

Acuity Audit of Hospital Bed Occupancy in Devon, June 2010

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1. Introduction

- 1.1 This report sets out the methodology, results and conclusions of an audit of hospital and intermediate care beds in Devon on 15th June 2010.
- 1.2 The aim of the audit was to define the care needs of the in patient population on that date.

2. Background

- 2.1 The acuity audit was undertaken as part of the urgent care workstream within the transformation programme. This audit was requested following pressures experienced during the winter period of 2009/10. The audit tool was one used in the South Devon area in May 2010.
- 2.2 The winter pressures identified several important issues which included patients delayed within the acute care setting as well as delays for patients with on-going care/social needs following in-patient stays in either a community hospital and intermediate care setting.
- 2.3 The objectives of the acuity audit were to:
 - Identify the numbers and percentage of patients that do not need to be cared for in their current care setting.
 - Identify the type of ongoing health and social care needs of patients 'fit to leave' their current care setting.
 - Identify areas where the patient pathway appears to work particularly well.
 - Assist in developing recommendations to reduce pressure on beds, delays in the patient pathway, and cost reductions as part of the Quality, Innovation, Productivity and Prevention (QIPP) programme.
 - Identify the numbers and percentages of patients who could be managed at home.
- 2.4 In analysing the results, certain assumptions have been made. These are:
 - All patients that are admitted for hospital require admission.
 - Delays to patient discharge or progress through a pathway including into rehabilitation are detrimental to the patient.
 - Caring for a patient in an acute care setting is either more expensive than or at least as expensive as caring for a patient in alternative settings, including at home.
 - The data from the South Devon audit, although taking place on another date, are comparable enough to be included in the audit.

- That the audit tool is valid, in that results would be the same whoever undertook the audit.

3. Method

- 3.1 Several audit tools were considered including the one used in South Devon on 10th May 2010 and the one used by external consultants. The South Devon audit tool was chosen for several reasons including the ease of usability and acceptance by clinicians completing the tool and the ability to run the audit within a tight timescale. By using the South Devon tool it was also possible to incorporate their results into the wider audit. The external consultancy option was discounted as it was both expensive and would cover a fraction of the population that the South Devon audit would cover, and could not be incorporated into the wider audit. It was adapted from an audit tool that had previously been developed with a change agent team. The auditors assign patients to defined categories and whilst there will be some subjectivity to this, the auditors for the Devon audit were all clinical professionals and it would be reasonable to expect consistency.
- 3.2 The audit took place on Tuesday 15th June 2010 across Devon. The audit tool was completed by individuals with clinical knowledge and access to the staff caring for the patients. The audit tool was circulated to senior managers across North Devon, Exeter and Plymouth who further distributed it to managers within their area. The audit was undertaken by qualified professionals including nursing and therapy staff.
- 3.3 The audit covered acute hospital, community hospitals and intermediate care settings across North Devon, Exeter and Plymouth. South Devon had previously been audited including the community hospitals that face them. These units are listed in Appendix A.
- 3.4 One additional category of date of birth (to calculate age) was added to the audit tool used by South Devon. This was added in response to anecdotal comments that patients were older and more frail than had been seen in previous years.
- 3.5 Some categories contained enough patients to allow strata analysis within the total audit. This included some locality specific and type of care setting analysis.
- 3.6 Within the South Devon audit patients were defined as either South Devon patient or Devon patient according to the GP practice that they were registered with.
- 3.7 Statistical significance was calculated using exact binomial confidence intervals for single proportions. Confidence intervals were calculated at 95%.

4. Results

- 4.1 Data were collected from 3 acute trusts, 15 community hospitals and 5 intermediate care/rehabilitation settings generating 1064 records. (Appendix A)
- 4.2 The audit recorded 708 individuals within an acute setting, 287 within a community hospital setting and 69 within an intermediate care/rehabilitation setting.
- 4.3 In addition an additional 327 individual patients were included in the South Devon audit undertaken on Monday 10th May 2010.
- 4.4 Of the 1064 patients included in the audit, 422 (40%) were medically fit to leave their current care setting on the day of the audit. (Figure 1)
- 4.5 There is a statistically significant difference between the age of patients who are 'fit to leave' compared to those 'not fit to leave'. The mean age of a patient 'fit to leave' was 77.3 years compared to 72.6 years for those 'not fit to leave'.
- 4.6 There was a lower percentage of patients 'fit to leave' and delayed within the North Devon acute setting, than Exeter, Plymouth or South Devon. (Figure 2)
- 4.7 The percentages 'fit to leave' community hospital settings were comparable across Exeter and East Devon, North Devon and South Devon. (Figure 3)
- 4.8 When analysed by locality there was a statistically significant difference between Devon registered patients and South Devon registered patients within the community hospital setting. (Figure 4)

Figure 1: Patients 'fit to leave' by locality

Locality	Type	Medically fit to leave this care setting?		Grand Total	% Fit To Leave	Lower Confidence	Upper Confidence
		Fit	Not Fit				
Exeter	Acute	193	372	565	34.2%	30.3%	38.2%
	Community	110	96	206	53.4%	46.3%	60.4%
	Intermediate	34	28	62	54.8%	41.7%	67.5%
	Total	337	496	833	40.5%	37.1%	43.9%
North Devon	Acute	22	80	102	21.6%	14.0%	30.8%
	Community	44	37	81	54.3%	42.9%	65.4%
	Intermediate	4	3	7	57.1%	18.4%	90.1%
	Total	70	120	190	36.8%	30.0%	44.1%
Plymouth	Acute	15	26	41	36.6%	22.1%	53.1%
	Total	15	26	41	36.6%	22.1%	53.1%
Grand Total		422	642	1064	39.7%	36.7%	42.7%

Figure 2: Acute patients 'fit to leave' by locality

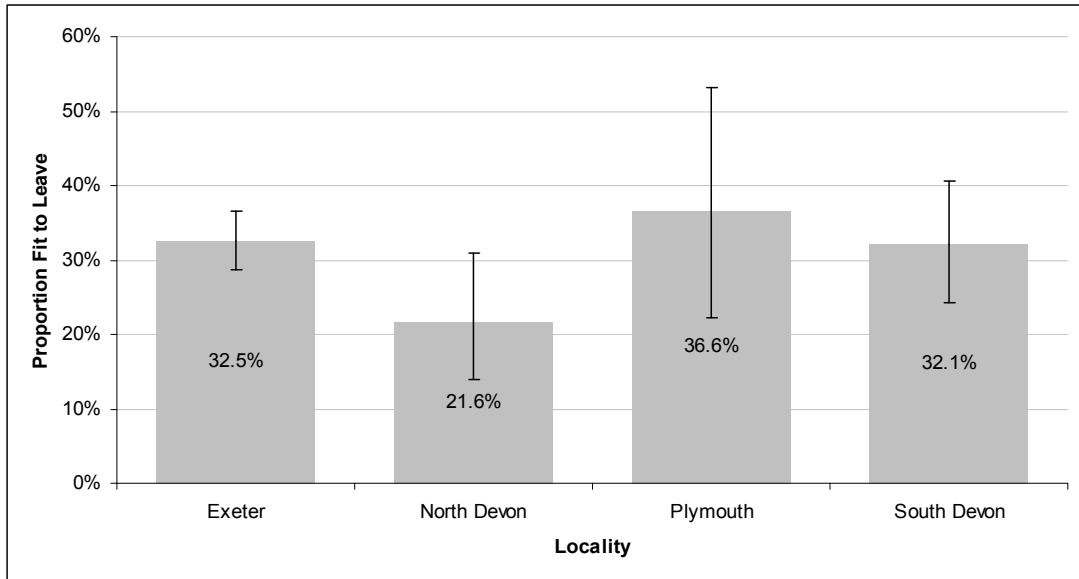
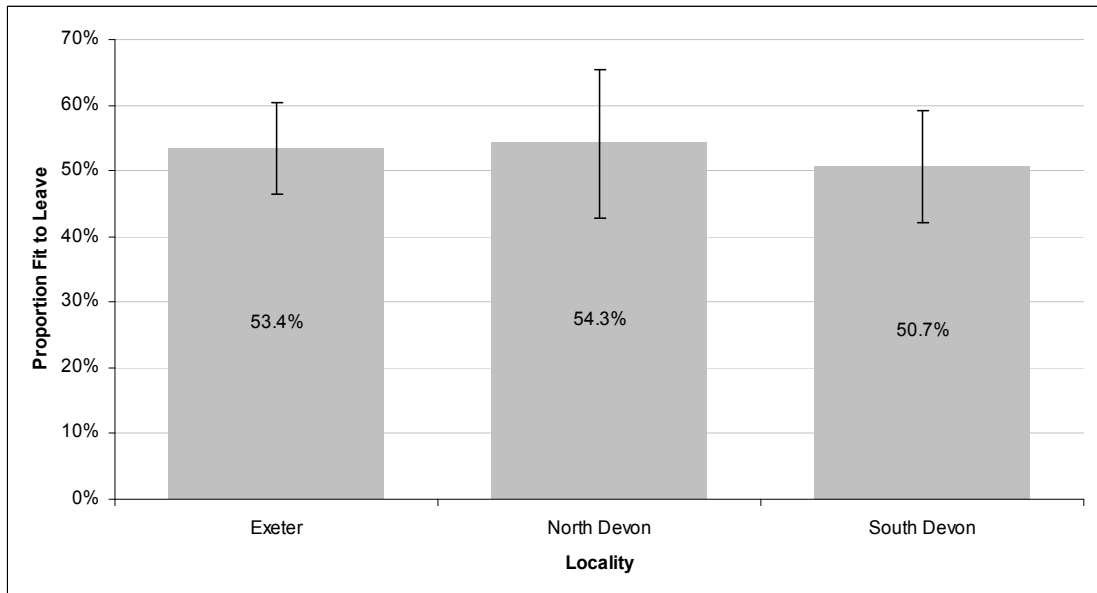
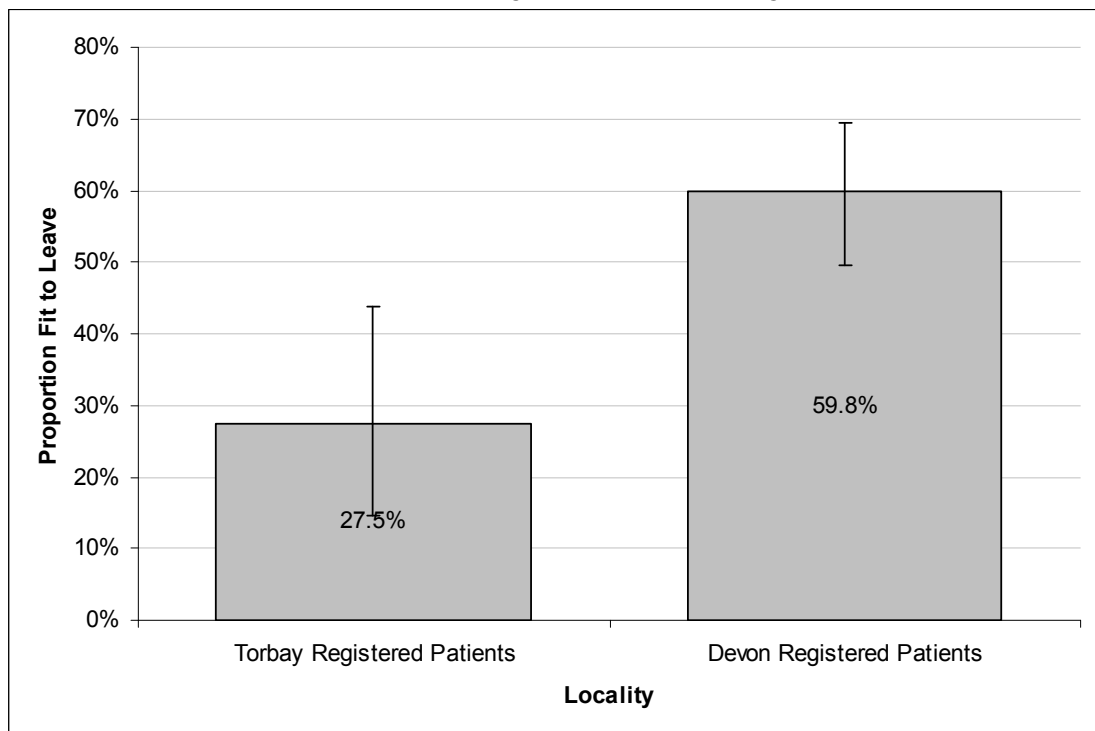


Figure 3: Community patients 'fit to leave'



4.9 Within the acute care setting, the percentage of medical patients 'fit to leave' was 32% compared to 31% for surgical patients. Auditor's comments indicated that surgical patients were often scheduled for discharge on the day of the audit.

Figure 4: Comparison between Torbay and Devon registered patients within the South Devon Healthcare System (from Torbay data)



4.10 A further analysis of patients within the 'fit to leave' category (n=422), was conducted to identify patients who might reasonably require specialist intervention. Patients were excluded if:

- their condition was liable to significant fluctuation
- receiving planned end of life care
- required further clinical investigations/treatment
- awaiting results which would inform the treatment plan
- awaiting specialist opinion
- required active medical intervention.

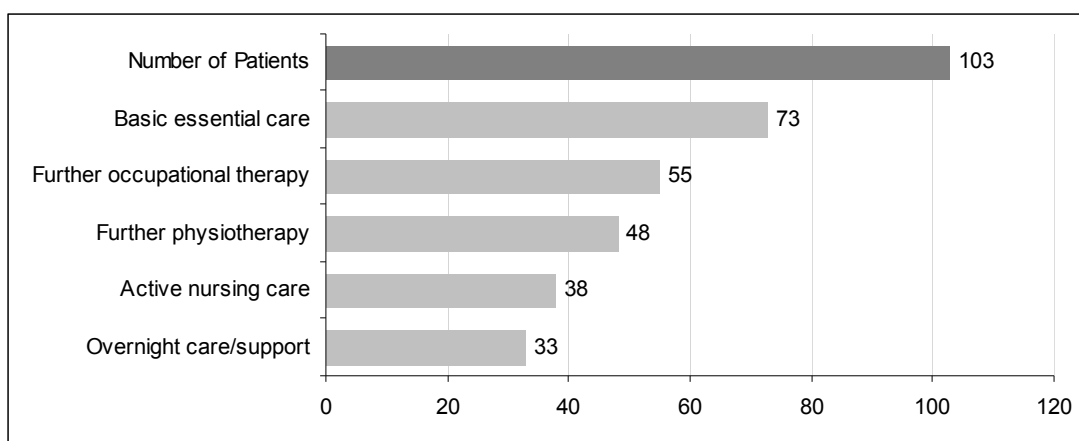
This left 103 patients that the auditor thought could be managed at home and required one or more of the following:

- physiotherapy
- occupational therapy
- nursing care
- basic essential care
- overnight care/support.

These 103 patients represent 24% of those 'fit to leave' and 10% of the total patient population audited.

Patients often needed more than one service. In total of the 103 patients, 48 (47%) required physiotherapy, 73 (71%) required basic essential care, 33 (32%) required overnight care, 55 (53%) requiring occupational therapy and 38 (37%) requiring nursing care (Figure 5)

Figure 5: Healthcare needs of patients 'fit to leave' (n=103) not awaiting further assessment.



- 4.11 Within community hospitals and intermediate care settings the "free text" comment section of the audit tool showed high proportions of patients waiting for assessment. Nearly half (48%) of the patients who were 'fit to leave' required further social care assessment. A number were awaiting funding decisions and many were waiting for a vacancy in their chosen home.
- 4.12 Occupancy levels across the healthcare system on the day of the audit had a mean of 94%, ranging from 91% in the Devon community hospitals to 99% in the Exeter acute setting.

5. Discussion

- 5.1 Across all care settings the average age for a patient 'fit to leave' was greater than for a patient 'not fit to leave'. One possible interpretation for this is that the older patient has more non-medical needs or on-going social and health care needs that need to be organised before the patient can be discharged from the current care setting. The oldest patients were seen in the community hospitals with 93% of patients 'fit to leave' in a community hospital being aged over 70 years and 75% being over 80 years.
- 5.2 North Devon operates a vertically integrated service and this may account for the lower rate of 'fit to leave' within the acute setting although no causation can be shown by this data. This is not significantly different compared to Exeter.
- 5.3 The percentage of patients 'fit to leave' the community hospitals across Exeter (53%), North Devon (54%) and South Devon (51%) were all comparable.

- 5.4 Within South Devon statistically significantly higher rates of patients 'fit to leave' were seen for patients resident in Devon (60%) when compared to those resident in South Devon (28%).
- 5.5 The auditors were asked to indicate whether a patient who was 'fit to leave' could be managed at home with support. Almost half of patients who were 'fit to leave', (205/422) could be managed at home with support.
- 5.6 The audit provided confirmation of an increasing 'frail elderly' population without acute medical needs but with ongoing care needs.

6. Conclusions

- 6.1 Older patients, specifically patients over 80 years of age are more likely to be 'fit to leave', and retained in a hospital setting than younger patients.
- 6.2 The needs of the patients 'fit to leave' indicate high levels of frail elderly patients with limited or no medical needs but requiring essential basic care including overnight support.
- 6.3 South Devon has a statistically significant lower level of patients within the community hospital setting who are 'fit to leave' when compared to the Exeter and East locality.
- 6.4 Nearly all patients who were defined as 'fit to leave' required some ongoing care with one third requiring overnight care

Appendix A

	Devon audit	South Devon audit
Acute Hospitals	Royal Devon & Exeter Hospital	Torbay Hospital
	North Devon District Hospital	
	Derriford, Plymouth	
Community Hospitals	Axminster	Ashburton
	Bideford	Bovey Tracey
	Budleigh Salterton	Brixham
	Crediton	Dawlish
	Exmouth	Dartmouth
	Holsworthy	Newton Abbot
	Honiton	Paignton
	Kingsbridge	Teignmouth
	Ottery St Marys	Totnes
	Seaton	
	Sidmouth	
	South Molton	
	Tiverton	
	Tyrell	
	Whipton	
Intermediate Care settings	Bodley	St Edmunds
	Exebank	St Kildas
	Green Close	Crisis Intermediate care beds
	Oakwell	
	Wardhayes	