



# Scottish Stroke Statistics

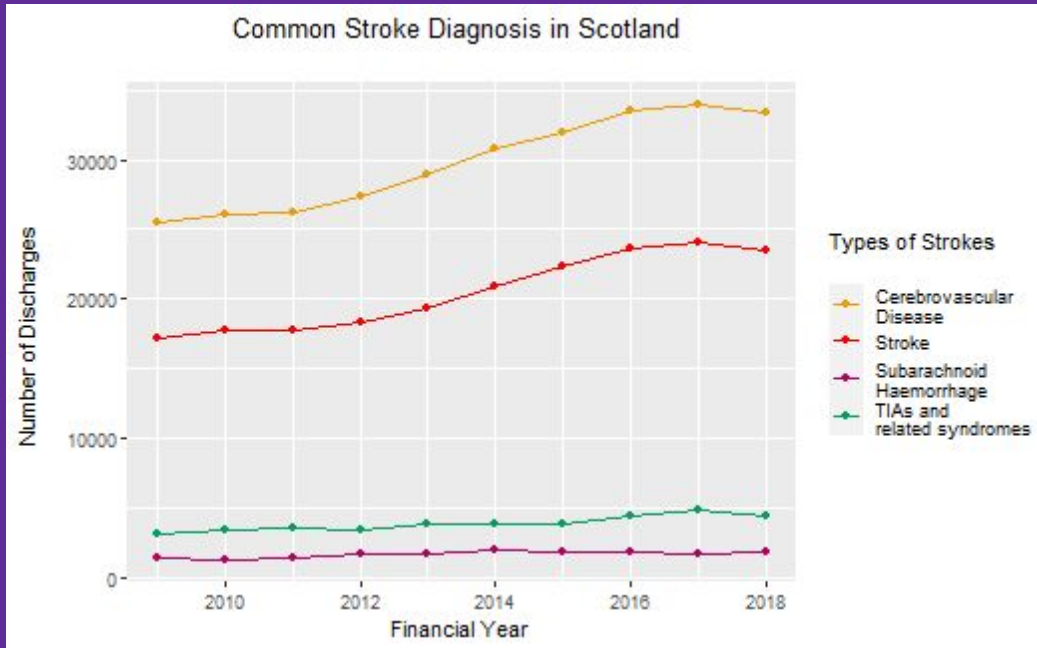
Malcolm Cheyne

16th February , 2022



# Common Stroke Diagnosis & Demographics Differences

# Common Stroke Diagnosis



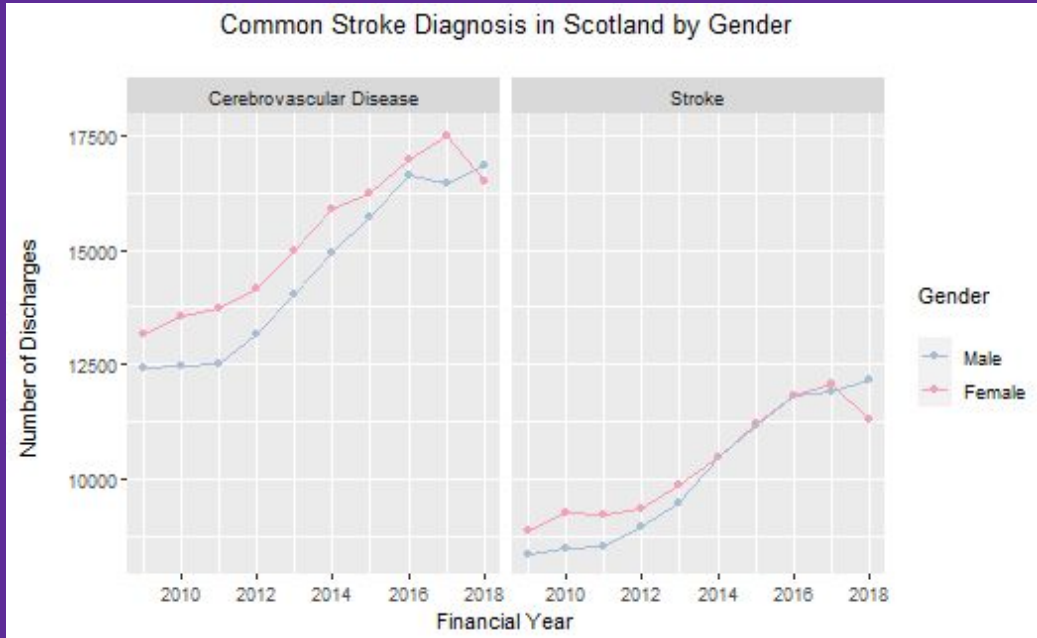
**Cerebrovascular Disease:**  
Group of conditions that affect blood flow and the blood vessels in the brain

**Stroke: Subtype of Cerebrovascular Disease**

**Subarachnoid Haemorrhage:**  
Uncommon type of stroke from burst blood vessel in the brain

**TIAs and related syndromes:**  
Temporary period of similar symptoms

# Stroke Diagnosis By Gender



Focusing on the two main types of Strokes.

Both genders have similar numbers of diagnosis, with Females higher than Males.

From 2009/10 - 2018/19

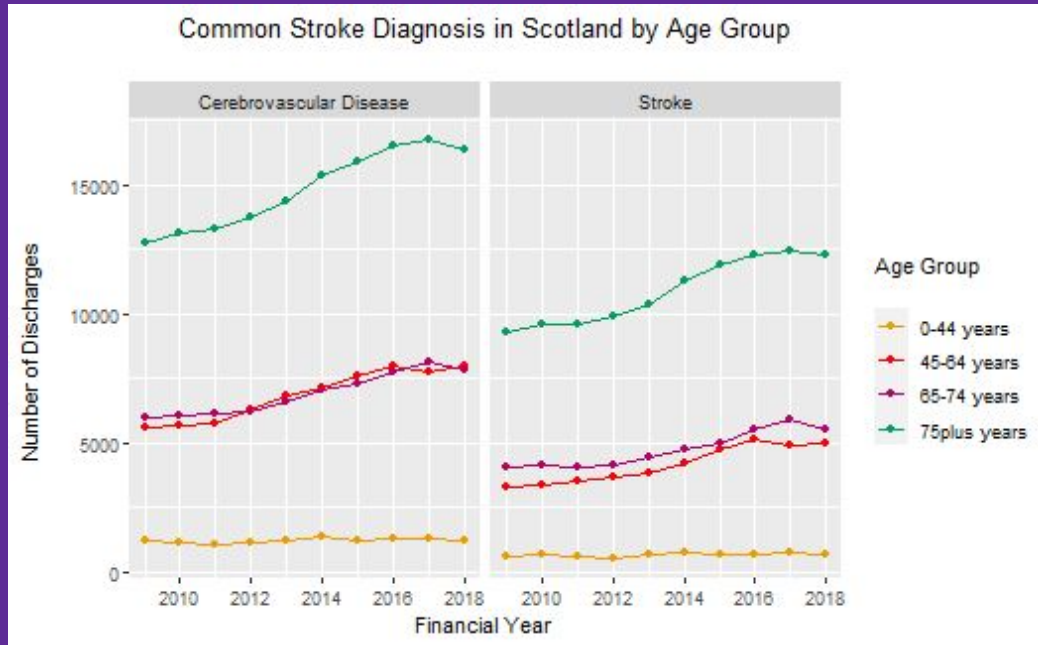
Cerebrovascular Disease:

- 30% increase in diagnosis cases

Stroke:

- 36% increase in diagnosis cases

# Stroke Diagnosis By Age



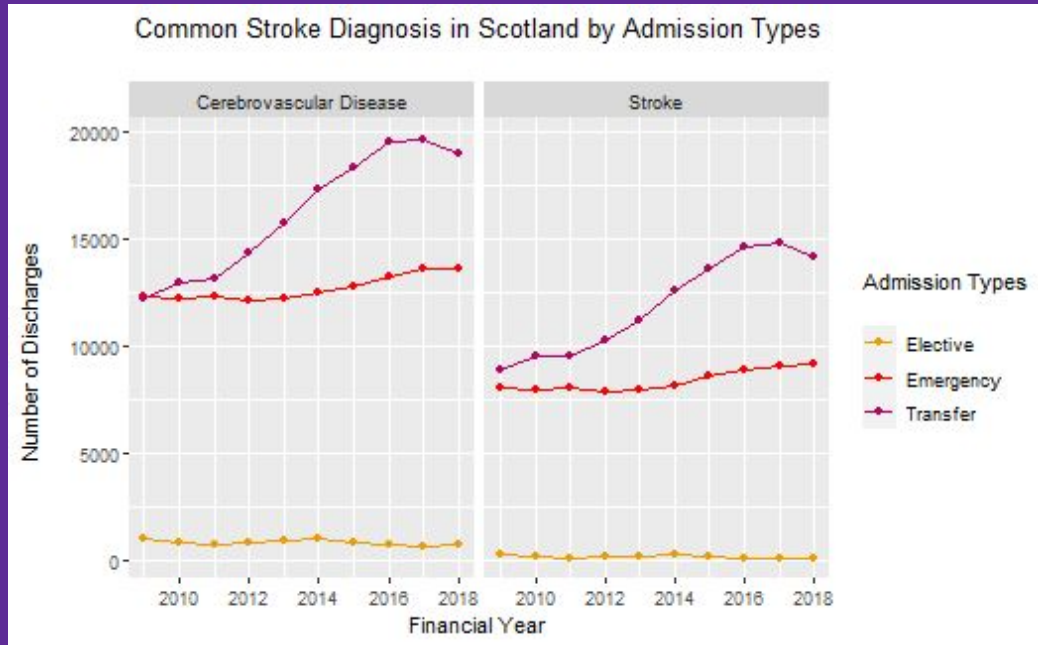
There's a more obvious difference diagnosis rates when age is taken into account.

With very few under 44 being diagnosed, an increased risk from 45-74 and a higher risk above 75 age.



# Differences Across Health Boards & Local Authority

# Stroke Diagnosis By Admission Types



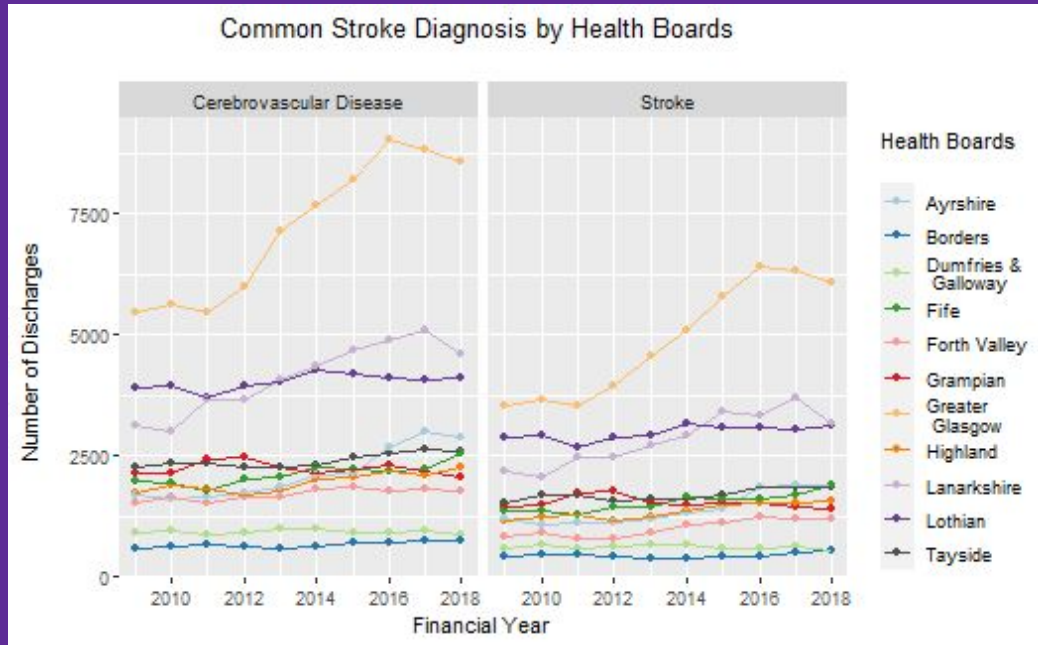
High number of cases require the transfer of the patient from an Health Board to another.

Health Boards with specialist hub or more space for treatment take these extra patients.

The rate of transfer has increased **55% Cerebrovascular Disease** and **59% Stroke** in this time frame.

Will compare to the mortality rates later.

# Stroke Diagnosis By Health Boards



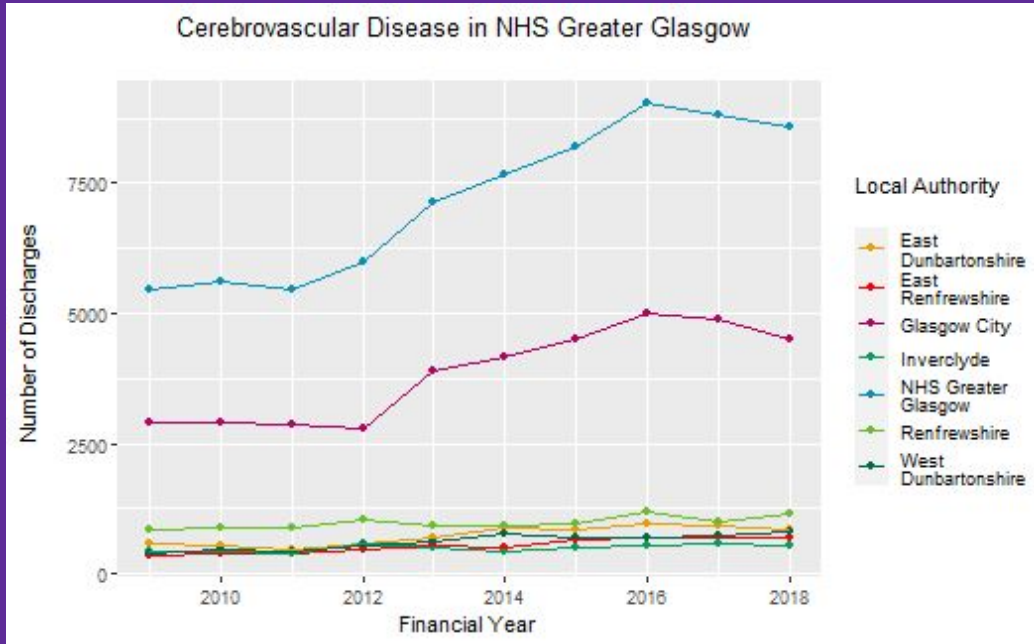
Both NHS Glasgow and Lanarkshire increase coincides with patient being transfer there.

NHS Lothian and other Health Boards have similar numbers throughout, suggesting transfer where for more treatment space.

Removed the island Health Boards due to them having almost no cases, transfer cases to the mainland.



# Health Board disparity to Local Authority



Some disparity in the data between the total cases across the local authority's compared to the Health board.

Using NHS Greater Glasgow and Clyde as an example across all the four types of strokes has:

- extra 3 cases, 0.02% in 2016/17
- extra 14 cases, 0.08% in 2017/18
- extra 86 cases, 0.5% in 2018/19

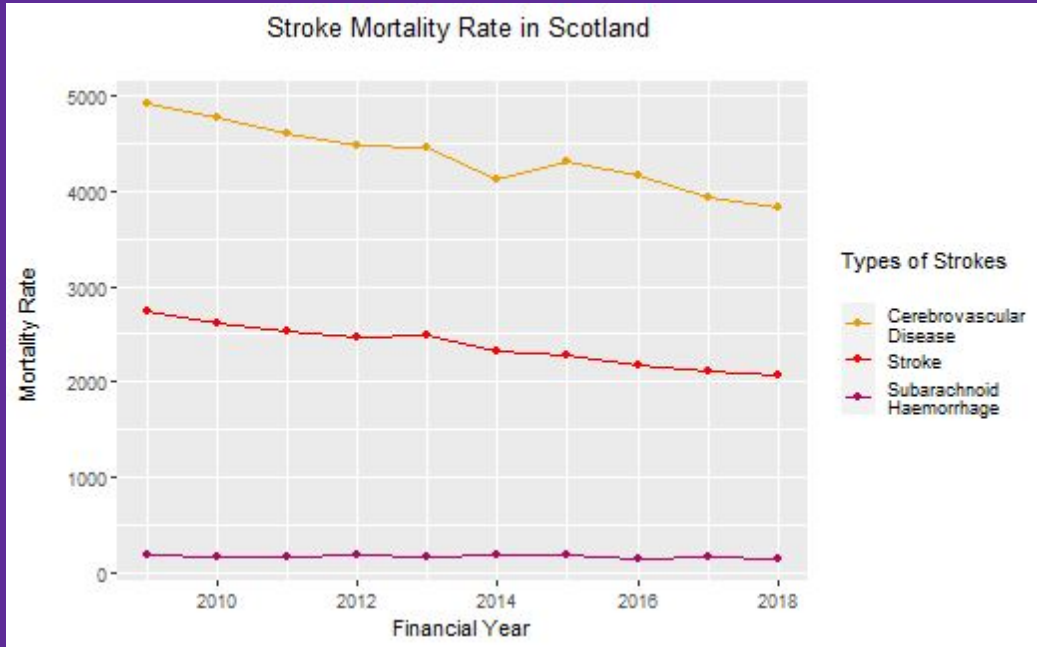
compared to the local authority's

Very small number of cases and predominantly in the last few years of the timeframe.



# Common Stroke Mortality & Demographics Differences

# Stroke Mortality Rate



## Cerebrovascular Disease:

- **Mortality Rate down 22%**
- **19% of the diagnosis in 2009/10**
- **11% of the diagnosis in 2018/19**

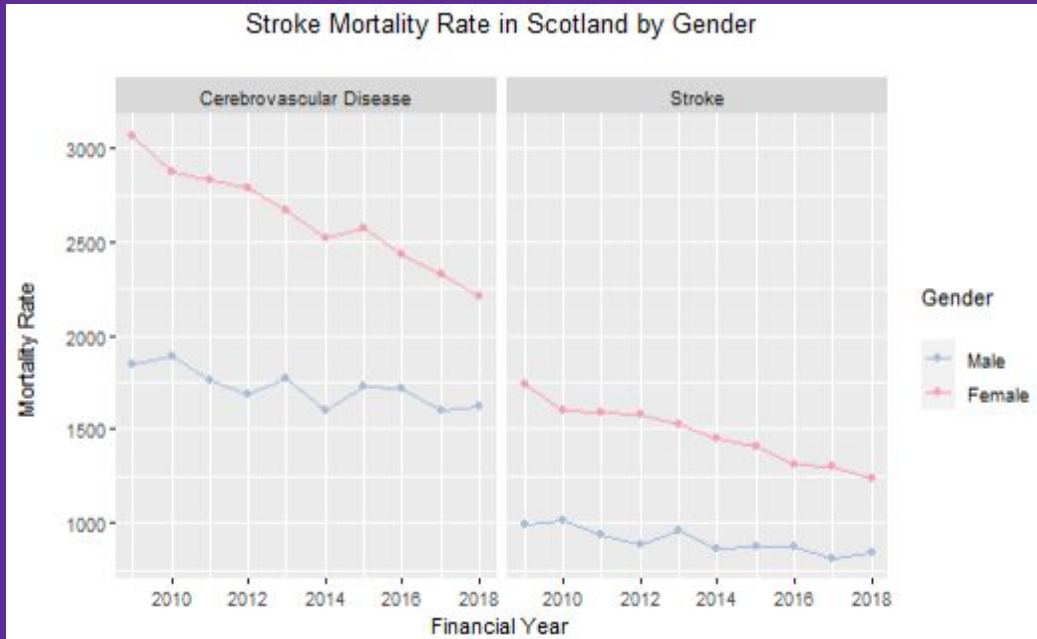
## Stroke:

- **Mortality Rate down 24%**
- **15% of the diagnosis in 2009/10**
- **8% of the diagnosis in 2018/19**

## Subarachnoid Haemorrhage:

- **Mortality Rate down 22%**
- **13% of the diagnosis in 2009/10**
- **8% of the diagnosis in 2018/19**

# Stroke Mortality Rate By Gender



**Cerebrovascular Disease:**

**Female:**

- Mortality Rate down 28%

**Male:**

- Mortality Rate down 11%

**Stroke:**

**Female:**

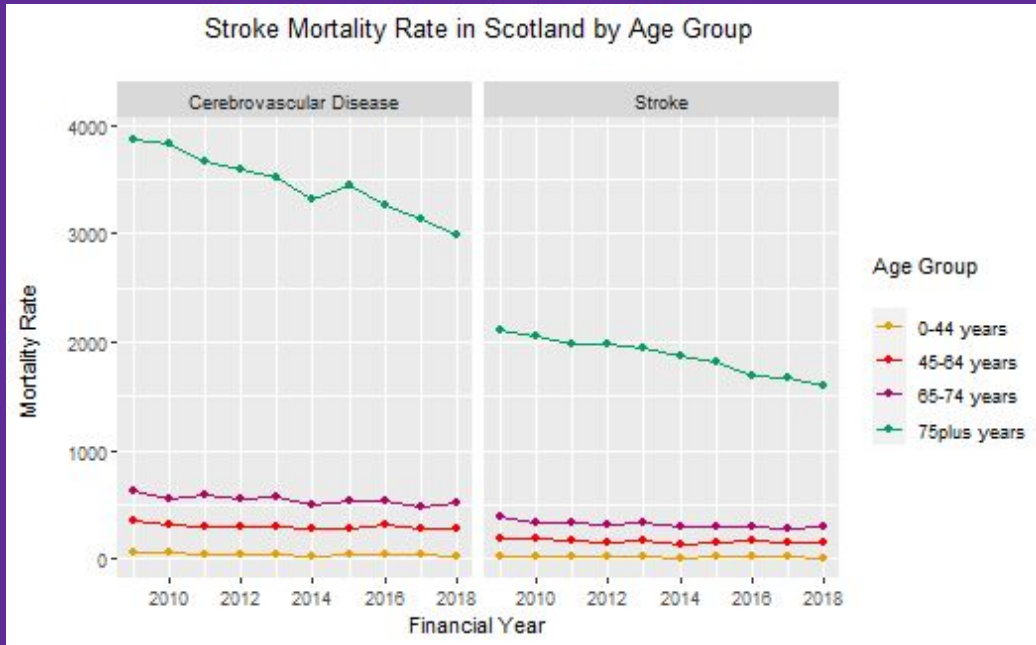
- Mortality Rate down 29%

**Male:**

- Mortality Rate down 14%

While genders have similar numbers of diagnosis, Female make a high number of the deaths.

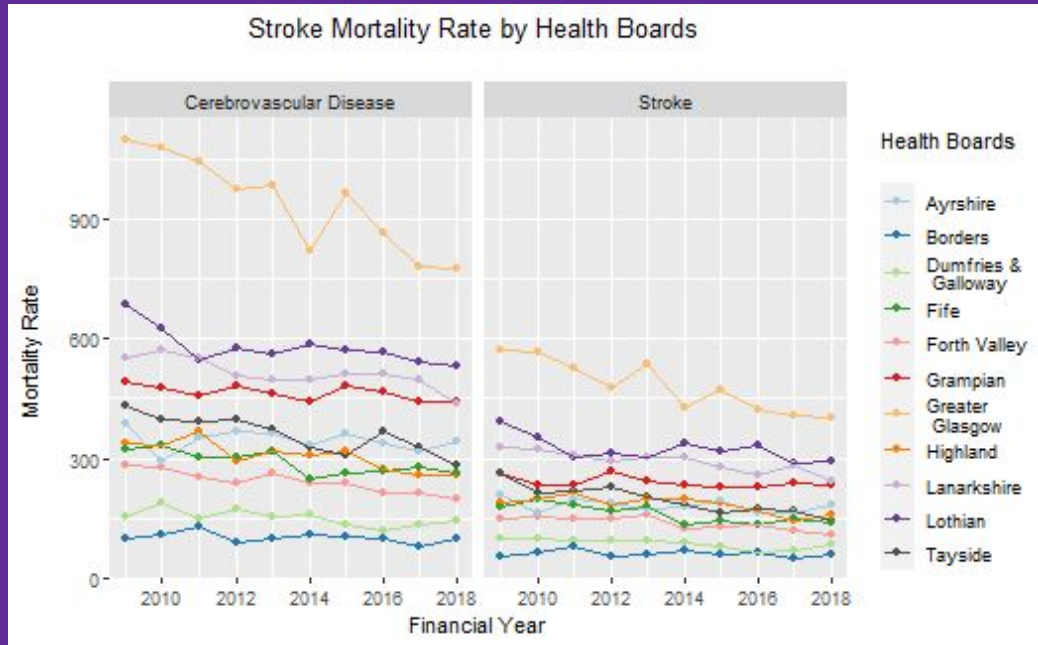
# Stroke Mortality Rate By Age



Predominantly the deaths are from patients over 75 years old. The Mortality Rate of has followed the 22% and 24% decrease respectively.

The other age groups show between 15-26% decrease

# Stroke Mortality Rate By Health Boards

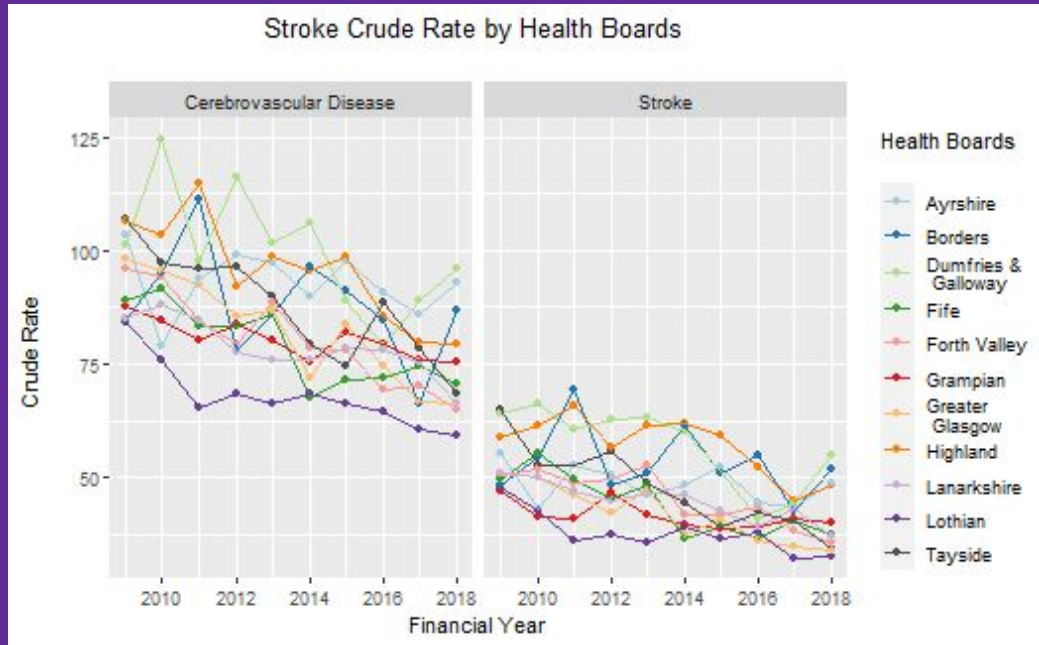


**NHS Glasgow has the highest Mortality numbers.**

**The other Health Boards follow a similar order to the diagnosis data, just NHS Grampian has grouped with Lothian and Lanarkshire.**

**All the island Health Boards had no Mortality data due to them having transfer cases to the mainland.**

# Stroke Crude Rate By Health Boards



The crude rate is set at per 100,000 population.

Shows NHS Dumfries & Galloway, Borders and Highland now have the higher proportion of their population dieing of Cerebrovascular Disease. All are rural areas with smaller population.

NHS Lothian has the best proportion for both types of Strokes.

# Proposed Focus Areas

## Rural Focus

- Focus on areas with higher mortality proportion to their population: NHS Dumfries & Galloway, Borders and Highland

## Transfer Focus

- Continue to focus on treatment hubs with higher number of specialist together: NHS Glasgow, Lothian, Lanarkshire and possibly include Grampian

## Gender Focus

- Focus on preventative measures primarily Female.
- Male patients may have succumbed to other health issues, should be included in preventative measures

## Preventative Age Focus

- Encourage throughout adulthood: healthy diet, exercise regularly, and avoid smoking and drinking too much alcohol.