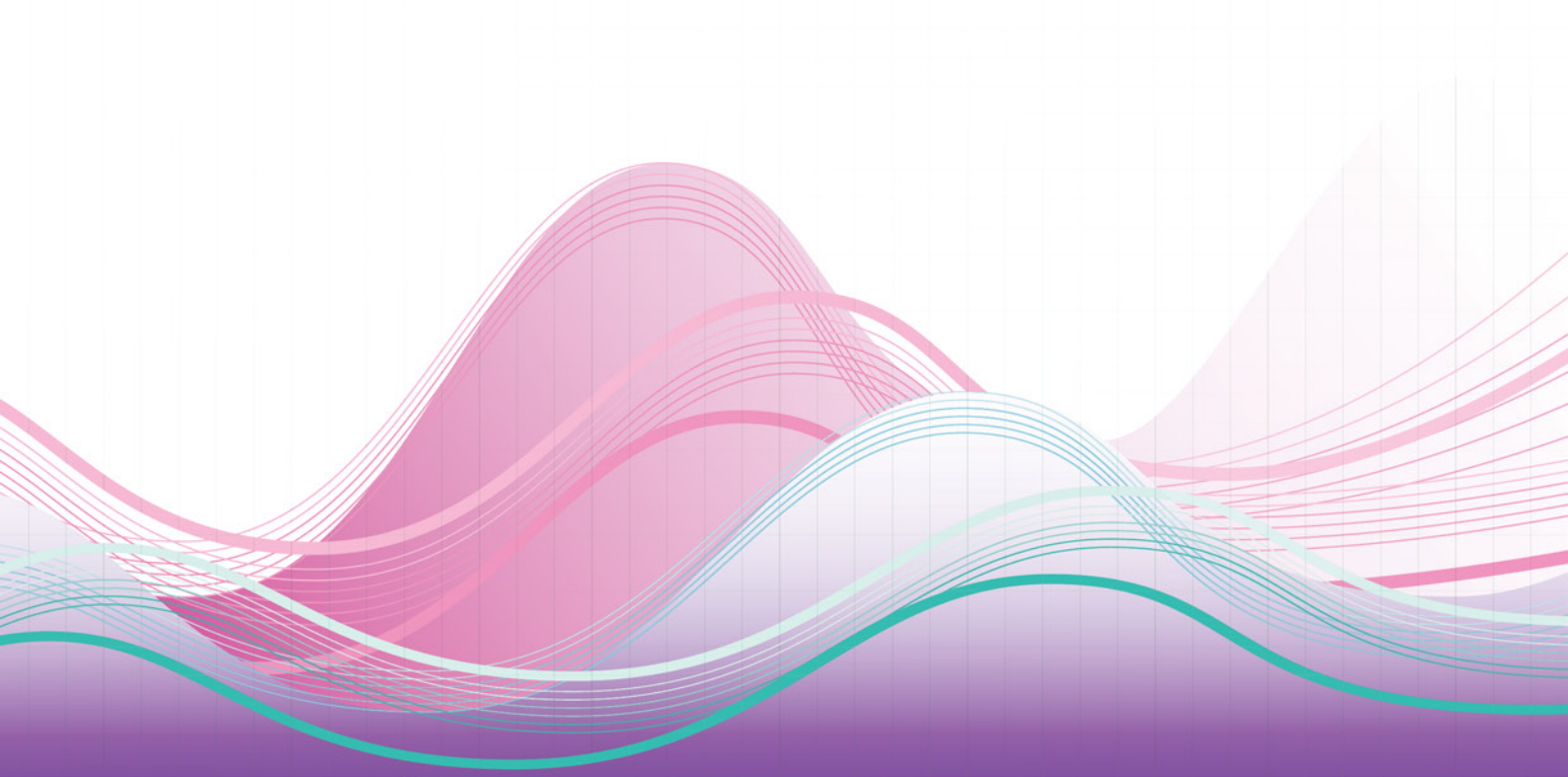Bureau of
Health Information

The Insights Series

30-day mortality following hospitalisation,
five clinical conditions, NSW,
July 2009 – June 2012

Acute myocardial infarction, ischaemic stroke,
haemorrhagic stroke, pneumonia and hip fracture surger

Performance Profile:

Ryde Hospital

Ryde Hospital summary dashboard, July 2009 - June 2012
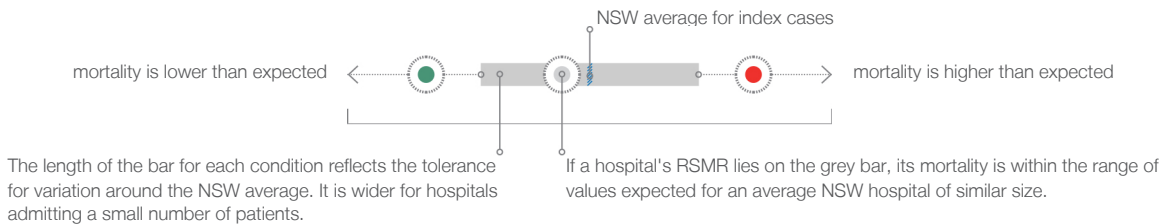## 30-day mortality following hospitalisation for five conditions

Hospital-specific risk-standardised mortality ratios (RSMRs) report the ratio of actual or 'observed' number of deaths to the 'expected' number of deaths. A hierarchical logistic regression model draws on the NSW patient population's characteristics and outcomes to estimate the expected number of deaths for each hospital, given its case mix. A ratio less than 1.0 indicates lower-than-expected mortality, and a ratio higher than 1.0 indicates higher-than-expected mortality. Small deviations from 1.0 are not considered to be meaningful. Funnel plots with 90% and 95% control limits around the NSW rate are used to identify hospitals with higher and lower mortality.

This measure is not designed to compare hospitals and cannot be used to measure the number of avoidable deaths. RSMRs do not distinguish deaths that are avoidable from those that are a reflection of the natural course of illness. They do not provide, by themselves, a diagnostic of quality and safety of care.

Risk-standardised mortality ratios (RSMRs) for five conditions, dashboard

● Lower mortality   ● No difference   ● Higher mortality   ▪ Range within 90% control limits

RSMR July 2009 to June 2012

RSMRs for three-year periods

	2000-02	2003-05	2006-08	2009-11
Acute myocardial infarction (AMI) 211 patients	●	●	●	●
Ischaemic stroke 127 patients	●	●	●	●
Haemorrhagic stroke 50 patients	●	●	●	●
Pneumonia 697 patients	●	●	◻ ◻ ●	●
Hip fracture 305 patients	●	●	●	●

NSW

How to interpret the dashboard

NSW average for index cases

mortality is lower than expected ← ● ▪ ● ● → mortality is higher than expected

The length of the bar for each condition reflects the tolerance for variation around the NSW average. It is wider for hospitals admitting a small number of patients.

If a hospital's RSMR lies on the grey bar, its mortality is within the range of values expected for an average NSW hospital of similar size.

(†) Data for hospitals with an expected mortality of <1 are suppressed.
(◇) Between 90% and 95% upper control limits; (◇◇) Outside 95% upper control limits.
(◻) Between 90% and 95% lower control limits; (◻◻) Outside 95% lower control limits.
Notes: RSMR data are for patients with a hospitalisation noting the relevant condition as principal diagnosis.
Patients include those discharged between July 2009 and June 2012 who were initially admitted to this hospital (regardless of whether they were subsequently transferred) in their last period of care. Deaths are from any cause, in or out of hospital within 30 days of the hospitalisation admission date.
Details of analyses and risk adjustment are available in *Spotlight on Measurement: risk-standardised mortality ratios for five conditions.*
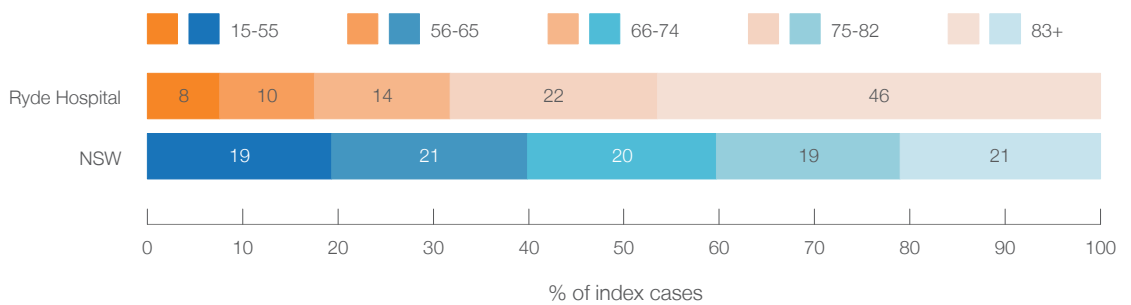**Data source:** SAPHaRI, Centre for Epidemiology and Evidence, NSW Ministry of Health.
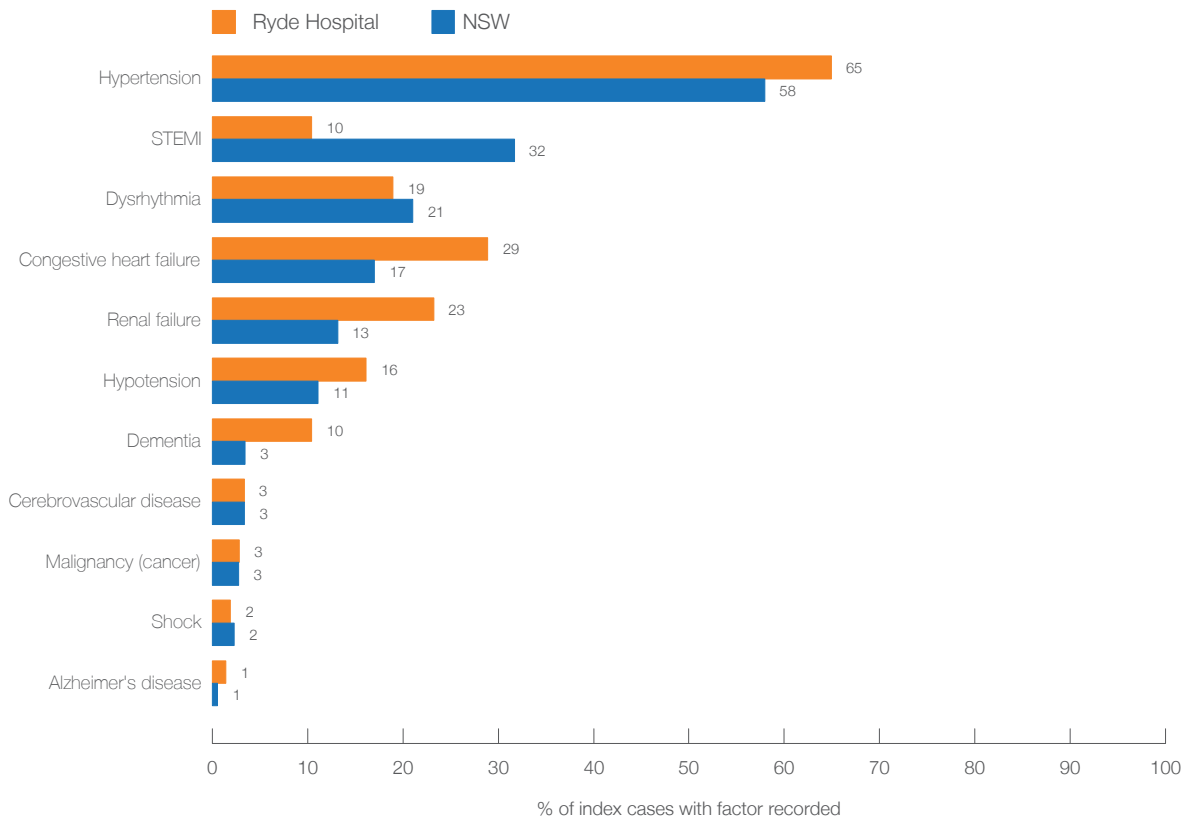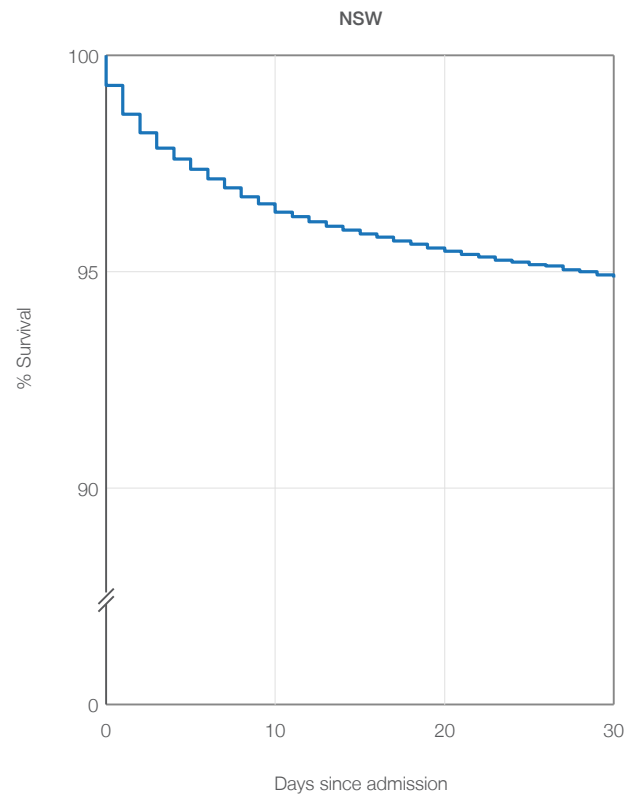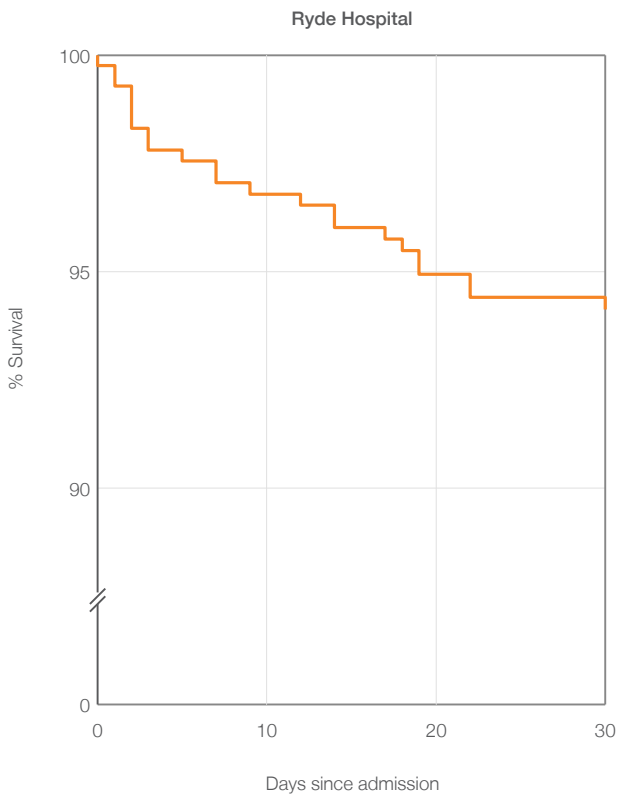
Ryde Hospital profile July 2009 - June 2012
30-day mortality following hospitalisation for Acute Myocardial Infarction (AMI)

	This hospital	NSW
Total Acute Myocardial Infarction (AMI) hospitalisations	277	37,794
Acute Myocardial Infarction (AMI) patients		
Presenting patients (index cases)[1]	211	29,223
Patients not transferred to another hospital	146	18,303
Patients transferred out to another hospital	65	10,920

Age profile, index cases [2]

Significant patient factors and comorbidities, index cases [3]

Ryde Hospital profile July 2009 - June 2012
30-day mortality following hospitalisation for Acute Myocardial Infarction (AMI)

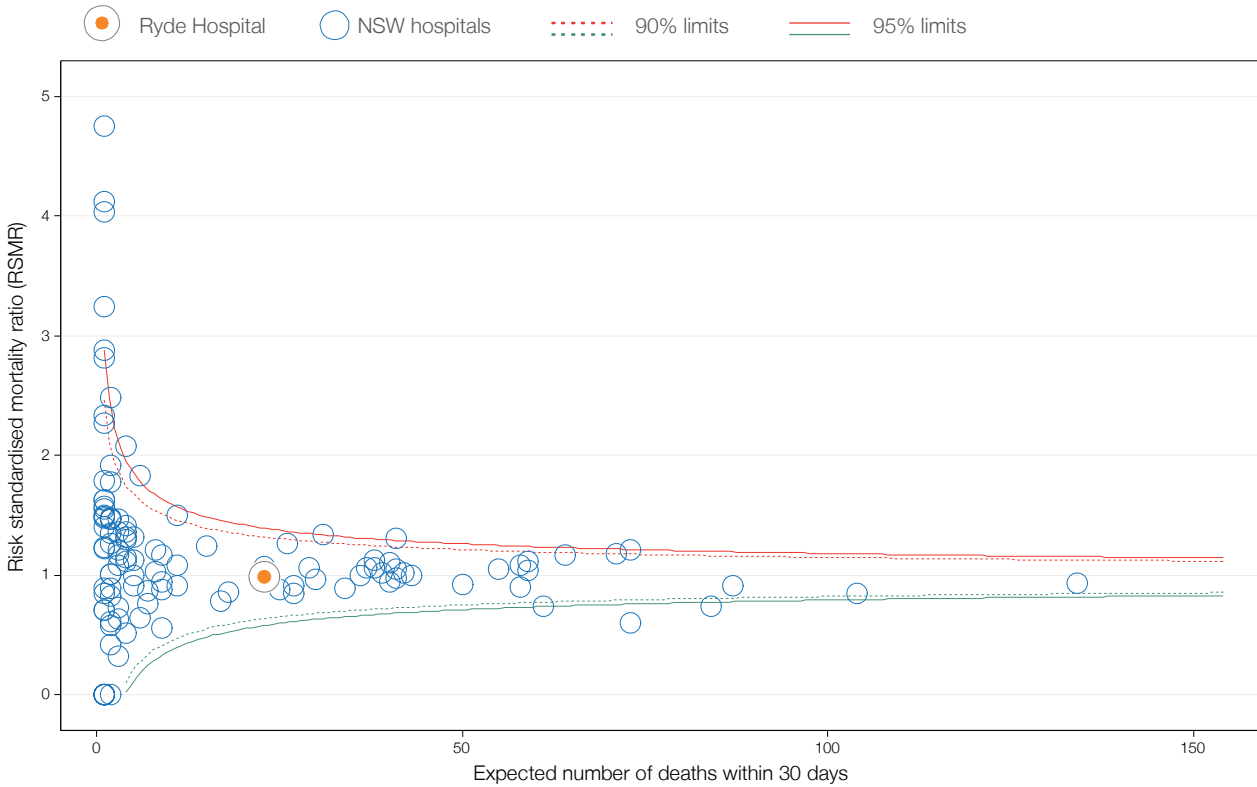|	This hospital percentage	NSW percentage
Mortality (all causes) among 211 Acute Myocardial Infarction (AMI) index cases [4]		
Percentages: index cases who died within 30 days of hospitalisation	11%	
Of all deaths:		
percentage in this hospital	57%	(64%)
percentage in another hospital following transfer	0%	(6%)
percentage after discharge	43%	(31%)
percentage on day of admission	4%	(14%)
percentage within 7 days	52%	(61%)

Survival of index cases following hospitalisation for Acute Myocardial Infarction (AMI) [5]
Adjusted for average age and Charlson comorbidity score

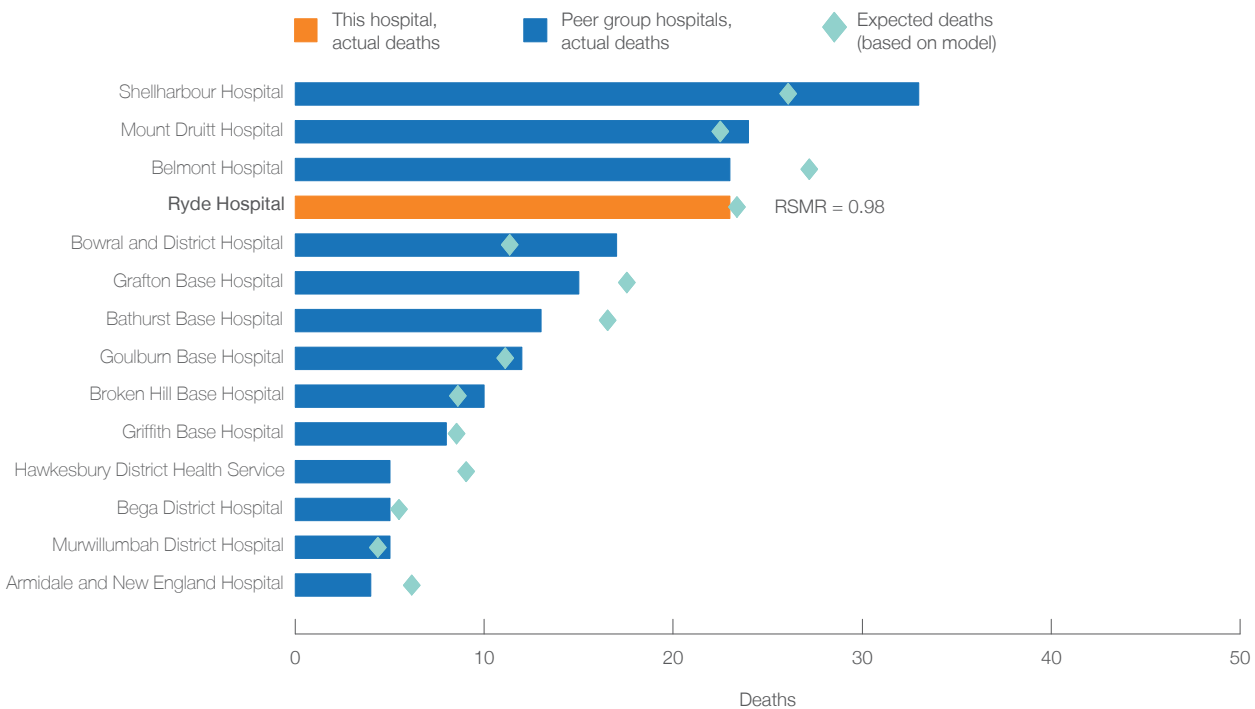Ryde Hospital

NSW

% Survival

Days since admission

Ryde Hospital profile July 2009 - June 2012

Hospital-level Acute Myocardial Infarction (AMI) risk-standardised mortality ratio by number of expected deaths, NSW public hospitals

Hospital-specific RSMRs report the ratio of actual or 'observed' number of deaths to the 'expected' number of deaths. A hierarchical logistic regression model draws on the NSW patient population's characteristics and outcomes to estimate the expected number of deaths for each hospital, given the characteristics of its patients.

Actual and expected deaths, compared to local peers

Ryde Hospital profile July 2009 - June 2012
30-day mortality following hospitalisation for Acute Myocardial Infarction (AMI)

Illustrating the effect of standardisation, July 2009 - June 2012

In order to make fair comparisons, a number of risk adjustments are made to mortality data. These take into account patient level factors that influence the likelihood of dying. The table below illustrates the cumulative effect of the statistical adjustments. For each ratio, hospitals are compared to the average NSW result, given their case mix.

■ Lower mortality   ■ No difference   ■ Higher mortality

Unadjusted ratio	Age and sex standardised ratio	Risk-standardised mortality ratio
1.44	0.92	0.98

Time series risk-standardised mortality ratio, July 2000 - June 2012 [6]

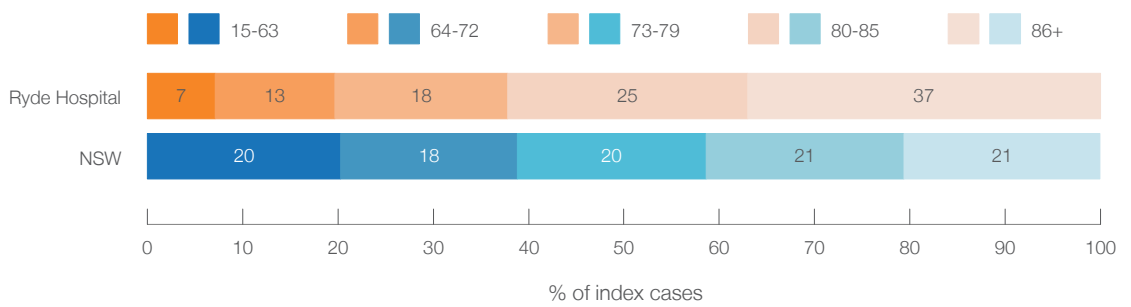■ Lower mortality   ■ No difference   ■ Higher mortality

Year (financial years)	2000-02	2003-05	2006-08	2009-11
Risk-standardised mortality ratio	1.11	0.77	0.78	0.98

(1) Index cases refer to patients discharged between July 2009 and June 2012 who were initially admitted to this hospital (regardless of whether they were subsequently transferred) in their last period of care.

(2) Age at admission date.

(3) Only those conditions that were shown to have a significant impact on mortality (P<0.05) are shown. Many are a result of end-organ damage resulting from comorbidities, such as diabetes. A broader set of comorbidities was screened for potential impacts on mortality. Comorbidities as recorded on patient record, with one year look back. STEMI refers to ST-elevation myocardial infarction.

(4) Deaths are from any cause, in or out of hospital within 30 days of the index hospitalisation admission date.

(5) Kaplan-Meier survival curve for 30-day following admission for haemorrhagic stroke, adjusted for average age and average Charlson comorbidity score. Survival curves depict the proportion of patients who were alive, day 0 – day 30.

(6) To make RSMRs comparable over time, a reference population is required. Time series RSMRs for each hospital are based on the reference years (July 2009 - June 2012). Control limits are based on the NSW average within each period.

(†) Data for hospitals with an expected mortality of <1 are suppressed.

(◇) Between 90% and 95% upper control limits;   (◇◇) Outside 95% upper control limits.

(▱) Between 90% and 95% lower control limits;   (▱▱) Outside 95% lower control limits.

Details of analyses and risk adjustment are available in *Spotlight on Measurement: risk-standardised mortality ratios*

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

Ryde Hospital profile July 2009 - June 2012
30-day mortality following hospitalisation for ischaemic stroke

	This hospital	NSW
Total ischaemic stroke hospitalisations	135	15,299
Ischaemic stroke patients		
Presenting patients (index cases)[1]	127	14,205
Patients not transferred to another hospital	114	11,757
Patients transferred out to another hospital	13	2,448

Age profile, index cases [2]

Legend: 15-63, 64-72, 73-79, 80-85, 86+

	15-63	64-72	73-79	80-85	86+
Ryde Hospital	7	13	18	25	37
NSW	20	18	20	21	21

% of index cases

Significant patient factors and comorbidities, index cases [3]

Legend: Ryde Hospital, NSW

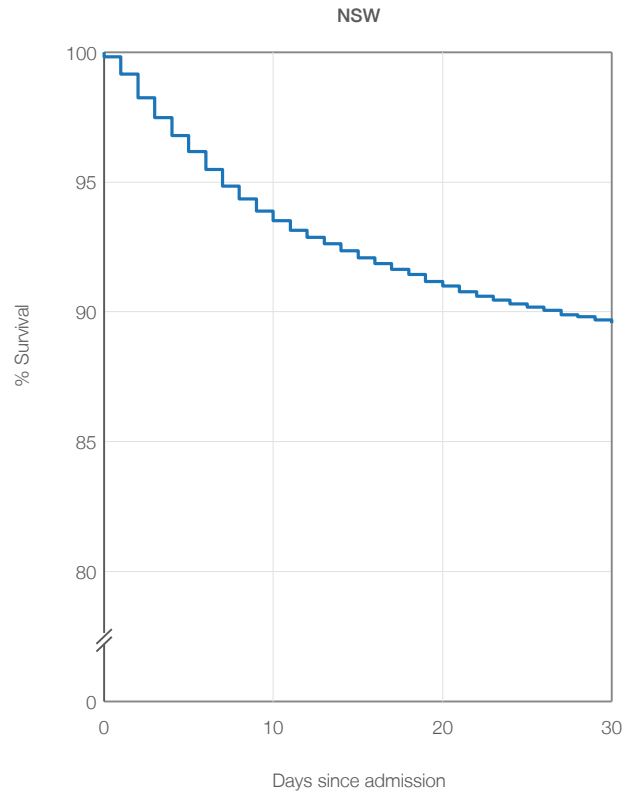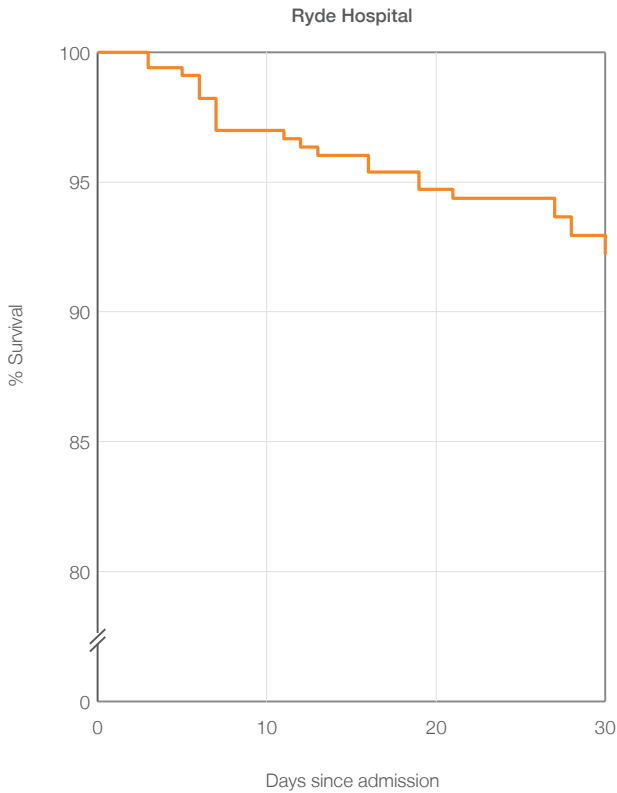|	Ryde Hospital	NSW
Female	52	47
Renal failure	10	10
Congestive heart failure	6	7
Malignancy (cancer)	6	4

% of index cases with factor recorded

Ryde Hospital profile July 2009 - June 2012
30-day mortality following hospitalisation for ischaemic stroke

	This hospital percentage	NSW percentage
Mortality (all causes) among 127 ischaemic stroke index cases [4]		
Percentages: index cases who died within 30 days of hospitalisation	19%	
Of all deaths:		
percentage in this hospital	58%	(67%)
percentage in another hospital following transfer	0%	(2%)
percentage after discharge	42%	(31%)
percentage on day of admission	0%	(2%)
percentage within 7 days	42%	(51%)

Survival of index cases following hospitalisation for ischaemic stroke [5]
Adjusted for average age and Charlson comorbidity score

Ryde Hospital

NSW

% Survival
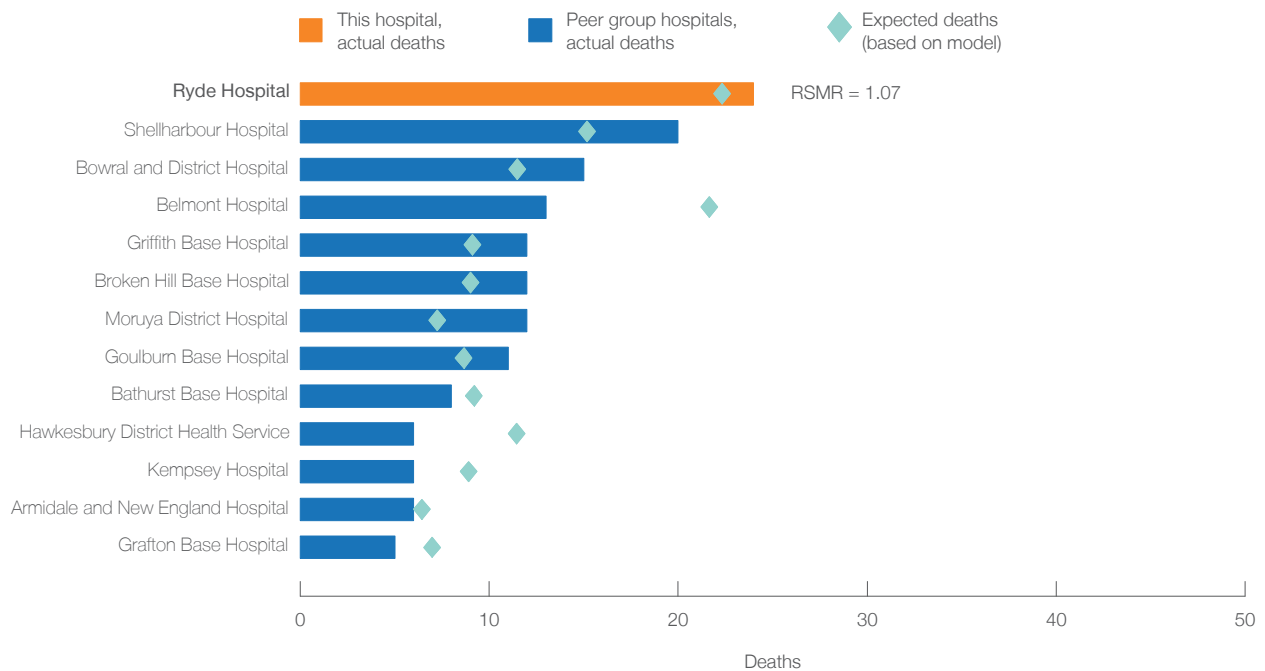
Days since admission

Ryde Hospital profile July 2009 - June 2012

Hospital-level ischaemic stroke risk-standardised mortality ratio by number
of expected deaths, NSW public hospitals

Hospital-specific RSMRs report the ratio of actual or 'observed' number of deaths to the 'expected' number
of deaths. A hierarchical logistic regression model draws on the NSW patient population's characteristics and
outcomes to estimate the expected number of deaths for each hospital, given the characteristics of its patients.

Actual and expected deaths, compared to local peers

Ryde Hospital profile July 2009 - June 2012
30-day mortality following hospitalisation for ischaemic stroke

Illustrating the effect of standardisation, July 2009 - June 2012

In order to make fair comparisons, a number of risk adjustments are made to mortality data. These take into account patient level factors that influence the likelihood of dying. The table below illustrates the cumulative effect of the statistical adjustments. For each ratio, hospitals are compared to the average NSW result, given their case mix.

■ Lower mortality   ■ No difference   ■ Higher mortality

Unadjusted ratio	Age and sex standardised ratio	Risk-standardised mortality ratio
1.42	1.07	1.08

Time series risk-standardised mortality ratio, July 2000 - June 2012 [6]

■ Lower mortality   ■ No difference   ■ Higher mortality

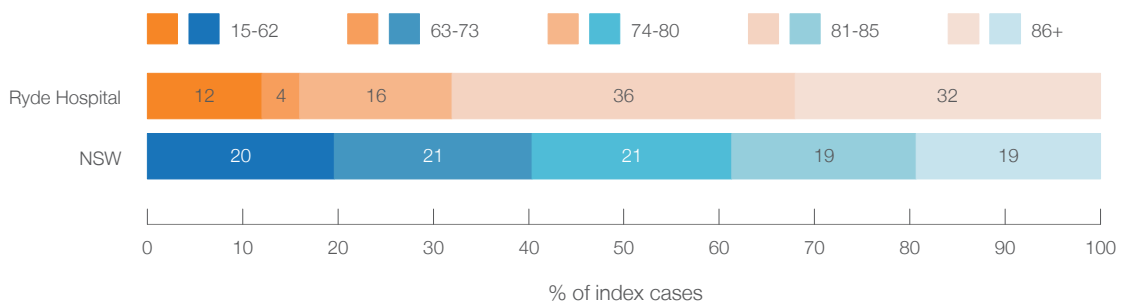| Year (financial years)	2000-02	2003-05	2006-08	2009-11
Risk-standardised mortality ratio	0.85	1.04	0.97	1.08

(1) Index cases refer to patients discharged between July 2009 and June 2012 who were initially admitted to this hospital (regardless of whether they were subsequently transferred) in their last period of care.
(2) Age at admission date.
(3) Only those conditions that were shown to have a significant impact on mortality (P<0.05) are shown. Many are a result of end-organ damage resulting from comorbidities, such as diabetes. A broader set of comorbidities was screened for potential impacts on mortality. Comorbidities as recorded on patient record, with one year look back. STEMI refers to ST-elevation myocardial infarction.
(4) Deaths are from any cause, in or out of hospital within 30 days of the index hospitalisation admission date.
(5) Kaplan-Meier survival curve for 30-day following admission for haemorrhagic stroke, adjusted for average age and average Charlson comorbidity score. Survival curves depict the proportion of patients who were alive, day 0 – day 30.
(6) To make RSMRs comparable over time, a reference population is required. Time series RSMRs for each hospital are based on the reference years (July 2009 - June 2012). Control limits are based on the NSW average within each period.
(†) Data for hospitals with an expected mortality of <1 are suppressed.
(◇) Between 90% and 95% upper control limits; (◇◇) Outside 95% upper control limits.
(▱) Between 90% and 95% lower control limits; (▱▱) Outside 95% lower control limits.
Details of analyses and risk adjustment are available in *Spotlight on Measurement: risk-standardised mortality ratios*
Data source: SAPHaRI, Centre for Epidemiology and Evidence, NSW Ministry of Health.

Ryde Hospital

Ryde Hospital profile July 2009 - June 2012
30-day mortality following hospitalisation for haemorrhagic stroke

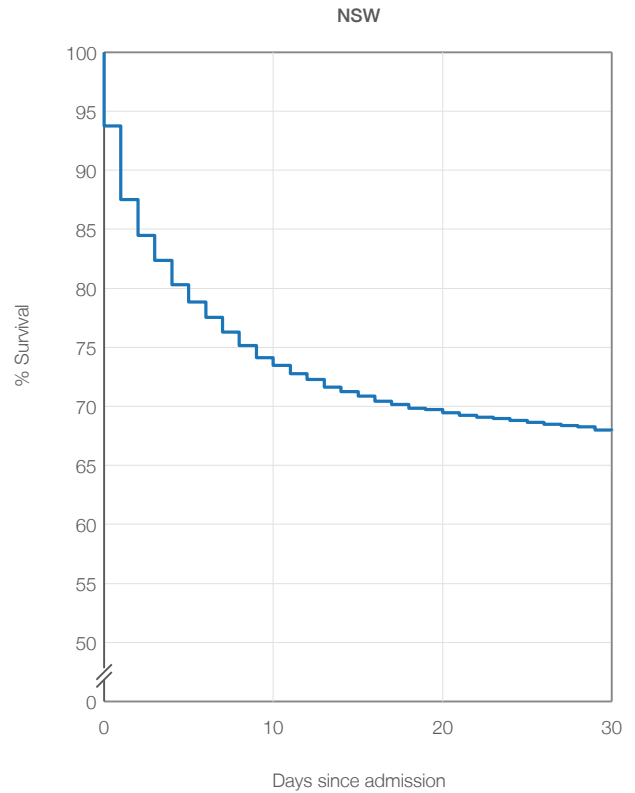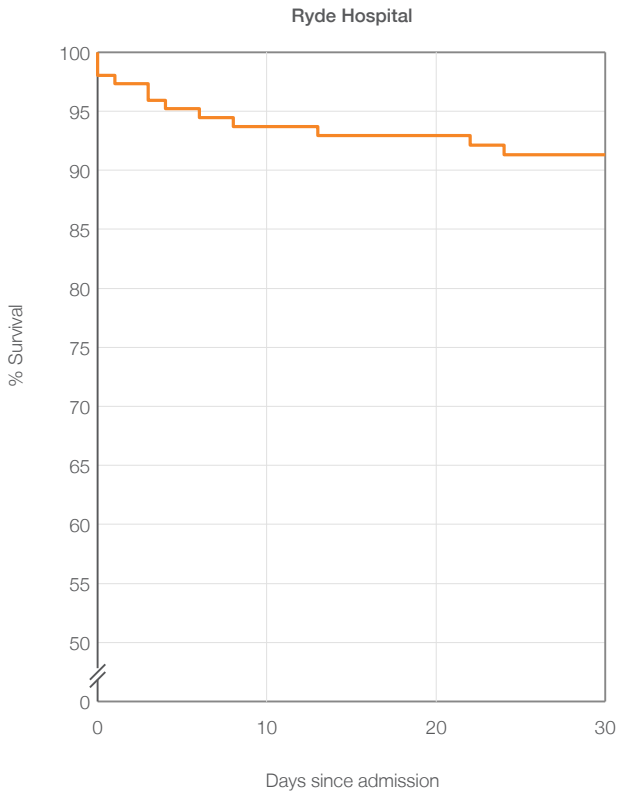|	This hospital	NSW
Total haemorrhagic stroke hospitalisations	54	6,573
Haemorrhagic stroke patients		
Presenting patients (index cases)[1]	50	5,681
Patients not transferred to another hospital	38	4,148
Patients transferred out to another hospital	12	1,533

Age profile, index cases [2]

Legend: 15-62 | 63-73 | 74-80 | 81-85 | 86+

Ryde Hospital: 12, 4, 16, 36, 32
NSW: 20, 21, 21, 19, 19

% of index cases

Significant patient factors and comorbidities, index cases [3]

Ryde Hospital | NSW

Female: 42 / 46
History of haemorrhagic stroke: 0 / 8
Malignancy (cancer): 2 / 6
Congestive heart failure: 6 / 6

% of index cases with factor recorded

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Ryde Hospital profile July 2009 - June 2012
30-day mortality following hospitalisation for haemorrhagic stroke

	This hospital percentage	NSW percentage
Mortality (all causes) among 50 haemorrhagic stroke index cases [4]		
Percentages: index cases who died within 30 days of hospitalisation	24%	
Of all deaths:		
percentage in this hospital	83%	(76%)
percentage in another hospital following transfer	0%	(3%)
percentage after discharge	17%	(21%)
percentage on day of admission	25%	(20%)
percentage within 7 days	67%	(75%)

Survival of index cases following hospitalisation for haemorrhagic stroke [5]
Adjusted for average age and Charlson comorbidity score

Ryde Hospital

% Survival

Days since admission

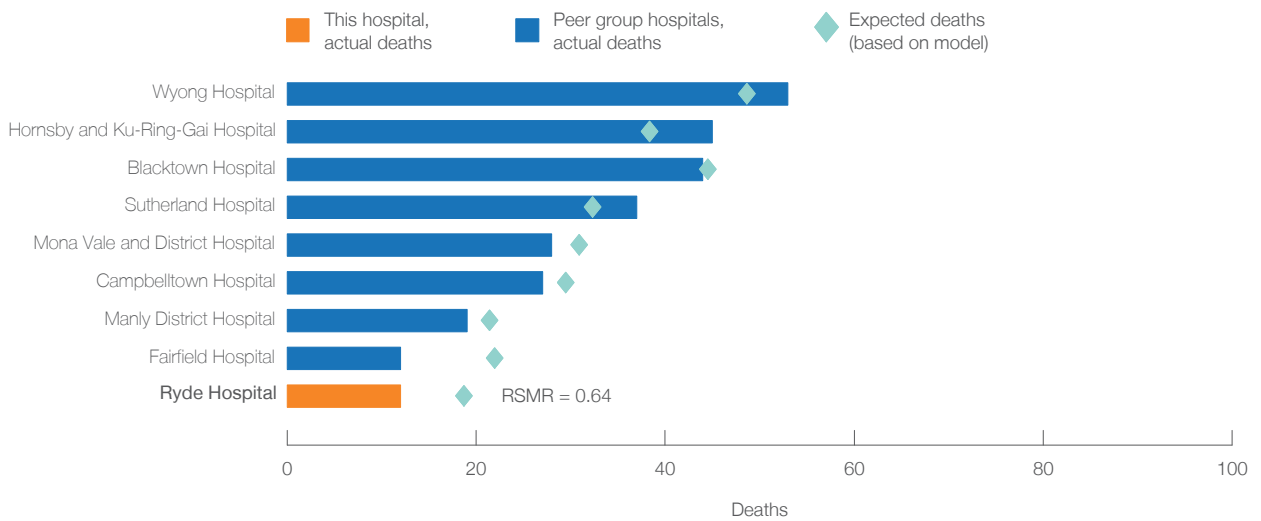NSW

% Survival

Days since admission

Ryde Hospital profile July 2009 - June 2012

Hospital-level haemorrhagic stroke risk-standardised mortality ratio by number
of expected deaths, NSW public hospitals

Hospital-specific RSMRs report the ratio of actual or 'observed' number of deaths to the 'expected' number of deaths. A hierarchical logistic regression model draws on the NSW patient population's characteristics and outcomes to estimate the expected number of deaths for each hospital, given the characteristics of its patients.

Actual and expected deaths, compared to local peers

Ryde Hospital profile July 2009 - June 2012
30-day mortality following hospitalisation for haemorrhagic stroke

Illustrating the effect of standardisation, July 2009 - June 2012

In order to make fair comparisons, a number of risk adjustments are made to mortality data. These take into account patient level factors that influence the likelihood of dying. The table below illustrates the cumulative effect of the statistical adjustments. For each ratio, hospitals are compared to the average NSW result, given their case mix.

■ Lower mortality　　**■** No difference　　**■** Higher mortality

Unadjusted ratio	Age and sex standardised ratio	Risk-standardised mortality ratio
0.71	0.64	0.64

Time series risk-standardised mortality ratio, July 2000 - June 2012 [6]

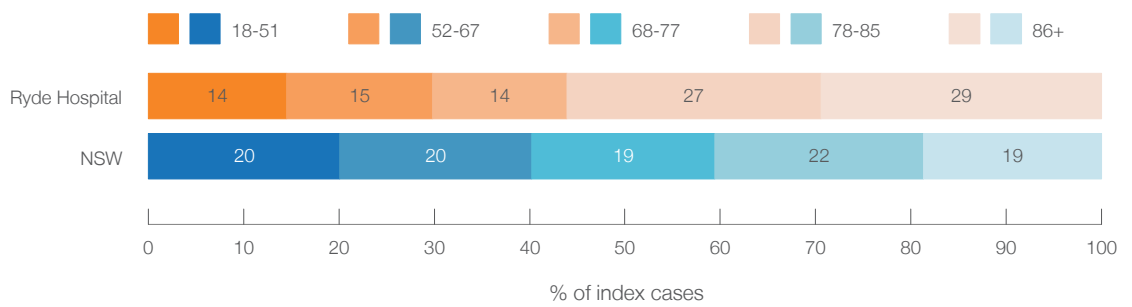**■** Lower mortality　　**■** No difference　　**■** Higher mortality

Year (financial years)	2000-02	2003-05	2006-08	2009-11
Risk-standardised mortality ratio	1.03	0.74	1.28	0.64

(1) Index cases refer to patients discharged between July 2009 and June 2012 who were initially admitted to this hospital
      (regardless of whether they were subsequently transferred) in their last period of care.
(2) Age at admission date.
(3) Only those conditions that were shown to have a significant impact on mortality (P<0.05) are shown. Many are a result of
      end-organ damage resulting from comorbidities, such as diabetes. A broader set of comorbidities was screened for potential
      impacts on mortality. Comorbidities as recorded on patient record, with one year look back. STEMI refers to ST-elevation
      myocardial infarction.
(4) Deaths are from any cause, in or out of hospital within 30 days of the index hospitalisation admission date.
(5) Kaplan-Meier survival curve for 30-day following admission for haemorrhagic stroke, adjusted for average age and average
      Charlson comorbidity score. Survival curves depict the proportion of patients who were alive, day 0 – day 30.
(6) To make RSMRs comparable over time, a reference population is required. Time series RSMRs for each hospital are based
      on the reference years (July 2009 - June 2012). Control limits are based on the NSW average within each period.
(†) Data for hospitals with an expected mortality of <1 are suppressed.
(◇) Between 90% and 95% upper control limits;　(◇◇) Outside 95% upper control limits.
(▭) Between 90% and 95% lower control limits;　(▭▭) Outside 95% lower control limits.
Details of analyses and risk adjustment are available in *Spotlight on Measurement: risk-standardised mortality ratios*
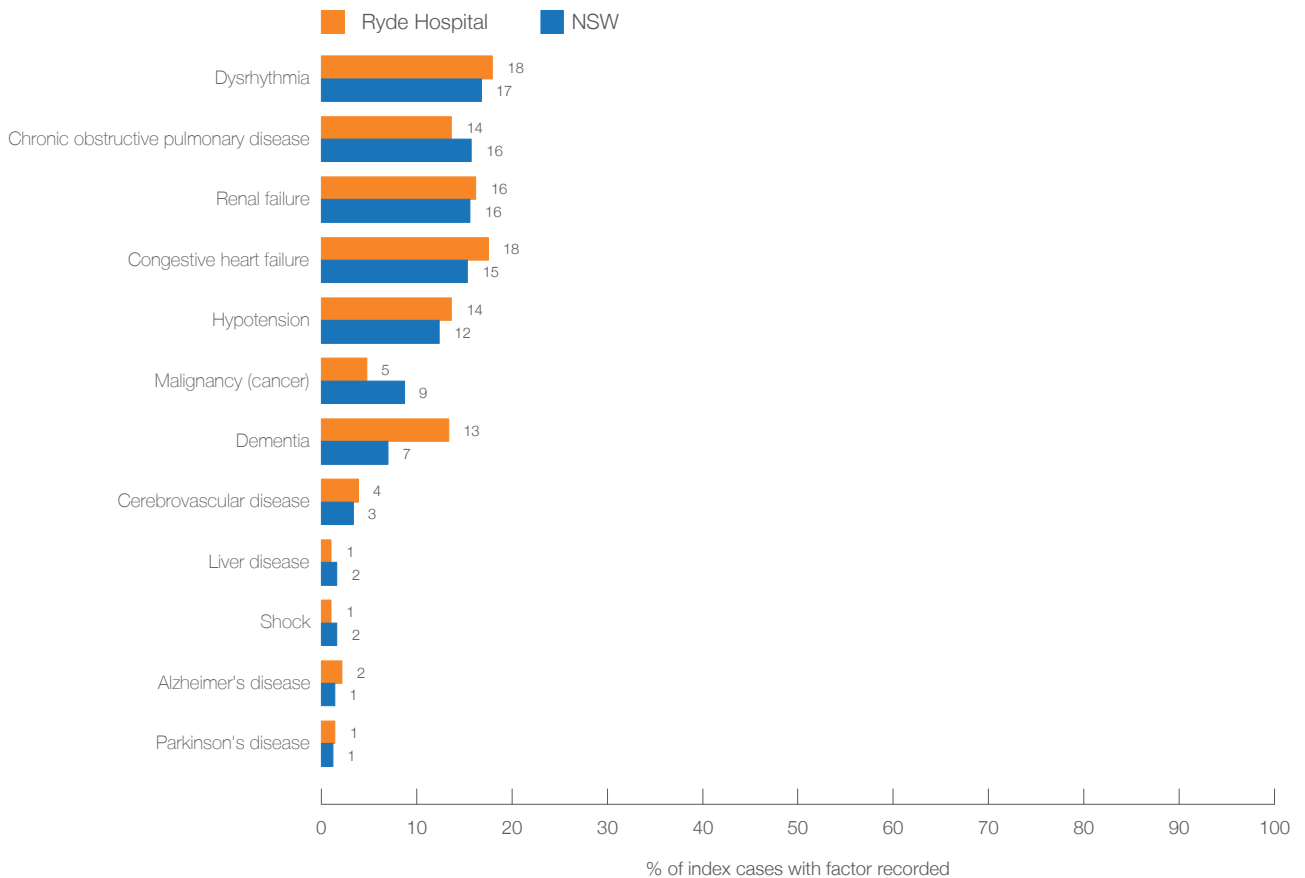**Data source:** SAPHaRI, Centre for Epidemiology and Evidence, NSW Ministry of Health.

Ryde Hospital profile July 2009 - June 2012
30-day mortality following hospitalisation for pneumonia

	This hospital	NSW
Total pneumonia hospitalisations	776	50,644
Pneumonia patients		
Presenting patients (index cases)[1]	697	44,059
Patients not transferred to another hospital	649	39,655
Patients transferred out to another hospital	48	4,404

Age profile, index cases [2]

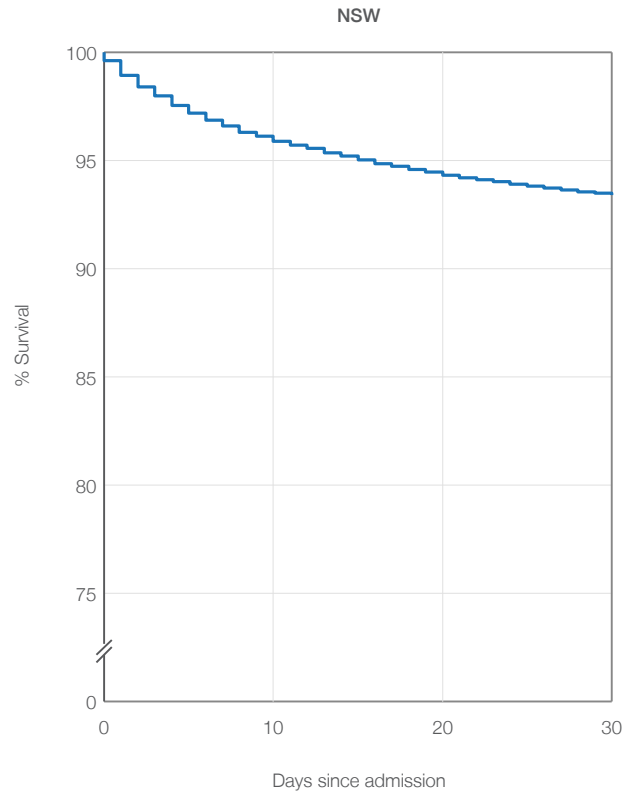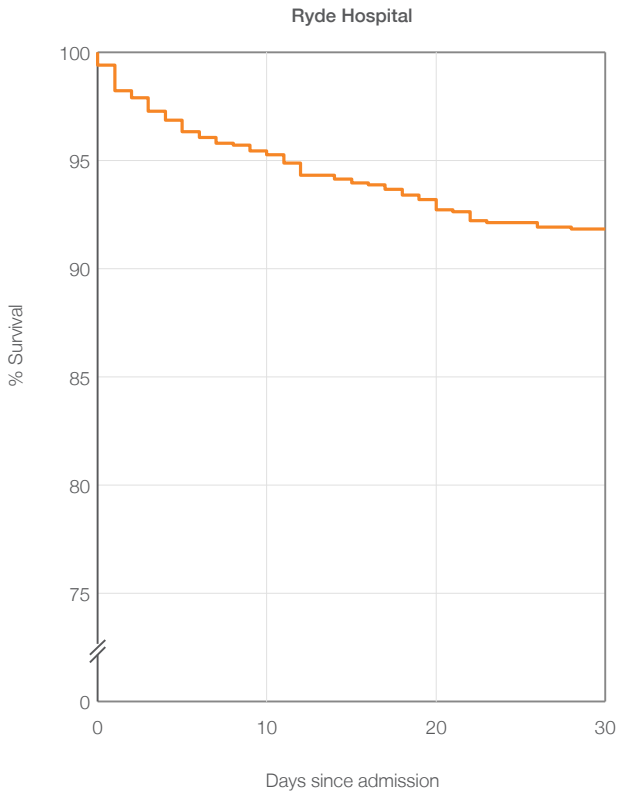

Significant patient factors and comorbidities, index cases [3]

Ryde Hospital profile July 2009 - June 2012
30-day mortality following hospitalisation for pneumonia

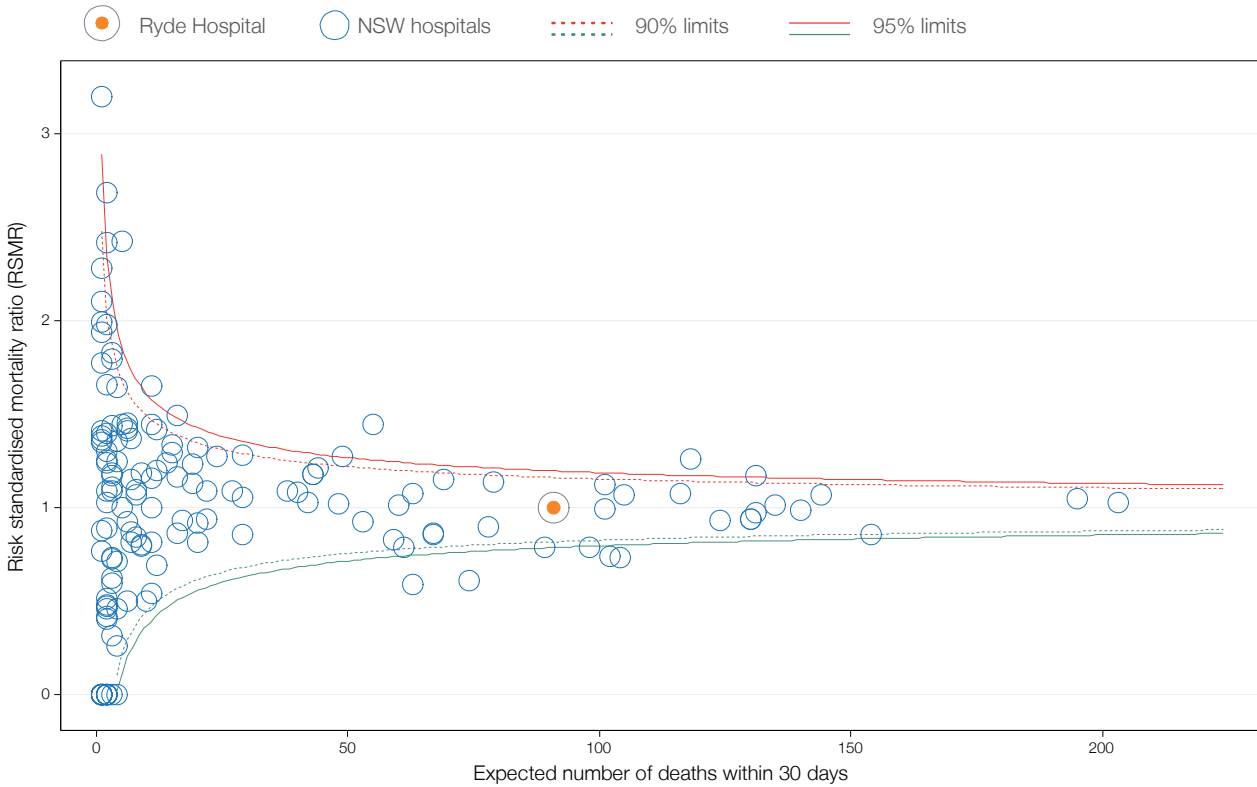|	This hospital percentage	NSW percentage
Mortality (all causes) among 697 pneumonia index cases [4]		
Percentages: index cases who died within 30 days of hospitalisation	13%	
Of all deaths:		
percentage in this hospital	74%	(66%)
percentage in another hospital following transfer	2%	(3%)
percentage after discharge	24%	(31%)
percentage on day of admission	8%	(6%)
percentage within 7 days	54%	(54%)

Survival of index cases following hospitalisation for pneumonia [5]
Adjusted for average age and Charlson comorbidity score

Ryde Hospital

% Survival

Days since admission

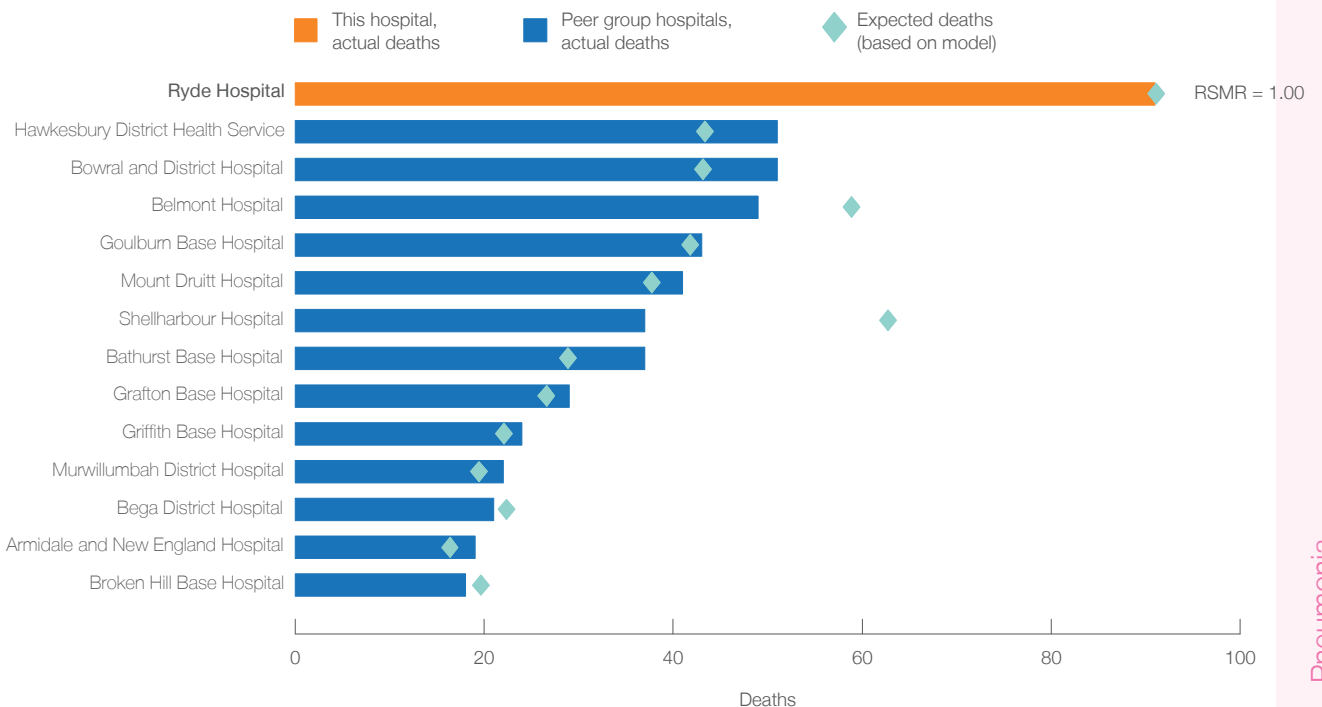NSW

% Survival

Days since admission

Ryde Hospital profile July 2009 - June 2012

Hospital-level pneumonia risk-standardised mortality ratio by number
of expected deaths, NSW public hospitals

Legend: ● Ryde Hospital ○ NSW hospitals ┈┈ 90% limits ── 95% limits

Y-axis: Risk standardised mortality ratio (RSMR)
X-axis: Expected number of deaths within 30 days

Hospital-specific RSMRs report the ratio of actual or 'observed' number of deaths to the 'expected' number of deaths. A hierarchical logistic regression model draws on the NSW patient population's characteristics and outcomes to estimate the expected number of deaths for each hospital, given the characteristics of its patients.

Actual and expected deaths, compared to local peers

Legend: ■ This hospital, actual deaths ■ Peer group hospitals, actual deaths ◆ Expected deaths (based on model)

- Ryde Hospital — RSMR = 1.00
- Hawkesbury District Health Service
- Bowral and District Hospital
- Belmont Hospital
- Goulburn Base Hospital
- Mount Druitt Hospital
- Shellharbour Hospital
- Bathurst Base Hospital
- Grafton Base Hospital
- Griffith Base Hospital
- Murwillumbah District Hospital
- Bega District Hospital
- Armidale and New England Hospital
- Broken Hill Base Hospital

X-axis: Deaths

Ryde Hospital profile July 2009 - June 2012
30-day mortality following hospitalisation for pneumonia

Illustrating the effect of standardisation, July 2009 - June 2012

In order to make fair comparisons, a number of risk adjustments are made to mortality data. These take into account patient level factors that influence the likelihood of dying. The table below illustrates the cumulative effect of the statistical adjustments. For each ratio, hospitals are compared to the average NSW result, given their case mix.

■ Lower mortality   ■ No difference   ■ Higher mortality

Unadjusted ratio	Age and sex standardised ratio	Risk-standardised mortality ratio
1.21	1.03	1.00

Time series risk-standardised mortality ratio, July 2000 - June 2012 [6]

■ Lower mortality   ■ No difference   ■ Higher mortality

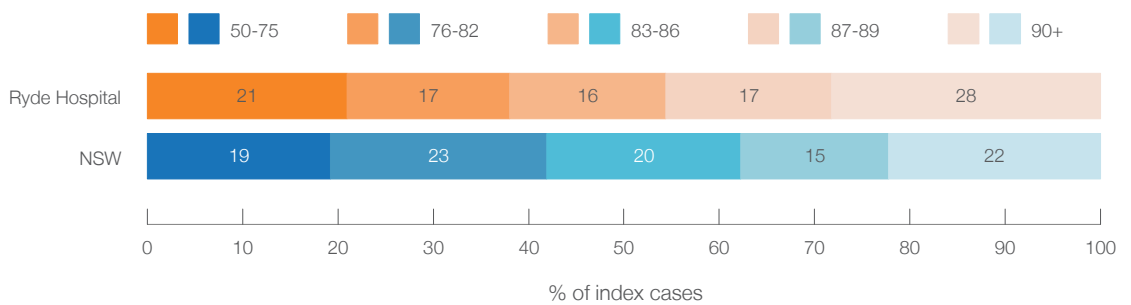| Year (financial years)	2000-02	2003-05	2006-08	2009-12
Risk-standardised mortality ratio	1.35	0.96	0.85	1.00

(1) Index cases refer to patients discharged between July 2009 and June 2012 who were initially admitted to this hospital (regardless of whether they were subsequently transferred) in their last period of care.

(2) Age at admission date.

(3) Only those conditions that were shown to have a significant impact on mortality (P<0.05) are shown. Many are a result of end-organ damage resulting from comorbidities, such as diabetes. A broader set of comorbidities was screened for potential impacts on mortality. Comorbidities as recorded on patient record, with one year look back. STEMI refers to ST-elevation myocardial infarction.

(4) Deaths are from any cause, in or out of hospital within 30 days of the index hospitalisation admission date.

(5) Kaplan-Meier survival curve for 30-day following admission for haemorrhagic stroke, adjusted for average age and average Charlson comorbidity score. Survival curves depict the proportion of patients who were alive, day 0 – day 30.

(6) To make RSMRs comparable over time, a reference population is required. Time series RSMRs for each hospital are based on the reference years (July 2009 - June 2012). Control limits are based on the NSW average within each period.

(†) Data for hospitals with an expected mortality of <1 are suppressed.

(◇) Between 90% and 95% upper control limits; (◇◇) Outside 95% upper control limits.

(▭) Between 90% and 95% lower control limits; (▭▭) Outside 95% lower control limits.

Details of analyses and risk adjustment are available in *Spotlight on Measurement: risk-standardised mortality ratios*

Data source: SAPHaRI, Centre for Epidemiology and Evidence, NSW Ministry of Health.
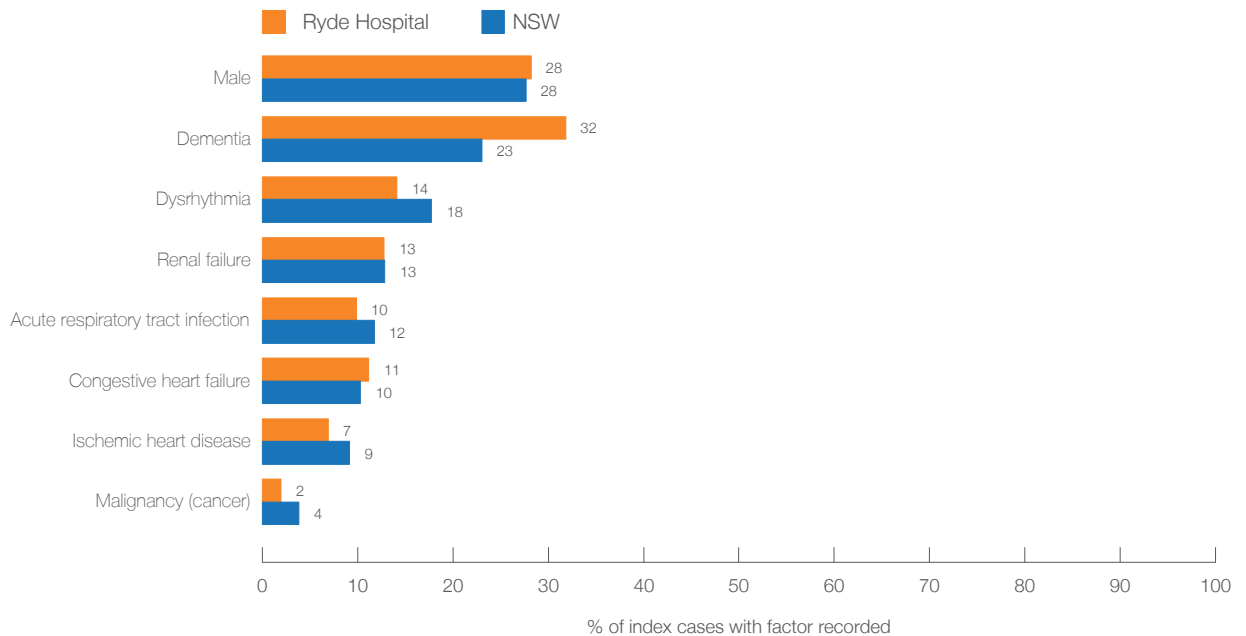
Ryde Hospital profile July 2009 - June 2012
30-day mortality following hospitalisation for hip fracture surgery

	This hospital	NSW
Total hip fracture surgery hospitalisations	313	16,355
Hip fracture surgery patients		
Presenting patients (index cases)[1]	305	15,836
Patients not transferred to another hospital	250	10,739
Patients transferred out to another hospital	55	5,097

Age profile, index cases [2]

Legend: 50-75 | 76-82 | 83-86 | 87-89 | 90+

	50-75	76-82	83-86	87-89	90+
Ryde Hospital	21	17	16	17	28
NSW	19	23	20	15	22

% of index cases

Significant patient factors and comorbidities, index cases [3]

Legend: Ryde Hospital | NSW

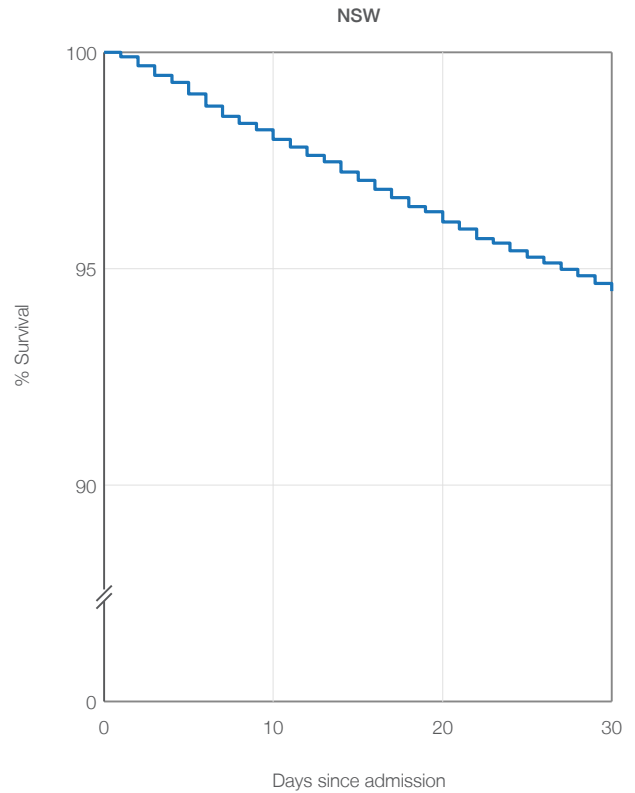| Factor	Ryde Hospital	NSW
Male	28	28
Dementia	32	23
Dysrhythmia	14	18
Renal failure	13	13
Acute respiratory tract infection	10	12
Congestive heart failure	11	10
Ischemic heart disease	7	9
Malignancy (cancer)	2	4

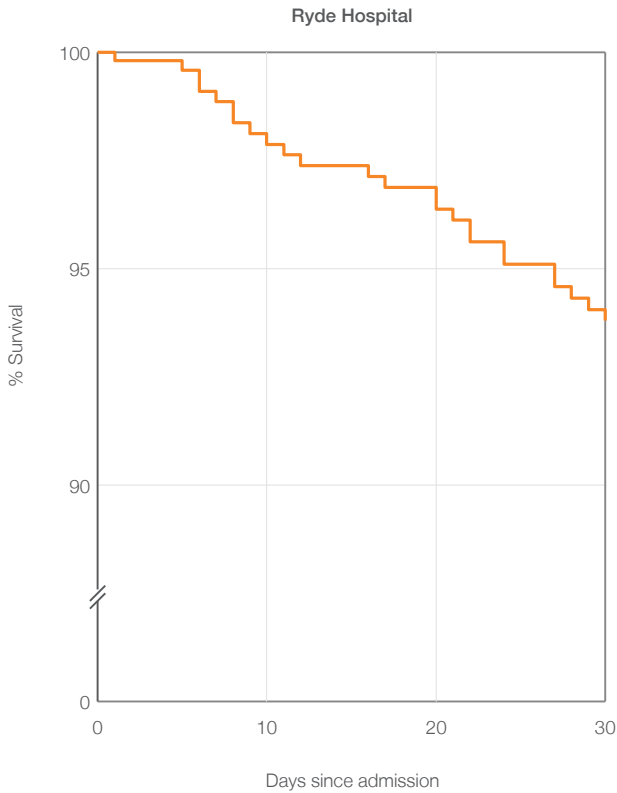% of index cases with factor recorded

Ryde Hospital profile July 2009 - June 2012
30-day mortality following hospitalisation for hip fracture surgery

	This hospital percentage	NSW percentage
Mortality (all causes) among 305 hip fracture surgery index cases [4]		
Percentages: index cases who died within 30 days of hospitalisation	8%	
Of all deaths:		
percentage in this hospital	52%	(50%)
percentage in another hospital following transfer	0%	(0%)
percentage after discharge	48%	(50%)
percentage on day of admission	not applicable for hip fracture surgery	
percentage within 7 days	20%	(27%)

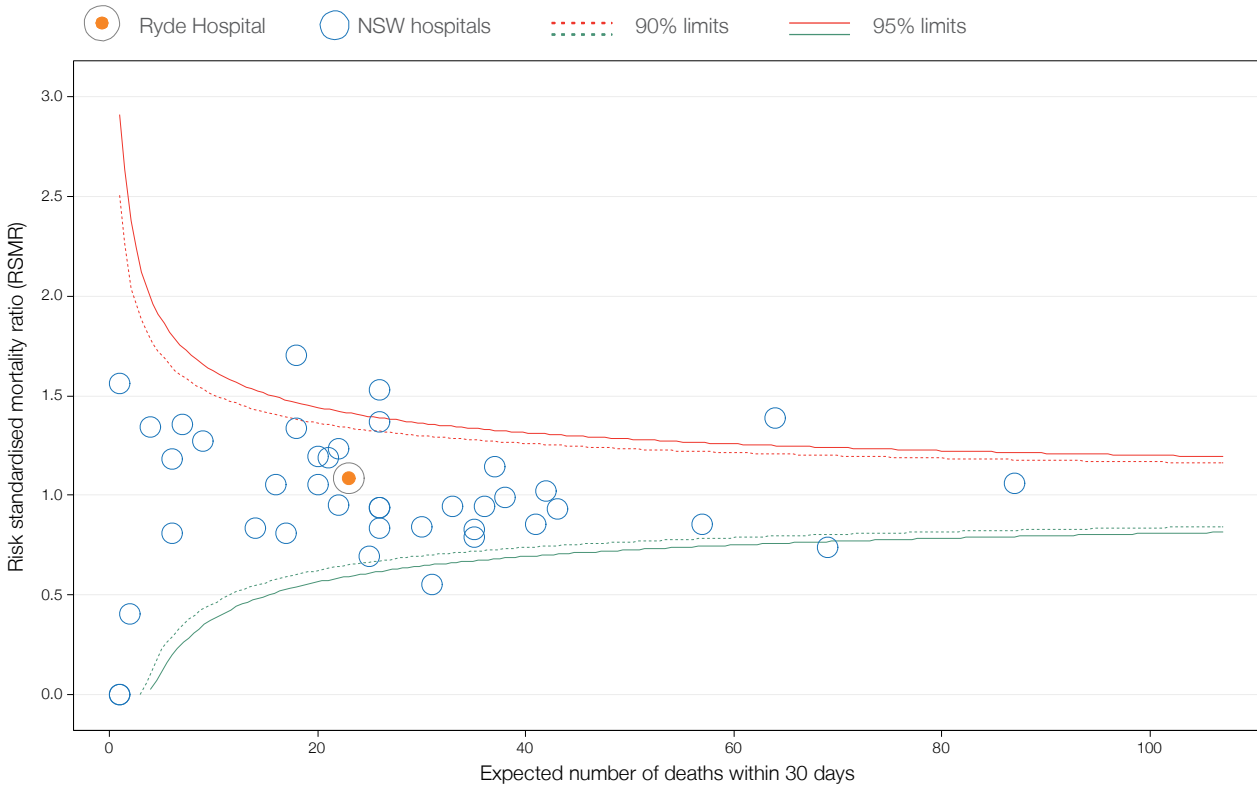### Survival of index cases following hospitalisation for hip fracture surgery [5]
Adjusted for average age and Charlson comorbidity score

Ryde Hospital

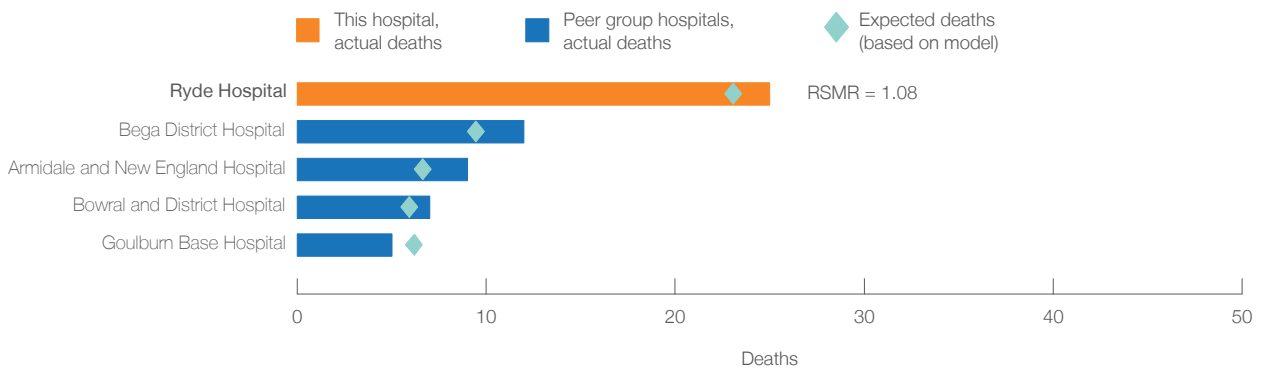NSW

% Survival

Days since admission

Ryde Hospital profile July 2009 - June 2012

Hospital-level hip fracture surgery risk-standardised mortality ratio by number
of expected deaths, NSW public hospitals

Hospital-specific RSMRs report the ratio of actual or 'observed' number of deaths to the 'expected' number
of deaths. A hierarchical logistic regression model draws on the NSW patient population's characteristics and
outcomes to estimate the expected number of deaths for each hospital, given the characteristics of its patients.

Actual and expected deaths, compared to local peers

Ryde Hospital profile July 2009 - June 2012
30-day mortality following hospitalisation for hip fracture surgery

Illustrating the effect of standardisation, July 2009 - June 2012

In order to make fair comparisons, a number of risk adjustments are made to mortality data. These take into account patient level factors that influence the likelihood of dying. The table below illustrates the cumulative effect of the statistical adjustments. For each ratio, hospitals are compared to the average NSW result, given their case mix.

■ Lower mortality   ■ No difference   ■ Higher mortality

Unadjusted ratio	Age and sex standardised ratio	Risk-standardised mortality ratio
1.20	1.14	1.08

Time series risk-standardised mortality ratio, July 2000 - June 2012 [6]

■ Lower mortality   ■ No difference   ■ Higher mortality

Year (financial years)	2000-02	2003-05	2006-08	2009-11
Risk-standardised mortality ratio	0.93	0.67	0.71	1.08

(1) Index cases refer to patients discharged between July 2009 and June 2012 who were initially admitted to this hospital (regardless of whether they were subsequently transferred) in their last period of care.
(2) Age at admission date.
(3) Only those conditions that were shown to have a significant impact on mortality (P<0.05) are shown. Many are a result of end-organ damage resulting from comorbidities, such as diabetes. A broader set of comorbidities was screened for potential impacts on mortality. Comorbidities as recorded on patient record, with one year look back. STEMI refers to ST-elevation myocardial infarction.
(4) Deaths are from any cause, in or out of hospital within 30 days of the index hospitalisation admission date.
(5) Kaplan-Meier survival curve for 30-day following admission for haemorrhagic stroke, adjusted for average age and average Charlson comorbidity score. Survival curves depict the proportion of patients who were alive, day 0 – day 30.
(6) To make RSMRs comparable over time, a reference population is required. Time series RSMRs for each hospital are based on the reference years (July 2009 - June 2012). Control limits are based on the NSW average within each period.
(†) Data for hospitals with an expected mortality of <1 are suppressed.
(◇) Between 90% and 95% upper control limits; (◇◇) Outside 95% upper control limits.
(⊟) Between 90% and 95% lower control limits; (⊟⊟) Outside 95% lower control limits.
Details of analyses and risk adjustment are available in *Spotlight on Measurement: risk-standardised mortality ratios*
Data source: SAPHaRI, Centre for Epidemiology and Evidence, NSW Ministry of Health.

Hip fracture surgery