

SCOOP

ACUTE HOSPITAL OUTCOMES REPORT

An overview of outcomes of acute geriatric medicine services in Scotland



Contents

Working Group	3
SCoOP Steering Group	4
Members	4
Scottish Care of Older People Project	
Acute Hospitals Report	5
What is SCoOP?	6
Executive Summary	7
Activity	8
Hospitals Report of Length of Stay	9
LOS by activity and time out of speciality	10
Same Day Discharge	12
Deaths	13
Readmissions	14
Hospital at Home	15
Aberdeen Royal Infirmary	16
Borders General Hospital	17
Dumfries and Galloway Royal Infirmary	18
Forth Valley Royal Hospital	19
Glasgow Royal Infirmary	20
Inverclyde Royal Hospital	21
Ninewells Hospital	22
Perth Royal Infirmary	23
Queen Elizabeth University Hospital	24
Raigmore Hospital	25
Royal Alexandra Hospital	26
Royal Infirmary Edinburgh	27
St John's Hospital	28
University Hospital Ayr	29
University Hospital Crosshouse	30
University Hospital Hairmyres	31
University Hospital Monklands	32
University Hospital Wishaw	33
Victoria Hospital	34
Data	35

SCoOP Acute Hospital Outcomes Report

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Hospital Reports 2017/18

SCoOP

Scottish Care of Older People Project

Acute Hospitals Report



This is the SCoOP's first Acute Hospitals Report to NHS Boards and Health and Social Care Partnerships. It aims to help them assess their specialist acute geriatric medicine services' performance by highlighting variation in outcomes across Scotland.

There are many factors that can account for variation in outcomes, including differences in case-mix, service configuration, resources and staffing. The report does not attempt to explain the variation but aims to stimulate thoughtful discussion, learning and action.

The report should be used to help benchmark some key patient outcomes and inspire a culture of inter-organisational learning and continuous improvement. The wider goal is to reduce unwarranted and unjustifiable variation in outcomes, which may represent a threat to patient safety and/or a failure to learn from best practice.

The report includes figures comparing outcomes across 19 acute hospital sites and a summary for each hospital site. Data for some smaller hospital sites were removed for disclosure reasons. Data for the Western General Hospital in Edinburgh are not available for this report as it does not have a major emergency department.

For the purposes of this report, admissions were only counted where the majority of the total hospital stay was spent in an acute hospital site.

All data were provided by the Information Statistics Division (ISD).

What is SCoOP?

“SCoOP is a Scottish national evaluation project focussing on care of older people across Scotland in both primary and secondary care settings.”



SCoOP has the following overarching aims:

- To evaluate the variation in service provision for older people who require health and social care in various settings to serve as a driver for standardisation and improvement of care across Scotland
- To provide benchmarking tools for various care aspects of older people in Scottish NHS health and social care setting to support improvement work in services across Scotland
- To provide a health intelligence and knowledge transfer hub for service users, health care providers and policy makers through annual evaluation cycles

This is a joint initiative set up in late 2016 by three key partners: Healthcare Improvement Scotland, the British Geriatrics Society Scotland Council, and the University of Aberdeen as the lead academic institution, with representation from the other Scottish universities with clinical academic departments in Geriatric Medicine.

Executive summary

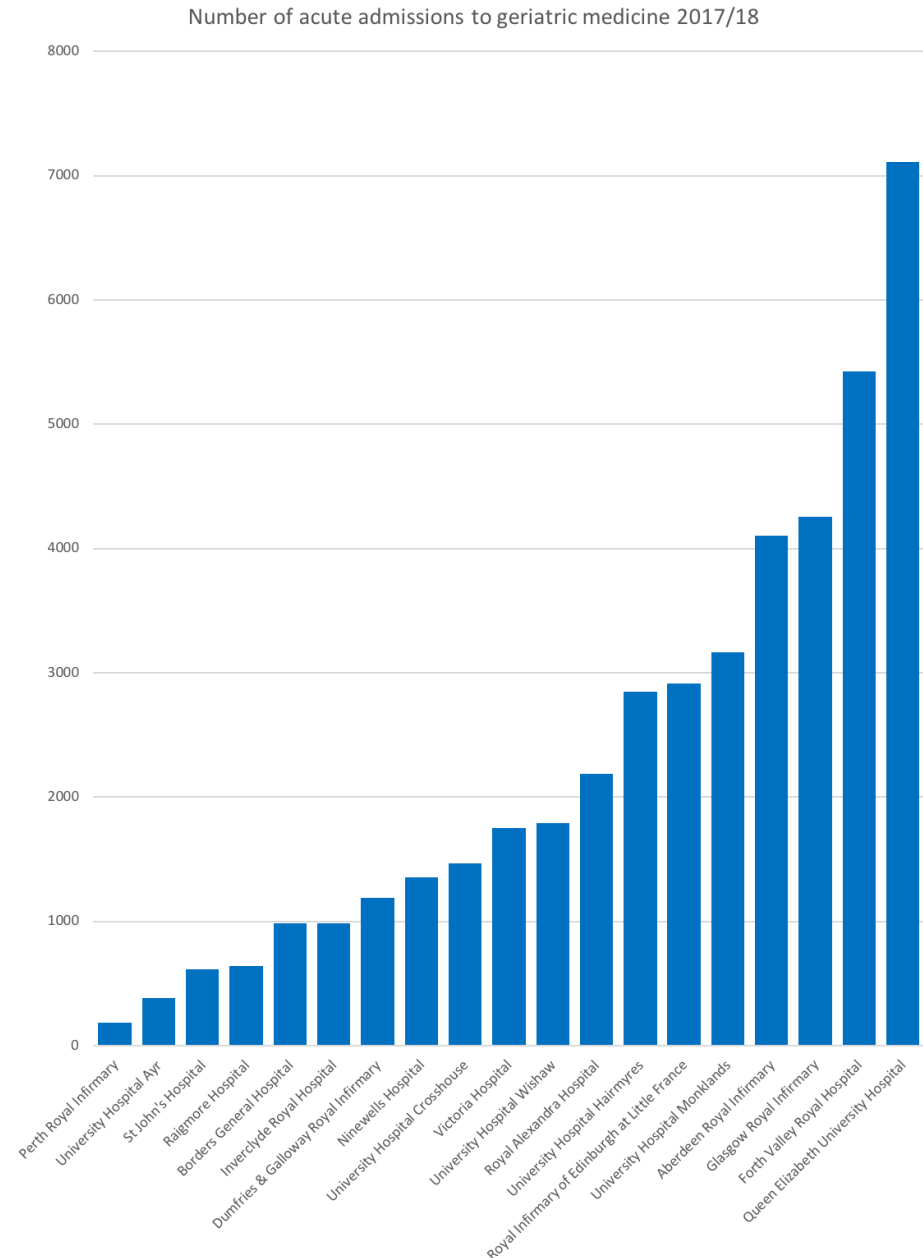


- The report measured outcomes of admissions to geriatric medicine in the 19 largest hospitals with major emergency departments in Scotland. Admissions rose by around 10% per year for three consecutive years, reaching 43,311 by 2017/18. This represents a growth in capacity most likely achieved through a reduction in length of stay.
- The number of admissions varied widely across sites, with some areas showing large increases in activity while others are in decline.
- There was enormous variation in length of stay across hospitals, with up to 12-fold differences in median length of stay. This was not explained by differences in length of stay in non-acute wards. Hospitals with higher activity levels usually had lower lengths of stay, but this does not explain all the variation.
- There was a strong correlation between total length of stay and time spent out of specialty, suggesting delays in accessing specialist services lead to longer stays in hospital.
- Length of stay has decreased across all sites by a median one day in the last three years (range -7 to +5).
- Differences in readmission rates and mortality were less marked between hospitals. However, there were up to two-fold differences in mortality rates at 30 days after admission between hospitals. Case-mix may account for some of the variation.
- Readmission and death rates have remained broadly stable over the last 3 years, despite the substantial increases in activity.
- Three health boards reported the activity of their 'Hospital at Home' schemes, all of which have grown to accommodate around 2,000 to 3,000 annual episodes each.
- The report highlights significant variation in outcomes across the country, and provides potential benchmarks for future quality improvement and greater consistency in outcomes.

Hospitals Report 2017/18

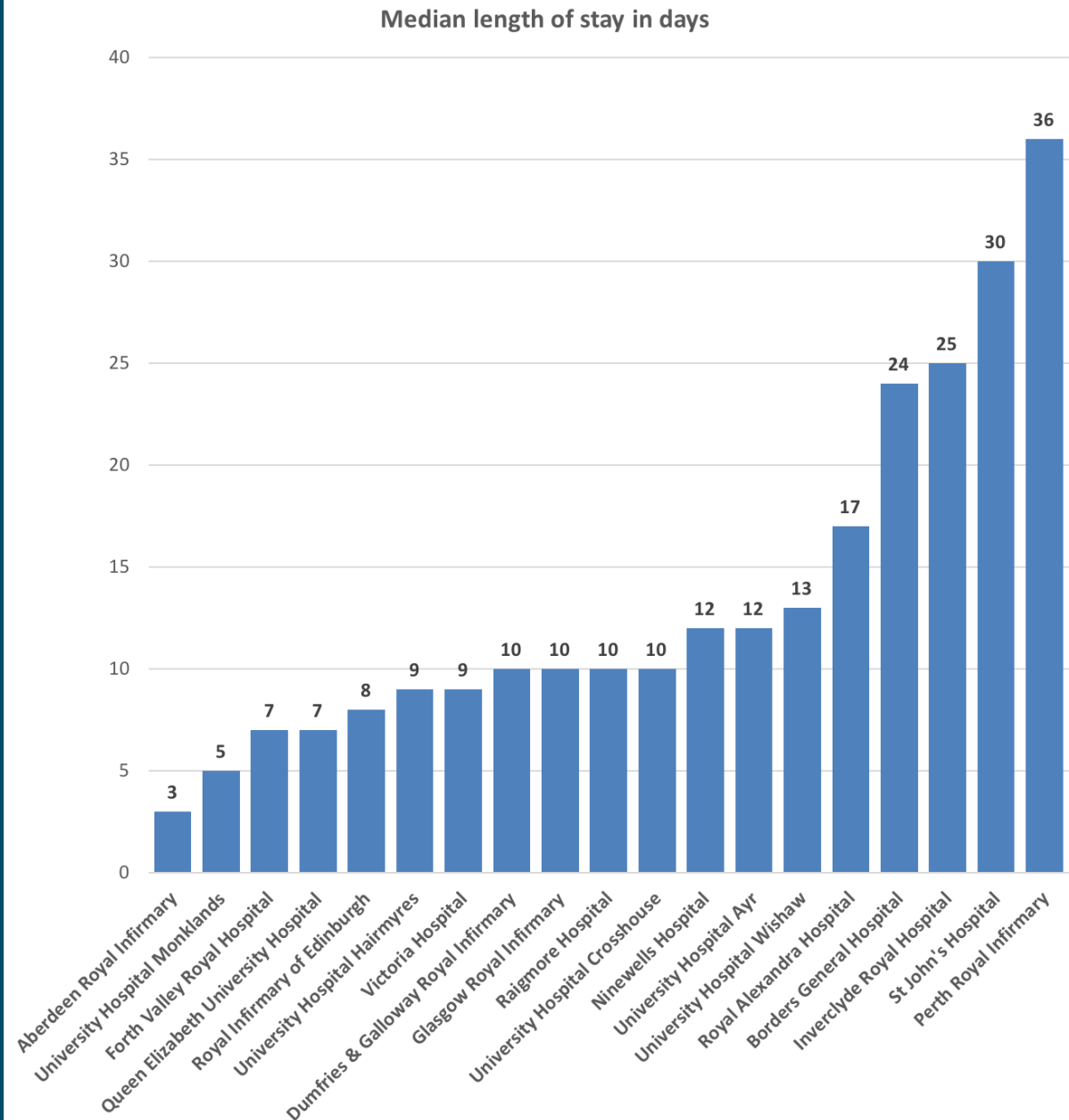
Activity

- There were 43,311 admissions to acute geriatric medicine beds in 2017/18
- Activity has increased nationally by around 10% in each of the last 3 years from 32,009 admissions in 2014/15
- Changes in activity over the last 3 years varied widely by hospital from a 41% drop in Ayr to an 84% increase in Borders General Hospital
- Levels of activity in 2017/18 varied widely by hospital from 187 to 7,113 admissions



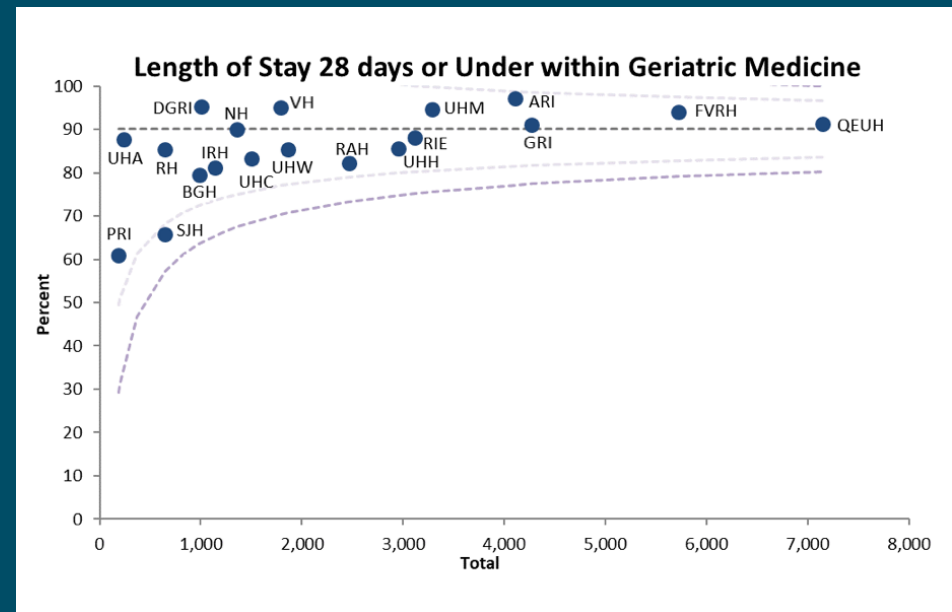
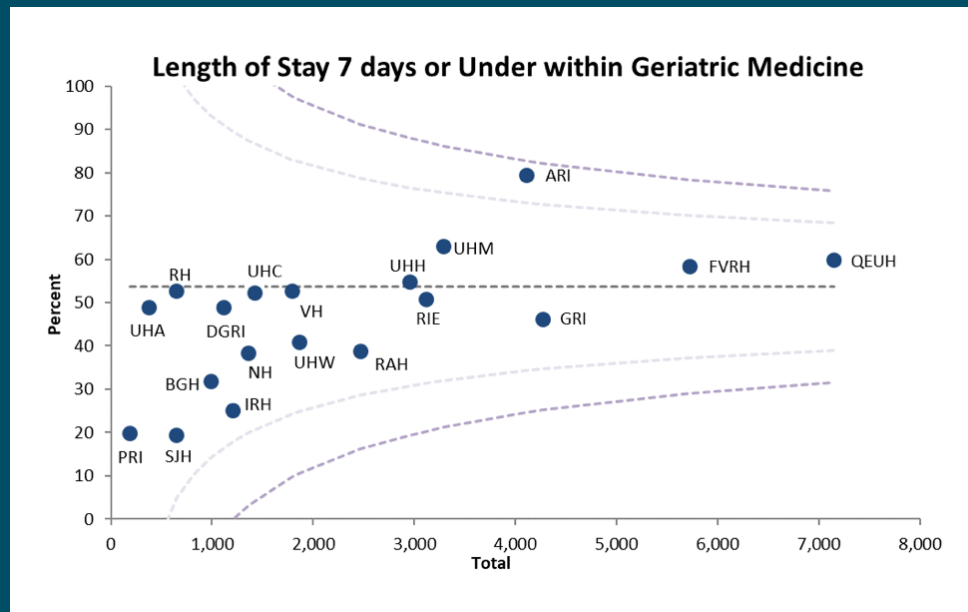
Hospitals Report Length of Stay

- Shown here as complete length of stay in acute beds including time spent in non-specialty beds
- Length of stay has fallen by a median of 1 day across sites overall in the last 3 years (range -7 to +5)
- There is a 12-fold variation in median length of stay across the country
- Length of stay in non-acute settings ranged from 29 to 57 days, with little correlation to length of stay in acute settings

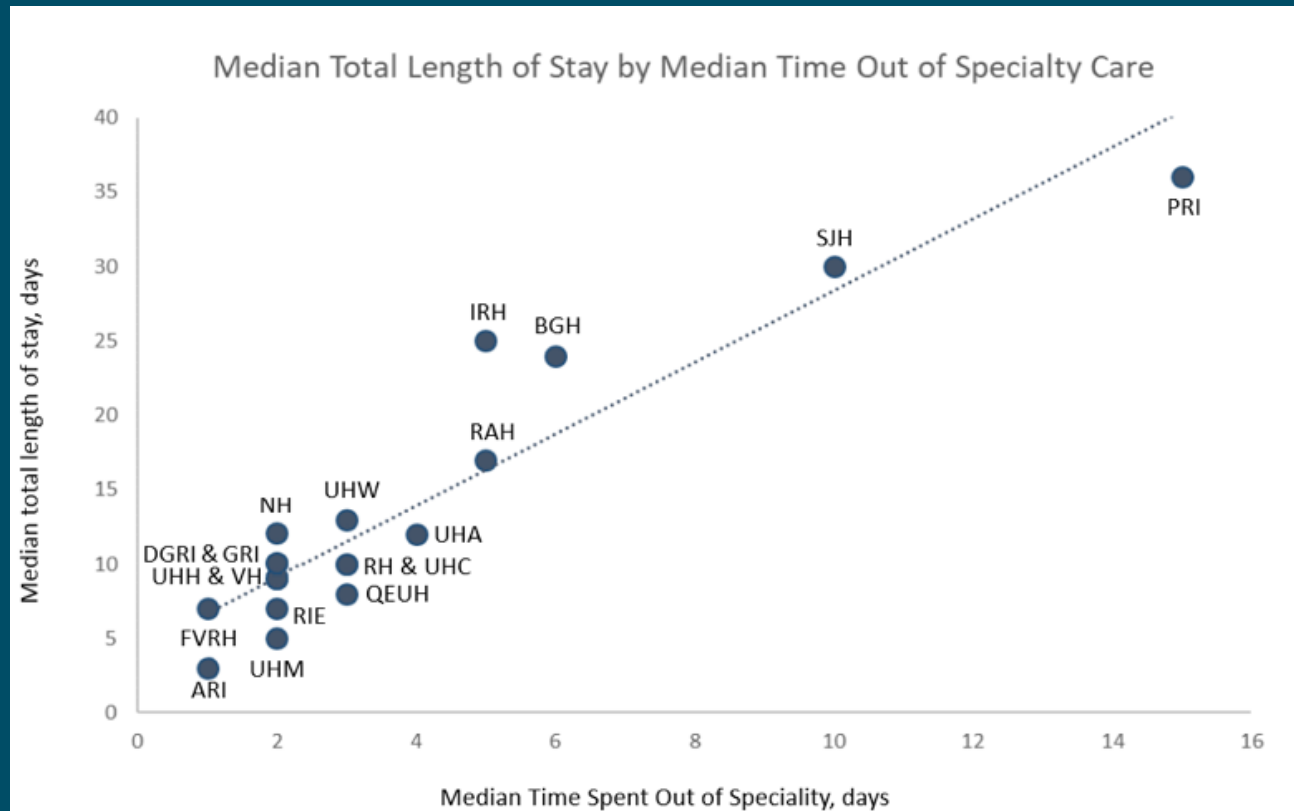


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LOS by activity and time out of speciality



- Funnel plots of all hospital rates versus activity, where dotted lines represent 2 and 3 standard deviations from the mean

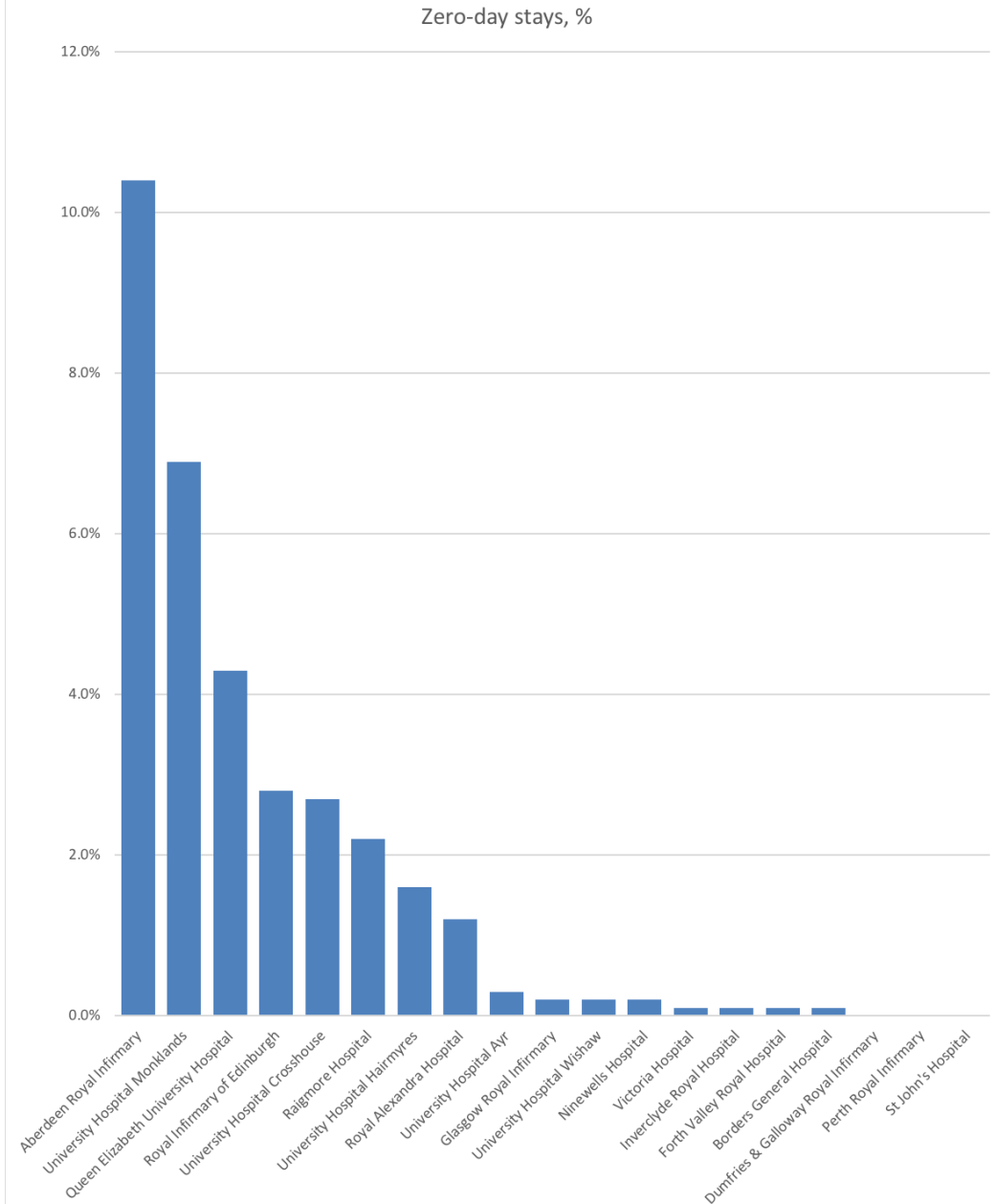


- Hospitals with shorter patient stays out of specialty (usually denoting faster access to specialist care) had significantly shorter overall lengths of stay ($r=0.86$, $p<0.001$)

Hospitals Report 2017/18

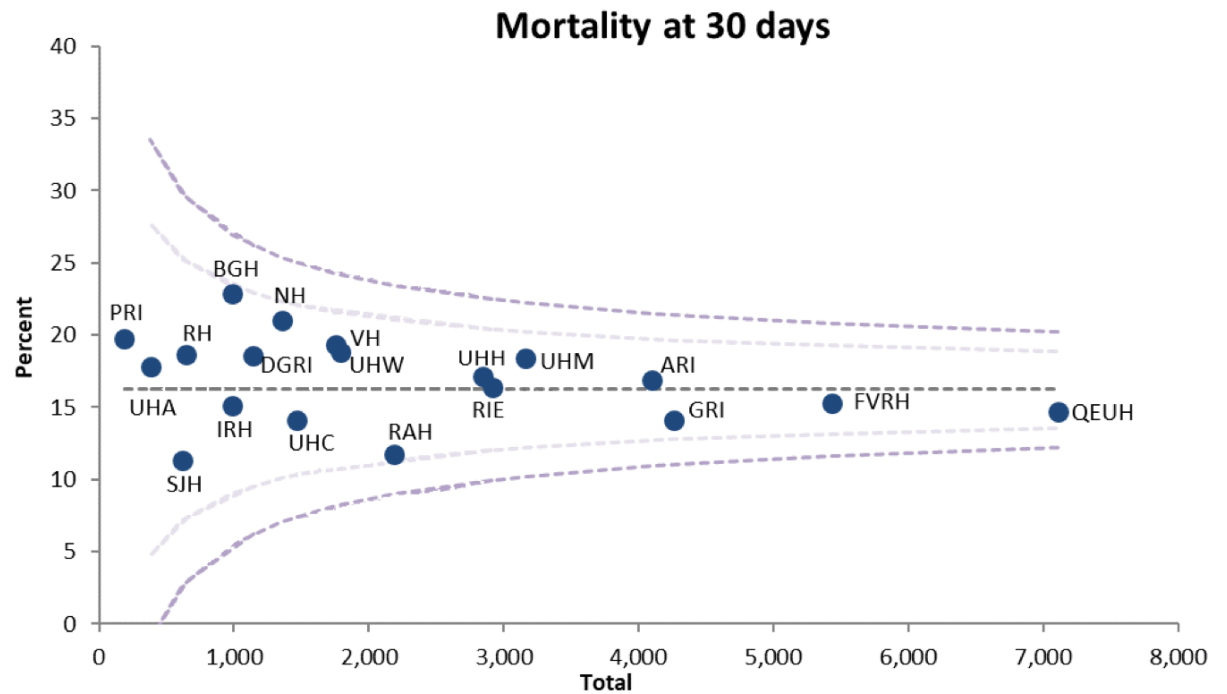
Same Day Discharge

- Percentage of admissions to geriatric medicine discharged on the same day they were admitted
- Rates varied from 0% to 10.4%



Deaths

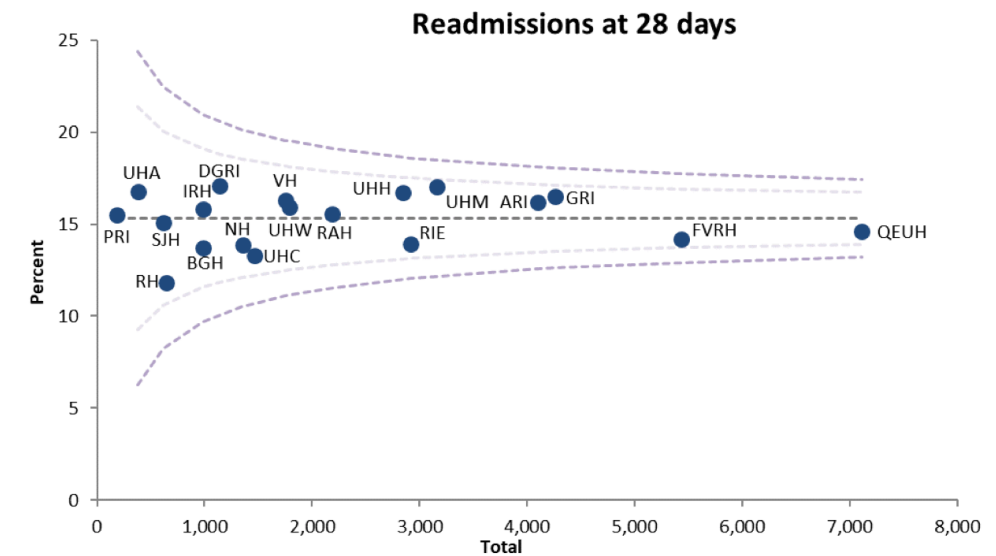
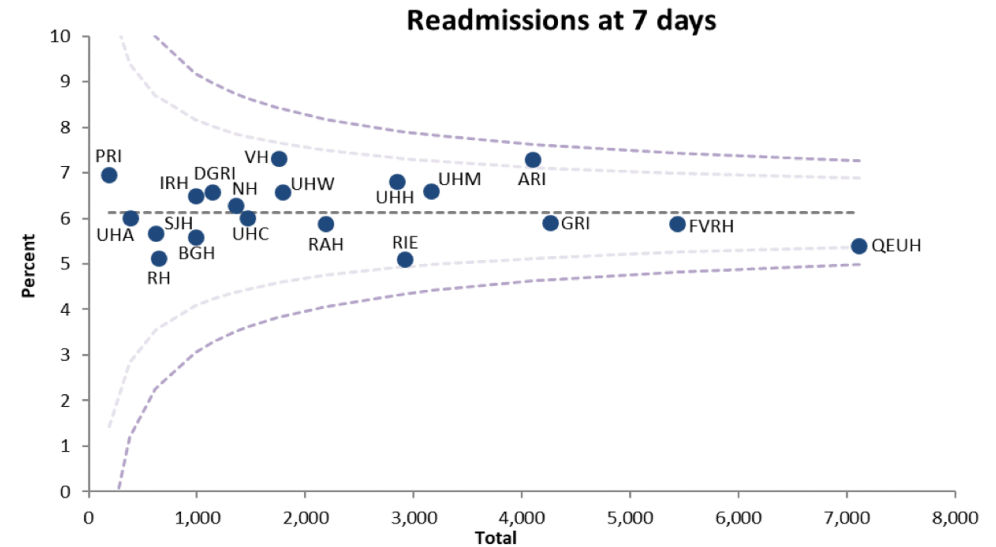
- Mortality rates at 30 days after admission have remained fairly steady nationally since 2013, averaging around 16.5%
- For 2017/18, mortality rates at 30 days across hospitals ranged from 11.4% to 22.8%
- All 30-day mortality rates were within 2 standard deviations of the mean



Hospitals Report 2017/18

Readmissions

- Mean emergency readmission rates at 7 and 28 days post discharge from geriatric medicine have remained steady since 2013
- Mean emergency readmission rates at 7 days averaged 6% (range 5-7%)
- Mean emergency readmission rates at 28 days averaged 15.3% (range 12-17%)
- Aberdeen Royal Infirmary had a slightly higher than expected 7-day readmission rate of 7.3% but at 28 days readmission rates were not significantly different across sites



Hospitals Report 2017/18

Hospital at Home

- Only three health boards reported data for their Hospital at Home schemes
- Number of episodes increased 5-fold from 1,343 to 7,003 in three years
- Median duration of episodes is similar at 5 or 6 days across health boards



Hospital at Home - Number of episodes by financial year* and NHS Board

NHS Board of Treatment					2017/18 comparison
	2014/15	2015/16	2016/17	2017/18	
NHS Fife	612	1,819	1,964	1,815	
NHS Lanarkshire	600	2,342	2,833	2,954	
NHS Lothian	131	1,551	1,820	2,234	

Hospital at Home - Median duration of episode by financial year* and NHS Board

NHS Board of Treatment	2014/15	2015/16	2016/17	2017/18
NHS Fife	6	7	6	6
NHS Lanarkshire	4	5	5	5
NHS Lothian	7	6	5	5

* data prior to 2016/7 are marked as provisional

Hospitals Report 2017/18

Aberdeen Royal Infirmery

Total throughput 2017/18 = 4,104

Change over 3 years = +14%

Median LOS = 3 days (rank 1st)

Change since 2014/15 = none

Median out of specialty care = 1 day

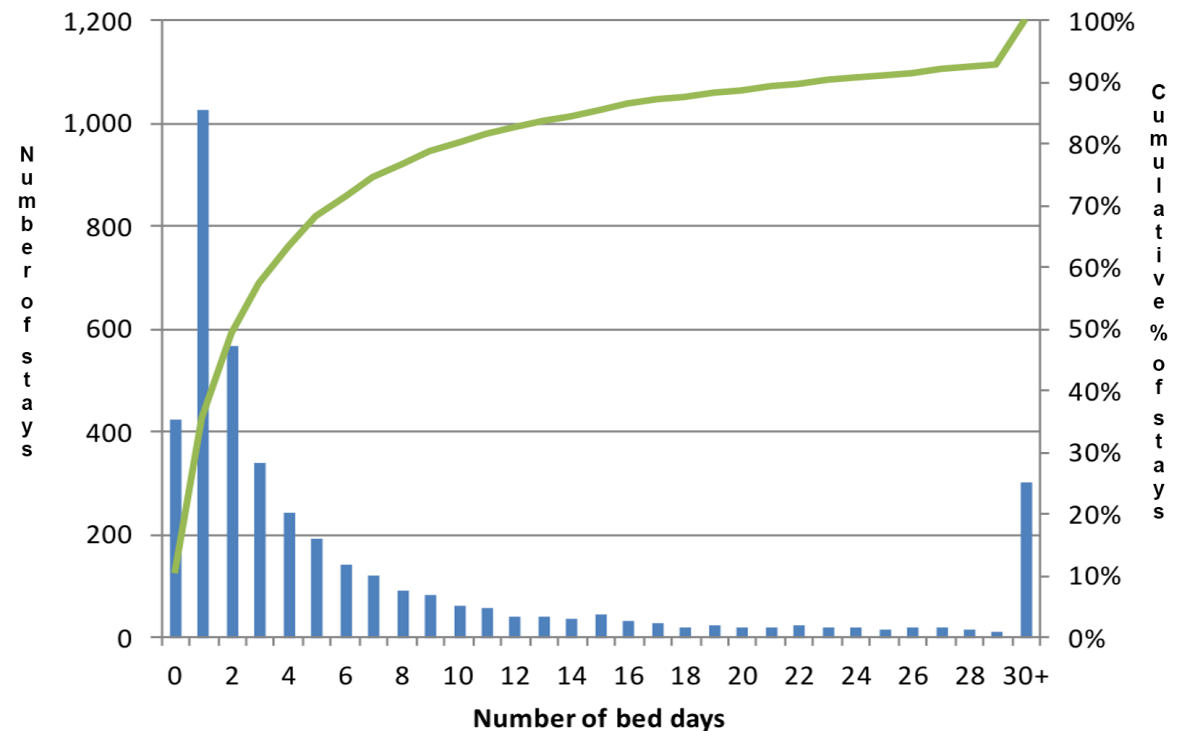
Median LOS in non-acute care = 41 days

Readmissions 7 days 7.3% (rank 18th)

Readmissions 28 days 16.2% (rank 13th)

Mortality 30 days 16.9% (rank 9th)

Aberdeen Royal Infirmery : Length of Stay (days) for Complete Stay



Hospitals Report 2017/18

Borders General Hospital

Total throughput 2017/18 = 985

Change over 3 years = +84%

Median LOS = 24 days (rank 16th)

Change since 2014/15 = -3 days

Median out of specialty care = 6 days

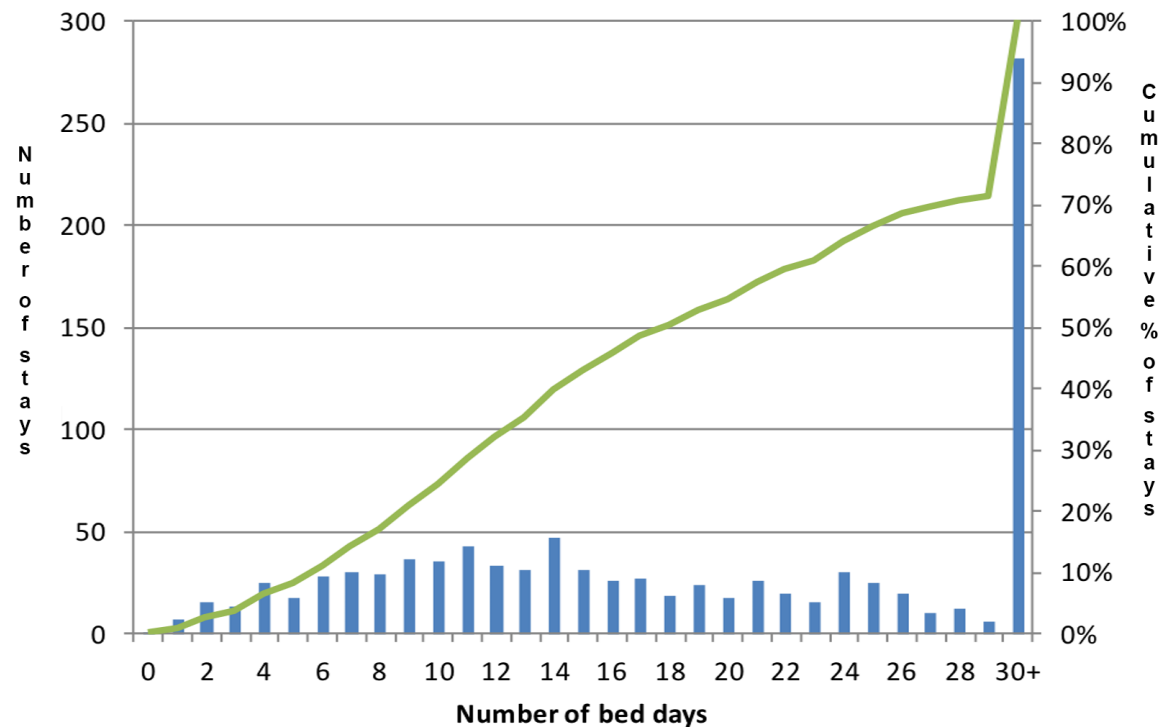
Median LOS in non-acute care = 42 days

Readmissions 7 days 5.6% (rank 4th)

Readmissions 28 days 13.7% (rank 3rd)

Mortality 30 days 22.8% (rank 19th)

Borders General Hospital : Length of Stay (days) for Complete Stay



Hospitals Report 2017/18

Dumfries and Galloway Royal Infirmary

Total throughput 2017/18 = 1,141

Change over 3 years = -7%

Median LOS = 10 days (rank 8th)

Change since 2014/15 = none

Median out of specialty care = 2 days

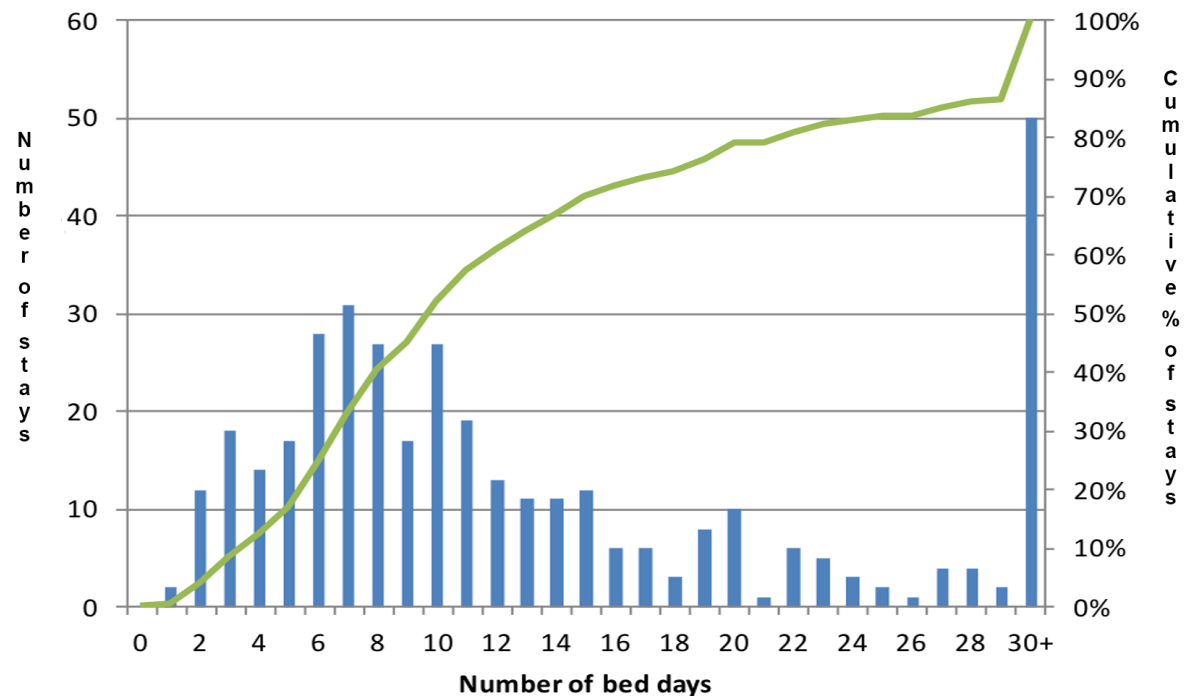
Median LOS in non-acute care = 42 days

Readmissions 7 days 6.6% (rank 13th)

Readmissions 28 days 17.1% (rank 19th)

Mortality 30 days 18.6% (rank 13th)

**Dumfries & Galloway Royal Infirmary :
Length of Stay (days) for Complete Stay**



Hospitals Report 2017/18

Forth Valley Royal Hospital

Total throughput 2017/18 = 5,723

Change over 3 years = +5%

Median LOS = 7 days (rank 3rd)

Median out of specialty care = 1 day

Change since 2014/15 = none

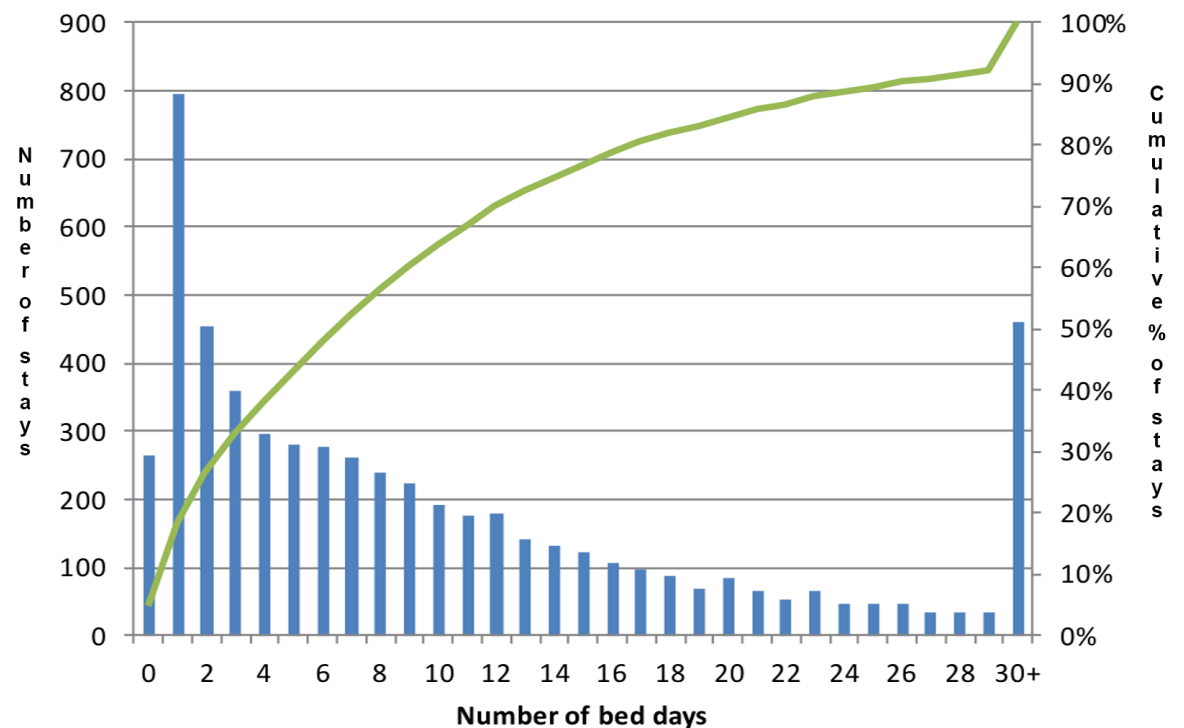
Median LOS in non-acute care = 51 days

Readmissions 7 days 5.9% (rank 6th)

Readmissions 28 days 14.2% (rank 6th)

Mortality 30 days 15.3% (rank 7th)

Forth Valley Royal Hospital : Length of Stay (days) for Complete Stay



Hospitals Report 2017/18

Glasgow Royal Infirmery

Total throughput 2017/18 = 4,272

Change over 3 years = +50%

Median LOS = 10 (rank 8th)

Change since 2014/15 = -3 days

Median out of specialty care = 2 days

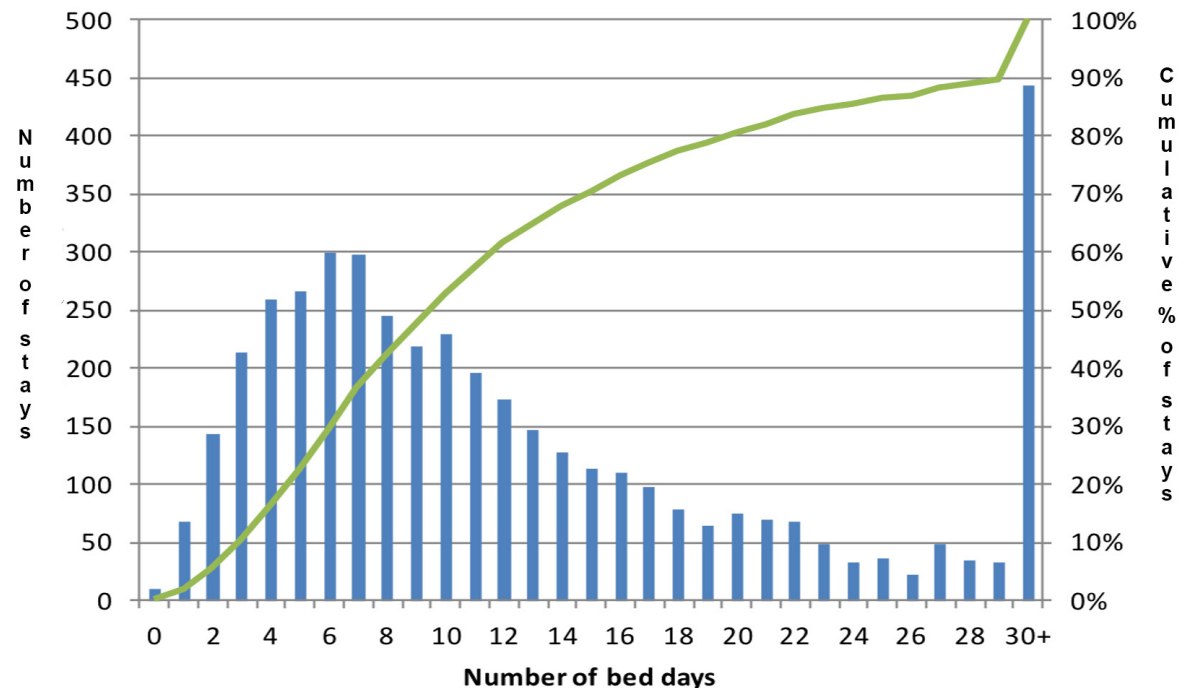
Median LOS in non-acute care = 35 days

Readmissions 7 days 5.9% (rank 6th)

Readmissions 28 days 16.5% (rank 15th)

Mortality 30 days 14.1% (rank 3rd)

Glasgow Royal Infirmery : Length of Stay (days) for Complete Stay



Hospitals Report 2017/18

Inverclyde Royal Hospital

Total throughput 2017/18 = 985

Change over 3 years = +12%

Median LOS = 25 days (rank 17th)

Change since 2014/15 = none

Median out of specialty care = 5 days

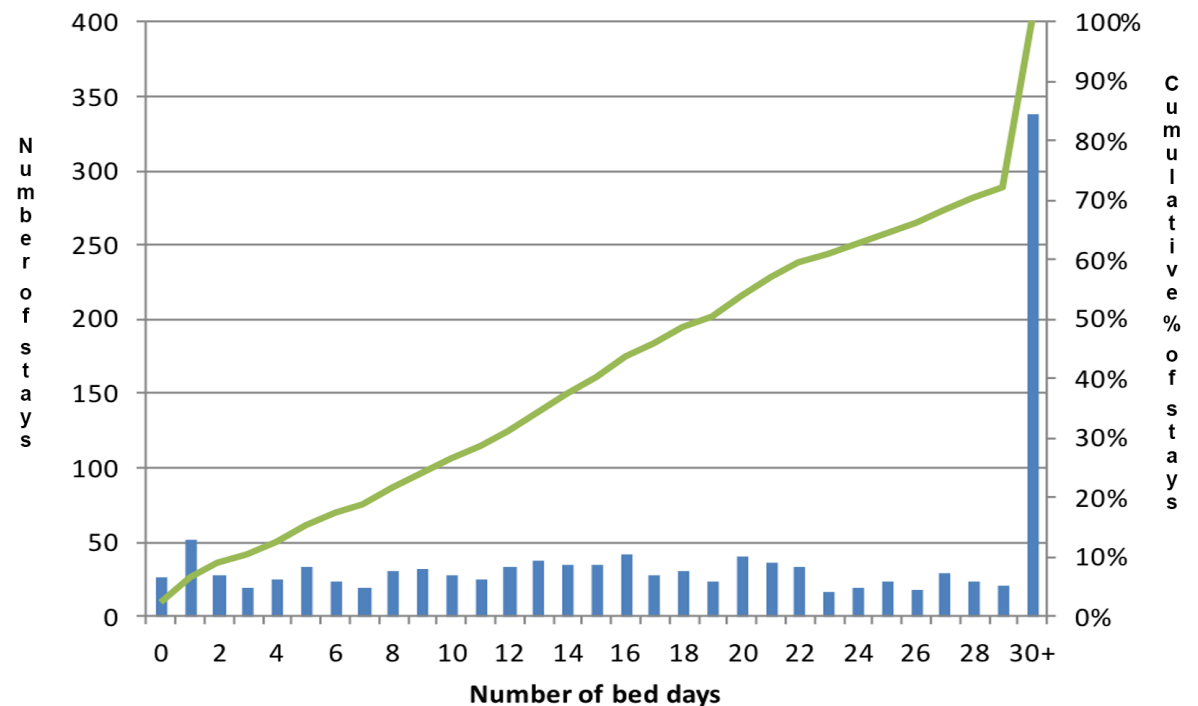
Median LOS in non-acute care = 35 days

Readmissions 7 days 6.5% (rank 12th)

Readmissions 28 days 15.8% (rank 11th)

Mortality 30 days 15.1% (rank 6th)

Inverclyde Royal Hospital : Length of Stay (days) for Complete Stay



Hospitals Report 2017/18

Ninewells Hospital

Total throughput 2017/18 = 1,354

Change over 3 years = +33%

Median LOS = 12 days (rank 12th)

Change since 2014/15 = -2 days

Median out of specialty care = 2 days

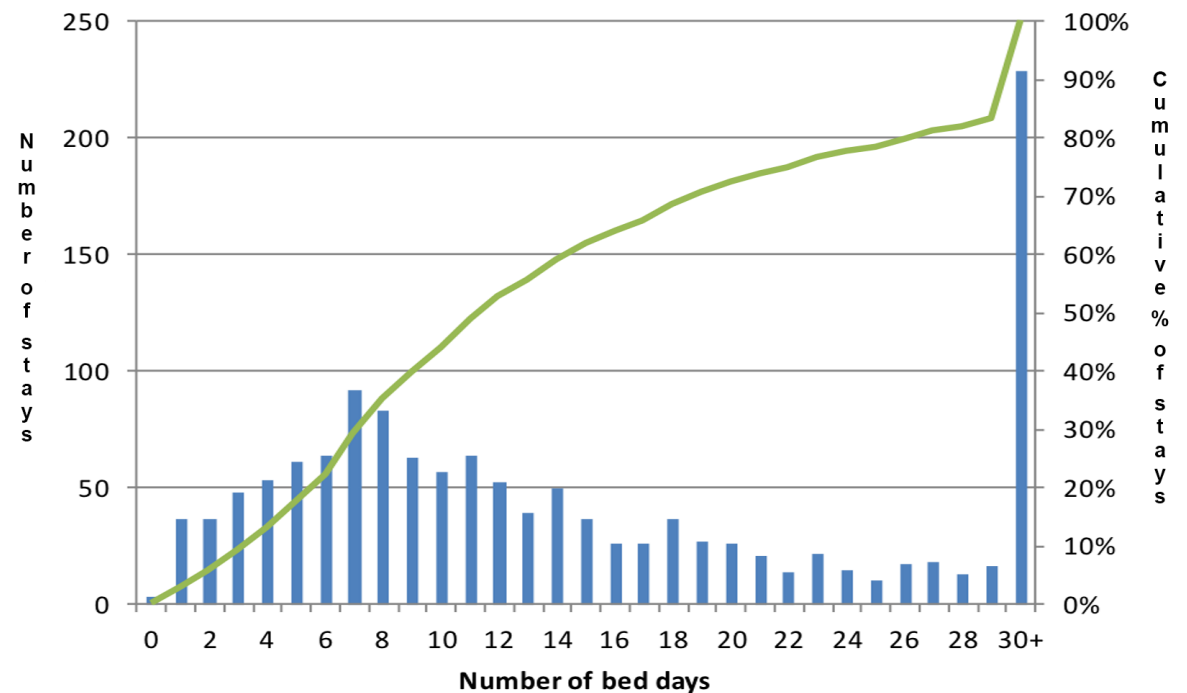
Median LOS in non-acute care = 29 days

Readmissions 7 days 6.3% (rank 11th)

Readmissions 28 days 13.9% (rank 4th)

Mortality 30 days 21.0% (rank 18th)

Ninewells Hospital : Length of Stay (days) for Complete Stay



Hospitals Report 2017/18

Perth Royal Infirmary

Total throughput 2017/18 = 187

Change over 3 years = -22%

Median LOS = 36 days (rank 19th)

Change since 2014/15 = none

Median out of specialty care = 15 days

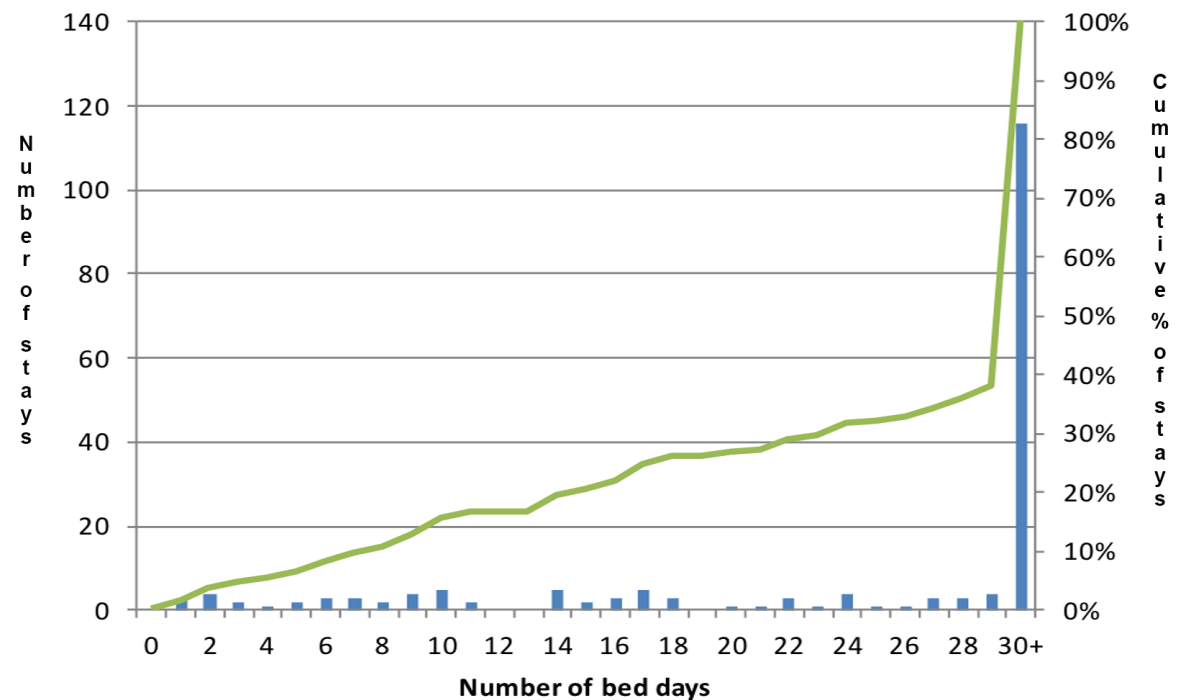
Median LOS in Non-acute care = 29 days

Readmissions 7 days 7.0% (rank 17th)

Readmissions 28 days 15.5% (rank 9th)

Mortality 30 days 19.8% (rank 17th)

Perth Royal Infirmary : Length of Stay (days) for Complete Stay



Hospitals Report 2017/18

Queen Elizabeth University Hospital

Total throughput 2017/18 = 7,113

Change over 2 years = +70%*

Median LOS = 7 days (rank 3rd)

Change since 2015/16 = -3 days*

Median out of specialty care = 3 days

Median LOS in non-acute care = 35 days

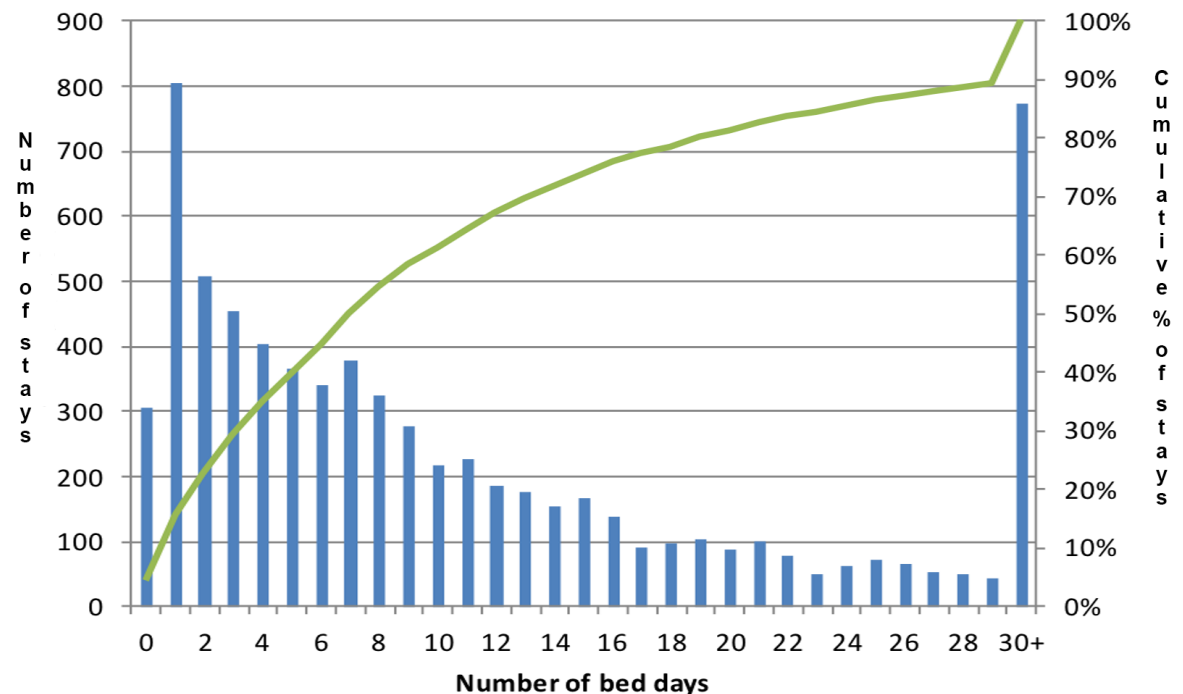
Readmissions 7 days 5.4% (rank 3rd)

Readmissions 28 days 14.6% (rank 7th)

Mortality 30 days 14.7% (rank 5th)

*results compared over a two-year period since QEUH opened in April 2015

Queen Elizabeth University Hospital : Length of Stay (days) for Complete Stay



Hospitals Report 2017/18

Raigmore Hospital

Total throughput 2017/18 = 644

Change over 3 years = +66%

Median LOS = 10 days (rank 8th)

Change since 2014/15 = -5 days

Median out of specialty care = 3 days

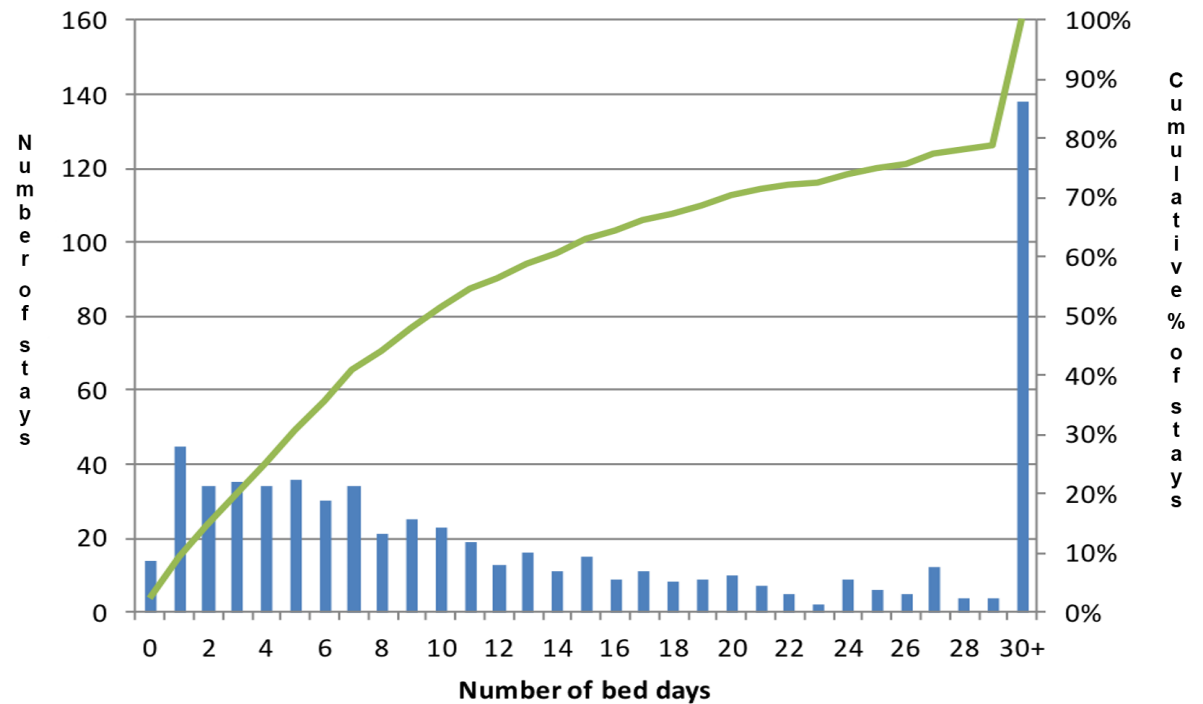
Median LOS in non-acute care = 59 days

Readmissions 7 days 5.1% (rank 1st)

Readmissions 28 days 11.8% (rank 1st)

Mortality 30 days 18.6% (rank 13th)

Raigmore Hospital : Length of Stay (days) for Complete Stay



Hospitals Report 2017/18

Royal Alexandra Hospital

Total throughput 2017/18 = 2,189

Change over 3 years = +18%

Median LOS = 17 days (rank 15th)

Change since 2014/15 = -1 day

Median out of specialty care = 5 days

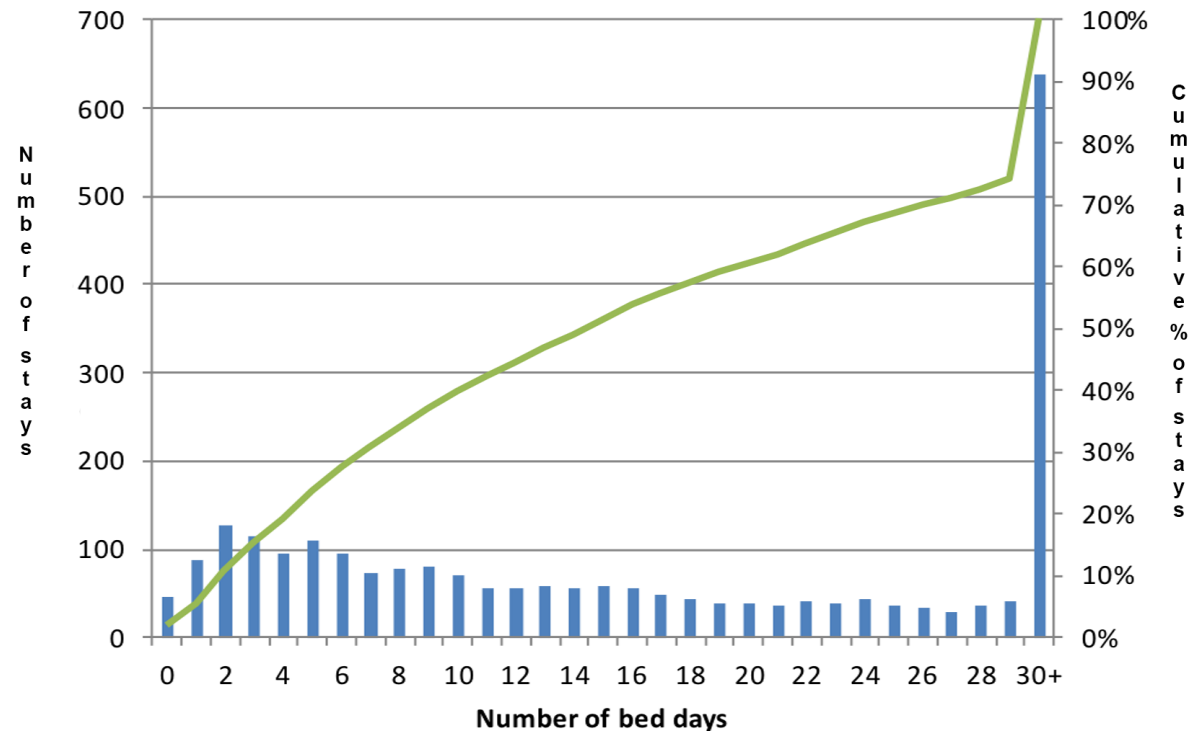
Median LOS in non-acute care = 35 days

Readmissions 7 days 5.9% (rank 6th)

Readmissions 28 days 15.6% (rank 10th)

Mortality 30 days 11.8% (rank 2nd)

Royal Alexandra Hospital : Length of Stay (days) for Complete Stay



Hospitals Report 2017/18

Royal Infirmary Edinburgh

Total throughput 2017/18 = 2,914

Change over 3 years = +59%

Median LOS = 8 days (rank 5th)

Change since 2014/15 = -5 days

Median out of specialty care = 2 days

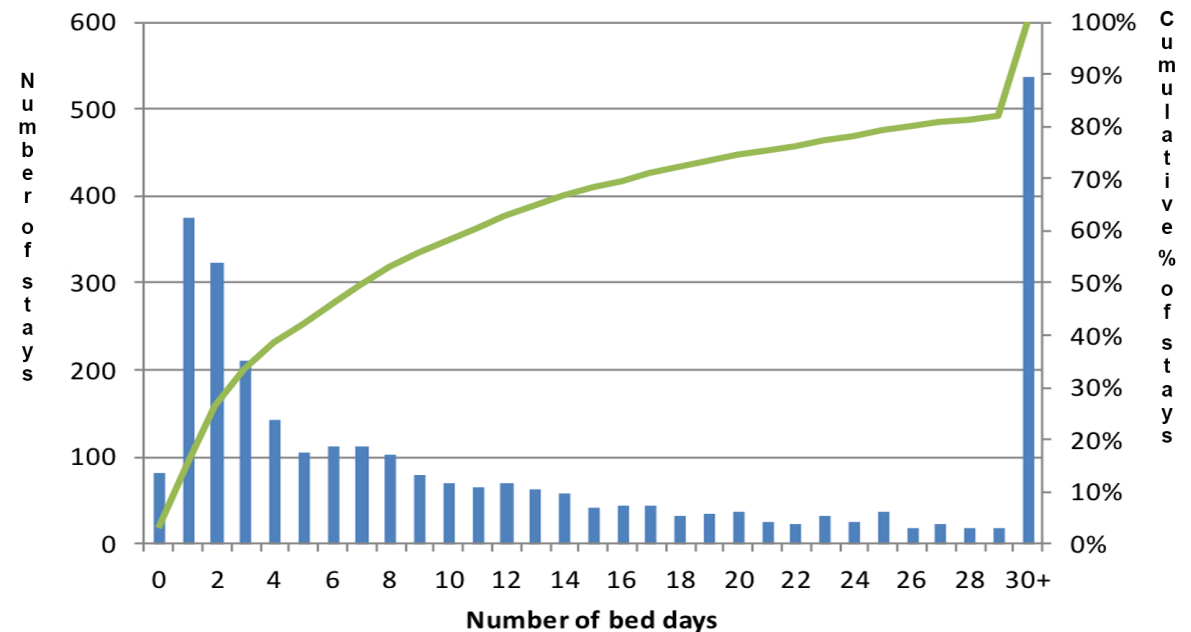
Median LOS in Non-acute care = 29 days

Readmissions 7 days 5.1% (rank 1st)

Readmissions 28 days 13.9% (rank 4th)

Mortality 30 days 16.4% (rank 8th)

Royal Infirmary of Edinburgh at Little France : Length of Stay (days) for Complete Stay



Hospitals Report 2017/18

St John's Hospital

Total throughput 2017/18 = 616

Change over 3 years = +16%

Median LOS = 30 days (rank 18th)

Change since 2014/15 = -3 days

Median out of specialty care = 10 days

Median LOS in non-acute care = 29 days

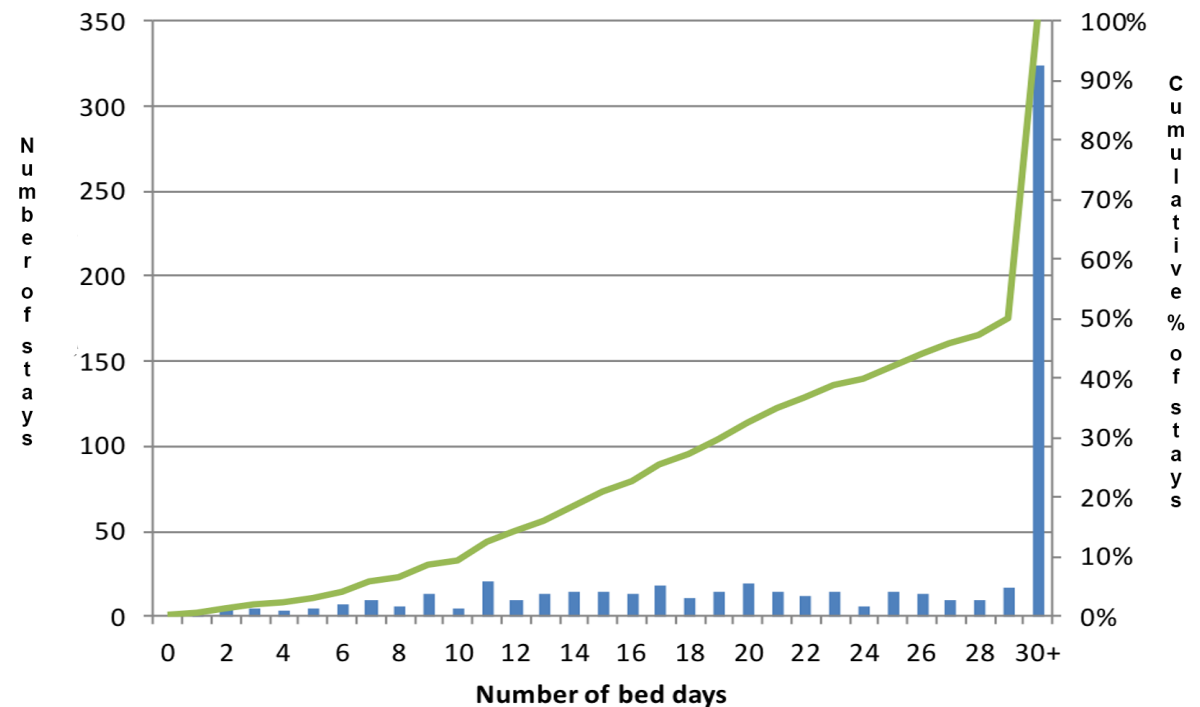
Readmissions 7 days 5.7% (rank 5th)

Readmissions 28 days 15.1% (rank 8th)

Mortality 30 days 11.4% (rank 1st)

Mortality 60 days 14.3% (rank 1st)

St John's Hospital : Length of Stay (days) for Complete Stay



Hospitals Report 2017/18

University

Hospital Ayr

Total throughput 2017/18 = 382

Change over 3 years = -41%

Median LOS = 12 days (rank 12th)

Change since 2014/15 = +5 days

Median out of specialty care = 4 days

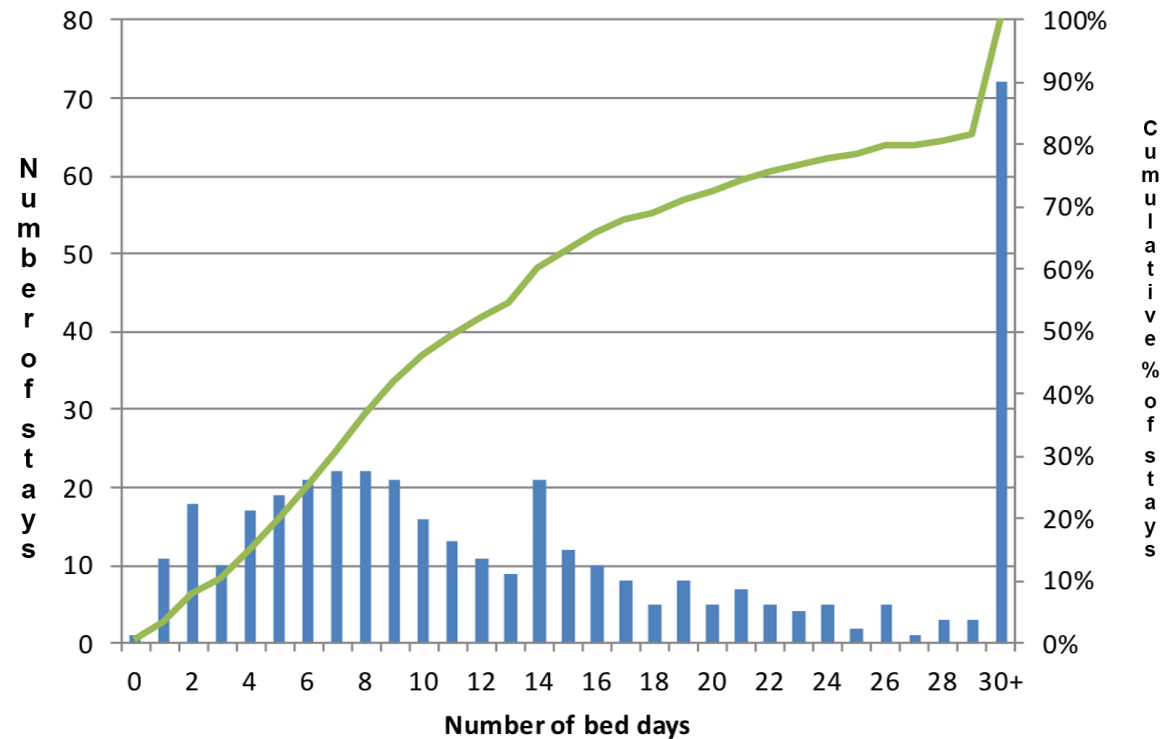
Median LOS in non-acute care = 57 days

Readmissions 7 days 6.0% (rank 9th)

Readmissions 28 days 16.8% (rank 17th)

Mortality 30 days 17.8% (rank 11th)

University Hospital Ayr : Length of Stay (days) for Complete Stay



Hospitals Report 2017/18

University Hospital Crosshouse

Total throughput 2017/18 = 1,465

Change over 3 years = -32%

Median LOS = 10 days (rank 8th)

Change since 2014/15 = +2 days

Median out of specialty care = 3 days

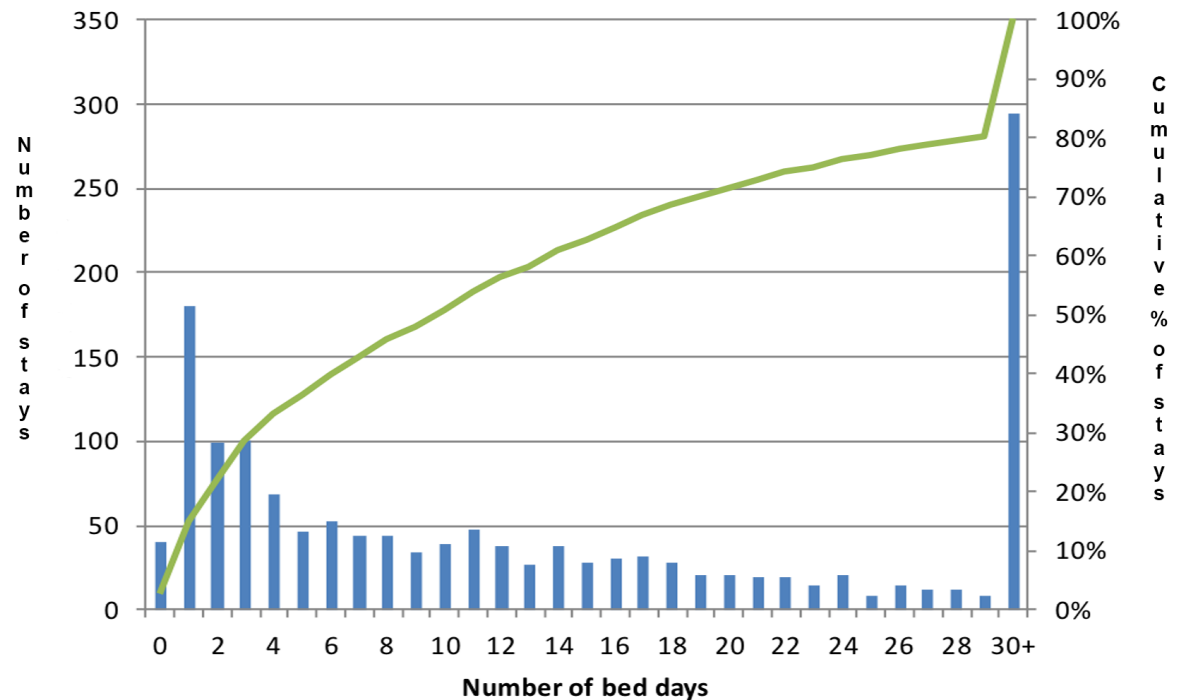
Median LOS in non-acute care = 57 days

Readmissions 7 days 6.0% (rank 9th)

Readmissions 28 days 13.3% (rank 2nd)

Mortality 30 days 14.1% (rank 3rd)

University Hospital Crosshouse : Length of Stay (days) for Complete Stay



Hospitals Report 2017/18

University Hospital Hairmyres

Total throughput 2017/18 = 2,846

Change over 3 years = +39%

Median LOS = 9 days (rank 6th)

Change since 2014/15 = -4 days

Median out of specialty care = 2 days

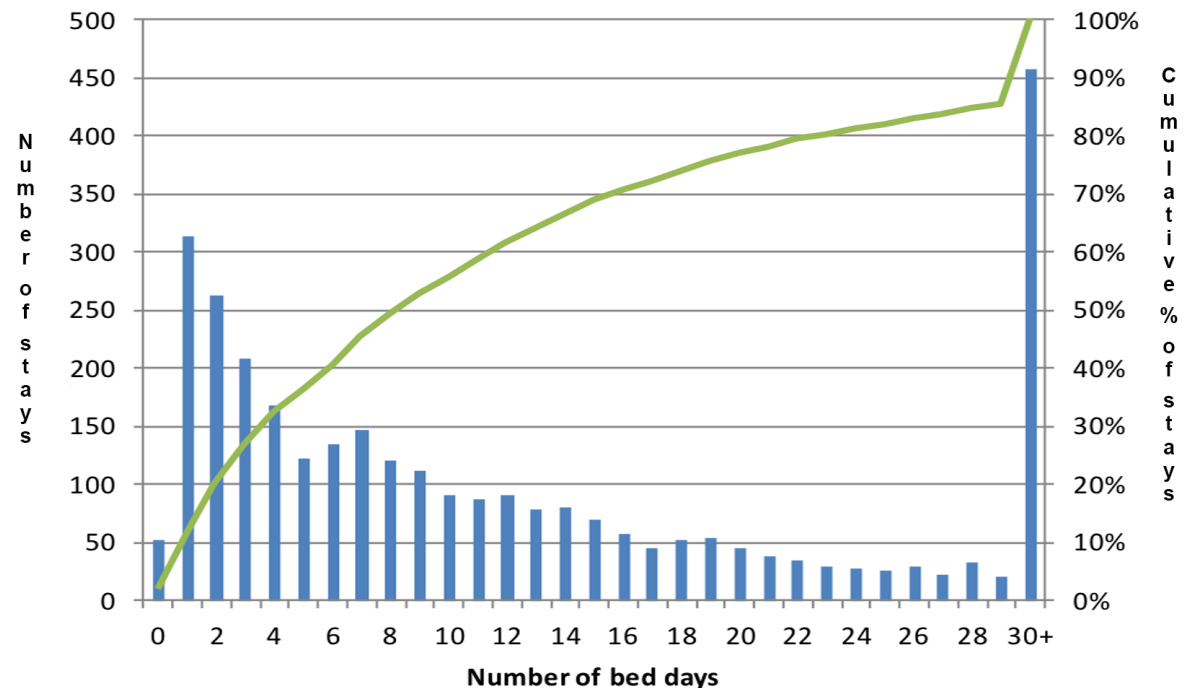
Median LOS in non-acute care = 29 days

Readmissions 7 days 6.8% (rank 16th)

Readmissions 28 days 16.7% (rank 16th)

Mortality 30 days 17.1% (rank 10th)

University Hospital Hairmyres : Length of Stay (days) for Complete Stay



Hospitals Report 2017/18

University Hospital Monklands

Total throughput 2017/18 = 3,162

Change over 3 years = +31%

Median LOS = 5 days (rank 2nd)

Change since 2014/15 = -3 days

Median out of specialty care = 2 days

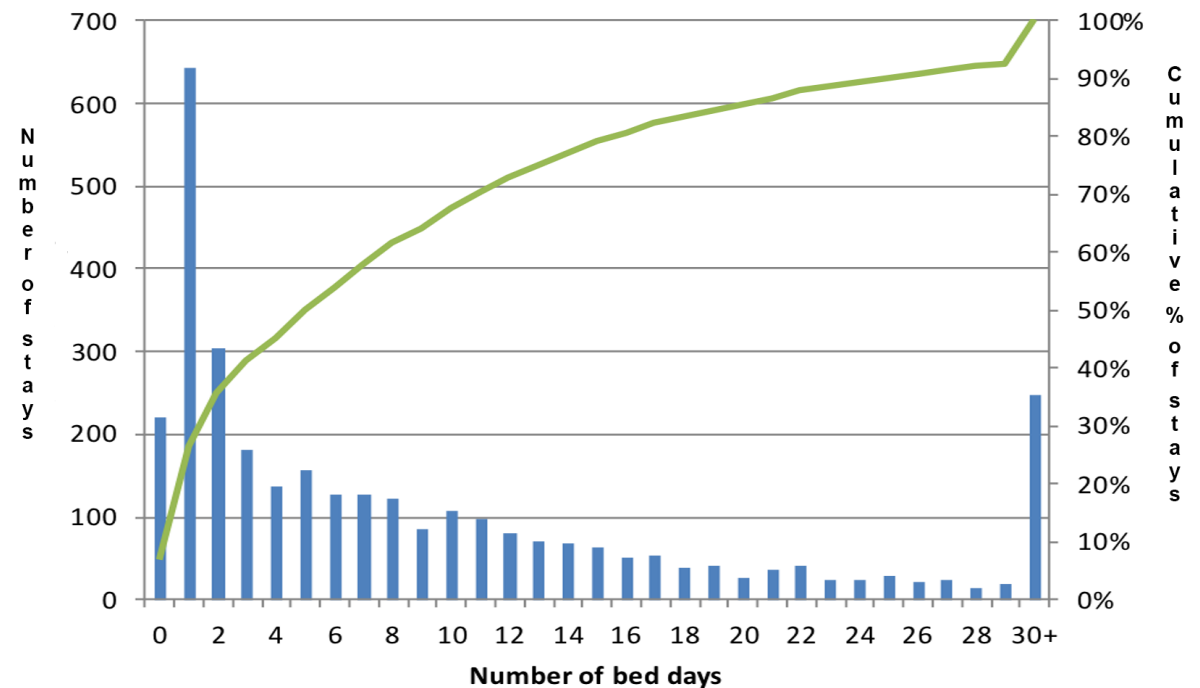
Median LOS in non-acute care = 29 days

Readmissions 7 days 6.6% (rank 13th)

Readmissions 28 days 17.0% (rank 18th)

Mortality 30 days 18.4% (rank 12th)

University Hospital Monklands : Length of Stay (days) for Complete Stay



Hospitals Report 2017/18

University Hospital Wishaw

Total throughput 2017/18 = 1,792

Change over 3 years = +24%

Median LOS = 13 days (rank 14th)

Change since 2014/15 = none

Median LOS in Non-acute care = 29 days

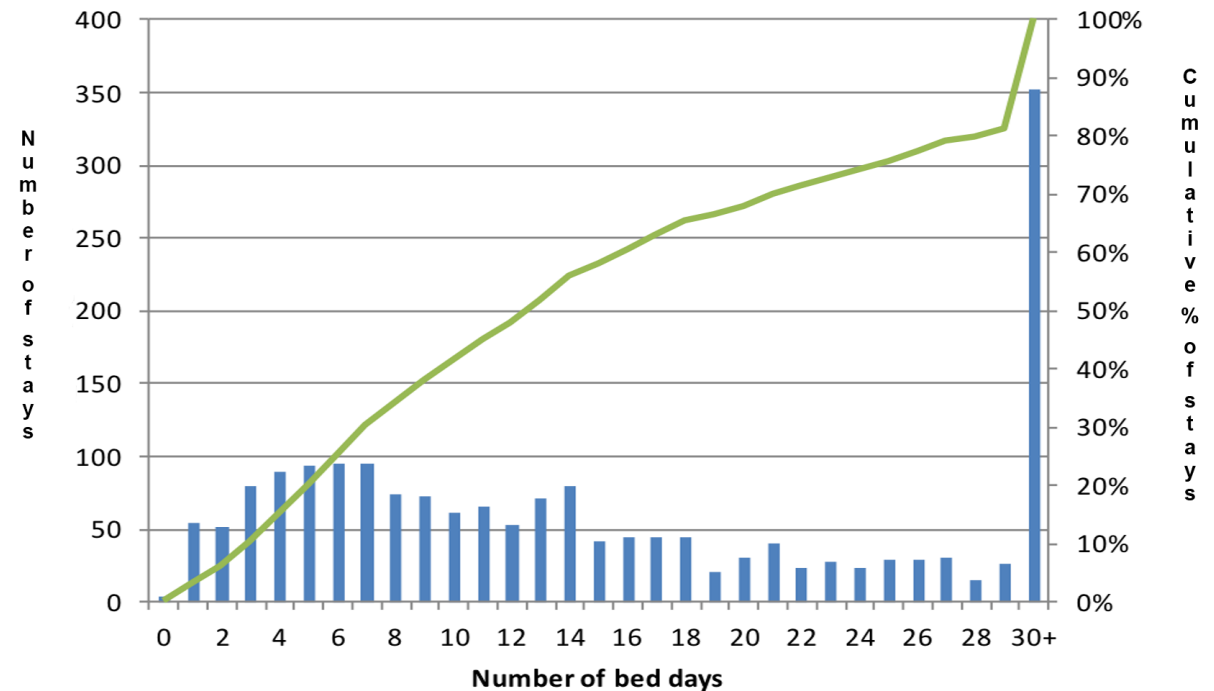
Median out of specialty care = 3 days

Readmissions 7 days 6.6% (rank 13th)

Readmissions 28 days 15.9% (rank 12th)

Mortality 30 days 18.8% (rank 15th)

University Hospital Wishaw : Length of Stay (days) for Complete Stay



Hospitals Report 2017/18

Victoria Hospital

Total throughput 2017/18 = 1,749

Change over 3 years = +54%

Median LOS = 9 days (rank 6th)

Change since 2014/15 = -3 days

Median out of specialty care = 2 days

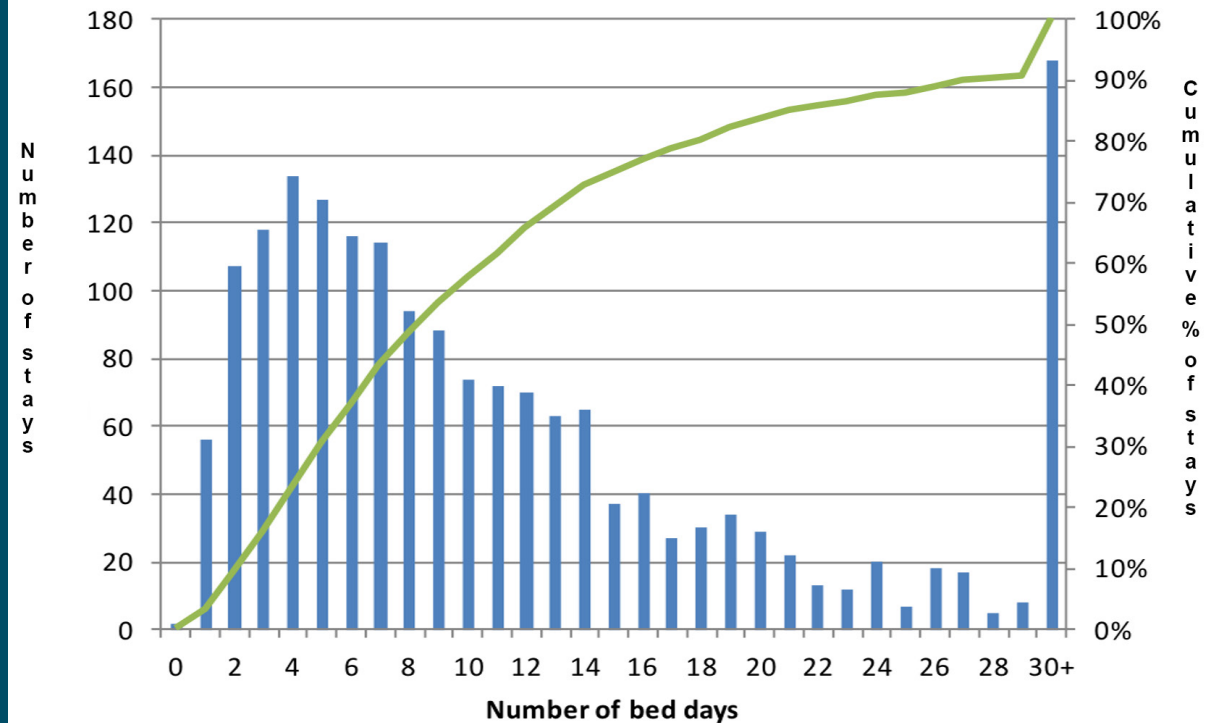
Median LOS in non-acute care = 39 days

Readmissions 7 days 7.3% (rank 18th)

Readmissions 28 days 16.3% (rank 14th)

Mortality 30 days 19.3% (rank 16th)

Victoria Hospital : Length of Stay (days) for Complete Stay



Hospitals Report 2017/18

Data

Data are derived from ISD



Data Sources : SMR01 and SMR01E

Date of Extract : 01/02/2019

Data relate to Scottish residents only. NHS boards based on the boundaries as at 1st April 2014.

Health Board: Health Board is Health Board of Treatment.

The basic unit of analysis for these figures is a Continuous Inpatient Stay (CIS) in hospital - Probability matching methods have been used to link together individual SMR01/SMR01E hospitals episodes for each patient, thereby creating "linked" patient histories. Within these patient histories, episodes are grouped according to whether they form part of a continuous spell of treatment (whether or not this involves transfer between specialties, consultants, hospitals or health boards).

Only stays that contained a Geriatric Medicine Speciality code (AB) were selected.

Same day discharges were included in all measures and expressed as percentage of all discharges.

Stays with a main diagnosis of stroke were excluded.

Age : Age (years) relates to the age of the patient on admission.

Types of Admission: Both elective and emergency admissions were selected for this output, although elective admissions to geriatric medicine are rare. Data for non acute sites are only available at board level.

Hospital level data were not available for the Western General Hospital, Edinburgh.

SCoOP Acute Hospital Outcomes Report

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