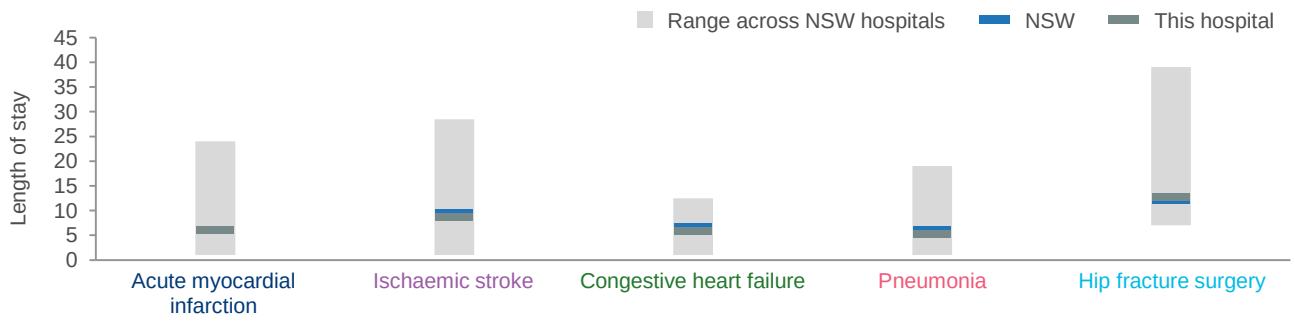
Shoalhaven and District Memorial Hospital

July 2009 – June 2012

This profile reports risk-standardised readmission ratios (RSRRs) and risk-standardised mortality ratios (RSMRs). The ratios take into account differences across hospitals in terms of case mix and volumes of patients, and results are reported as either: higher than expected; no different than expected; or lower than expected. The performance dashboard below summarises ratio results for five conditions over a 12 year period together with length of stay information for July 2009 – June 2012. Subsequent pages provide information to support interpretation of the RSRR. Readmissions are defined as returns to acute care[1] and results describe the age profile and comorbidity profile of patients; the number who returned to acute care within 30 days of discharge; and reasons, location and timing of returns to acute care.

Returns to acute care and mortality for five clinical conditions[2]

Average length of stay (days)[3]



NOTES:

1. For patients whose acute hospitalisation ends with discharge home, a return to acute care involves readmission to hospital; while for patients whose acute hospitalisation ends with a 'discharge' to non-acute care, a return involves a move back into an acute care setting regardless of whether they physically left the hospital.
2. The “Not reported” category is used when there were fewer than 50 index cases admitted in the time period. Risk-standardised mortality ratios have been taken from the BHI publication *The Insights Series: 30-day mortality following hospitalisation, five clinical conditions, NSW, July 2009 – 2012* and further information about this measure can be found there. RSRR outlier status is determined using funnel plot control limits of 95% and 99.8%.
3. For calculation of average length of stay, index admissions that were transferred in from, or transferred out to, another acute care hospital were excluded. Unreasonably long episodes are trimmed on the basis of the Diagnosis Related Group (DRG) of the episode. The trim point is the third quartile plus 1.5 x the interquartile range of all in-scope episodes in each DRG.
4. Discharge destinations are based on the mode of separation of the index case. For episodes coded as 'Discharged by hospital' or 'Discharged on leave', patients are considered to be destined for their place of usual residence. All other modes of separation are deemed to indicate a discharge destination other than a patient’s place of usual residence.
5. Age of the patient at admission for the index case is used. Percentages may not add to 100% due to rounding.
6. Comorbidities are identified from the hospital discharge records using the Elixhauser comorbidity set (plus dementia) with a one year look-back from the admission date of the index case. Percentage labels have been rounded to the nearest integer.
7. Results for hospitals with <1 expected return to acute care (readmission) within 30 days are not shown.
8. Peer hospitals are identified according to the NSW Ministry of Health’s peer grouping as of 30 June 2011. Hospitals with fewer than 50 index cases are not shown.
9. Hospitals are classified as urban and regional/rural using the geocoded address of the hospital assigned to ABS statistical areas (SA2) and the Australian remoteness index for areas. Further information can be found in this report's *Spotlight on Measurement* companion publication.
10. Reasons for return to acute care are classified according to a draft specification made available to the BHI by the Australian Institute of Health and Welfare. Principal diagnoses for the return to acute care episode, are stratified as: the same as the index hospitalisation; related to that of the index hospitalisation; potentially related to hospital care (i.e. complications and adverse events) using various time horizons; and, other reasons. Percentages may not add to 100% due to rounding.

Further information can be found in this report's *Spotlight on Measurement* companion publication.

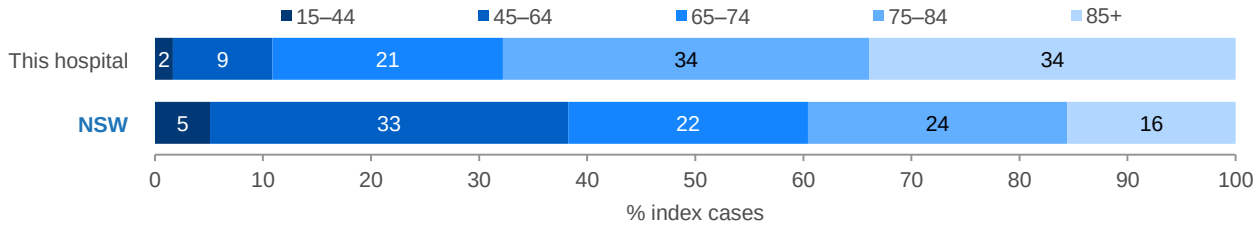
Data source: SAPHaRI, Centre for Epidemiology and Evidence, NSW Ministry of Health.

30-day return to acute care following hospitalisation for AMI

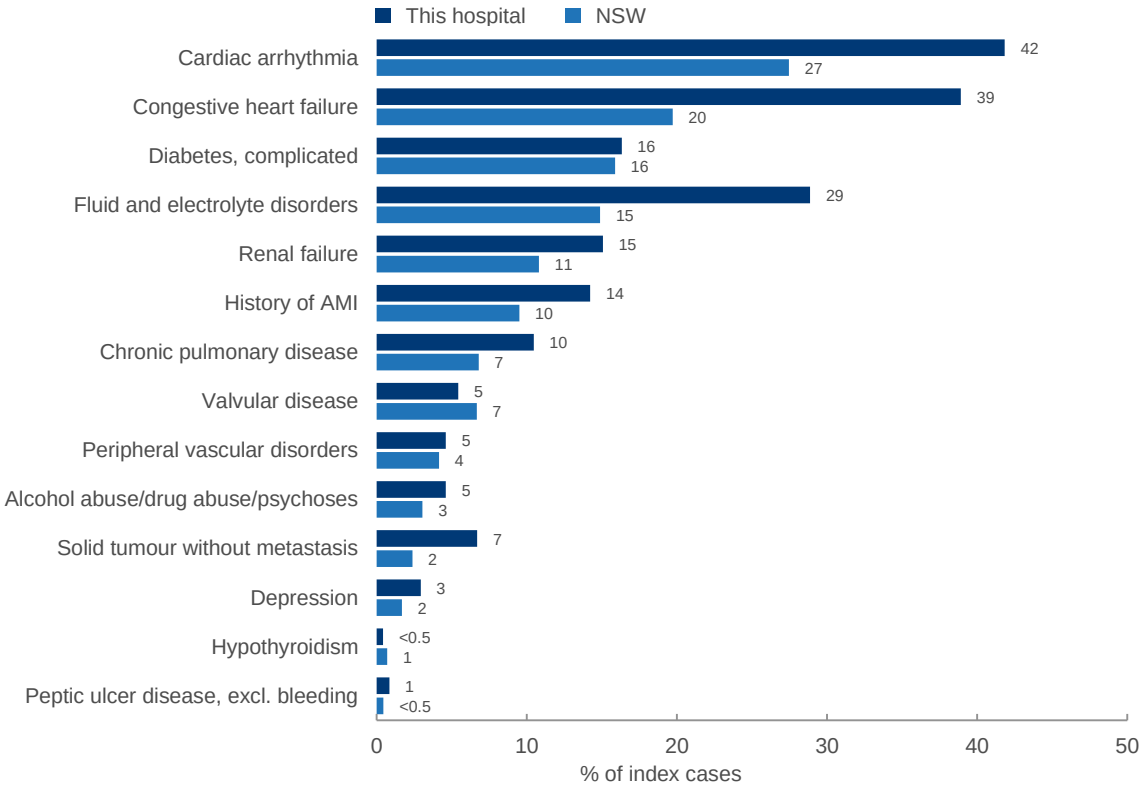
Patient cohort, index cases[3,4]

	This hospital	NSW
Total AMI index cases	239	27,325
Average length of stay (days)	6.0	6.0
Patients transferred in from acute care in another hospital	72	11,648
Discharge destination		
Home	208	24,132
Other	31	3,193

Age profile for index cases (years)* [5]



Presence of factors associated with 30-day AMI return to acute care[6]

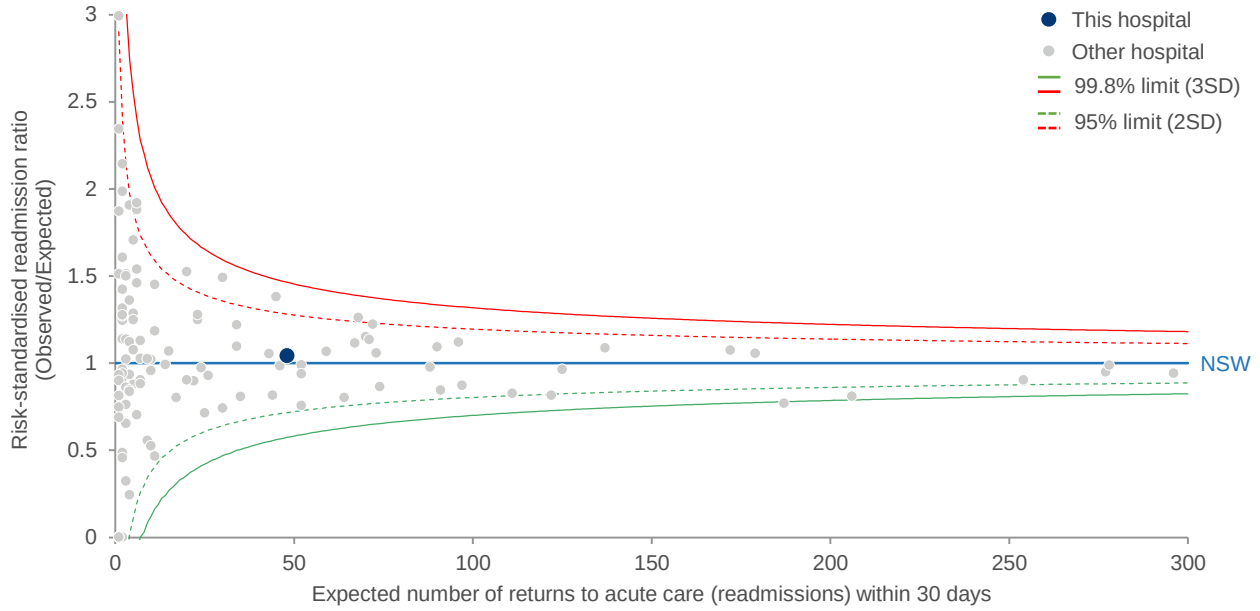


*Age was a significant factor in the final model of 30-day returns to acute care following an index hospitalisation for AMI.

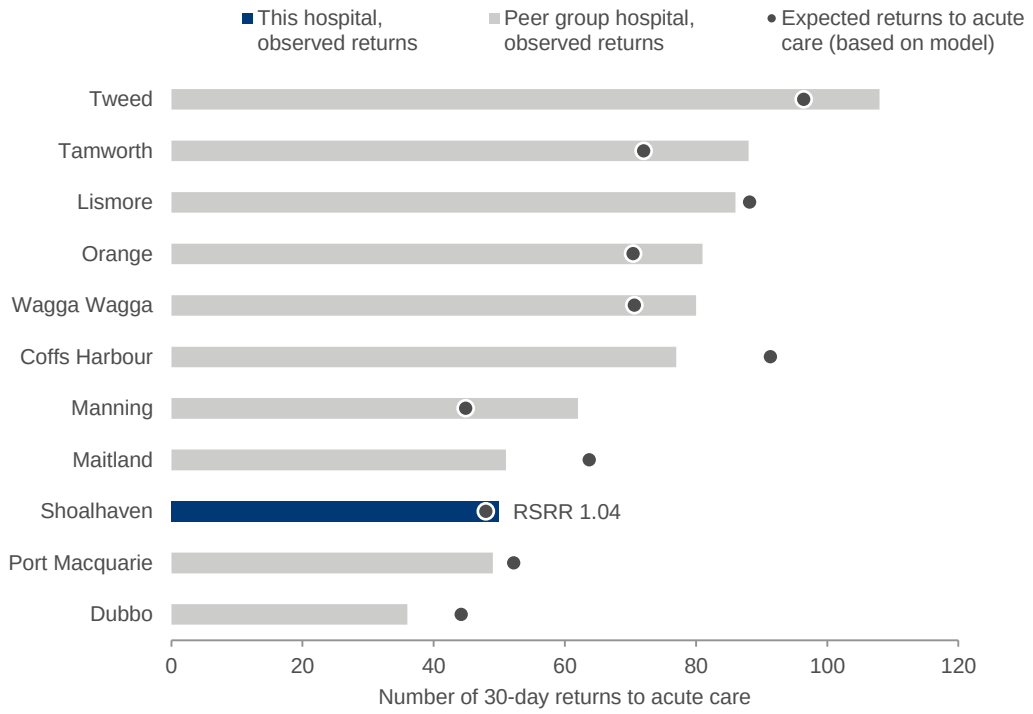
30-day return to acute care following hospitalisation for AMI

Hospital-specific RSRRs report the ratio of actual or 'observed' number of returns to acute care to the 'expected' number of returns. A competing risk regression model draws on the NSW patient population's characteristics and outcomes to estimate the expected number of returns for each hospital, given the characteristics of its patients. An RSRR less than 1.0 indicates lower-than-expected returns to acute care, and a ratio higher than 1.0 indicates higher-than-expected returns. Small deviations from 1.0 are not considered to be meaningful. Funnel plots with 95% and 99.8% control limits around the NSW rate are used to identify outliers.

Hospital level AMI RSRR by number of expected returns to acute care (readmissions)[7]



Observed and expected 30-day returns to acute care, grouped with peers[8]



30-day return to acute care following hospitalisation for AMI

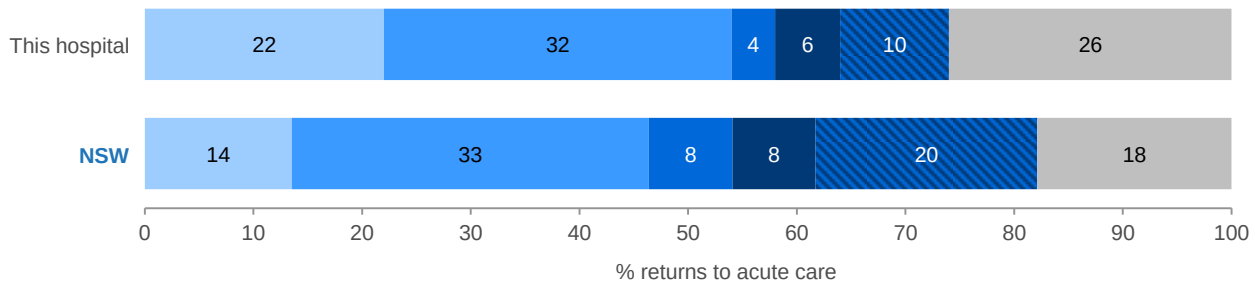
Location of returns to acute care[9]

	This hospital	NSW
Total returns to acute care following AMI index hospitalisation	50	4,453
Returned to the hospital where acute care was completed	43	3,042
Returned to a different hospital	7	1,411
Of these:		
To an urban public hospital	6	
To a regional or rural public hospital	1	
To a private hospital	0	

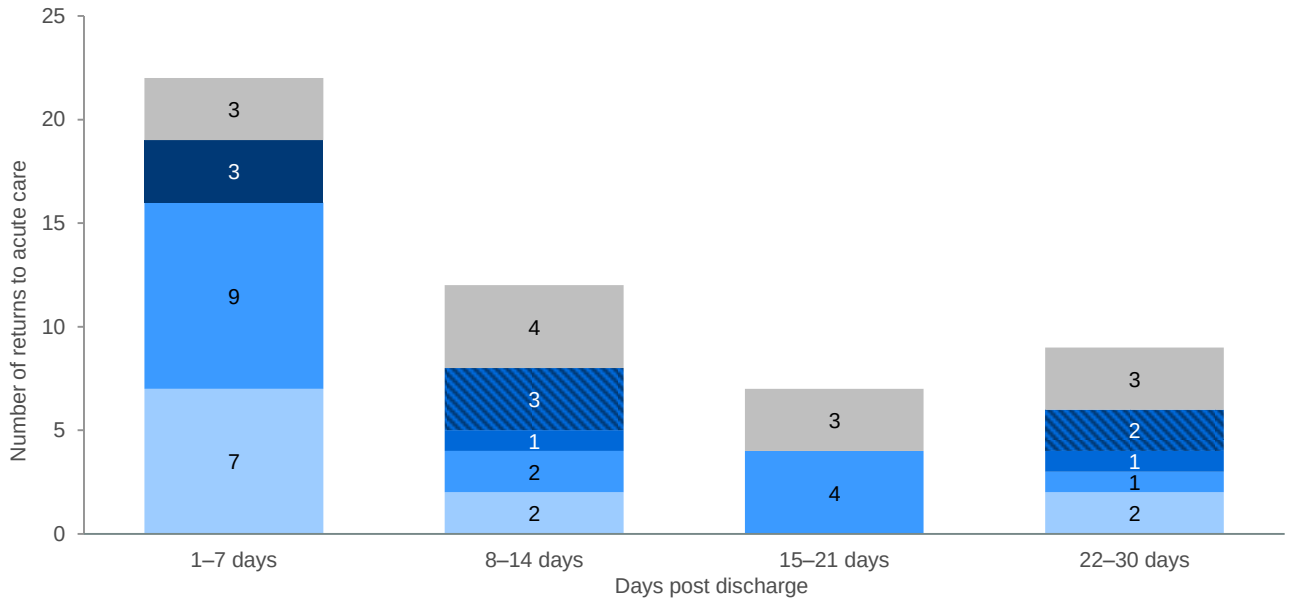
Reasons for and time to returns to acute care[10]

- Principal diagnosis
- Condition related to principal diagnosis
- Potentially related to hospital care (relevant at any time)
- Potentially related to hospital care (time sensitive, ≤ 7 days post discharge)
- Potentially related to hospital care (time sensitive, 8–30 days post discharge)
- Other condition

Distribution of reasons for returns to acute care



Number of, and reasons for, returns to acute care following hospitalisation for AMI, by days post discharge

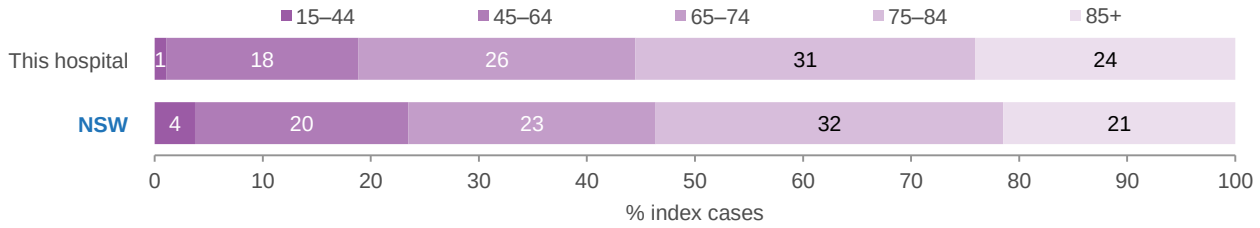


30-day return to acute care following hospitalisation for ischaemic stroke

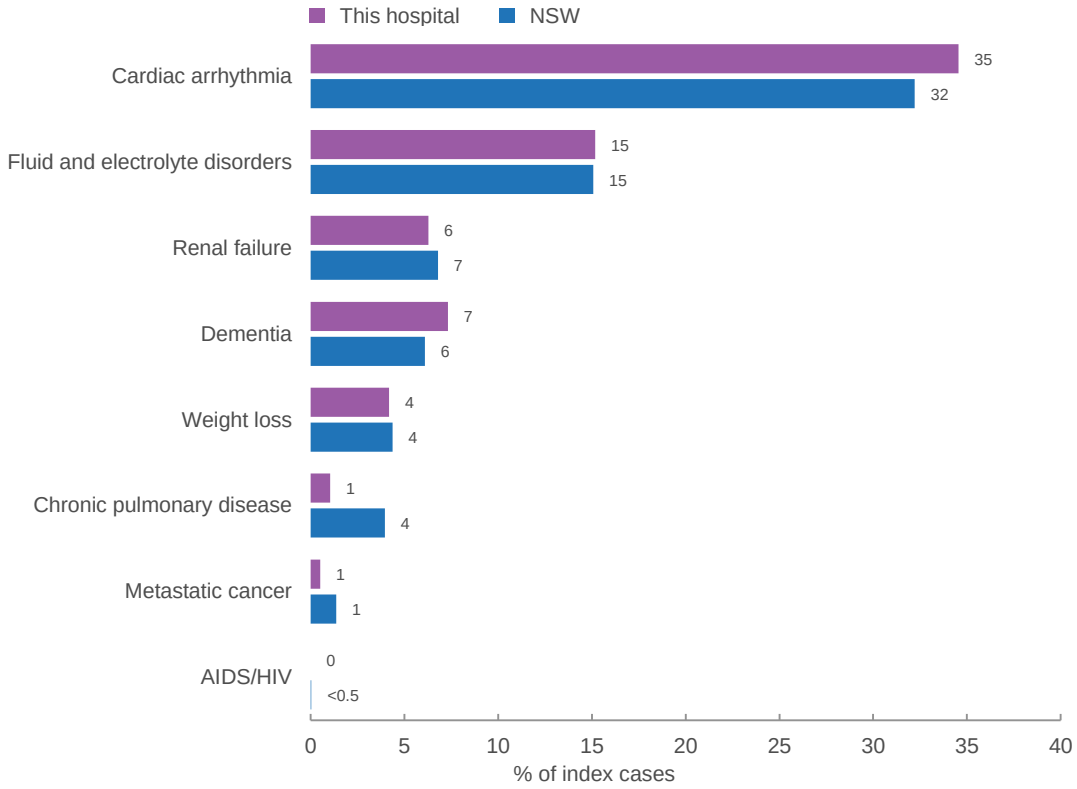
Patient cohort, index cases[3,4]

	This hospital	NSW
Total ischaemic stroke index cases	191	12,776
Average length of stay (days)	8.6	9.5
Patients transferred in from acute care in another hospital	20	1,713
Discharge destination		
Home	86	6,772
Other	105	6,004

Age profile for index cases (years)* [5]



Presence of factors associated with 30-day ischaemic stroke return to acute care[6]

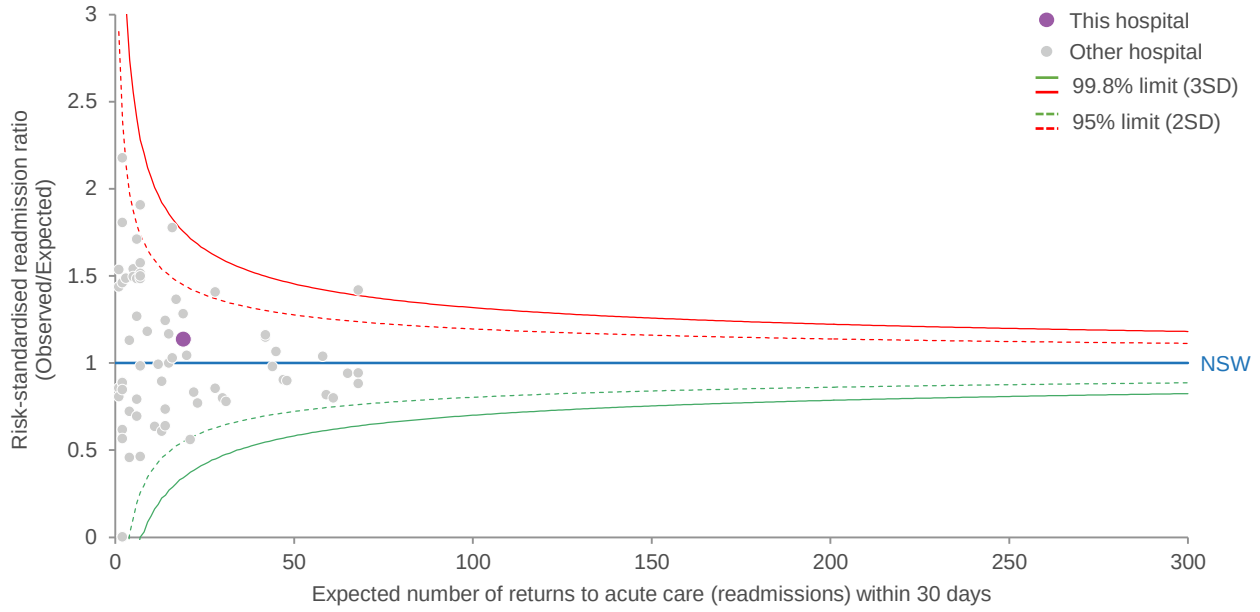


*Age was not a significant factor in the final model of 30-day returns to acute care following an index hospitalisation for ischaemic stroke.

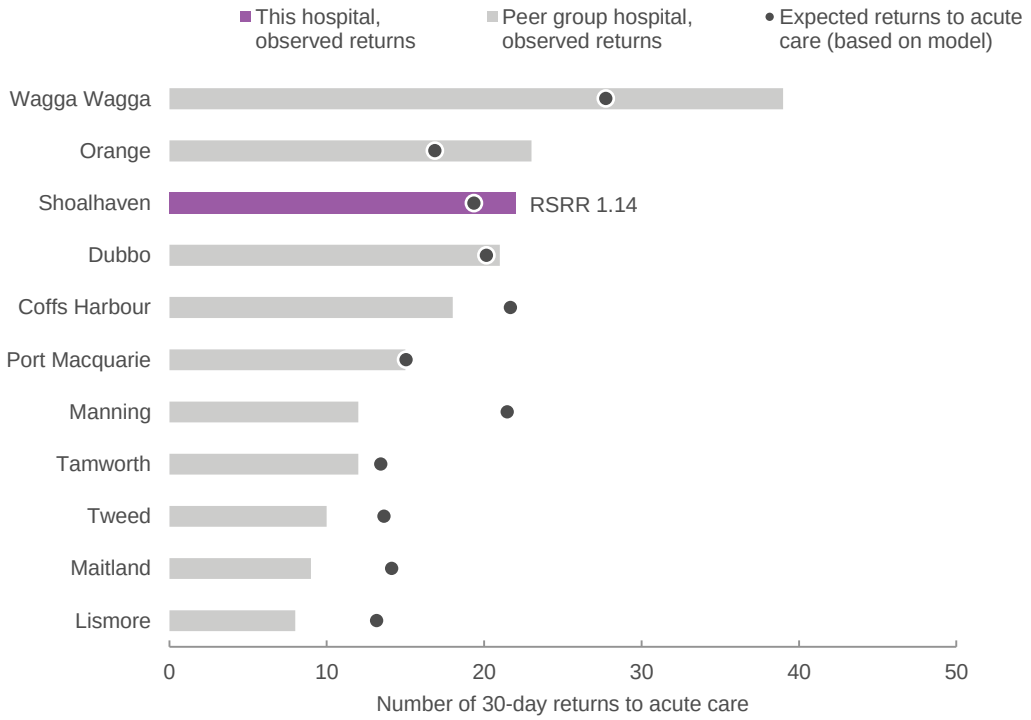
30-day return to acute care following hospitalisation for ischaemic stroke

Hospital-specific RSRRs report the ratio of actual or 'observed' number of returns to acute care to the 'expected' number of returns. A competing risk regression model draws on the NSW patient population's characteristics and outcomes to estimate the expected number of returns for each hospital, given the characteristics of its patients. An RSRR less than 1.0 indicates lower-than-expected returns to acute care, and a ratio higher than 1.0 indicates higher-than-expected returns. Small deviations from 1.0 are not considered to be meaningful. Funnel plots with 95% and 99.8% control limits around the NSW rate are used to identify outliers.

Hospital level ischaemic stroke RSRR by number of expected returns to acute care (readmissions)[7]



Observed and expected 30-day returns to acute care, grouped with peers[8]



30-day return to acute care following hospitalisation for ischaemic stroke

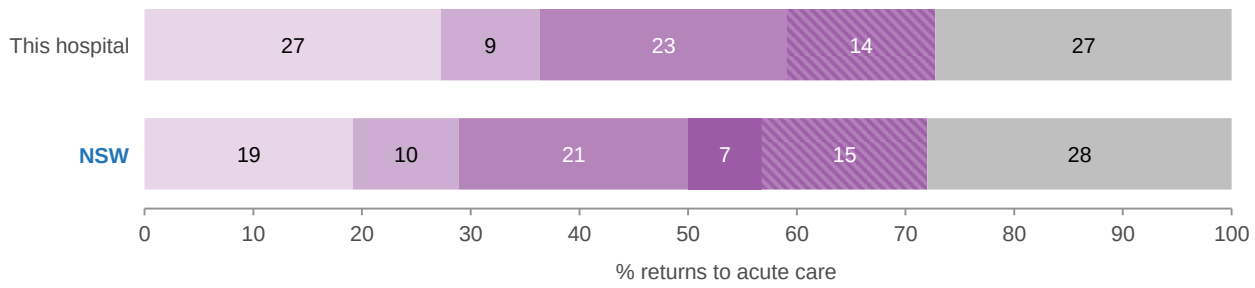
Location of returns to acute care[9]

	This hospital	NSW
Total returns to acute care following ischaemic stroke index hospitalisation	22	1,321
Returned to the hospital where acute care was completed	20	1,022
Returned to a different hospital	2	299
Of these:		
To an urban public hospital	1	
To a regional or rural public hospital	1	
To a private hospital	0	

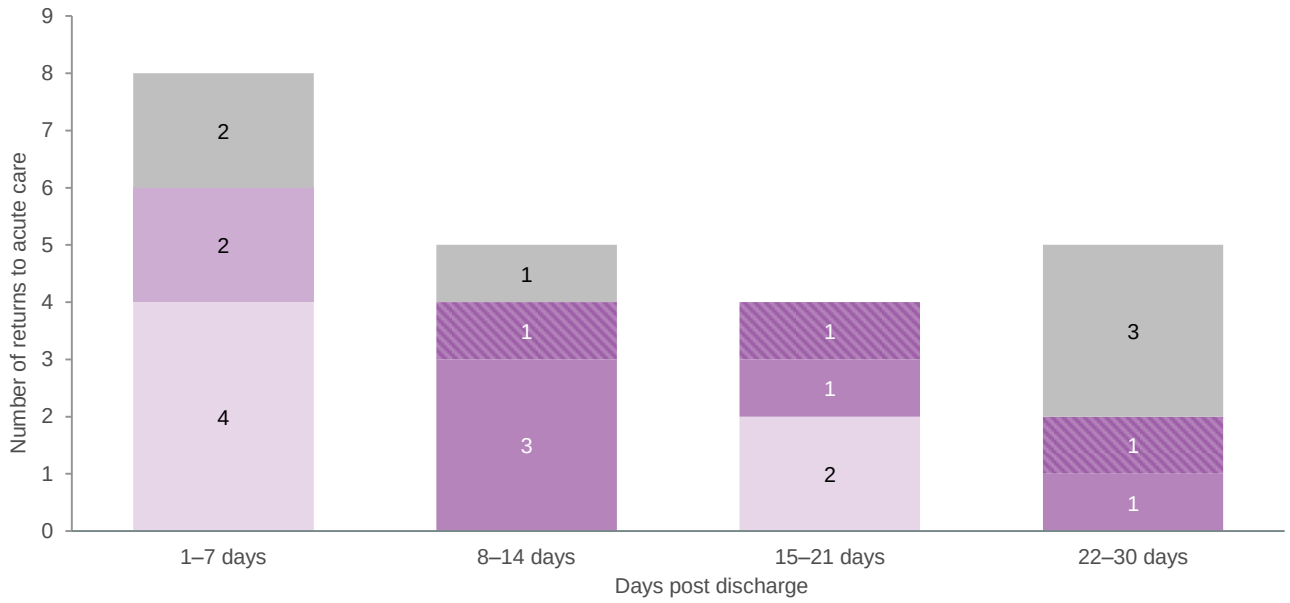
Reasons for and time to returns to acute care[10]

Principal diagnosis
Condition related to principal diagnosis
Potentially related to hospital care (relevant at any time)
Potentially related to hospital care (time sensitive, ≤ 7 days post discharge)
Potentially related to hospital care (time sensitive, 8–30 days post discharge)
Other condition

Distribution of reasons for returns to acute care



Number of, and reasons for, returns to acute care following hospitalisation for ischaemic stroke, by days post discharge

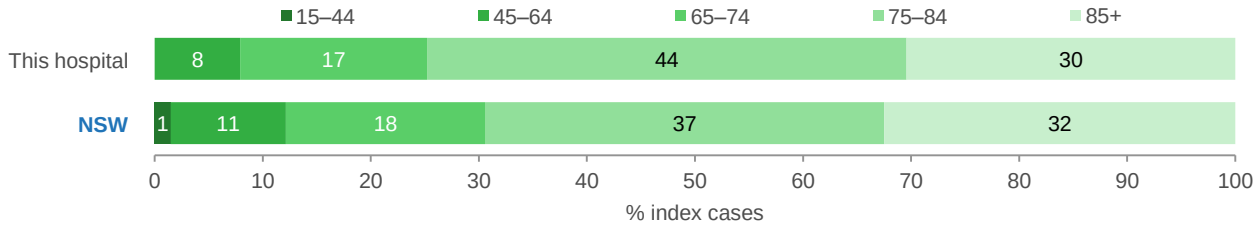


30-day return to acute care following hospitalisation for congestive heart failure

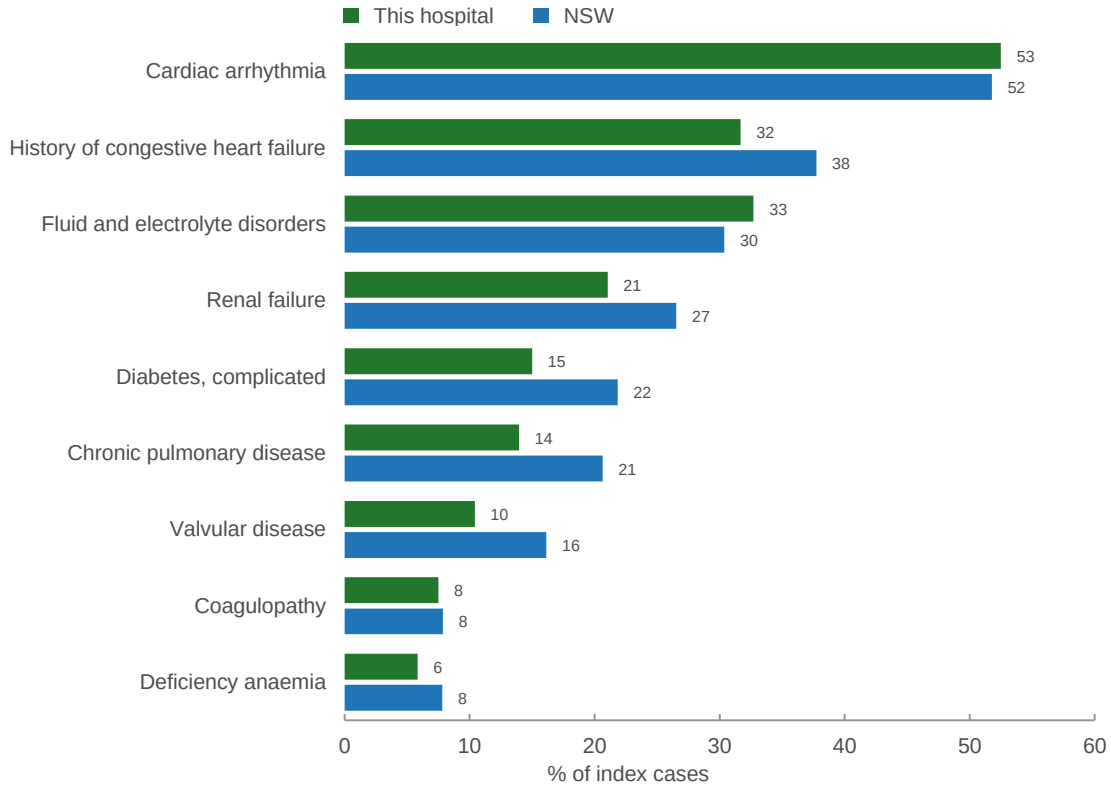
Patient cohort, index cases[3,4]

	This hospital	NSW
Total congestive heart failure index cases	480	29,961
Average length of stay (days)	5.7	6.6
Patients transferred in from acute care in another hospital	28	2,820
Discharge destination		
Home	446	26,099
Other	34	3,862

Age profile for index cases (years)*[5]



Presence of factors associated with 30-day congestive heart failure return to acute care[6]

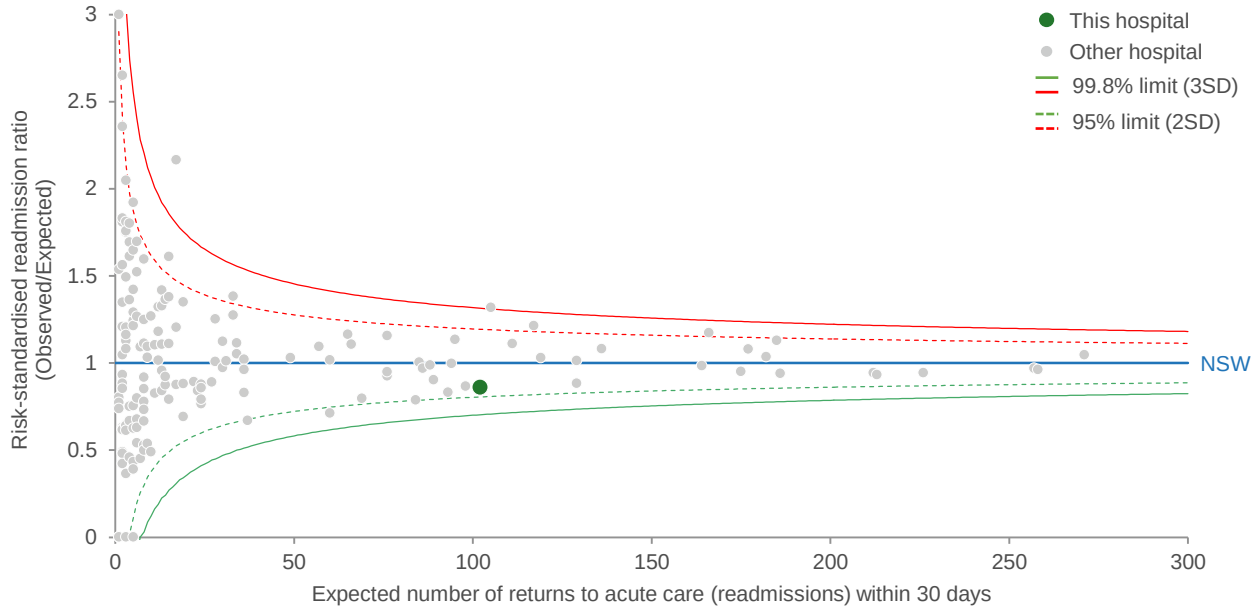


*Age was a significant factor in the final model of 30-day returns to acute care following an index hospitalisation for congestive heart failure.

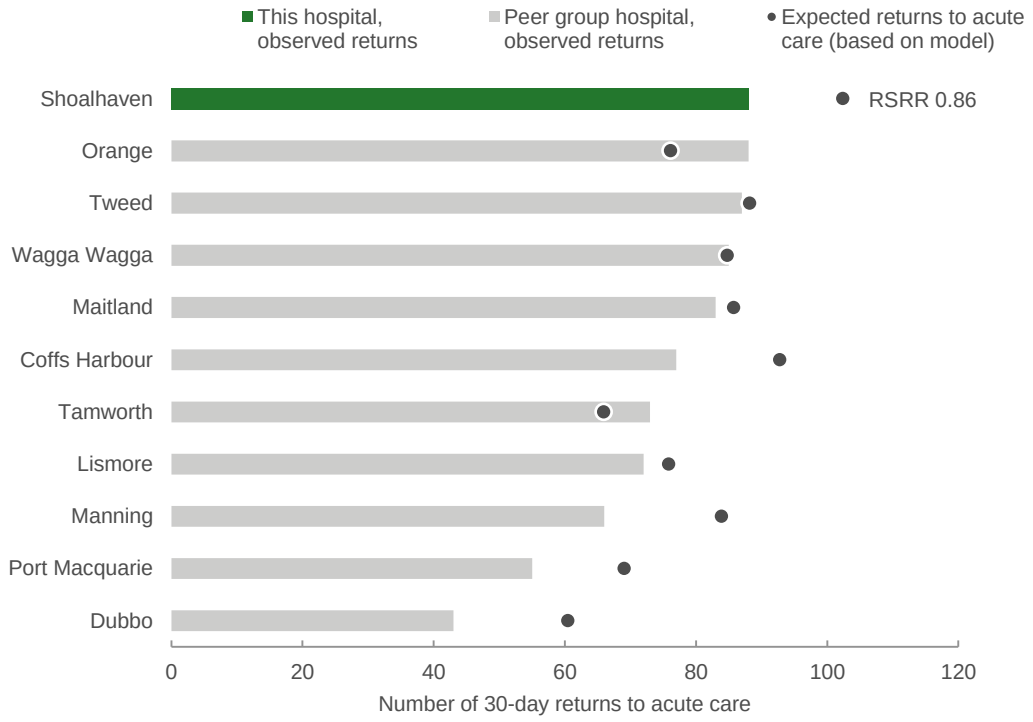
30-day return to acute care following hospitalisation for congestive heart failure

Hospital-specific RSRRs report the ratio of actual or 'observed' number of returns to acute care to the 'expected' number of returns. A competing risk regression model draws on the NSW patient population's characteristics and outcomes to estimate the expected number of returns for each hospital, given the characteristics of its patients. An RSRR less than 1.0 indicates lower-than-expected returns to acute care, and a ratio higher than 1.0 indicates higher-than-expected returns. Small deviations from 1.0 are not considered to be meaningful. Funnel plots with 95% and 99.8% control limits around the NSW rate are used to identify outliers.

Hospital level congestive heart failure RSRR by number of expected returns to acute care (readmissions)[7]



Observed and expected 30-day returns to acute care, grouped with peers[8]



30-day return to acute care following hospitalisation for congestive heart failure

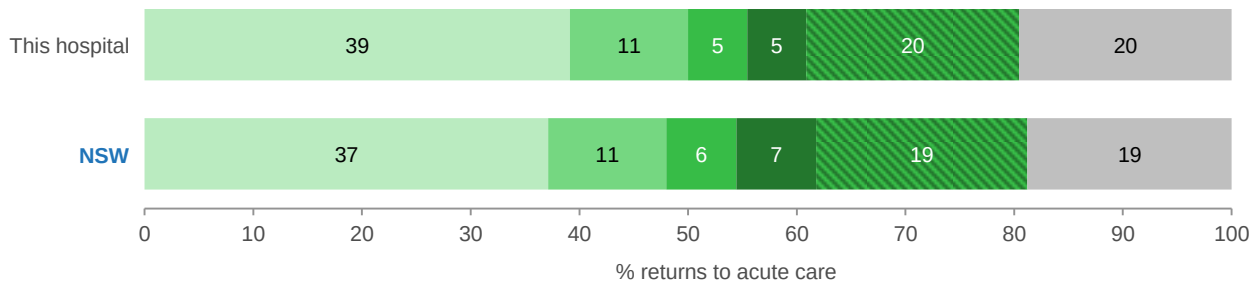
Location of returns to acute care[9]

	This hospital	NSW
Total returns to acute care following congestive heart failure index hospitalisation	92	6,850
Returned to the hospital where acute care was completed	86	5,608
Returned to a different hospital	6	1,242
Of these:		
To an urban public hospital	3	
To a regional or rural public hospital	3	
To a private hospital	0	

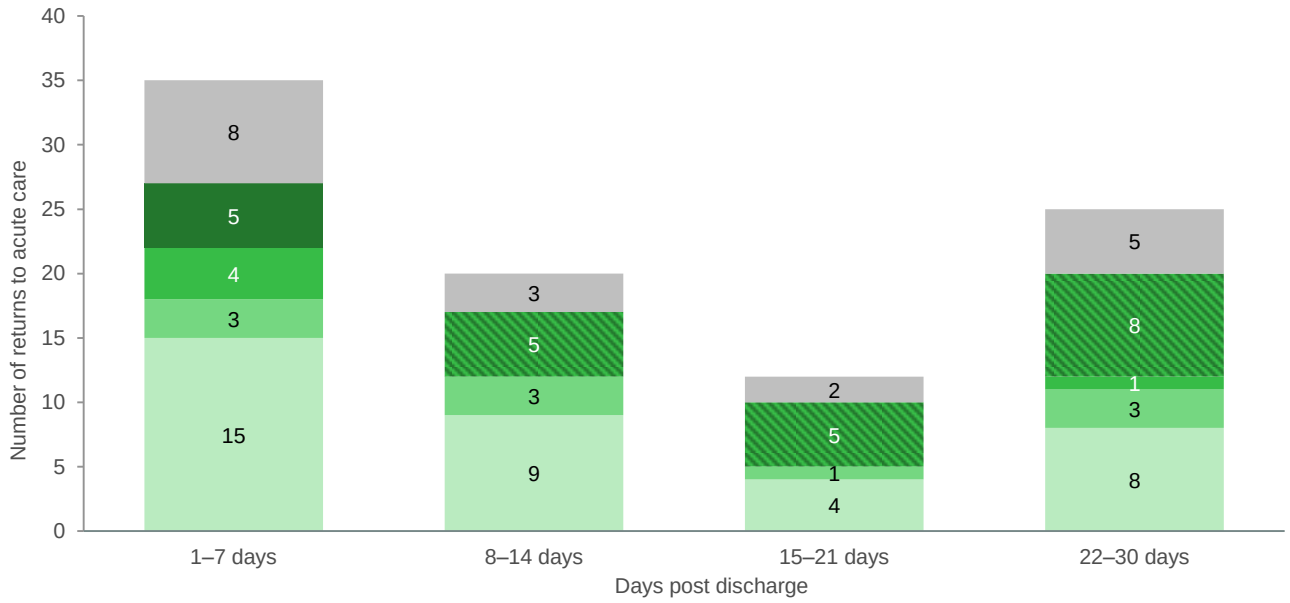
Reasons for and time to returns to acute care[10]

Principal diagnosis
Condition related to principal diagnosis
Potentially related to hospital care (relevant at any time)
Potentially related to hospital care (time sensitive, ≤ 7 days post discharge)
Potentially related to hospital care (time sensitive, 8–30 days post discharge)
Other condition

Distribution of reasons for returns to acute care



Number of, and reasons for, returns to acute care following hospitalisation for congestive heart failure, by days post discharge

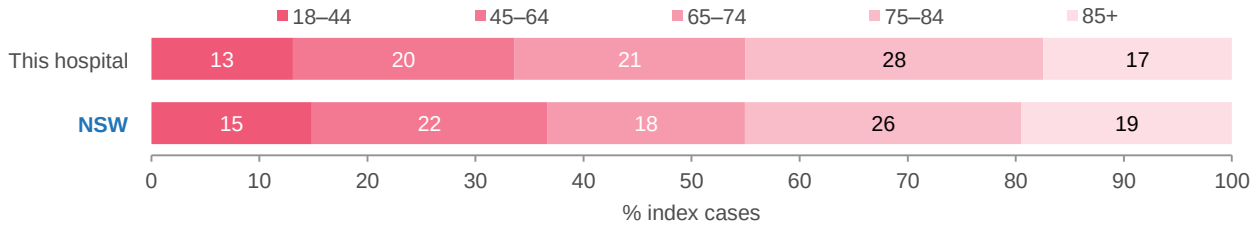


30-day return to acute care following hospitalisation for pneumonia

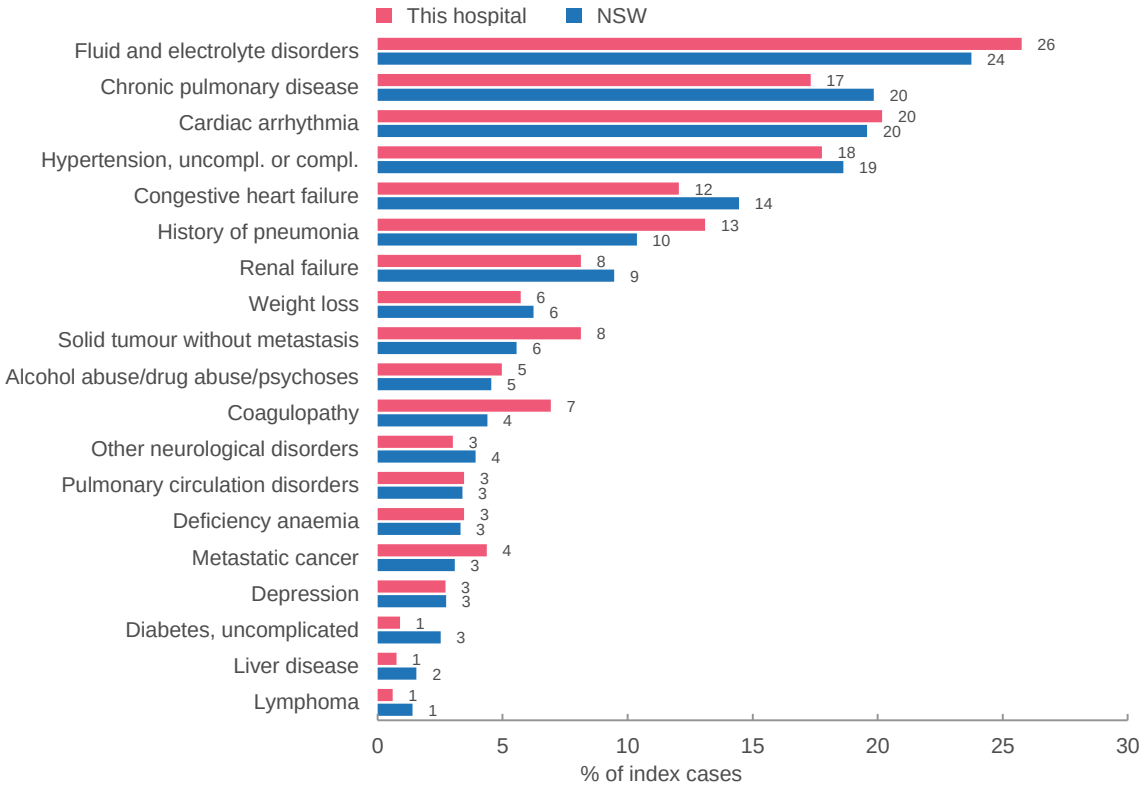
Patient cohort, index cases[3,4]

	This hospital	NSW
Total pneumonia index cases	664	42,777
Average length of stay (days)	5.3	6.1
Patients transferred in from acute care in another hospital	37	4,358
Discharge destination		
Home	607	37,971
Other	57	4,806

Age profile for index cases (years)*[5]



Presence of factors associated with 30-day pneumonia return to acute care[6]

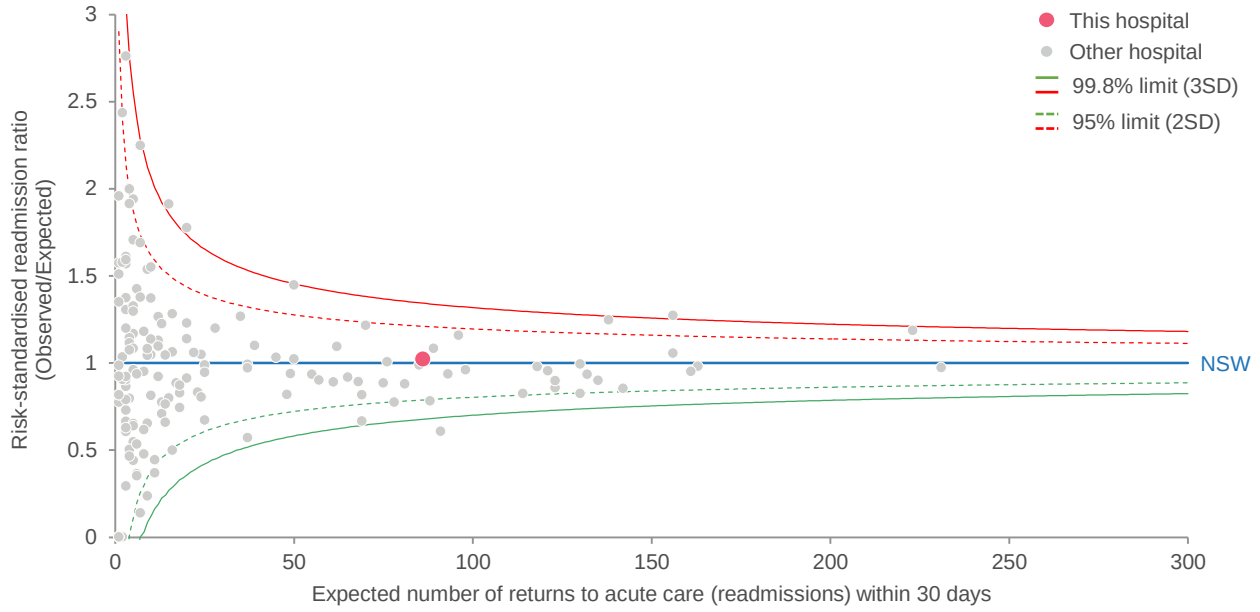


*Age and sex were significant factors in the final model of 30-day return to acute care following an index hospitalisation for pneumonia. The percentage of index hospitalisations that were female patients at this hospital was 48% compared to 48% for NSW.

30-day return to acute care following hospitalisation for pneumonia

Hospital-specific RSRRs report the ratio of actual or 'observed' number of returns to acute care to the 'expected' number of returns. A competing risk regression model draws on the NSW patient population's characteristics and outcomes to estimate the expected number of returns for each hospital, given the characteristics of its patients. An RSRR less than 1.0 indicates lower-than-expected returns to acute care, and a ratio higher than 1.0 indicates higher-than-expected returns. Small deviations from 1.0 are not considered to be meaningful. Funnel plots with 95% and 99.8% control limits around the NSW rate are used to identify outliers.

Hospital level pneumonia RSRR by number of expected returns to acute care (readmissions)[7]



Observed and expected 30-day returns to acute care, grouped with peers[8]

30-day return to acute care following hospitalisation for pneumonia

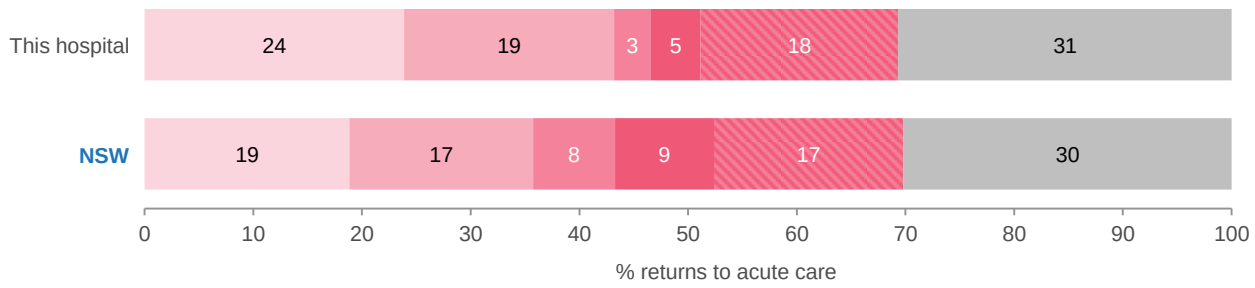
Location of returns to acute care[9]

	This hospital	NSW
Total returns to acute care following pneumonia index hospitalisation	88	5,412
Returned to the hospital where acute care was completed	76	4,323
Returned to a different hospital	12	1,089
Of these:		
To an urban public hospital	5	
To a regional or rural public hospital	7	
To a private hospital	0	

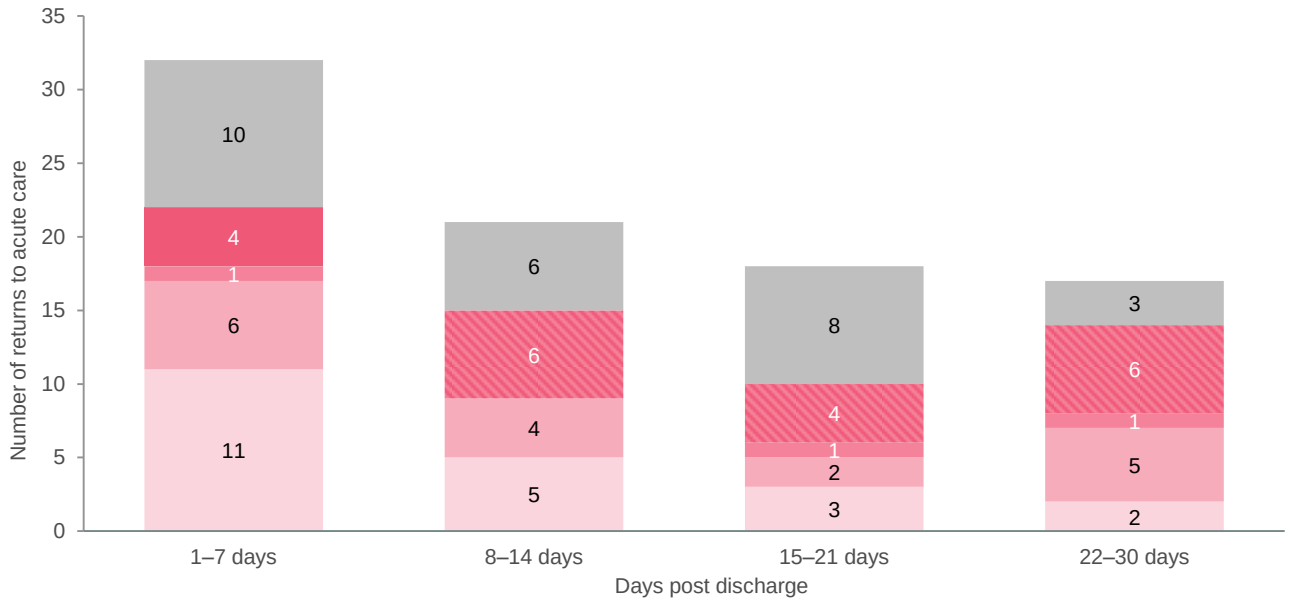
Reasons for and time to returns to acute care[10]

Principal diagnosis
Condition related to principal diagnosis
Potentially related to hospital care (relevant at any time)
Potentially related to hospital care (time sensitive, ≤ 7 days post discharge)
Potentially related to hospital care (time sensitive, 8–30 days post discharge)
Other condition

Distribution of reasons for returns to acute care



Number of, and reasons for, returns to acute care following hospitalisation for pneumonia, by days post discharge

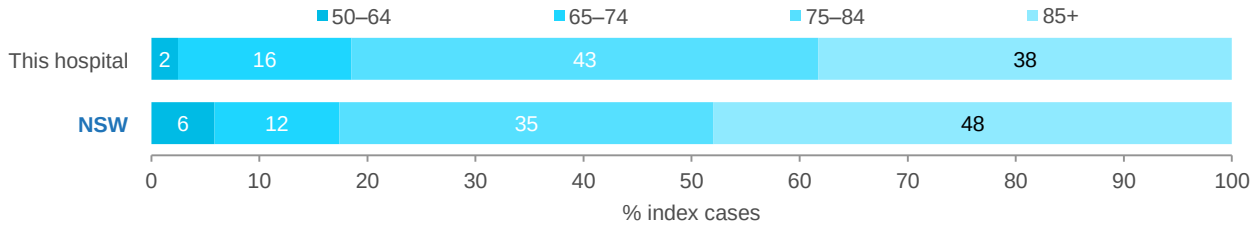


30-day return to acute care following hospitalisation for hip fracture surgery

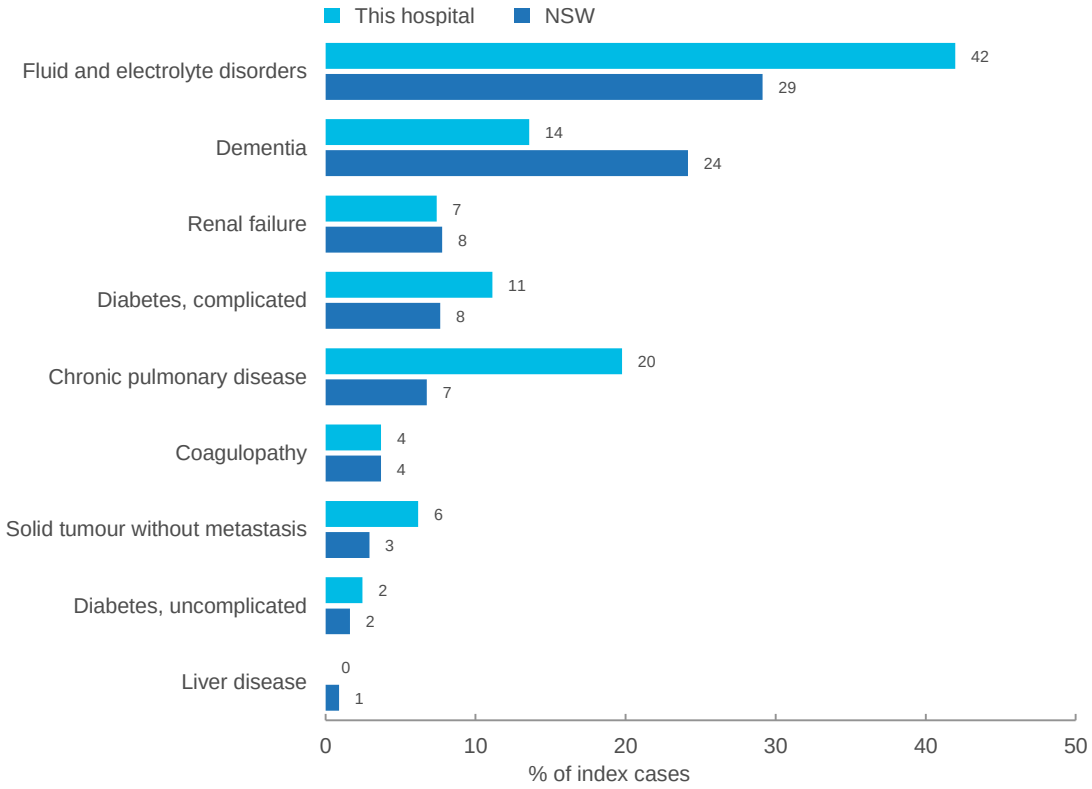
Patient cohort, index cases[3,4]

	This hospital	NSW
Total hip fracture surgery index cases	81	14,035
Average length of stay (days)	12.8	12.1
Patients transferred in from acute care in another hospital	36	3,141
Discharge destination		
Home	26	4,888
Other	55	9,147

Age profile for index cases (years)*[5]



Presence of factors associated with 30-day hip fracture surgery return to acute care[6]

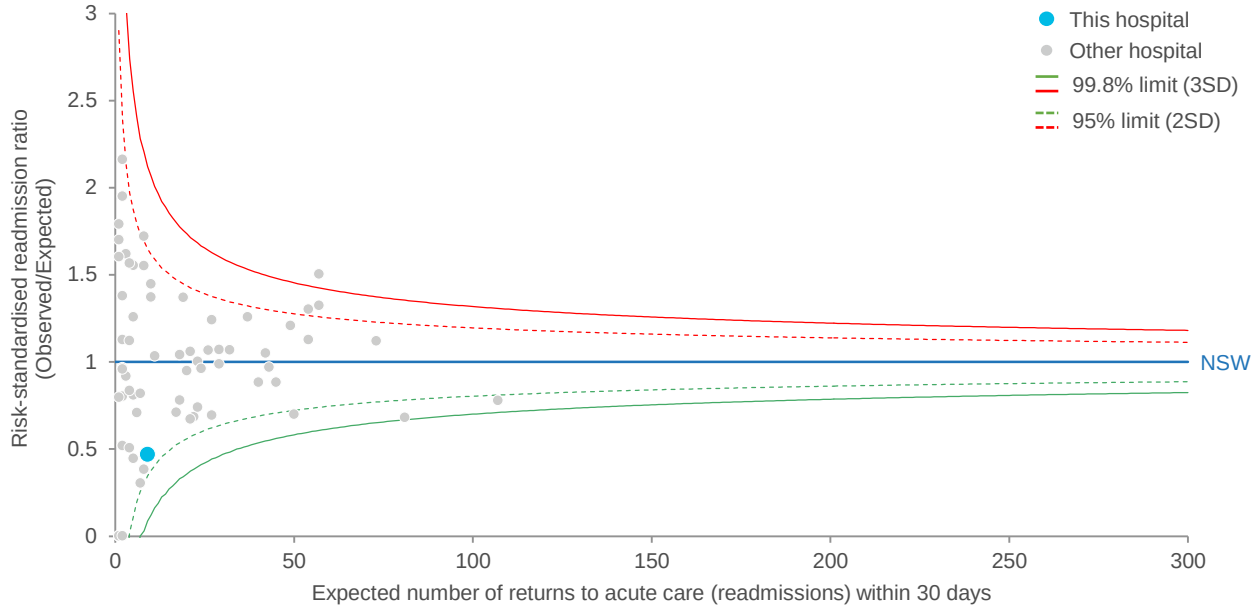


*Age and sex were significant factors in the final model of 30-day return to acute care following an index hospitalisation for hip fracture surgery. The percentage of index hospitalisations that were female patients at this hospital was 68% compared to 73% for NSW.

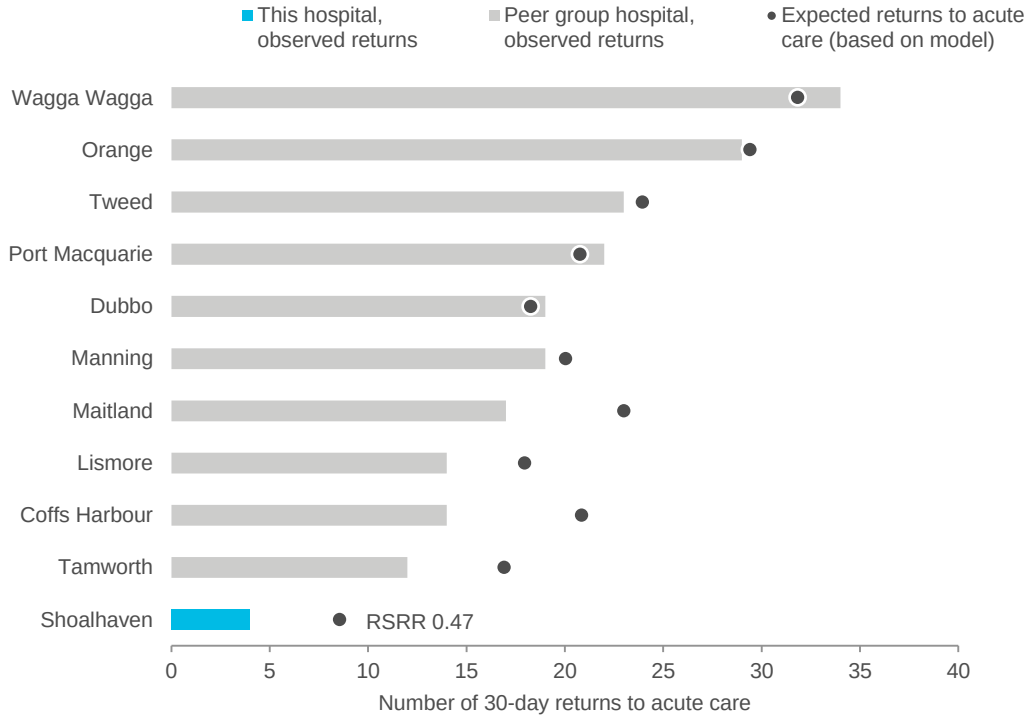
30-day return to acute care following hospitalisation for hip fracture surgery

Hospital-specific RSRRs report the ratio of actual or 'observed' number of returns to acute care to the 'expected' number of returns. A competing risk regression model draws on the NSW patient population's characteristics and outcomes to estimate the expected number of returns for each hospital, given the characteristics of its patients. An RSRR less than 1.0 indicates lower-than-expected returns to acute care, and a ratio higher than 1.0 indicates higher-than-expected returns. Small deviations from 1.0 are not considered to be meaningful. Funnel plots with 95% and 99.8% control limits around the NSW rate are used to identify outliers.

Hospital level hip fracture surgery RSRR by number of expected returns to acute care (readmissions)[7]



Observed and expected 30-day returns to acute care, grouped with peers[8]



30-day return to acute care following hospitalisation for hip fracture surgery

Location of returns to acute care[9]

Results not reported: fewer than 5 index cases returned to acute care.

Reasons for and time to returns to acute care[10]

Results not reported: fewer than 5 index cases returned to acute care.