

## AHSN Fractures Programme

### Intelligence for the North East & North Cumbria AHSN

April 2017

#### Report Addendum Content

This Addendum to the main NEQOS report on falls and fractures published in January 2017 has been developed by NEQOS in order to provide the AHSN with additional baseline information to support the development of the role of the Admiral Nurse in falls and fracture risk assessment and prevention for people with Dementia.

The information included here was originally published in Dementia Profiles that NEQOS produced for its acute Trust subscribers in mid 2016/17, and has been re-produced here in order to provide the AHSN with timely data, ahead of the next refresh of the main Falls and Fractures Report in September 2017. For this reason the analysis towards the end of this Addendum is incomplete in that there is no Trust level information available for four NENC trusts - Co. Durham & Darlington, North Cumbria, City Hospitals Sunderland and South Tyneside. These trusts were non-subscribers and some of the more detailed information in our Dementia Profiles was not produced for them. However, data for these trusts will be included in the refreshed Falls and Fractures Report which NEQOS will be producing for the AHSN in Autumn 2017 and thereafter.

#### Report Summary

Between April 2010 and March 2015 a total of 78,637 emergency hospital admissions to Trusts in the North East and North Cumbria (NENC) region were coded for dementia and/or delirium in the 75+ age group. This represents 4.3% of all emergency hospital admissions and 16% of emergency admissions for those aged 75 and over. In the vast majority (95%) of cases, dementia and/or delirium were coded as a secondary diagnosis.

In NENC just under 20% of patients aged 75+, who were coded as having dementia and/or delirium were readmitted to hospital with 30 days of discharge. 40% of these re-admissions took place within the first seven days.

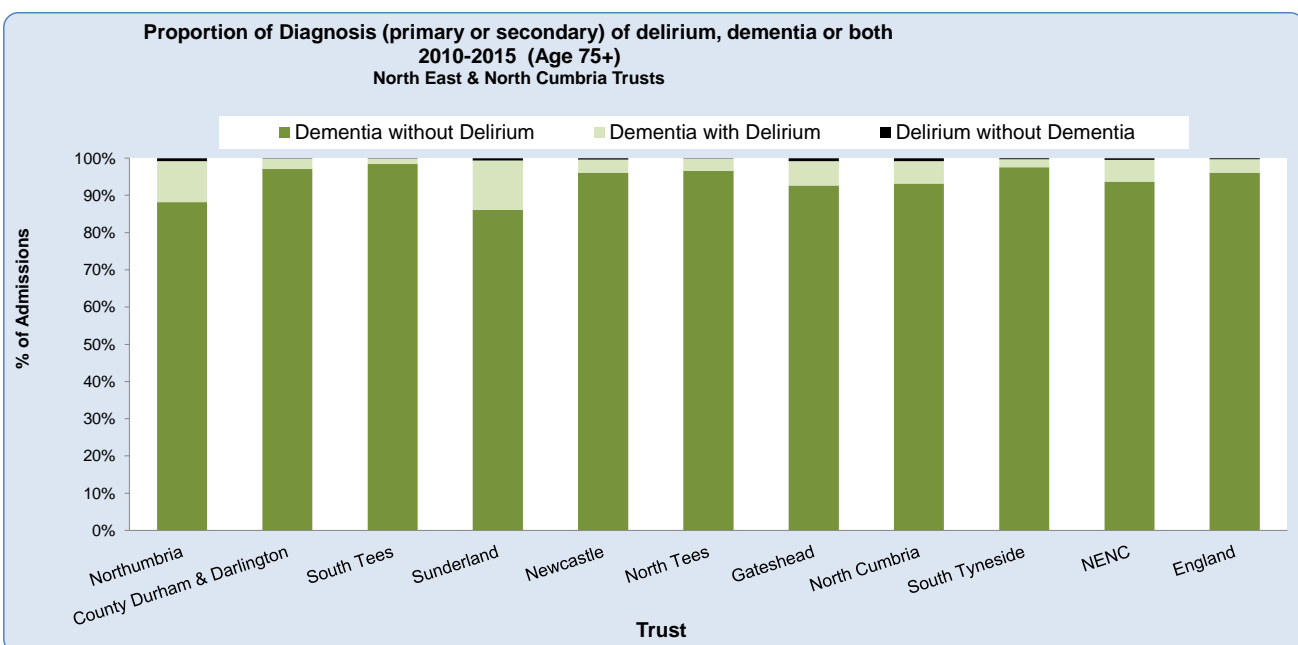
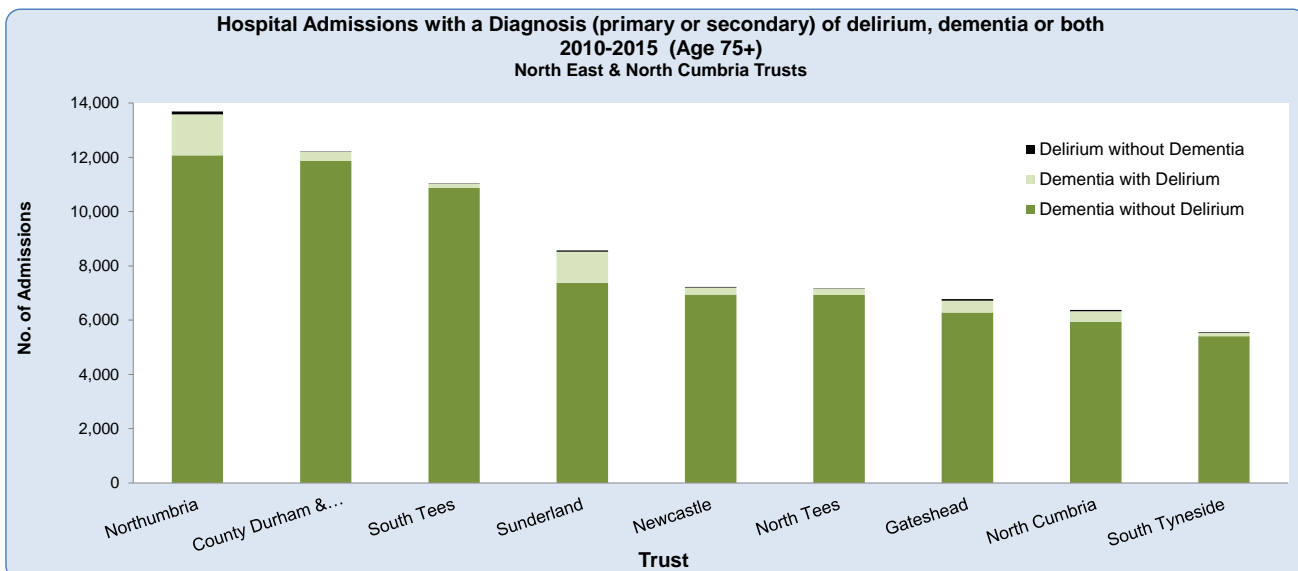
Across the Region, the length of stay in hospital for patients aged 75+ (admitted as an emergency and coded for dementia and/or delirium) is similar to the England average, but variation is seen between Trusts.

15% of the admissions for over 75s with dementia and/or delirium had a primary diagnosis of "Injury, Poisoning or other consequences of external causes". Over these, 70% of admissions resulted in injuries to the hip, thigh or head.

Fractured neck-of-femur accounted for over 90% of the hip and thigh injuries, for which elderly patients with dementia and/or delirium were admitted.

In NENC 92% of all admissions with an injury code (for patients aged 75+, with dementia and/or delirium) were associated with a fall.

## Hospital Admissions with a Diagnosis (primary or secondary) of delirium, dementia or both



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### What is the data telling us?

Between April 2010 and March 2015 a total of 78,637 emergency hospital admissions to Trusts in the NENC region were coded for dementia and/or delirium, in the primary or secondary diagnostic code positions, on the admission episode. This represents 4.3% of all emergency hospital admissions and 16% of emergency admissions for the 75+ age group. In the vast majority (95%) of cases dementia and/or delirium were a secondary diagnosis. Also the vast majority (93.7%) were coded with dementia alone, 5.8% with both dementia and delirium, and only 0.4% with delirium alone.

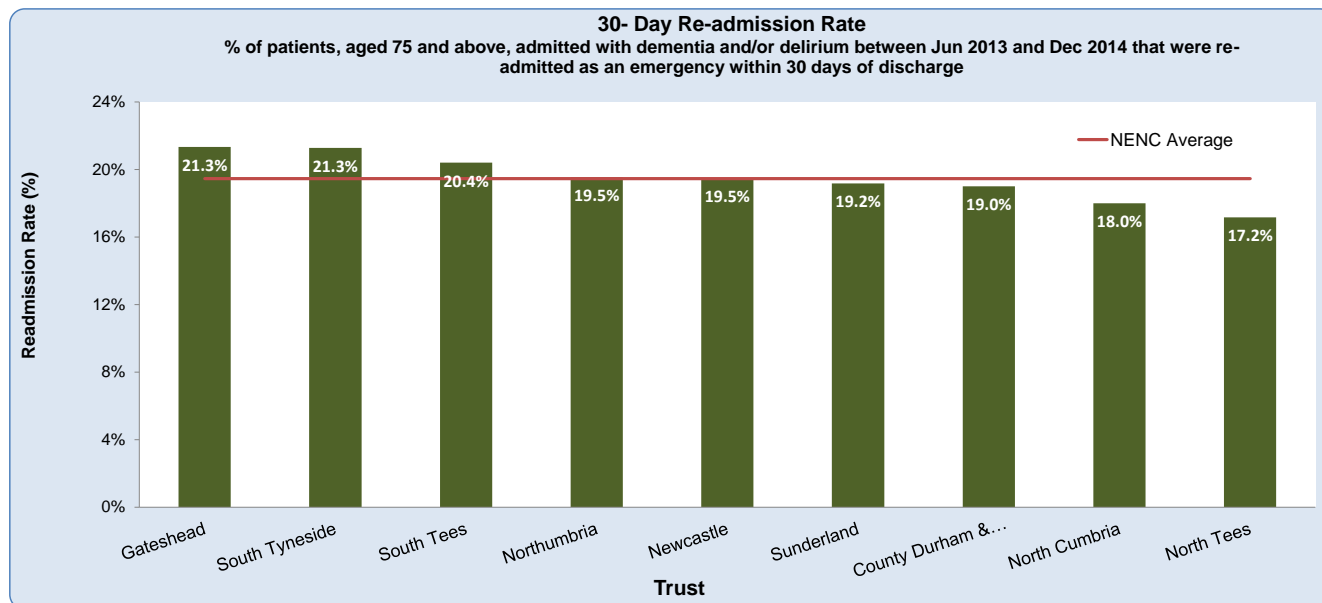
Individual Trusts vary in respect of percentages with different combinations of coding of delirium and dementia. Northumbria has a relatively high percentage (11%) of admissions coded with both dementia and delirium in this age group. Together with Sunderland the Trust records delirium more frequently than the other NENC trusts, which may reflect more robust approaches to case detection and diagnosis. Nonetheless, research suggests that close to 50% of patients with dementia have delirium<sup>1,2</sup> thus coding levels for delirium should be higher still.

1. Fong TG, Tulebaev SR, Inouye SK. Delirium in elderly adults: diagnosis, prevention and treatment. *Nat Rev Neurol*. 2009 Apr; 5(4): 210-220
2. Fick DM1, Agostini JV, Inouye SK. Delirium superimposed on dementia: a systematic review. *J Am Geriatr Soc*. 2002 Oct;50(10):1723-32

### Definitions / Notes

The following ICD-10 codes were used to identify patients with dementia and/or delirium: F00, F01, F02, F03X, F05, F10.7, G30 and G31. Admissions were included if one of these codes appeared in either the primary or secondary diagnostic code fields, in any episode within the spell, and the patient was admitted as an emergency.

## Emergency Readmissions within 30 days



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### What is the data telling us?

Emergency re-admission within 30 days of discharge of a prior emergency admission, among patients aged 75 years and over who have been diagnosed with dementia and/or delirium, may reflect:

- failures of discharge planning prior to discharge; or
- failures of community support post discharge; or
- mis-diagnosis and/or inadequate medical treatment during the original admission and/or at discharge; or
- a lack of advanced care or end of life planning.

They may be due to a combination of such factors. On the other hand, some patients will be re-admitted because of an acute unavoidable deterioration in current medical problems or development of a new treatable clinical problem. Without reviewing such cases it is difficult to categorise such admissions as avoidable or unavoidable using routine hospital activity data from HES. Nonetheless, comparison of re-admission rates among these patients across Trusts and trends over time can act as indicators of the extent to which the local health and social care economy is working well to bring down the numbers and rates of such re-admissions.

The 30-day emergency re-admission rate varies by about four percentage points across the NENC Trusts. The average is 19.5%, varying from 21.3% in Gateshead to 17.2% in North Tees & Hartlepool Trust. This emergency re-admission rate of almost 20% for elderly patients with dementia poses a major challenge to all Trusts. There is a need to explore how these rates could be reduced taking account of the diagnosis, treatment, care planning and management issues raised above. It should also be noted that of those that were re-admitted within 30 days, over 40% were actually re-admitted within the first 7 days following discharge.

### Definitions / Notes

The time period examined covers emergency admissions during an 18 month period – June 2013 to December 2014. Patients are counted as re-admissions if they were discharged alive and re-admitted as an emergency for any reason within 30 days .

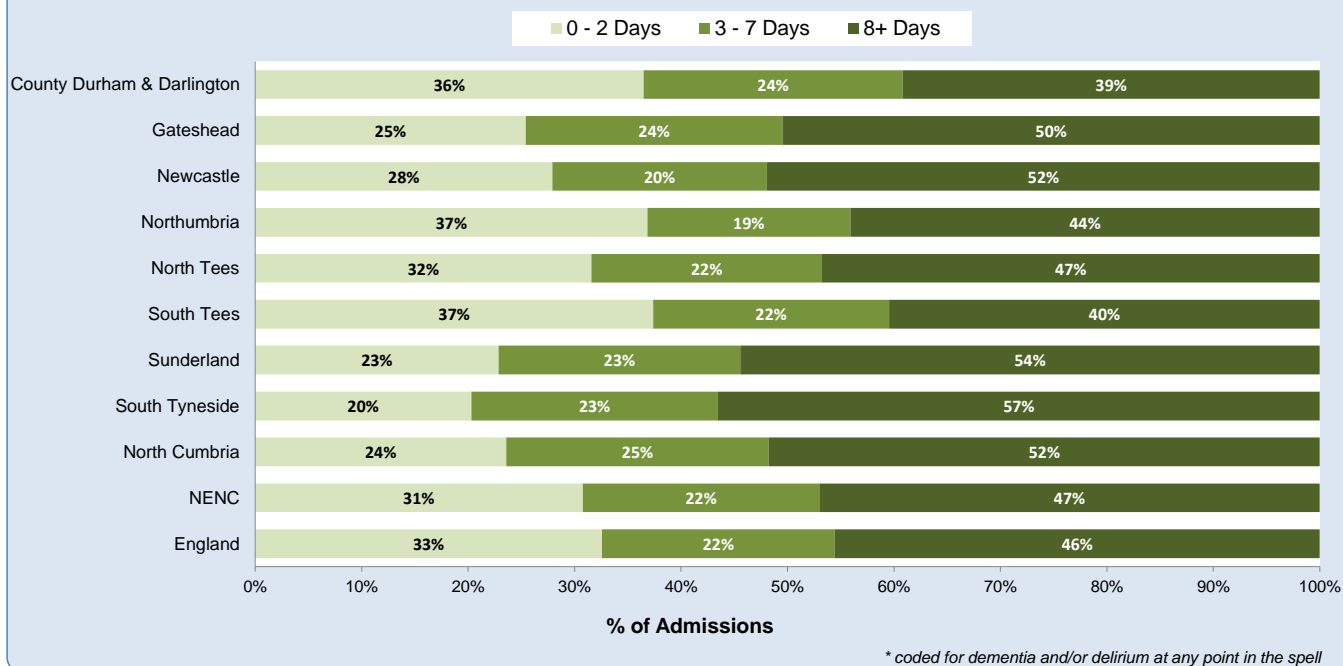
## Length of Stay

Emergency Hospital Spells coded for Dementia and/or Delirium\*, by Length of Stay, 2010-2015, Age 75+

Trust	Length of Stay			TOTAL
	0 - 2 Days	3 - 7 Days	8+ Days	
County Durham & Darlington	4,610	3,072	4,949	12,631
Gateshead	1,821	1,726	3,615	7,162
Newcastle	2,196	1,585	4,084	7,865
Northumbria	5,188	2,682	6,210	14,080
North Tees	2,347	1,608	3,476	7,431
South Tees	4,276	2,536	4,628	11,440
Sunderland	2,032	2,016	4,836	8,884
South Tyneside	1,201	1,372	3,346	5,919
North Cumbria	1,559	1,632	3,422	6,613
<b>NENC</b>	<b>25,230</b>	<b>18,229</b>	<b>38,566</b>	<b>82,025</b>
<b>England</b>	<b>420,250</b>	<b>281,871</b>	<b>587,727</b>	<b>1,289,848</b>

\* Coded for dementia and/or delirium at any point in the spell

Percentage of Emergency Hospital Spells, coded for Dementia and/or Delirium\*, by Length of Stay, 2010-2015, Age 75+  
North East & North Cumbria Trusts



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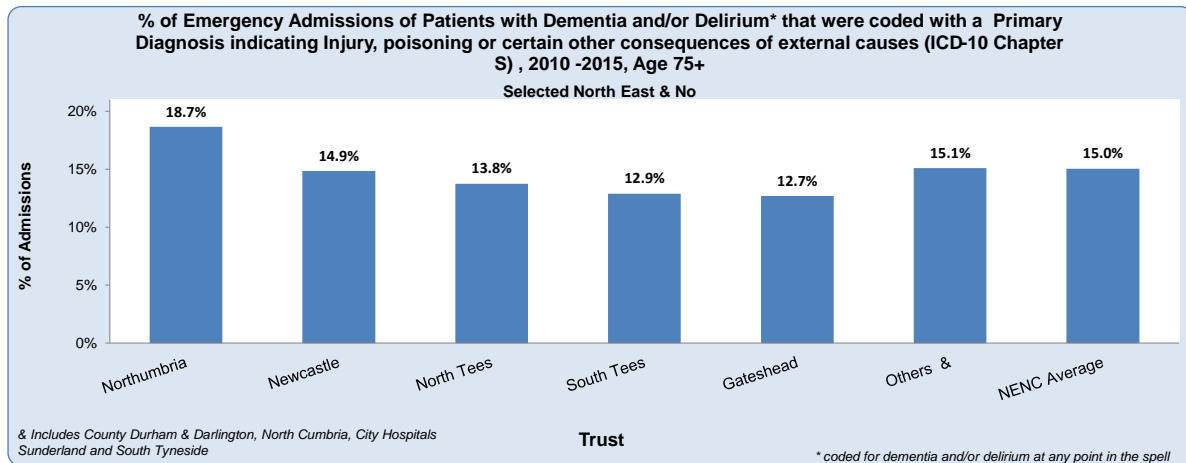
### What is the data telling us?

Trusts show considerable variation in the percentage of patients discharged within two days of admission, ranging from 20% to 37%, with Northumbria Healthcare and South Tees on 37%. County Durham and Darlington and South Tees discharge about 60% of patients within 7 days, the highest percentages in the region. On the other hand, South Tyneside Trust discharges only 43% of its dementia patients within 7 days (i.e. 43%).

High proportions of short stay patients may reflect more effective assessment and discharge processes and community support. On the other hand, high levels of very short stay patients may indicate poor community assessment and care planning, management and oversight of this group leading to unnecessary admission.

### Definitions / Notes

## Emergency Hospital Admissions associated with injuries



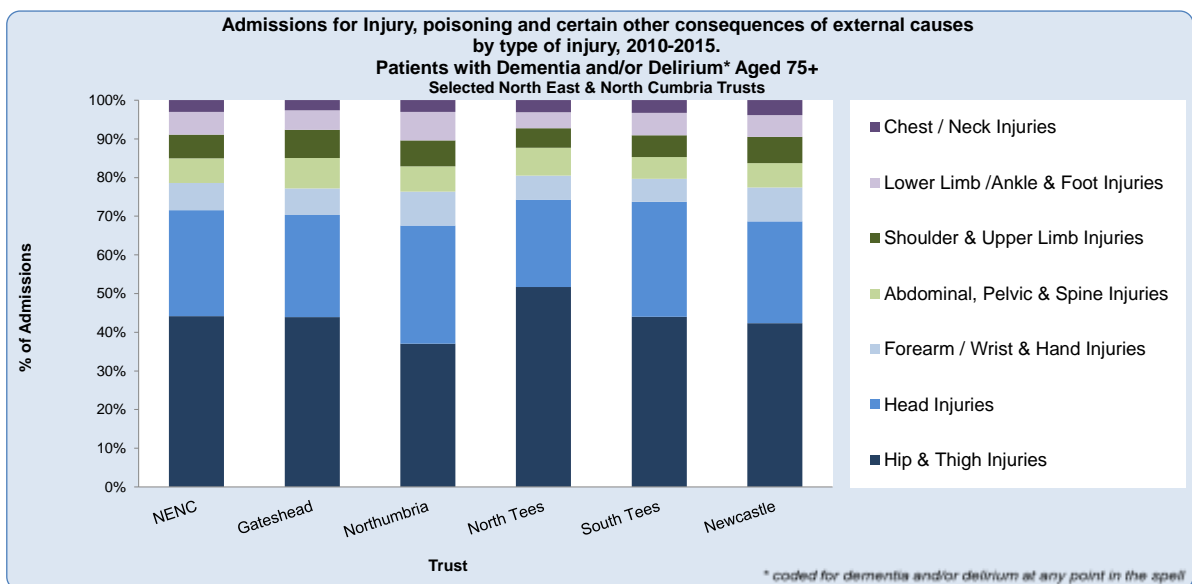
## Number of emergency Admissions with a Primary Diagnosis of Injury, poisoning or certain other consequences of external causes (ICD-10 Chapter S) by Type of Injury, 2010 -2015

**Patients with Dementia and/or Delirium\* Aged 75+**

Primary Diagnosis	NENC (All Trusts)	Trust					
		Gateshead	Northumbria	North Tees	South Tees	Newcastle	Others &
Hip & Thigh Injuries	5,448	399	972	528	649	495	2,405
Head Injuries	3,378	240	802	231	437	308	1,360
Forearm / Wrist & Hand Injuries	871	63	232	64	88	102	322
Abdominal, Pelvic & Spine Injuries	786	71	172	73	83	74	313
Shoulder & Upper Limb Injuries	762	66	175	52	83	79	307
Lower Limb /Ankle & Foot Injuries	716	46	194	42	86	66	282
Chest / Neck Injuries	378	24	79	32	48	45	150
<b>TOTAL</b>	<b>12,339</b>	<b>909</b>	<b>2,626</b>	<b>1,022</b>	<b>1,474</b>	<b>1,169</b>	<b>5,139</b>

& Includes County Durham & Darlington, North Cumbria, City Hospitals Sunderland and South Tyneside

\* coded for dementia and/or delirium at any point in the spell



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### What is the data telling us?

The vast majority of patients with dementia and/or delirium have a different diagnosis as the primary reason for their emergency admission to hospital. Indeed a Public Health England (PHE) report<sup>3</sup> suggests that nationally 20% of such admissions are for potentially preventable acute conditions and/or avoidable through community based diagnosis and treatment. Examining the data for 2010-2015 our analysis shows that across the NENC region 15% of the admissions relating to elderly patients with dementia and/or delirium had a primary diagnosis indicating "Injury, Poisoning or other consequences of external causes". This proportion ranged from 12.7% in Gateshead to 18.7% in Northumbria Healthcare (first chart above).

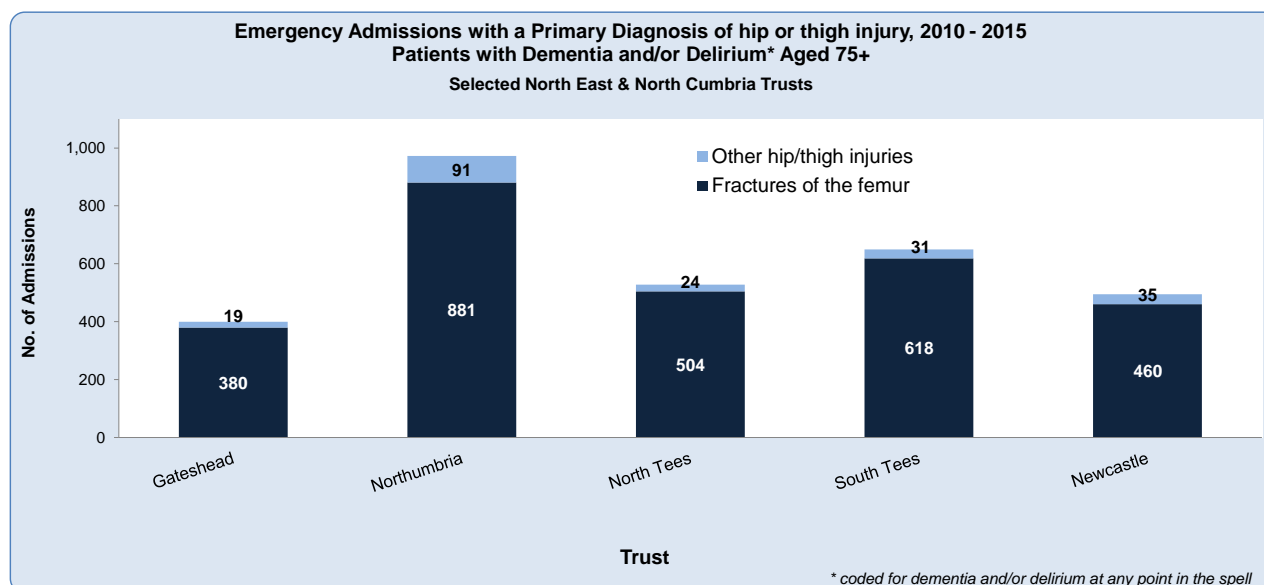
A detailed breakdown by specific diagnostic codes is provided in the table below the chart, and provides an indication of the level of emergency in-patient hospital activity that might be avoided by each Trust, with more focused primary and community support. The final chart also presents a breakdown of the admissions by type of injury showing the proportion in each category. Hip, thigh and head injuries account for approximately 70% of these cases. Of the hip and thigh injuries, an average of 94% for the NENC Trusts were related to fracture of the femur (ICD-10 S72). Then number of fractures of the femur by Trust is shown on the next page of this report.

3. Public Health England: Reasons why people with dementia are admitted to a general hospital in an emergency, PHE publications, gateway No 2014780, March 2015

### Definitions / Notes

From this point forward in this Addendum there is no Trust level information available for four NENC trusts - Co. Durham & Darlington, North Cumbria, City Hospitals Sunderland and South Tyneside. This is due to the fact that this information was originally produced by NEQOS for its acute Trust subscribers only and these Trusts were non-subscribers. Data for these trusts will be included in the refreshed Falls and Fractures Report which NEQOS will be producing for the AHSN in the Autumn 2017.

## Admissions for Fracture of the Femur and admissions associated with Falls



**% of emergency Admissions with a Primary Diagnosis of Injury, poisoning or certain other consequences of external causes associated with a fall, 2010 - 2015**  
**Patients with Dementia and/or Delirium\* Aged 75+**

Primary Diagnosis	NENC (All Trusts)	Trust					
		Gateshead	Northumbria	North Tees	South Tees	Newcastle	Others &
Hip & Thigh Injuries	95%	96%	94%	95%	94%	93%	95%
Head Injuries	94%	96%	93%	93%	95%	95%	94%
Forearm / Wrist & Hand Injuries	88%	89%	88%	89%	86%	82%	89%
Abdominal, Pelvic and Spine Injuries	90%	92%	88%	95%	88%	84%	90%
Shoulder & Upper Limb Injuries	91%	95%	88%	92%	96%	92%	91%
Lower Limb / Ankle & Foot Injuries	78%	87%	75%	67%	85%	80%	79%
Chest / Neck Injuries	88%	96%	89%	88%	94%	73%	88%
<b>TOTAL</b>	<b>92%</b>	<b>95%</b>	<b>91%</b>	<b>93%</b>	<b>93%</b>	<b>90%</b>	<b>93%</b>

& Includes County Durham & Darlington, North Cumbria, City Hospitals Sunderland and South Tyneside  
 \* coded for dementia and/or delirium at any point in the spell

**Emergency Admissions with a diagnostic code indicating a Fall by Nature of Fall, 2010-2015**  
**Patients with Dementia and/or Delirium\* Aged 75+**  
 Selected North East & North Cumbria Trusts

Nature of Fall (ICD-10 code)	NENC (All Trusts)	Trust					
		Gateshead	Northumbria	North Tees	South Tees	Newcastle	Others &
Unspecified fall (W19)	6,832	521	1,061	542	719	661	3,328
Fall on same level from slipping, tripping and stumbling (W01)	1,407	149	261	159	230	139	469
Other slipping, tripping and stumbling (W18)	1,503	86	709	110	184	85	329
Fall from Bed (W06)	843	49	178	91	117	81	327
Fall on and from stairs and steps (W10)	366	22	71	28	55	41	149
Fall from Chair (W07)	364	27	83	29	44	26	155
Other Fall	245	17	54	27	37	37	73
<b>TOTAL</b>	<b>11,560</b>	<b>871</b>	<b>2,417</b>	<b>986</b>	<b>1,386</b>	<b>1,070</b>	<b>4,830</b>

& Includes County Durham & Darlington, North Cumbria, City Hospitals Sunderland and South Tyneside  
 \* coded for dementia and/or delirium at any point in the spell

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### What is the data telling us?

For all of the Trusts shown in the chart above, over 90% of the hip and thigh injuries, for which elderly patients with dementia and/or delirium were admitted, were fractured femurs. Some fractures may have been preventable with appropriate treatment of osteoporosis, for example.

Across the NENC region 92% of all admissions with an injury code were associated with a fall, ranging from 90% in Newcastle to 95% in Gateshead. It is unclear the extent to which this variation reflects reality or is simply as a result of variation in the quality of clinical coding between Trusts.

The nature of falls varies and some, if not all, falls may have been preventable with the implementation of appropriate falls prevention strategies and programmes. Unfortunately, as shown in the second table above, a very high percentage of falls are coded as "Unspecified fall". Improved coding in Trusts would reduce this and would provide more useful information.

### Definitions / Notes

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