total activity, and decreased from 1.6% of all hospitalisations in Q1 2007-08 to 1.4% in Q1 2017-18. The average Australian public hospital in-hospital death rate in 2015-16 was 1.0%³. The rate of hospitalisations ending with transfer to another hospital has increased from 4.7% to 6.2%. The average Australian public hospital transfer rate in 2015-16 was 5.6%⁴.

The Central Adelaide Local Health Network (LHN) – consisting of Hampstead Rehabilitation Centre, Pregnancy Advisory Centre, Royal Adelaide Hospital, St Margaret's Hospital and The Queen Elizabeth Hospital – makes up the majority of inpatient activity (35.5%). This is followed by Southern Adelaide LHN (Flinders Medical Centre, Noarlunga Hospital and Repatriation General Hospital) with 31.6% and Northern Adelaide LHN (Lyell McEwin Health Service and Modbury Hospital) with 22.5%. The Women's and Children's Hospital accounts for 10.3% of all metropolitan Adelaide public acute hospital inpatient activity.

Trends in average length of stay and crude rate of hospitalisations ending with death in hospital are up in recent quarterly data for the Central Adelaide LHN. The rate of hospitalisations at the Women's and Children's Hospital ending with transfer to another hospital has decreased over the last decade.

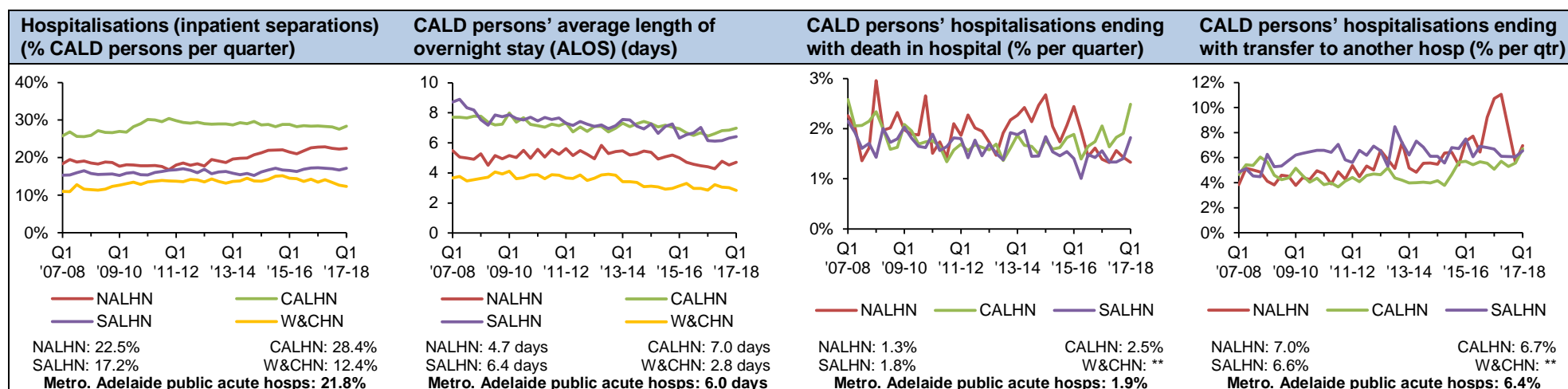


Notes: (i) From 1 July 2017, SA Health adopted new business counting rules to hospitalisations data that may affect time series (see Appendix B for more info); (ii) ** not reported due to very low volume of data.

2. Culturally and linguistically diverse patients

The Health Performance Council defines culturally and linguistically diverse (CALD) persons in its monitoring as those born in non-main English speaking countries. That is, countries *other than* Australia, New Zealand, United Kingdom, Ireland, United States of America, Canada and South Africa.

In the first quarter (Q1) of the 2017-18 financial year, persons from CALD backgrounds accounted for around one in five (21.8%) metropolitan Adelaide public acute hospitalisations (inpatient separations), although 13.3% of South Australians were born in predominantly non-English speaking countries⁵. Trends in average length of stay are up in recent quarterly data for this population group in the Northern Adelaide, Central Adelaide and Southern Adelaide local health networks (LHNs). Crude rate of hospitalisations ending with death in hospital has also increased recently in the Central Adelaide and Southern Adelaide LHNs. After a recent spike observed in the rate of hospitalisations in the Northern Adelaide LHN of persons from CALD backgrounds ending with a transfer to another hospital, trends appear to have stabilised somewhat. In-hospital death rate and transfer rate for Women's and Children's Hospital are not charted below due to the very low volume of activity.

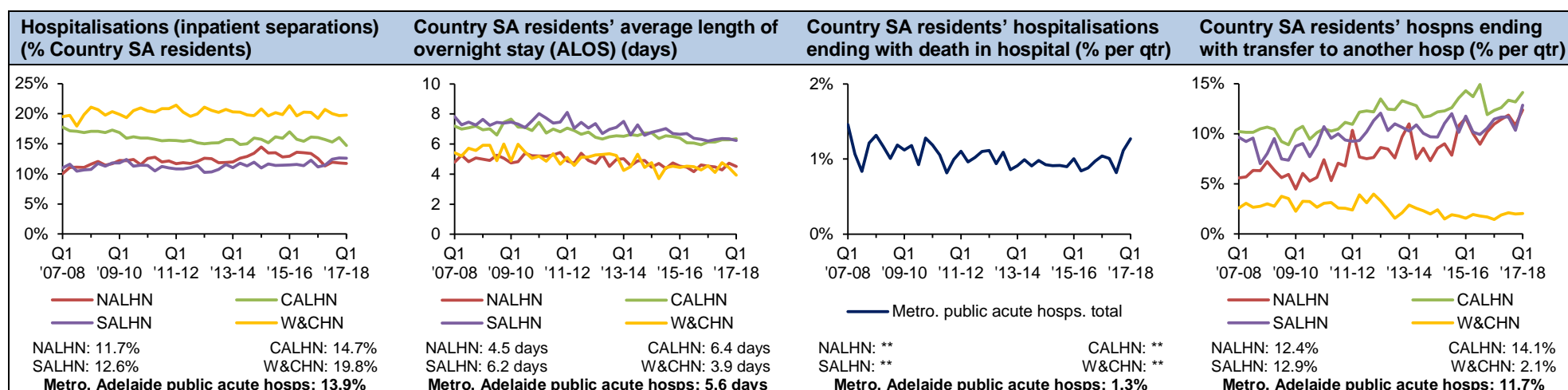


Notes: (i) From 1 July 2017, SA Health adopted new business counting rules to hospitalisations data that may affect time series (see Appendix B for more info); (ii) ** not reported due to very low volume of data.

3. Patients from rural and remote South Australia

Hospitalisations by inpatients who live in country South Australia represented around one in seven (13.9%) of metropolitan Adelaide public acute hospital inpatient activity in the first quarter (Q1) of 2017-18. In comparison, over a quarter (28.8%) of the state's population lives outside the metropolitan area⁶.

During Q1 2017-18, around one in nine (11.7%) hospitalisations (inpatient separations) of country residents at metropolitan Adelaide public acute hospitals ended with a transfer to another hospital. This is higher than the overall rate reported in Section 1 (6.2%) and trends continue to increase for the local health networks of Northern Adelaide, Central Adelaide and Southern Adelaide. Trends over the last 10 years in average length of stay across all local health networks continue to trend down for hospitalisations of country residents at metropolitan Adelaide public acute hospitals. Rate of country residents' hospitalisations ending with death in hospital is not charted below by individual local health network due to very low volume of data.



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4. Patients from lower socioeconomic status geographic areas of South Australia

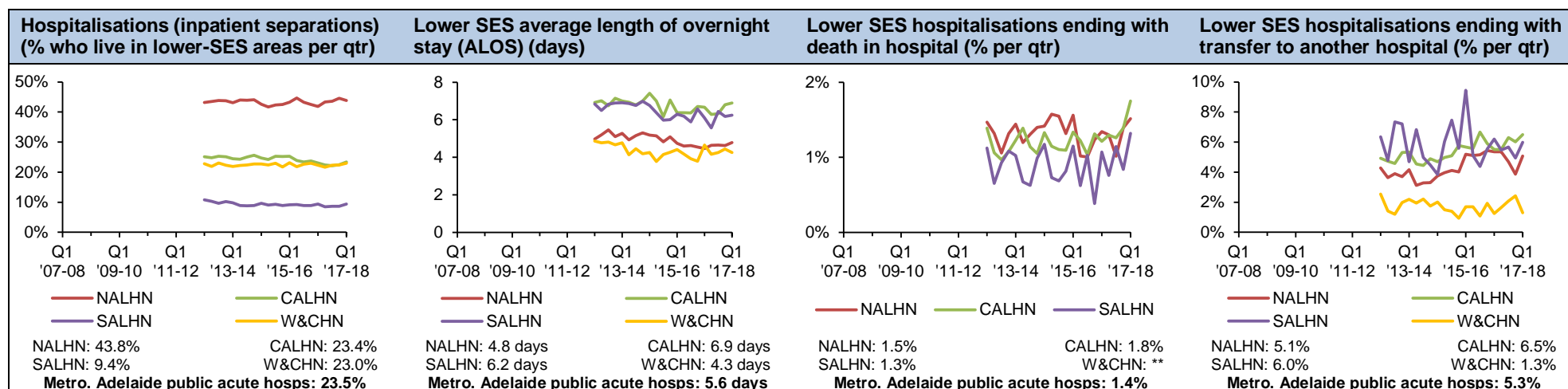
The Health Performance Council classifies the socioeconomic status (SES) of geographic areas in South Australia using the Socio-Economic Index for Areas (SEIFA) Index of Relative Socio-economic Disadvantage (IRSD) by Statistical Area Level 2 (SA2), published by the Australian Bureau of Statistics. Lower-SES areas are those in the lower quintile (lower 20%) of SA2s ordered by SEIFA IRSD. Please refer to the technical notes at the end of this document for more information.

South Australian SA2s ranked by the Health Performance Council as lower-SES are:

Metropolitan Adelaide: Davoren Park, Elizabeth, Elizabeth East, Smithfield - Elizabeth North, Virginia - Waterloo Corner, Enfield - Blair Athol, Parafield Gardens, Paralowie, Salisbury, Salisbury North, Christie Downs, Hackham West - Huntfield Heights, Morphett Vale – West, Royal Park – Hendon – Albert Park, Woodville – Cheltenham, Port Adelaide, The Parks.

Country South Australia: Peterborough – Mt Remarkable, Port Pirie, Wallaroo, Ceduna, Western, Whyalla, Anangu Pitjantjatjara Yankunytjatjara (APY) Lands, Coober Pedy, Port Augusta, Millicent, Barmera, Berri, Murray Bridge, Renmark, Waikerie.

Approximately half (43.8%) of inpatient hospitalisations in the Northern Adelaide Local Health Network (NALHN) are persons who live in lower socioeconomic status areas of the state. The average length of overnight stay for this population group was 5.6 days in the first quarter (Q1) of 2017-18, the same as the overall average reported in Section 1. The number of in-hospital deaths at the Women's and Children's Hospital for inpatients from lower socioeconomic status areas of the state is very low, so has been omitted from the third chart below.



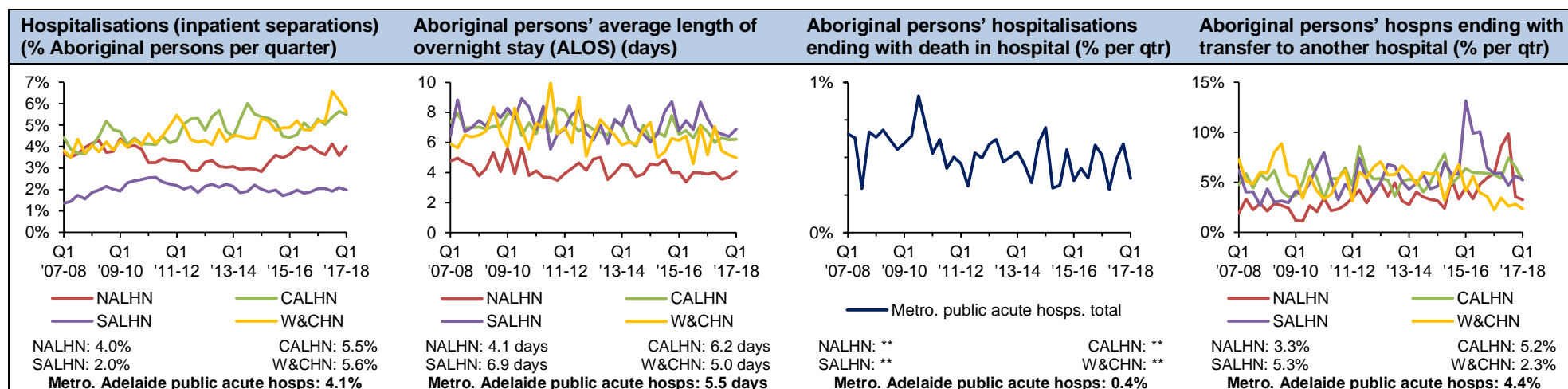
Notes: (i) From 1 July 2017, SA Health adopted new business counting rules to hospitalisations data that may affect time series (see Appendix B for more info); (ii) ** not reported due to very low volume of data.

5. Aboriginal persons

The Health Performance Council respectfully uses the term 'Aboriginal', rather than 'Indigenous', to refer to people who identify as Aboriginal, Torres Strait Islander, or both. HPC recognises Aboriginal and Torres Strait Islander people as two separate groups. However, this document refers to Aboriginal persons in recognition that Aboriginal people are the original inhabitants of South Australia. We also acknowledge the complexity and diversity of the Aboriginal communities of South Australia, recognising each has its own beliefs and practice.

Aboriginal persons represent 2.4% of the population of South Australia⁷. In the first quarter (Q1) of the 2017-18 financial year, 4.1% of metropolitan Adelaide public acute hospitalisations (inpatient separations) were Aboriginal persons. The Health Performance Council noted changing trends in proportion of hospitalisations of Aboriginal persons between the local health networks (LHNs), from around 2010-11 onwards.

Average length of stay for Aboriginal persons at metropolitan Adelaide public acute hospitals is relatively unchanged across the time series presented in this report. In-hospital mortality rate for Aboriginal persons (0.4%) continues an overall downward trend (volume of activity data was too small to chart local health network activity separately for this indicator). HPC noted spikes in the proportion of hospitalisations of Aboriginal persons that ended with transfer to another hospital in the Northern and Southern Adelaide local health networks in 2015-16 and 2016-17, although these relatively large increases appear to have been a temporary occurrence, with trends reversing since then.

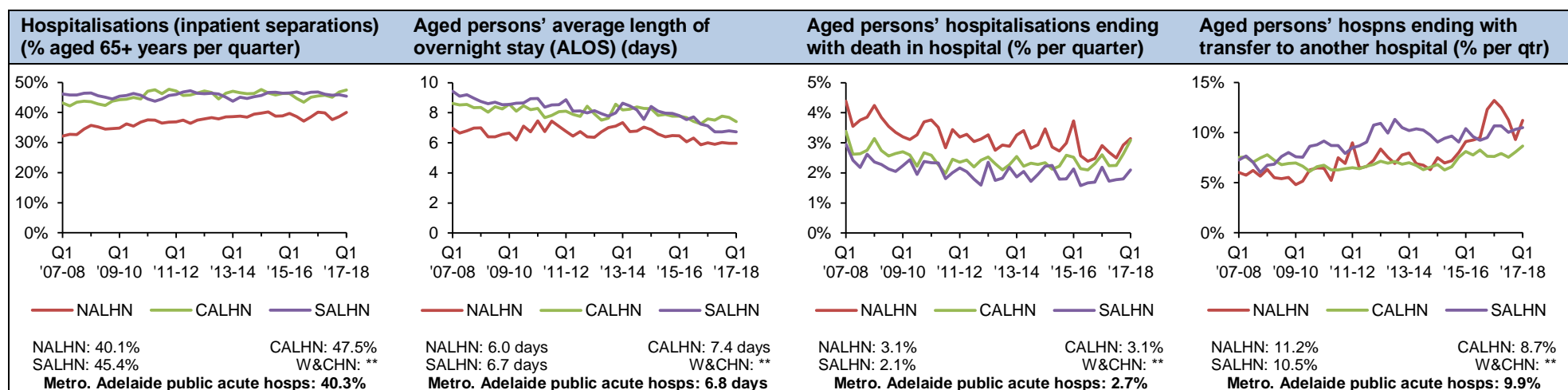


Notes: (i) From 1 July 2017, SA Health adopted new business counting rules to hospitalisations data that may affect time series (see Appendix B for more info); (ii) ** not reported due to very low volume of data.

6. Aged persons

The Health Performance Council defines aged person as inpatients aged 65 years and over at time of admission. This group represents 17.4% of the state's population⁸ and 40.3% of hospital activity at metropolitan Adelaide public acute hospitals in the first quarter (Q1) of the 2017-18 financial year. Around half of all inpatient activity at hospitals in the Central Adelaide and Southern Adelaide local health networks (LHNs) are persons in this age cohort, with the Northern Adelaide LHN trending up towards the same level. There is virtually no inpatient activity at the Women's and Children's Hospital for aged persons, so its trend line does not appear in the charts below.

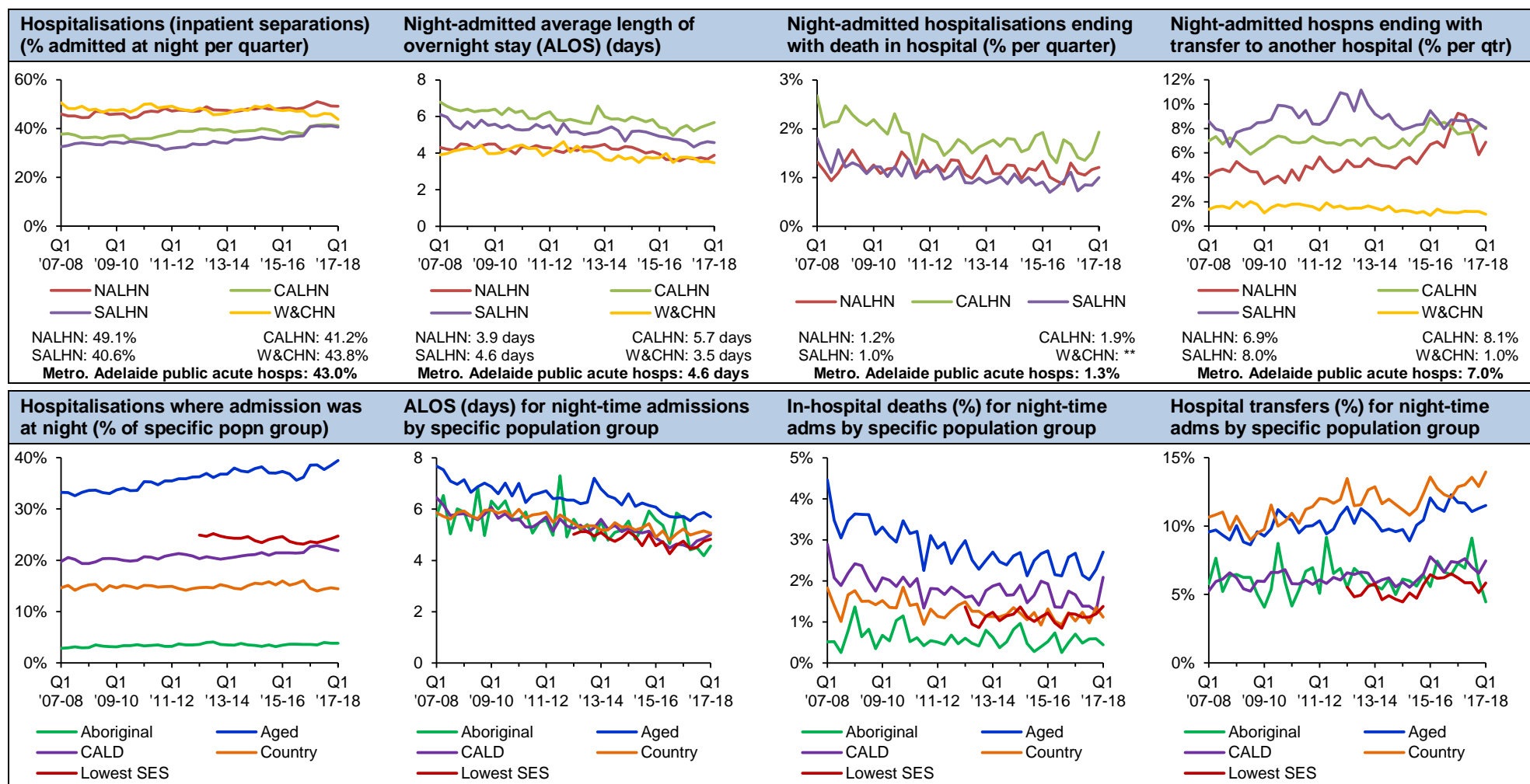
The average length of overnight stay for patients in older age groups over during Q1 2017-18 was 6.8 days. This is higher than the overall average length of overnight stay of 5.6 days reported in Section 1 although has been trending down over the time series presented in this report. In-hospital deaths as a crude proportion of all activity for this population group has also decreased, down from 3.4% in Q1 2007-08 to 2.7% in Q1 2017-18. The relative number of hospitalisations of patients in older age cohorts ending with transfer to another hospital is on the rise, up to 9.9% for all metropolitan Adelaide public acute hospitals and 11.2% in the Northern Adelaide Local Health Network (LHN).



Notes: (i) From 1 July 2017, SA Health adopted new business counting rules to hospitalisations data that may affect time series (see Appendix B for more info); (ii) ** not reported due to very low volume of data.

7. Patients admitted out-of-hours (night-time)

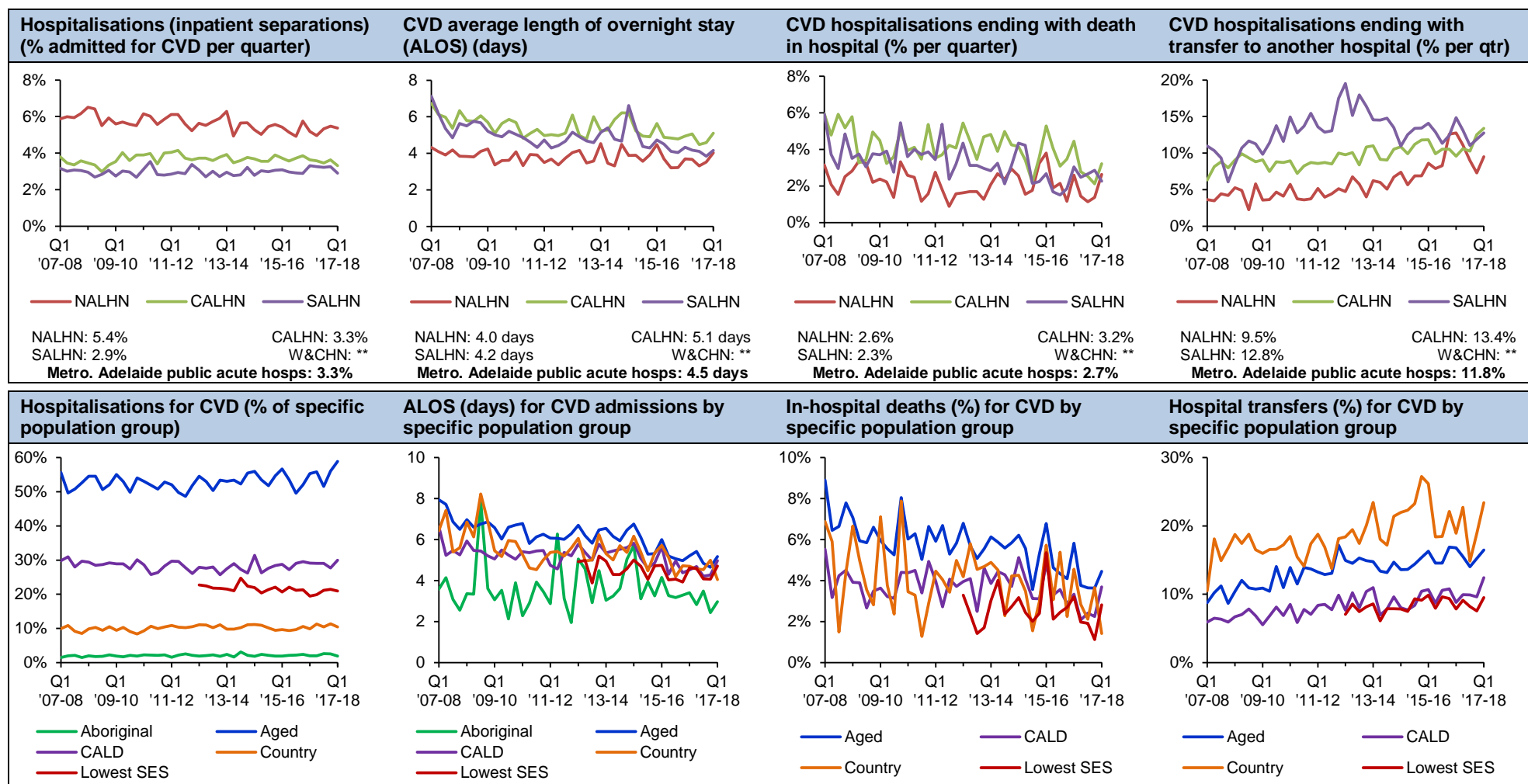
The Health Performance Council defines after hours (night-time) inpatient admissions as after 6:00pm and before 8:00am, regardless of day of the week or public holidays. In the Northern Adelaide Local Health Network (49.1%) and Women's and Children's Hospital (43.8%), around half of all inpatients are admitted between these hours. Average length of overnight stay and percentage of hospitalisations ending in death for this patient group is up in NALHN. Proportion of after-hours (night-time) admitted patients being transferred to another hospital has decreased for the Women's and Children's Hospital over the last decade.



Notes: (i) From 1 July 2017, SA Health adopted new business counting rules to hospitalisations data that may affect time series (see Appendix B for more info); (ii) ** not reported due to very low volume of data.

8. Patients admitted for cardiovascular disease

The proportion of inpatient hospitalisations for cardiovascular disease (CVD) – stroke, chest pain, and heart failure and shock – at metropolitan Adelaide public hospitals has remained relatively steady over the time series presented here, representing 3.3% of all inpatient hospitalisations in Q1 2017-18. The Northern Adelaide Local Health Network accounts for the majority of CVD inpatient activity. Average length of overnight stay is on the decline for this patient group, as is the rate of hospitalisations that end with death in hospital. Women's and Children's Hospital and in-hospital deaths for Aboriginal CVD inpatients are not charted separately below due to low volume of data.

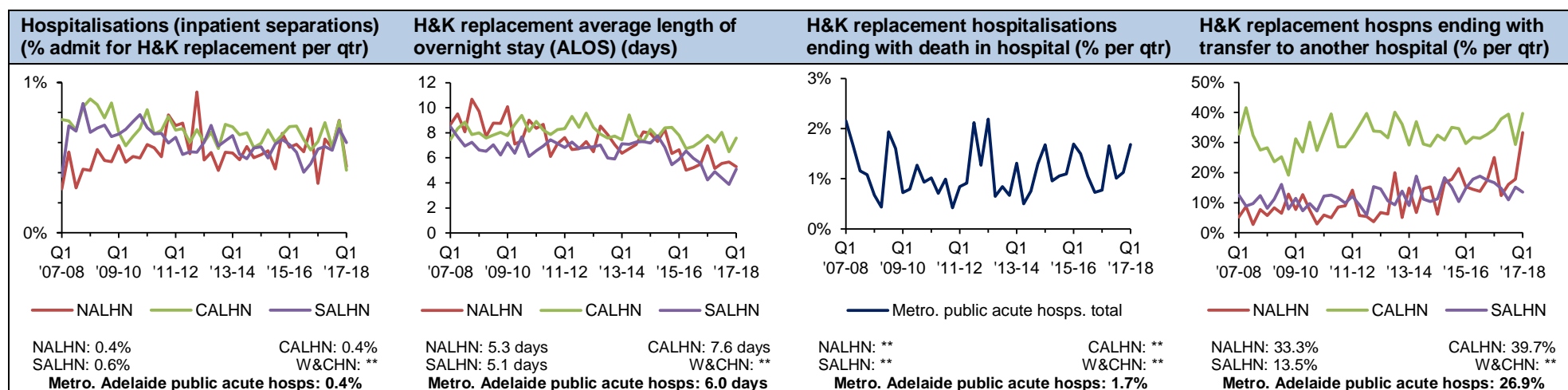


Notes: (i) From 1 July 2017, SA Health adopted new business counting rules to hospitalisations data that may affect time series (see Appendix B for more info); (ii) ** not reported due to very low volume of data.

9. Patients admitted for hip and knee replacement

Safely reducing length of stay for hip and knee replacement surgery patients, particularly at the Royal Adelaide Hospital in the Central Adelaide Local Health Network (CALHN), was an early focus of SA Health in its implementation of Transforming Health⁹. The Health Performance Council is monitoring outcomes for this patient group as a priority surgical clinical activity group, although total volume of activity is relatively low.

Over the time series presented in this report, the average length of overnight stay for hip and knee replacement hospitalisations (inpatient separations) has decreased to 6.0 days in the first quarter (Q1) of 2017-18, down from 7.9 days in Q1 2007-08. The Health Performance Council observed declining trends in overnight average length of stay for hip and knee replacement inpatients, particularly in the Southern Adelaide and Northern Adelaide local health networks commencing from around Q1 2014-15. Over a quarter (26.9%) of hip and knee replacement inpatient hospitalisations across the Transforming Health hospitals (metropolitan Adelaide public acute hospitals) ended with a transfer to another hospital in Q1 2017-18, highest in the Central Adelaide Local Health Network (CALHN) at 39.7%. No hip and knee replacement surgery is recorded for Women's and Children's Hospital, so this facility is omitted from the charts below. The number of in-hospital deaths from hip and knee hospitalisations are too low to represent by individual local health network.



Notes: (i) From 1 July 2017, SA Health adopted new business counting rules to hospitalisations data that may affect time series (see Appendix B for more info); (ii) ** not reported due to very low volume of data.

There is insufficient volume of hospital inpatient activity for hip and knee replacements to break the data down further by specific population groups.

Appendix A: Background to the Health Performance Council and Transforming Health

What is the Health Performance Council?

The Health Performance Council is the South Australian Government's statutory Ministerial advisory body established under section 9 of the *Health Care Act 2008* to provide advice to the Minister for Health on the performance of the health system, health outcomes for South Australians and specific population groups and the effectiveness of community & individual engagement. We publish reviews of South Australian health system performance on our website: hpcsa.com.au.

What was Transforming Health?

Transforming Health was a major state government initiative to align new models of health care delivery with new and upgraded hospital facilities in metropolitan Adelaide, in particular the new Royal Adelaide Hospital. Development of the Transforming Health program began in June 2014 and the change program was originally anticipated to roll out from 2015 to 2019. In June 2017, with State Budget announcements, the Minister for Health said Transforming Health was coming to a conclusion by the end of the year with investment in public hospital facilities and implementation of service moves.

Key dates in the design and implementation of Transforming Health are:

Clinical Advisory Committees (Jun–Oct 2014). Clinical advisory committees worked together to develop the quality principles and clinical standards of Transforming Health.

Discussion Paper (Oct–Nov 2014). The discussion paper was released for wide consultation, including community events. More than 2000 submissions were received.

Transforming Health Summit (28 Nov 2014). More than 600 people attended the summit and agreed that transformation was needed, beginning with the metropolitan Adelaide hospital system.

Proposals Paper (Feb 2015). The *Delivering Transforming Health Proposals Paper* was released for feedback. SA Health received submissions from staff and clinicians; the community; unions; consumer representative organisations; research, training and education providers; and non-government organisations.

Next Steps (Mar 2015). *Delivering Transforming Health – Our Next Steps* was released, outlining initial decisions, a commitment to ongoing engagement, and timelines of the first changes to improve our healthcare system. *Our Next Steps* outlines the Transforming Health vision to deliver the best care, first time, every time, based on six quality principles: (1) patient-centred, (2) safe, (3) effective, (4) accessible, (5) efficient and (6) equitable.

State Budget 2017-18 Agency Statements (June 2017). Agency statements describe Transforming Health as nearing completion, and Sub-program 1.3 Transforming Health has no funding. In 2017-18, Transforming Health clinical innovation and service reforms funding is presented under Sub-program 1.1 System Performance and Service Delivery business-as-usual.

New Royal Adelaide Hospital opening (5 September 2017). Doors of the old Royal Adelaide Hospital closed, and the new Royal Adelaide Hospital's emergency department opened its doors to patients.

Transforming Health service changes were designed to improve the delivery of consistent quality of care in response to ten identified issues: (1) Too many deaths occur in our hospitals; (2) Senior clinicians unavailable overnight; (3) Insufficient opportunities for staff to maintain their skills, (4) Too many cancelled elective surgeries; (5) Low day surgery rates; (6) Too many procedures being performed; (7) Long waiting times for discharge or placement; (8) Too many transfers between hospitals; (9) Our health system is unable to meet some national standards; and (10) Risk to the financial sustainability of our healthcare.

More information is available from the website: transforminghealth.sa.gov.au

How is Transforming Health (2015-2017) being evaluated by SA Health?

The National Health and Medical Research Council (NHMRC) accredited SA Academic Health Science and Translation Centre (SA Centre) has been commissioned by SA Health to bring together the state's academic, research and health care delivery agencies to advance translation of evidence into clinical care for improved health outcomes. As part of its role, the SA Centre has been:

- supporting the Transforming Health agenda through the provision of evidence-based and evaluation-oriented strategic advice
- undertaking the ongoing evaluation of system changes under Transforming Health, to explore if and how Transforming Health has made progress towards achieving its goals of improving quality of care outcomes.

The SA Centre convenes an Evaluation Working Group to provide advice and oversee the establishment of an evaluation framework, and implementation of an evaluation and reporting process. The five main sub-areas for evaluation are (1) patient experience; (2) staff experience of change; (3) clinical outcomes; (4) system improvement; and (5) population health. The Evaluation Working Group will (1) identify and prioritise evaluation questions and KPIs; (2) determine what evidence or data will be required to demonstrate change attributable to Transforming Health; and (3) review the Transforming Health Evaluation Report. The Working Group has developed a logic model and expects to be sharing a final report with the SA Centre by June 2018.

The group is chaired by Professor Alison Kitson, Vice-President and Executive Dean, College of Nursing and Health Sciences, Flinders University, and previously Dean of Nursing at the University of Adelaide. The group has representation from universities, clinicians, system managers, consumer groups, Health Performance Council and data experts.

How has the Health Performance Council been monitoring the implementation of Transforming Health (2015-2017)?

The Health Performance Council's (HPC) monitoring of the implementation of Transforming Health supports SA Health's evaluation. It is contributing to a better understanding of the overall impact of new care models and service moves in metropolitan Adelaide public hospitals. This period of health system change has been an important time for HPC to apply independent scrutiny of policy implementation and report on the performance of the South Australian health system in relation to: (1) strategic objectives that have been set or adopted within SA Health, (2) significant trends, health outcomes and future priorities of the health system, and (3) emerging gaps in service access and utilisation by specific population groups.

HPC has a set key of principles it considers in its reviews. HPC looks for situations where it appears system or policy changes may be causing unwarranted widening of health outcomes gaps between

specific populations, particularly vulnerable groups such as Aboriginal and Torres Strait Islander people, culturally and linguistically diverse communities, lower socio-economic areas, aged persons and rural and remote residents.

HPC developed monitoring of the following critical questions:

1. Is the Transforming Health (2015-2017) aim of providing “Best Care. First Time. Every Time.” being realised consistently across the system for specific population and patient groups?
2. How has patient experience changed during Transforming Health implementation?
3. How has staff engagement changed during Transforming Health implementation, with a focus on the importance of human behaviour as a critical factor in any change process?

Next steps with HPC’s monitoring of the implementation of Transforming Health (2015-2017) will include the addition of patient experience and staff engagement measures. This monitoring will be a core component of the HPC’s 4-yearly (2015-2018) review into the performance of the South Australian health system.

What indicators has the Health Performance Council chosen to monitor implementation of Transforming Health?

The Health Performance Council (HPC) is monitoring hospitalisations (inpatient separations), average length of overnight stay, hospitalisations ending with death in hospital and hospitalisations ending with transfer to another hospital.

HPC selected these indicators to monitor changes in patient access and equity based on these elements described in *Delivering Transforming Health – Our Next Steps* (Section 3 and Appendix 7):

1. **Too many deaths occur in our hospitals** – SA Health identified that: (1) more deaths occur in our hospitals compared with other hospitals across Australia and (2) mortality rates vary in hospitals, overnight and on the weekend. Contributing factors include lack of senior clinical support available 24-7 and services spread too thinly across too many hospitals.
2. **Long waiting times for discharge or placement** – Patients are sometimes required to stay in hospital many days longer than other patients with the same condition, depending on which hospital they attend and the day of the week they are admitted. There are a number of reasons for this, including the lack of allied health staff and senior clinicians working on the weekend, which can delay discharge.
3. **Too many transfers between hospitals** – Several thousand patient transfers are made each year between hospitals in South Australia, often because patients are not in the right hospital to receive the treatment required for their condition. As a result, patients’ treatments are delayed, leading to longer recovery times.
4. **Senior clinicians unavailable** – While senior clinicians are available on call overnight in cases of emergencies, generally there are no senior clinicians rostered overnight in our major hospitals.

Within the above areas, HPC prioritised monitoring implementation of new models of care for two clinical activity groups. One medical and one surgical group was selected for monitoring – **cardiovascular disease** (incorporating stroke, chest pain, and heart failure and shock) and **hip and knee replacement**. **After-hours (night-time)** admitted patients were also selected for closer analysis due to SA Health identifying unavailability of senior clinicians at night as a contributing factor in the delivery of consistent quality of care in its case for change for Transforming Health. HPC is also developing an after-hours (night-time *and* weekends) measure for future reports to complement its monitoring of trends in outcomes for out-of-hours admitted patients.

Within these selected aspects of hospital activity, HPC is monitoring trends between specific population groups:

- **Aboriginal and Torres Strait Islander people**
- **Culturally and linguistically diverse (CALD) communities**
- **Lower socio-economic areas**
- **Aged persons**
- **Rural and remote residents.**

The technical appendix (Appendix B) has more detailed information on the definitions and derivations of the selected measures.

Appendix B: Technical notes

This technical appendix is provided to explain definitions and assumptions about indicators to avoid potential misinterpretation by all readers including non-technical audiences.

Data sources

HPC's monitoring of the implementation of Transforming Health uses data sourced from SA Health's central hospital morbidity and activity database, known as the *Integrated South Australian Activity Collection* (ISAAC).

ISAAC covers all public and private hospitals in South Australia. It records details of inpatient "episodes of care" commencing with admission to hospital and concluding with a "separation" (discharge, transfer or death). ISAAC is the means by which admitted patient activity can be monitored, funded, evaluated, planned for, researched and reviewed to ensure that SA Health continues to deliver efficient and equitable health services.

ISAAC data is extracted via SA Health's corporate/enterprise management information reporting tool, the *Health Information Portal*.

Hospitals included

Transforming Health applies specifically to metropolitan Adelaide public acute hospitals. Corporate counting rules pre-define these sites in ISAAC as the following:

- **Northern Adelaide Local Health Network:** Lyell McEwin Health Service and Modbury Hospital
- **Central Adelaide Local Health Network:** Hampstead Rehabilitation Centre; Pregnancy Advisory Centre; Royal Adelaide Hospital; St Margaret's Hospital; and The Queen Elizabeth Hospital
- **Southern Adelaide Local Health Network:** Flinders Medical Centre; Noarlunga Hospital; and Repatriation General Hospital
- **Women's and Children's Health Network:** Women's and Children's Hospital and Torrens House (2005-06 data only)
- **Other sites:** Southern Districts War Memorial Hospital is defined within ISAAC as a metropolitan Adelaide public acute hospital and therefore included. It has a very low volume of activity.

Counting rules

To ensure consistency, HPC applies pre-defined ISAAC business counting rules to the hospital activity data before extraction and further analysis. Standard business counting rules include grouping, or "bundling", episodes that experience multiple care type changes during a hospital stay into a single record. Bundling provides a more accurate picture of the number of patients actually discharged from a hospital. Standard business counting rules also excludes sameday endoscopy and chemotherapy activity.

From 1 July 2017, SA Health adopted new state-wide business counting rules to hospital admitted activity data and this may affect time series reported in this document.

Measures reported

- **Hospitalisations (inpatient separations):** A hospital inpatient “separation” is a completed episode of care of an admitted patient, generally concluding with their discharge from hospital (mostly to home), transfer to another healthcare facility or in-hospital death. It can also include other types of separation, such as ‘administrative separation’ applied for hospital activity payment purposes.

The charts in this report show hospitalisations as raw numbers for the total (first chart) or as a percentage of this total for subsequent selected patient and population types.

- **Average length of overnight stay (ALOS):** To be consistent with the Australian Institute of Health and Welfare national reporting counting rules, HPC only counts inpatients that spent a minimum of one night in hospital when deriving this metric.
- **Hospitalisations ending with death in hospital:** The HPC reports deaths in hospitals as a crude rate (number of inpatients who died in hospital as a percentage of all separations). No adjustment is done for type of hospital or care received (such as palliative care), age or condition of patient, patient mix or other explanatory variables that may be considered in statistical models such as standardised hospital mortality ratios.
- **Hospitalisations ending with transfer to another hospital:** As with deaths in hospital, the HPC reports this indicator as a crude rate (episodes of care that conclude with transfer to another hospital as a percentage of all separations). No adjustment is done for type of hospital or care received, age or condition of patient, patient mix or other explanatory variables.

Patient types

- **Patients admitted for cardiovascular or hip and knee replacement:** HPC uses the Extended Service Related Group (ESRG) classification to report cardiovascular and hip and knee replacement inpatient activity. The ESRG classification is based on Australian Refined Diagnosis Related Group (AR-DRG) aggregations to categorise admitted patient episodes into groups representing clinical divisions of hospital activity.
 - **Cardiovascular** patients are defined by HPC in this report as episodes of care in the ESRGs of “Stroke”, “Chest Pain”, and “Heart Failure & Shock”.
 - **Hip and knee replacement** patients are defined by HPC in this report as episodes of care in the ESRG of “Hip & Knee Replacement”.
 - HPC’s monitoring of the impact of Transforming Health does not include any other surgical activities. There is insufficient volume of activity to support specific population group analysis of hip replacement or fractured neck of femur procedures.
- **Patients admitted out-of-hours (night-time):** HPC defines after hours (night-time) admissions as inpatients admitted between 6:01pm and 7:59am, regardless of day of the week or public holidays.

Population types

- **Culturally and linguistically diverse (CALD) persons:** Defined by the HPC as persons born in non-main English speaking countries. These are countries *other than* Australia (incl. external territories), New Zealand, United Kingdom (incl. Isle of Man & Channel Islands), Ireland, United States of America, Canada and South Africa.
- **Rural and remote residents:** Defined by the HPC as persons who reside within SA Health's Country Health South Australia Local Health Network (CHSALHN) boundaries.
- **Lower socioeconomic status geographic areas of South Australia:** Areas identified using the Australian Bureau of Statistics' Socio-economic Index for Areas (SEIFA), ABS 2013, 'Table 3. Statistical Area Level 2 (SA2) Index of Relative Socio-economic Disadvantage, 2011', Socio-economic Index for Areas (SEIFA), Data Cube only, 2011, cat. no. 2033.0.55.001.

South Australian SA2s ranked in the lower-SES quintile (lower 20%) are:

- **Metropolitan Adelaide:** Davoren Park, Elizabeth, Elizabeth East, Smithfield - Elizabeth North, Virginia - Waterloo Corner, Enfield - Blair Athol, Parafield Gardens, Paralowie, Salisbury, Salisbury North, Christie Downs, Hackham West - Huntfield Heights, Morphett Vale - West, Royal Park - Hendon - Albert Park, Woodville - Cheltenham, Port Adelaide, The Parks.
- **Country South Australia:** Peterborough - Mt Remarkable, Port Pirie, Wallaroo, Ceduna, Western, Whyalla, Anangu Pitjantjatjara Yankunytjatjara (APY) Lands, Coober Pedy, Port Augusta, Millicent, Barmera, Berri, Murray Bridge, Renmark, Waikerie.

Note that ISAAC incorporated SA2s into its reporting on 1 July 2012 and so the charts start at 2012-13 for this indicator.

- **Aboriginal persons:** The Health Performance Council respectfully uses the term 'Aboriginal', rather than 'Indigenous', to refer to people who self-identify as Aboriginal, Torres Strait Islander, or both. HPC recognises Aboriginal and Torres Strait Islander people as two separate groups. However, this document refers to Aboriginal persons in recognition that Aboriginal people are the original inhabitants of South Australia. We also acknowledge the complexity and diversity of the Aboriginal communities of South Australia, recognising each has its own beliefs and practice.
- **Aged persons:** Inpatients whose age at admission was 65 years or older.

Quality control

The HPC developed its monitoring of the implementation of Transforming Health in consultation with SA Health, sourcing data from enterprise datasets and applying standardised business counting rules. Technical information has been provided in this report so that results can be replicated. HPC validates its monitoring with relevant experts to confirm robustness of method, accuracy of findings and clarity of presentation.

Appendix C: References

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- ¹ Health Performance Council, State of Our Health, '1-1. Population', http://hpcsa.com.au/state_of_our_health/chapter_1/1_1, viewed 24 Feb 2017.
- ² AIHW 2017, 'Table 2.17: Average length of stay statistics, public and private hospitals, states and territories, 2015–16', *Admitted patient care 2015–16: Australian hospital statistics*, Health services series no.75, Cat. no. HSE 185, <http://www.aihw.gov.au/publication-detail?id=60129559537>, viewed 7 June 2017.
- ³ Ibid., 'Table 5.38: Separations, by mode of separation, public and private hospitals, states and territories, 2015–16'.
- ⁴ Ibid.
- ⁵ Health Performance Council, State of Our Health, '1-2-1. People born overseas', http://hpcsa.com.au/state_of_our_health/chapter_1/1_2, viewed 24 Feb 2017.
- ⁶ Ibid., '1-1-1. Population by region', http://hpcsa.com.au/state_of_our_health/chapter_1/1_1.
- ⁷ Health Performance Council, *Aboriginal health in South Australia: 2017 case study*, Government of South Australia, Adelaide, 2017, http://hpcsa.com.au/files/1025_hpc_aboriginal_health_case_study_2017_final_report.pdf, viewed 8 Sep 2017.
- ⁸ Health Performance Council, State of Our Health, '1-1-2. Population by age and sex', http://hpcsa.com.au/state_of_our_health/chapter_1/1_1, viewed 24 Feb 2017.
- ⁹ Transforming Health, 'Pilot programs result in reduced emergency department waiting times and surgical length of stay' <http://transforminghealth.sa.gov.au/pilot-programs-result-in-reduced-emergency-department-waiting-times-and-surgical-length-of-stay>, released 18 Nov 2015, viewed 28 Feb 2017.