

Detailed Analysis of Emergency Admissions in Somerset

Summary for Taunton Federation

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Content of this Presentation

- Background, objectives, datasets & tools
- Summary of overall findings
- Some examples of detailed observations
 - Observations relating to demographics of the patient population
- Some key Issues in relation to Taunton Federation

OBJECTIVES, SOURCES & TOOLS

Background

- Project initiated by the QIPP board to fully understand why emergency admissions have increased in Somerset and quantify the causes.
- Steering group of senior directors, chaired by David Slack:
 - met weekly across October through conference call
 - attendees from PCT, Acute Trusts, Somerset Partnership and South West Ambulance.
 - Analysis led by Kevin Hudson and mediated through a Data Analyst Group across all organisations.
 - Data Analyst Group subjected observations to peer review prior to discussion at the steering group.
- Sought to achieve common story for Emergency Admissions in Somerset.
- Shared at visit of Intensive Support Team on 2nd November 2011
- Initiated further work and further communication.

Objectives

- To quantify and stratify the current trend in rates of emergency admission in Somerset, and particularly in relation to Taunton & Somerset NHS Foundation Trust.
- To investigate potential correlating factors to the trend, and to attempt to quantify the relative influences of:
 - Changes in the demographics of the local population.
 - Changes in processes taking place in non-Acute settings – GP Practices, Out of hours and ambulance trusts.
 - Changes in processes taking place in Acute settings.
- To further understand causes of A&E attendances and their link to emergency admissions (not part of these results, this work will follow).

Data Sources used in this report

(Listed as this analysis expands)

- SUS data from April 2008 re-costed at 2011/12 tariff. (Master Data Set). Received and uploaded for analysis.
- Timed admission data from Trusts
- Ambulance Activity data by patient and Practice
- Somerset Primary Link Activity (main emergency admission avoidance scheme)
- RISC system data on patients' likelihood of a future unscheduled admission.
- Out of Hours activity data by Practice
- Practice performance data as used in QOF

* 'Admission Components'

(subsets that have been used to analyse the data)

- SUS data through the NERRT2 tool allows interrogation to Practice and Federation level of a number of components of Emergency Admission:
- Patient Demographics (“Admissions of”): Analysis for under 16s, 16-64, over 65s, 75s & 85s.
- Providing Trust (“Admissions to”): Analysis by each individual Trust providing to Somerset patients
- Method of Admission (“Admissions through”): A&E admissions, GP admissions, other admissions.
- Clinical Condition (“Admissions for”): Analysis by HRG chapter plus analysis of codes for ‘major / minor’ procedures and ‘with’ or ‘without complications
- Length of Stay (“Admission Stay”): Zero days, 1 day, 2-3 days, 4+ days.
- Time of Admission: including “in hours” and “out of hours”

* Tools - NERRT2 (Overall Trend)

(main analytical tool developed to review datasets – now on Dashboard)

- The front page of NERRT2 reports monthly recorded activity and reports variance for Financial Year to Date, 12 month growth, and growth from 2008/9:

Clinical Commissioning Information

Emergency Admissions - Practice Interrogation and Comparison Tool

Select Key Criteria to analyse...

Federation or Practice: ALL PRACTICES
 Admission Component: ALL ADMISSIONS

Selected Population Size: 540,337 Federation: All Practices

...and to compare to... (defaults to practice locality)

Federation or Practice: All Practices
 Admission Component: ALL ADMISSIONS

Comparison: / All Practices

Month	Total referrals	Ave referrals per week	Variances				Referral Rate Variance	
			Same Month Last Yr	Financial YTD	12 Mth Variance	from 2008/9 Baseline	Financial YTD	12 Mth Variance
Mar-10	4411	711.5	-1.3%	-0.9%	-0.9%	-0.9%	0.0%	0.0%
Apr-10	4262	710.3	2.3%	2.3%	-1.1%	-0.7%	0.0%	0.0%
May-10	4317	696.3	4.6%	3.4%	-0.7%	-0.3%	0.0%	0.0%
Jun-10	4290	715.0	4.9%	3.9%	-0.3%	0.1%	0.0%	0.0%
Jul-10	4452	718.1	5.0%	4.2%	0.3%	0.5%	0.0%	0.0%
Aug-10	4220	680.6	11.1%	5.5%	1.3%	1.4%	0.0%	0.0%
Sep-10	4322	720.3	7.0%	5.7%	2.0%	1.9%	0.0%	0.0%
Oct-10	4501	726.0	3.2%	5.3%	2.2%	2.2%	0.0%	0.0%
Nov-10	4442	740.3	9.6%	5.9%	3.0%	3.0%	0.0%	0.0%
Dec-10	4617	744.7	4.2%	5.7%	3.4%	3.3%	0.0%	0.0%
Jan-11	4452	718.1	9.9%	6.1%	4.7%	4.2%	0.0%	0.0%
Feb-11	4161	743.0	12.5%	6.6%	5.9%	5.1%	0.0%	0.0%
Mar-11	4725	762.1	7.1%	6.6%	6.6%	5.7%	0.0%	0.0%
Apr-11	4389	731.5	3.0%	3.0%	6.7%	6.0%	0.0%	0.0%
May-11	4486	723.5	3.9%	3.5%	6.6%	6.3%	0.0%	0.0%
Jun-11	4405	734.2	2.7%	3.2%	6.4%	6.5%	0.0%	0.0%
Jul-11	4242	684.2	-4.7%	1.2%	5.6%	6.1%	0.0%	0.0%
Aug-11	-	-	-	-	-	-	-	-
Sep-11	-	-	-	-	-	-	-	-

Emergency Admissions are as reported through SUS for Somerset Patients only (including those not registered at GP Practices). 'Admission Components' permit analysis by age band, providing Trust, method of Admission, HRG chapter, and length of stay. For further information contact the Clinical Commissioning Information team on 01278 727 423 / GPCinfo@somerset.nhs.uk

[Click Here to see a list of Practices and their localities](#)

Jul-11

Average Referrals per week (this yr / last yr)

Referral Rate (per 1000 per week)

Total Referrals per month

Admission Component Summaries

- One page report can be printed from the NERRT2 tool.
- Outlines admissions growth in all particular components.
- Can be set for Somerset overall and for any Federation or Practice.
- There is also a similar one page report to outline each Practice's & Federation's admission performance.
- Can be set for all admissions or for any of the individual admission components show opposite.
- *Also shown graphically*

Emergency Admissions (Age Adj++) - Summary by 'Admission Component'										Jul-11
Locality: ALL PRACTICES										
	Financial Year to Date (Apr - Jul11)			12 months ending July 2011				Weighted Annual Growth Effect		
	Total Admissions	%age share of total	%YTD growth	Total Admissions	%age share of total	% annual growth	% growth from 2008/9			
ALL ADMISSIONS	16,102		-1.4%	49,086		3.0%	2.2%	3.0%		
Admissions by Demographics										
Admits of: Patients aged 16 and under	2,260	14%	-0.1%	7,375	15%	6.1%	4.9%	0.9%		
Admits of: Patients aged 17 to 24	871	5%	1.2%	2,584	5%	5.4%	-1.4%	0.3%		
Admits of: Patients aged 25 to 34	926	6%	-3.0%	2,789	6%	11.1%	2.6%	0.6%		
Admits of: Patients aged 35 to 44	1,273	8%	6.2%	3,763	8%	3.5%	0.7%	0.3%		
Admits of: Patients aged 45 to 54	1,359	8%	1.9%	4,103	8%	8.0%	8.1%	0.7%		
Admits of: Patients aged 55 to 64	1,820	11%	-4.5%	5,356	11%	-2.8%	0.1%	-0.3%		
Admits of: Patients aged 65 to 74	2,099	13%	0.9%	6,343	13%	4.6%	0.6%	0.6%		
Admits of: Patients aged 75 to 84	3,081	19%	-3.7%	9,289	19%	-1.9%	1.0%	-0.4%		
Admits of: Patients aged 85 and over	2,414	15%	-5.0%	7,484	15%	2.9%	2.9%	0.4%		
Admits of: Adults aged under 55	4,428	28%	1.9%	13,239	27%	6.8%	2.9%	1.8%		
Admits of: Adults aged 55 and over	9,414	58%	-3.2%	28,473	58%	0.6%	1.2%	0.3%		
Admissions by Provider										
Admitted to: TAUNTON AND SOMERSET NHS FOUNDATION	8,490	53%	4.1%	25,708	52%	6.9%	8.3%	3.6%		
Admitted to: YEOVIL DISTRICT HOSPITAL NHS FOUNDATION	3,782	23%	-8.6%	11,607	24%	-1.1%	-2.9%	-0.3%		
Admitted to: ROYAL UNITED HOSPITAL BATH NHS TRUST	1,451	9%	-0.5%	4,438	9%	8.2%	10.2%	0.7%		
Admitted to: WESTON AREA HEALTH NHS TRUST	735	5%	-10.9%	2,385	5%	-5.9%	-7.2%	-0.3%		
Admitted to: SOMERSET PCT	450	3%	-6.7%	1,420	3%	-2.6%	-33.0%	-0.1%		
Admitted to: SOMERSET PARTNERSHIP NHS FOUNDATION	273	2%	-8.3%	776	2%	-19.1%	-21.0%	-0.3%		
Admitted to: NORTH BRISTOL NHS TRUST	228	1%	3.1%	629	1%	-6.8%	-10.0%	-0.1%		
Admitted to: UNIVERSITY HOSPITALS BRISTOL NHS FOUNDATION	174	1%	-3.6%	564	1%	1.3%	41.9%	0.0%		
Admitted to: ROYAL DEVON AND EXETER NHS FOUNDATION	95	1%	2.8%	283	1%	0.3%	-0.9%	0.0%		
Admitted to: DORSET COUNTY HOSPITAL NHS FOUNDATION	106	1%	24.2%	275	1%	6.1%	1.7%	0.0%		
Admitted to: OTHER PROVIDERS	319	2%	-19.6%	992	2%	-4.2%	3.2%	-0.1%		
Admissions by Source										
Admits through: A&E or Dental Casualty Depts	10,054	62%	6.9%	29,432	60%	9.2%	19.2%	5.5%		
Admits through: Emergency - GP	3,925	24%	-11.5%	12,630	26%	-5.0%	-20.4%	-1.3%		
Admits through: Emergency - Bed Bureau	223	1%	13.3%	680	1%	25.0%	38.8%	0.3%		
Admits through: Emergency - OP Clinic	325	2%	-4.6%	1,076	2%	4.2%	-8.5%	0.1%		
Admissions by Health Resource Group (HRG) Chapter										
Admits through: Emergency - Domiciliary Visit	-	0%	0.0%	-	0%	0.0%	0.0%	0.0%		
Admits through: Emergency - Other Means	1,574	10%	-19.9%	5,268	11%	-9.8%	-9.0%	-1.0%		
Admitted for: Nervous System	1,133	7%	3.9%	3,155	6%	-1.5%	5.5%	-0.1%		
Admitted for: Eyes and Periorbital	114	1%	25.4%	299	1%	6.4%	7.5%	0.0%		
Admitted for: Mouth, Head, Neck and Ears	504	3%	3.0%	1,481	3%	7.9%	11.9%	0.2%		
Admitted for: Respiratory System	1,381	9%	1.6%	4,483	9%	6.5%	3.8%	0.6%		
Admitted for: Cardiac Surgery and Primary Cardiac Cor	2,427	15%	2.4%	7,174	15%	5.8%	5.1%	0.9%		
Admitted for: Digestive System	2,100	13%	0.3%	6,375	13%	7.7%	11.2%	1.0%		
Admitted for: Hepatobiliary and Pancreatic System	382	2%	10.4%	1,077	2%	6.4%	9.5%	0.1%		
Admitted for: Musculoskeletal System	2,017	13%	-11.6%	6,016	12%	-5.0%	0.1%	-0.6%		
Admitted for: Skin, Breast and Burns	580	4%	-3.6%	1,671	3%	-0.7%	-0.8%	0.0%		
Admitted for: Endocrine and Metabolic System	268	2%	19.9%	750	2%	18.1%	8.0%	0.3%		
Admitted for: Urinary Tract and Male Reproductive Sys	894	6%	-5.7%	2,798	6%	-1.8%	9.7%	-0.1%		
Admitted for: Female Reproductive System and Assist	-	0%	0.0%	-	0%	0.0%	0.0%	0.0%		
Admitted for: Obstetrics	-	0%	0.0%	-	0%	0.0%	0.0%	0.0%		
Admitted for: Diseases of Childhood and Neonates	1,970	12%	1.9%	6,464	13%	3.1%	3.8%	0.4%		
Admitted for: Vascular System	219	1%	-42.1%	724	1%	-31.9%	-29.1%	-0.5%		
Admitted for: Radiology and Interventional Radiology	3	0%	188.8%	6	0%	91.7%	483.7%	0.0%		
Admitted for: Haematology, Chemotherapy, Radiothe	238	1%	6.1%	738	2%	4.1%	-7.7%	0.1%		
Admitted for: Undefined Groups	410	3%	8.1%	1,481	3%	4.0%	-34.2%	0.1%		
Admitted for: Multiple Trauma, Emergency and Urgen	161	1%	-15.3%	478	1%	-7.4%	4.0%	-0.1%		
Admitted for: Immunology, Infectious Diseases and ot	1,302	8%	-2.6%	3,916	8%	15.3%	1.1%	1.2%		
Admitted for: Critical Care and High Cost Drugs	-	0%	0.0%	-	0%	0.0%	0.0%	0.0%		
Admitted for: HRG Codes for minor procedures	1,325	8%	-6.6%	3,798	8%	0.7%	14.8%	0.1%		
Admitted for: HRG Codes for major procedures	3,547	22%	-2.2%	10,985	22%	6.1%	12.6%	1.4%		
Admitted for: HRG Codes without complications	2,863	18%	-6.3%	8,912	18%	-5.6%	-17.2%	-1.0%		
Admitted for: HRG Codes with complications	6,835	42%	-0.8%	20,758	42%	6.6%	17.5%	2.8%		
Admission Stay:										
Admission stay: Zero Days	5,099	32%	-5.0%	15,343	31%	3.9%	4.9%	1.2%		
Admission stay: 1 Day	4,641	29%	4.4%	14,033	29%	6.8%	10.9%	1.9%		
Admission stay: 2-3 Days	3,120	19%	4.1%	9,483	19%	1.7%	1.7%	0.3%		
Admission stay: 4+ Days	3,242	20%	-8.1%	10,228	21%	-1.8%	-10.5%	-0.4%		

NERRT2 - Analysis by Practice & Federation

- NERRT2 analytical tool reports overall admission rate by Practice and Federation (the Federations are highlighted in the chart below)

Emergency Admissions - Local Benchmarking of Practices & Federations

Federation / Practice:

Method of Measurement:

<< please select method

Admission Component:

Highlight in the Graph:

<< please select method

Federation:

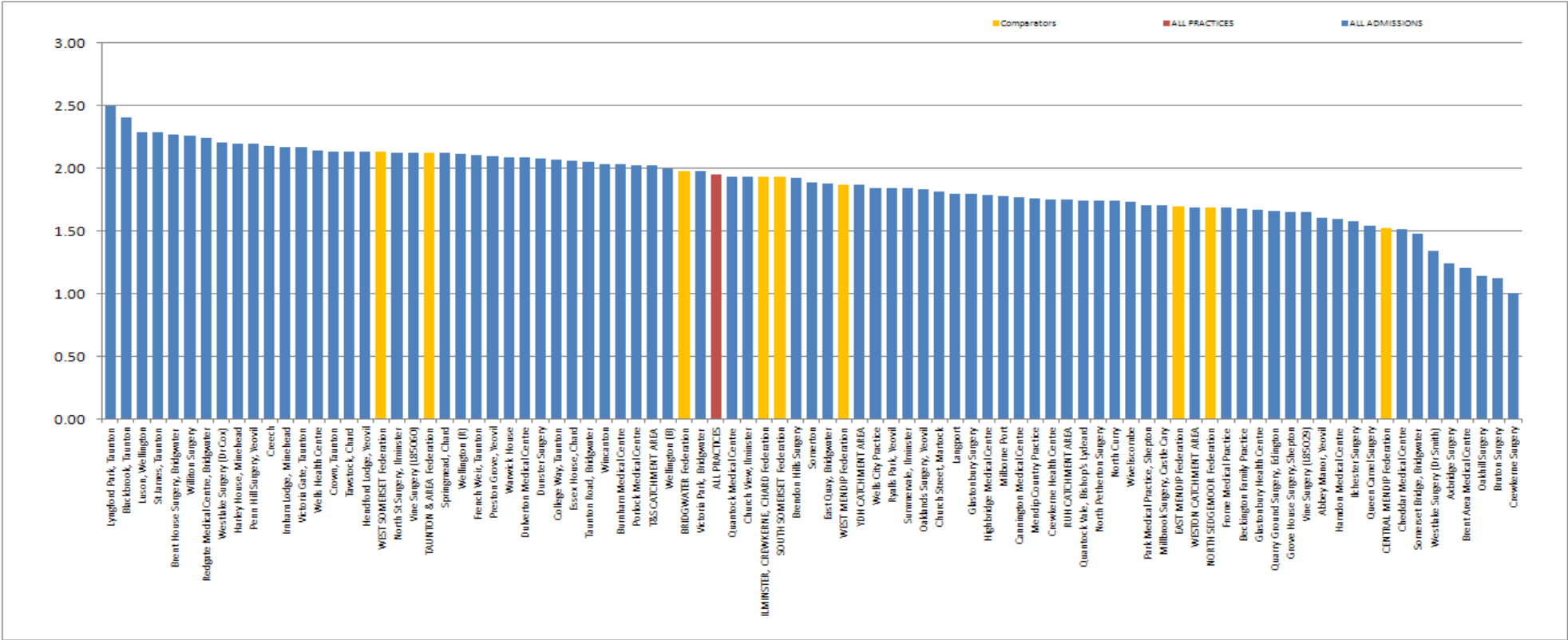
Measurement Description: Practice Benchmarking of overall 12 month admission rates

Population Size:

This graph shows the raw admission rates per 1000 patient in comparison to other Practices

Jul-11

Note these are raw admission rates per 1000 patients - will be affected by underlying demographics of Practices.



* Emergency Admission Trends

(Raw Results – based on original / unadjusted SUS data)

- Analysis of SUS data has allowed the following ‘headline figures’ to be calculated
- Somerset Trusts have agreed these reported growth statistics.

Analysis of Emergency Admissions - 'Headline' Growth of Emergency Admissions

Based on information taken from NERRT2, using Somerset SUS data to the end of September 2011.

	Financial Year to Date (Apr - Sep11)				12 months ending September 2011			
	Total Admissions	%YTD growth (v'st last yr)	Planned (Contracted) Admissions	%age Contract Variance	Total Admissions	%age share of total	% annual growth	% growth from 2008/9
All Somerset Admissions	26,267	1.6%	24,616	6.7%	53,165		4.5%	6.5%
<i>Of which at individual Trusts:</i>								
Taunton & Somerset	13,863	7.6%	12,148	14.1%	27,882	52%	8.8%	8.8%
Yeovil District Hospital	6,086	-5.7%	6,226	-2.2%	12,330	23%	-1.5%	-1.5%
Royal United Hospital	2,331	6.5%	2,123	9.8%	4,793	9%	11.1%	11.1%
Weston General Hospital	1,152	-10.9%	1,284	-10.3%	2,416	5%	-8.4%	-8.4%
Other Providers	2,835	-6.4%	2,835	0.0%	5,737	11%	-0.4%	-8.3%

Based on information taken from NERRT2, using Somerset SUS data to the end of September 2011.

* Which reinforces the key objective of this analysis:

- **Why have Somerset emergency admissions grown by 4.5% in the past year?**
- What contributory factors can be identified in relation to this growth? What is the contributory amount of each of those factors?

And...

- **Why have emergency admissions to Taunton and Somerset NHS Foundation Trusts grown by almost double this amount? (8.8% growth compared to 4.5% for Somerset)**
- And again, what contributory factors can be identified in relation to this growth? What is the contributory amount of each of those factors?

This has been a very detailed analysis (over 200 slides of results). However the key points that would be offered to readers are as follows:

OVERALL FINDINGS

* Key Observations

- **Certain Components show 'irregular' or 'step-change' growth:**
 - Obstetrics, female reproductive system, Somerset PCT zero length of stay
 - 4% of admissions account for 21% of reported growth.
 - More work is required to understand these observations.
- **Populations and age of patients have grown:**
 - 31% of current year emergency admission growth (& 56% of growth since April 2008) can be accounted for by changes in population and changes in the age of that population.
- **A change of 'Provider Mix' is observable.**
 - Patients in certain parts of Somerset that might previously have been admitted elsewhere appear more recently to be admitted to Taunton & Somerset NHS Trust.
 - Of approx 1000 'additional admissions' observed last year at T&S, 66% due to change in mix and originate from patients attending Practices beyond the Trust's 'core catchment'
 - 'Effect of Mix' varies by HRG chapter: Significant for Cardiac Conditions & Musculo-skeletal System. Less significant for Digestive System complaints.

** Summary of Headline Figures

- From original “observed growth” of 4.5% in Somerset, 2.0% remains as ‘underlying’ or ‘unexpected’.
- For Taunton & Somerset, from original observed growth of 8.8%, 3.2% remains unexpected. For Yeovil, observed growth has increased.

Emergency Admission Analysis - Calculation of Underlying Admission Trends

Sep-11

Based on information taken from NERRT2, using Somerset SUS data to the end of September 2011.

	All Somerset Admissions			Taunton & Somerset		Yeovil District Hospital		Royal United Hospital		Weston General Hospital	
	Total Admits (12 mths to Sep 2011)	%age growth	%age explained	Total Admits	%age growth	Total Admits	%age growth	Total Admits	%age growth	Total Admits	%age growth
Headline (raw) growth from SUS	53,165	4.5%		27,882	8.8%	12,330	-1.5%	4,793	11.1%	2,416	-8.4%
After Adjustments for Service Change	50,913	3.3%	27%	26,778	7.3%	11,968	-2.4%	4,698	10.9%	2,388	-8.0%
After Adjustments for Population & Age Growth	49,139	2.0%	39%	25,938	6.0%	11,433	-3.8%	4,536	9.7%	2,327	-9.1%
After Adjustments for Change in 'Provider Mix'	49,139	0.0%	0%	25,234	3.2%	11,704	-1.5%	4,583	10.8%	2,629	2.6%
Trend 'explained' by factors listed above	1,256	2.5%	56%	1,402	5.6%	- 2	0.0%	10	0.3%	- 284	-11.1%
Underlying Admission Trend	1,038	2.0%	44%	857	3.2%	- 188	-1.5%	469	10.8%	62	2.6%

Based on information taken from NERRT2, using Somerset SUS data to the end of September 2011.

Summary of admission rates and growth by Federation

- The Federations with the highest admission rate are Taunton & W.Somerset
- The Federations with the highest 'underlying' growth are Bridgwater, Taunton & CLIC.

Emergency Admissions (Popn Growth Adj) - Summary by 'Locality'

Sep-11

'Admission Component':

ALL ADMISSIONS

	Population	Financial Year to Date (Apr - Sep11)			12 months ending September 2011					
		Total Admissions	%age share of total	%YTD growth	Total Admissions	%age share of total	Admission rate (per 1000 patients)	% annual growth	% growth from 2008/9	
ALL PRACTICES	540,337	15,953		-1.6%	49,139		90.9	2.0%	2.1%	
Admissions by Federation										
NORTH SEDGEMOOR Federation	47,703	1,222	8%	0.3%	3,819	8%	80.1	-2.3%	-4.2%	
BRIDGWATER Federation	80,337	2,427	15%	7.0%	7,271	15%	90.5	5.9%	6.3%	
WEST SOMERSET Federation	23,273	798	5%	6.9%	2,389	5%	102.6	3.2%	4.2%	
TAUNTON & AREA Federation	113,979	3,669	23%	1.8%	11,292	23%	99.1	4.5%	6.1%	
ILMINSTER, CREWKERNE, CHARD Federation	45,824	1,408	9%	2.5%	4,226	9%	92.2	4.5%	5.4%	
SOUTH SOMERSET Federation	106,940	3,133	20%	-2.5%	9,608	20%	89.8	1.4%	-2.8%	
WEST MENDIP Federation	48,975	1,377	9%	-3.7%	4,286	9%	87.5	1.5%	1.2%	
CENTRAL MENDIP Federation	29,635	693	4%	-0.8%	2,037	4%	68.7	-2.9%	-0.1%	
EAST MENDIP Federation	42,472	1,098	7%	0.3%	3,408	7%	80.2	5.1%	5.8%	
Patients not registered to GP Practices		128	1%	-77.1%	802	2%		-33.5%	-19.4%	

* 'Underlying Growth'

- **The 'underlying' (unexpected) trend of emergency admissions has been calculated and investigated further. Key observations include:**
 - **A less than average growth of admissions for patients over 55 years.**
 - Particularly focussed in certain Federations.
 - Is this evidence of success of QIPP Schemes (or due to other factors)?
 - **A higher than average growth of admission for patients under 55 years.**
 - **Growth of admissions of 'under 55s' particularly concentrated at T&S:**
 - through both GP and A&E admission routes, particularly short lengths of stay.
 - focussed in 'Digestive System', 'Male Reproductive' & 'Immunology...contacts with Health Services'.
 - **High growth of admissions for children at Yeovil District Hospital (YDH)**
 - **Higher growth for patients 'with complications' compared to those 'without'**

* Analytical Links to other sources

- **Analytical links have also been made to other data sources:**
 - A observed decline in the use and efficiency of Somerset Primary Link.
 - No observable correlation between growth of admissions & out of hours service.
 - No observable correlation between growth of admissions & patient's abilities to access GP Practices.
 - Ambulance conveyance trends appear mirror overall observations including observed demographic differences and change in mix.
 - Nursing home analysis show differences in admission rates per home.
 - Timed data received from T&S show potentially useful information regarding growth of admissions at particular times of day.

The following detailed observations are perhaps worthy of further investigation and clinical debate...

Given the time constraints in any meeting, we can only just briefly touch on some of the observations made – but it is recommended that this evidence presented is understood in detail by any of those involved in the planning and execution of QIPP objectives for emergency care.

DETAILED OBSERVATIONS

* Out of Hours GP Correlation Analysis

- Growth of OOH GP per Practice compared to growth of Emergency Admission. Correlation Coefficient calculated.
- No significant correlation found to growth (or decline) of use of OOH GP service and Practice growth of emergency admissions – either overall or for admissions of “adults of working age”.

Practice	OOH growth - 12 mths Jul 2011	Total Discounged Admits growth - 12 mths Jul 2011	Discounged Admits growth - 12 mths Jul 2011
Abbey Manor, Yeovil	-11%	-6%	-1%
Axbridge Surgery	4%	-4%	0%
Beckington Family Practice	-4%	11%	3%
Blackbrook, Taunton	5%	3%	7%
Brendon Hills Surgery	6%	4%	-2%
Brent Area Medical Centre	26%	-16%	-38%
Brent House Surgery, Bridgwater	7%	24%	44%
Bruton Surgery	-2%	-15%	-20%
Burnham Medical Centre	2%	2%	-4%
Cannington Medical Centre	3%	20%	36%

	Patients aged 17-65
Correlation Coefficient [R]	0.24
Coefficient of Determination [R squared]	0.06

* Practice Access Performance

- Practice access performance (via the quarterly GP survey) as of March 2011 and Jun 2009 compared to emergency admission growth reported for that Practice.
- No significant correlations have been observed for either growth of admissions against poor practice access or overall levels of admissions.

But

- A small / moderate correlation ($R=0.34$) has been observed when comparing Practice access performance against a measured rate of A&E Attendance for patients of that practice.

* Residential Homes – RISC analysis

(source RISC Nursing Home Analysis / CCG Information Dashboard)

- Reported generated following Federation requests. Now published on CCG Dashboard
- Why is there disparity between the number of admissions / cost per resident?
- Why does it seem that residential homes costing the NHS more than nursing homes?
- Shared with Federations for further clinical analysis and local reflection.

Somerset Clinical Commissioning Information

Based on Patient RISC scores as calculated with data at the end of August 2011

Residential / Nursing Home Patients - RISC scores and costs in the last 12 months

NB! For notes on the No of Applicable Patients field, see the SummaryFed tab

Summary by Care Home/Federation

The data below shows Average RISC scores, Average Admissions, Total Admission Costs & GP Event

Click and select 'largest to smallest' to order by most admissions per resident

Click on this filter to select Federation

Nursing Home	Federation code	No of Applicable Patients	Average RISC Scores per resident				Average Admissions per resident			Average Admission Costs per resident (£)							GP Event (last 12 months)
			Min RISC Ratio	Max RISC Ratio	Mean RISC Ratio (arithmetic)	Mean RISC Ratio (geometric)	Average Unplanned Admissions (Chronic)	Average Unplanned Admissions (Total)	Average Total Admissions	Average Actual PBR Acute Cost	Average Actual Costs of Planned IP (not Daycases)	Average Actual Costs of Planned IP (Daycases)	Average Actual Costs of Unplanned IP (Chronic)	Average Actual Costs of Unplanned IP (Other)	Average Actual Costs (Outpatient)	Average Actual Costs (A&E)	
Moorlands Res. Home	CHARD, CREW & ILMINSTER	11	1.92	34.34	10.75	6.10	0.82	1.18	1.73	4749.22	368.09	113.91	2582.55	1298.09	289.76	96.82	2.82
Yew Tree Cottage Res. Home	CHARD, CREW & ILMINSTER	5	1.42	24.31	9.71	6.69	0.20	1.00	1.60	3049.30	0.00	153.20	117.20	2579.60	162.90	36.40	4.80
Careford Lodge Res. Home	CHARD, CREW & ILMINSTER	15	1.92	34.23	11.87	7.09	1.20	1.20	1.53	3989.92	67.67	66.53	3098.20	359.40	209.39	88.73	0.73
Hazelwell Lodge	CHARD, CREW & ILMINSTER	32	1.34	28.36	9.01	5.63	0.59	1.03	1.28	3004.16	0.00	71.94	1244.22	1566.69	66.44	54.88	11.09
Sunnymeade	CHARD, CREW & ILMINSTER	37	0.93	30.95	9.87	5.88	0.54	0.86	1.27	3836.08	14.00	37.89	1126.05	2434.32	173.08	50.73	10.54
Oak Lodge NH	CHARD, CREW & ILMINSTER	34	1.17	35.33	9.70	5.55	0.62	0.94	1.12	2544.93	0.00	13.47	1587.65	807.15	104.58	32.09	6.26
Horton Cross NH	CHARD, CREW & ILMINSTER	31	0.64	37.04	10.71	6.66	0.68	0.81	1.06	3470.99	0.00	25.71	1498.10	1783.74	115.60	47.84	12.71
Vaughan Lee House	CHARD, CREW & ILMINSTER	23	1.90	34.28	9.92	6.63	0.57	0.65	1.04	2472.39	87.65	0.00	853.00	968.17	84.78	78.78	15.00
The Orchards	CHARD, CREW & ILMINSTER	20	1.92	26.94	5.51	3.66	0.35	0.35	0.50	1907.11	88.15	0.00	1080.50	572.65	156.66	9.15	1.30
Sunnyside Res. Home	CHARD, CREW & ILMINSTER	11	0.34	27.86	5.30	2.68	0.36	0.45	0.45	1004.03	0.00	0.00	728.55	0.00	225.84	49.64	2.55
Beauchamps Country House Care	CHARD, CREW & ILMINSTER	19	1.10	16.98	6.20	4.77	0.16	0.32	0.42	1018.51	0.00	0.00	382.68	509.63	94.35	31.84	16.42
The Rosary NH	CHARD, CREW & ILMINSTER	1	2.84	2.84	2.84	2.84	0.00	0.00	0.00	830.63	0.00	0.00	0.00	0.00	830.63	0.00	0.00
Holway House	CHARD, CREW & ILMINSTER	1	1.27	1.27	1.27	1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00

* Quantify Movement in 'Provider Mix'

- Taking age / population adjusted data, calculate the additional admissions observed at Taunton from Practices in Federations not necessarily expected to refer to Taunton.
- Whilst a 'diminishing list' the top 20 Practice in this category suggest **66% of the observed overall variance can be attributed to these Practices on the boundary of catchment areas.**

Analysis of Emergency Admissions - Effect of "Provider Mix" on Observed Variances

Based on information taken from NERRT2, using Somerset SUS data to the end of July 2011, adjusted for Service Changes, population & Age.

Practice	Fed	All Admissions		Taunton & Somerset Admissions			Variance to Expected	%age share of variance	Alternate Trust
		Total Discounted Admissions	%age Growth	Total Discounted Admissions	%age Share	%age Growth			
All Admissions		49,055	3.0%	25,680	52.3%	6.9%	998		
Selected GP Practices (on boundary or beyond T&S catchment area - Limited to top 20 Practices, in order of effect):									
1 Highbridge Medical Centre	NS	1,176	1.1%	494	42.0%	29.2%	139	13.9%	WGH
2 Preston Grove, Yeovil	SS	1,261	9.0%	41	3.3%	152.0%	59	5.9%	YDH
3 Glastonbury Surgery	WM	1,049	-1.6%	475	45.3%	9.8%	54	5.4%	YDH
4 Hamdon Medical Centre	SS	378	-3.3%	34	8.9%	158.8%	54	5.4%	YDH
5 Burnham Medical Centre	NS	1,456	0.3%	316	21.7%	14.3%	44	4.4%	WGH
6 Glastonbury Health Centre	WM	453	7.3%	198	43.9%	28.9%	43	4.3%	YDH
7 Park Medical Practice, Shepton	CM	776	4.4%	31	4.0%	130.4%	39	3.9%	RUH
8 Langport	SS	962	6.6%	615	63.9%	11.1%	27	2.7%	YDH
9 Wells Health Centre	WM	1,144	7.2%	411	36.0%	13.8%	27	2.7%	YDH
10 Dulverton Medical Centre	WS	389	4.6%	306	78.6%	12.0%	23	2.3%	RD&E
11 Springmead, Chard	CLIC	640	2.1%	570	89.1%	6.0%	23	2.3%	YDH
12 Essex House, Chard	CLIC	917	2.6%	812	88.5%	5.4%	22	2.2%	YDH
13 Hendford Lodge, Yeovil	SS	1,308	0.6%	46	3.5%	42.8%	20	2.0%	YDH
14 Vine Surgery (L85029)	WM	633	-6.5%	289	45.7%	-1.1%	15	1.5%	YDH
15 North St Surgery, Ilminster	CLIC	306	13.6%	263	85.8%	19.1%	14	1.4%	YDH
16 Axbridge Surgery	NS	508	-4.5%	111	21.9%	7.3%	13	1.3%	WGH
17 Tawstock, Chard	CLIC	441	8.9%	380	86.2%	11.8%	11	1.1%	YDH
18 Church View, Ilminster	CLIC	205	12.4%	182	88.8%	18.0%	10	1.0%	YDH
19 Church Street, Martock	SS	948	2.8%	64	6.7%	17.9%	10	1.0%	YDH
20 Cheddar Medical Centre	NS	537	-6.4%	73	13.5%	3.7%	7	0.7%	YDH
Total Selected Practices							655	65.6%	

* NERRT2 Variant 'Admission Time Profile' Analysis Tool

- Importing timed data into NERRT allows presentation of admission profile in units of 'admissions per half hour' – weekdays by half hour periods, weekends by 3 hr time periods.
- Further Summarisation by 3 hour weekday intervals and 'in hours' and 'out of hours'

Emergency Admissions (T&S timed +) - Time Profile Analysis (Weekdays & Weekends)

Method of Measurement: **Overall Admission Rate**

<< please select method

Highlight in the Graph :

<< please select method

Time Period: **ALL TIME PERIODS**

Admission Component: **ALL ADMISSIONS**

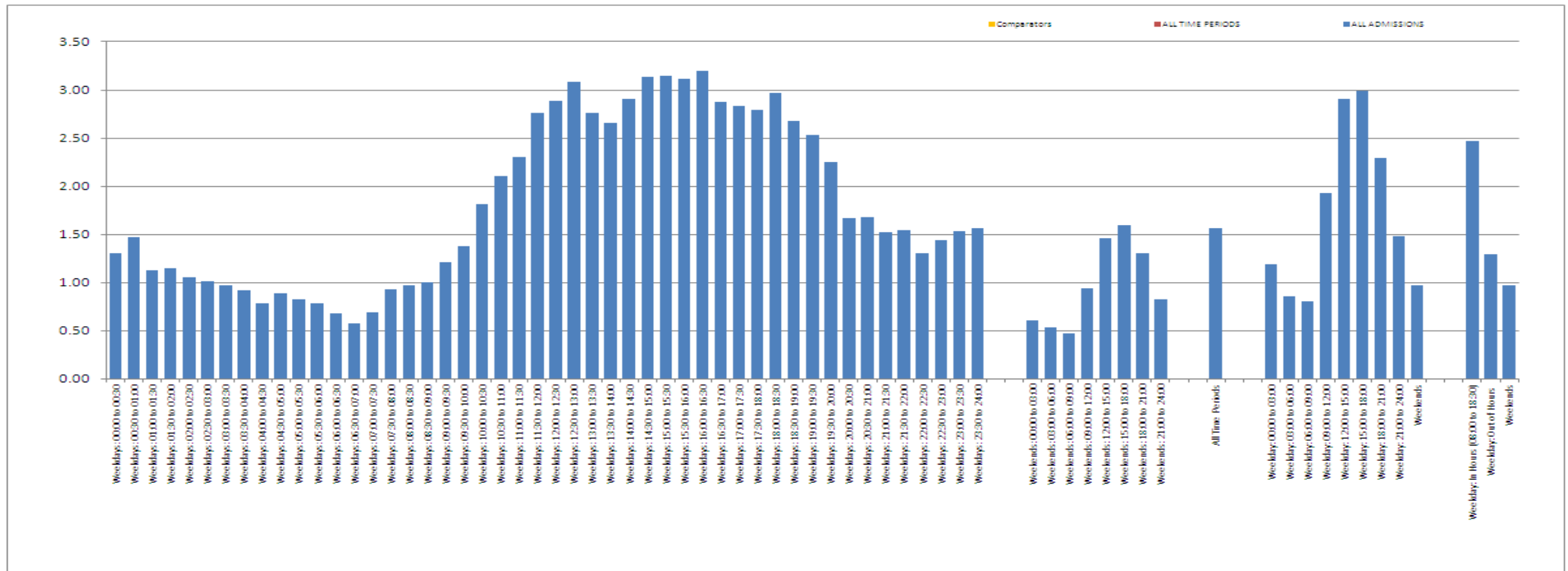
Time Zone: **All Time Periods**

Measurement Description: Time Profile Chart of overall 12 month admission rates

This graph shows the raw admission rates per half hour per day

Note these are raw admission rates per half hour per day.

Jul-11



* NERRT2 Variant 'Admission Time Profile' Analysis Tool

- Can also analyse movement in admission rate for same time segments.
- This shows overall admission growth happens most between 14:00 & 20:30.
- Little growth taking place in mornings, later evenings and weekends.

Emergency Admissions (T&S timed +) - Time Profile Analysis (Weekdays & Weekends)

Time Period:

Admission Component:

Time Zone:

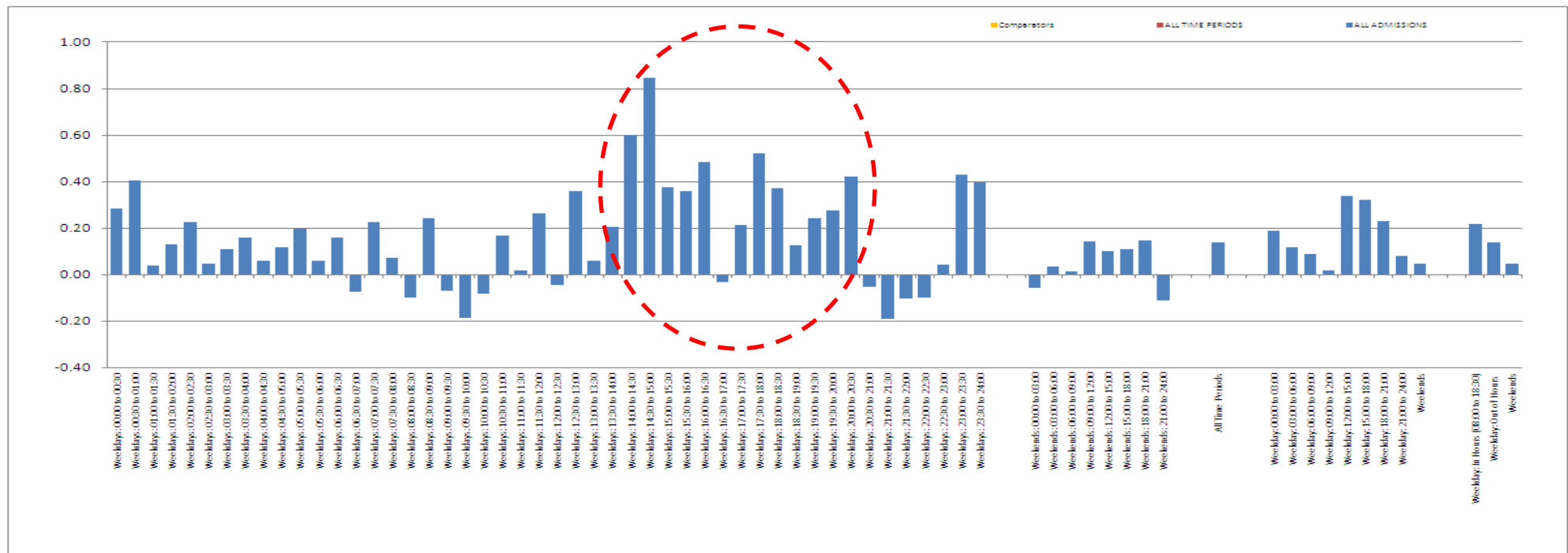
Method of Measurement: << please select method

Highlight in the Graph : << please select method

Measurement Description: Time Profile of movement in 12 month rolling admission rate per half hour time-band compared to the 12 months previous

This graph shows how admission rates in time periods have grown (or have reduced): Units = admissions per half hour

Jul-11



Time Profile Observations

- Most growth of Admissions of Adults of Working Age – 12:00 to 18:00
- **Most growth of Admissions of Elderly happening later - 18:00 to 21:00**
- Growth of A&E Admissions across a wide time band - 10:30 to 18:30
- **GP Admissions overall flat growth, but time of admission delayed by approx 4 hours.**
- Growth of cardiac admissions – even across all time bands
- **Growth of respiratory admissions – narrow time band – 15:00 to 21:00**
- *No evidence of significant difference “out of hours” vs “in hours”*
- *Demonstrates “Admission pinch point” of late afternoon / early evening*

- Analysis of population and patient age changes in Somerset
- Adjusting admissions for 'natural' changes in population and age
- Detailed analysis of adjusted admissions for 'unexpected changes'
- Analysis of admissions of patients of different ages in different Federations

Effect on Emergency Admission of...

CHANGES IN DEMOGRAPHICS OF LOCAL POPULATION

* Admissions of Adults under 55

(source pop'n growth adjusted NERRT2 / Practice Benchmarking Table)

- 'Population growth adjusted' admissions of adults under 55 has risen by 5.1%
- Significant difference between Federations: Highest growth in, Bridgwater (17.3%), Taunton (14.1%) & CLIC (13.1%).

Emergency Admissions (Popn Growth Adj) - Summary by 'Locality'					Sep-11				
'Admission Component':		Admits of: Adults aged under 55							
	Population	Financial Year to Date (Apr - Sep11)			12 months ending September 2011				
		Total Admissions	%age share of total	%YTD growth	Total Admissions	%age share of total	Admission rate (per 1000 patients)	% annual growth	% growth from 2008/9
ALL PRACTICES	540,337	4,482		-1.1%	13,239		24.5	5.1%	2.3%
Admissions by Federation									
NORTH SEDGEMOOR Federation	47,703	311	7%	3.6%	894	7%	18.7	-2.0%	9.0%
BRIDGWATER Federation	80,337	769	17%	23.9%	2,136	16%	26.6	17.3%	12.5%
WEST SOMERSET Federation	23,273	167	4%	5.3%	497	4%	21.4	7.5%	1.3%
TAUNTON & AREA Federation	113,979	1,088	24%	4.4%	3,292	25%	28.9	14.1%	9.4%
ILMINSTER, CREWKERNE, CHARD Federation	45,824	362	8%	2.5%	1,064	8%	23.2	13.1%	7.2%
SOUTH SOMERSET Federation	106,940	889	20%	-3.4%	2,494	19%	23.3	-4.5%	-10.4%
WEST MENDIP Federation	48,975	334	7%	-17.8%	1,032	8%	21.1	-3.4%	-1.3%
CENTRAL MENDIP Federation	29,635	191	4%	-4.6%	554	4%	18.7	-6.4%	-4.1%
EAST MENDIP Federation	42,472	297	7%	3.4%	909	7%	21.4	15.8%	7.3%
Patients not registered to GP Practices		74	2%	-69.5%	368	3%		-29.9%	-23.3%

* Admissions of Adults over 55

(source pop'n growth adjusted NERRT2 / Practice Benchmarking Table)

- 'Adjusted' admissions of adults 55 and over has shown no rise (0.0%)
- Some difference between Federations: Drop in admissions in North Sedgemoor (-4.3%), Central Mendip (-4.0%), South Somerset (-0.1%), Bridgwater (0.0%).
- Taunton Admissions of adults over 55 is up by 2.3%

Emergency Admissions (Popn Growth Adj) - Summary by 'Locality'					Sep-11					
'Admission Component':		Admits of: Adults aged 55 and over								
		Financial Year to Date (Apr - Sep11)			12 months ending September 2011					
	Population	Total Admissions	%age share of total	%YTD growth	Total Admissions	%age share of total	Admission rate (per 1000 patients)	% annual growth	% growth from 2008/9	
ALL PRACTICES	540,337	9,347		-1.9%	28,572		52.9	0.0%	0.9%	
<i>Admissions by Federation</i>										
NORTH SEDGEMOOR Federation	47,703	799	9%	-2.2%	2,480	9%	52.0	-4.3%	-7.6%	
BRIDGWATER Federation	80,337	1,320	14%	0.4%	3,986	14%	49.6	0.0%	2.8%	
WEST SOMERSET Federation	23,273	544	6%	4.7%	1,628	6%	70.0	1.8%	2.8%	
TAUNTON & AREA Federation	113,979	2,041	22%	1.7%	6,185	22%	54.3	2.3%	5.6%	
ILMINSTER, CREWKERNE, CHARD Federation	45,824	878	9%	-0.7%	2,634	9%	57.5	1.4%	4.1%	
SOUTH SOMERSET Federation	106,940	1,792	19%	-4.7%	5,564	19%	52.0	-0.1%	-3.8%	
WEST MENDIP Federation	48,975	870	9%	4.8%	2,676	9%	54.6	5.0%	3.8%	
CENTRAL MENDIP Federation	29,635	413	4%	3.9%	1,142	4%	38.5	-4.0%	-2.4%	
EAST MENDIP Federation	42,472	647	7%	-0.1%	1,945	7%	45.8	-1.5%	4.8%	
Patients not registered to GP Practices		42	0%	-81.4%	332	1%		-36.2%	15.1%	

* Taunton admissions by age band

(as an example of different rates of admission for different ages)

- Why is there significant differences in rate of growth of admissions before & after 55?
- Are low admission trends of over 55s evidence of success of Admission Avoidance work? – or something else?
- But if so, what is causing the increase in the under 55s which is masking LTC results?

Emergency Admissions (Popn Growth Adj) - Summary by 'Admission Component'								Sep-11
Locality: TAUNTON & AREA Federation								
	Financial Year to Date (April - September 11)			12 months ending September 2011				Weighted Annual Growth Effect
	Total Admissions	%age share of total	%YTD growth	Total Admissions	%age share of total	% annual growth	% growth from 2008/9	
ALL ADMISSIONS	5,593		3.7%	11,292		● 4.5%	6.5%	4.5%
Admissions by Demographics								
Admits of: Patients aged 16 and under	836	15%	-3.0%	1,815	16%	● -3.1%	-0.5%	-0.5%
Admits of: Patients aged 17 to 24	302	5%	2.6%	599	5%	● 4.7%	-7.4%	0.2%
Admits of: Patients aged 25 to 34	378	7%	11.1%	731	6%	● 17.7%	11.1%	1.1%
Admits of: Patients aged 35 to 44	483	9%	14.1%	956	8%	● 17.0%	14.3%	1.4%
Admits of: Patients aged 45 to 54	479	9%	9.4%	1,006	9%	● 14.9%	24.5%	1.3%
Admits of: Patients aged 55 to 64	578	10%	-3.4%	1,151	10%	● -4.4%	2.5%	-0.4%
Admits of: Patients aged 65 to 74	696	12%	20.7%	1,351	12%	● 14.9%	6.2%	1.8%
Admits of: Patients aged 75 to 84	1,030	18%	0.0%	2,054	18%	● -0.1%	0.6%	0.0%
Admits of: Patients aged 85 and over	812	15%	-2.8%	1,629	14%	● -1.1%	17.2%	0.2%
Admits of: Adults aged under 55	1,642	29%	9.8%	3,292	29%	● 14.1%	11.6%	4.2%
Admits of: Adults aged 55 and over	3,116	56%	2.5%	6,185	55%	● 2.3%	6.1%	1.3%

* Key Growth components - adults over 55

- Growth through A&E but a decline by GP Admission.
- Highest growing HRG Chapters: Cardiac Surgery (up 7.7%), Musculoskeletal (up 7.7%), Respiratory (up 9.0%), Digestive System (up 7.5%).
- Increase in short length of stays, decline in long length of stays.

Emergency Admissions (Popn Growth Adj (Adults over 55)) - Summary by 'Admission Component'								Sep-11
Locality: TAUNTON & AREA Federation								
	Financial Year to Date (April - September 11)			12 months ending September 2011				Weighted Annual Growth Effect
	Total Admissions	%age share of total	%YTD growth	Total Admissions	%age share of total	% annual growth	% growth from 2008/9	
ALL ADMISSIONS	3,116		2.5%	6,185		● 2.3%	6.1%	2.3%
Admissions by Provider								
Admitted to: TAUNTON AND SOMERSET NHS FOUNDATION	2,832	91%	3.0%	5,635	91%	● 3.1%	8.7%	2.8%
Admitted to: SOMERSET PCT	147	5%	-11.0%	294	5%	● -6.2%	-18.6%	-0.3%
Admissions by Source								
Admits through: A&E or Dental Casualty Depts	1,792	58%	16.6%	3,390	55%	● 14.4%	27.6%	7.9%
Admits through: Emergency - GP	943	30%	-11.7%	1,907	31%	● -11.6%	-13.8%	-3.6%
Admissions by Health Resource Group (HRG) Chapter								
Admitted for: Cardiac Surgery and Primary Cardiac Cor	666	21%	5.2%	1,300	21%	● 7.7%	12.3%	1.6%
Admitted for: Musculoskeletal System	446	14%	8.3%	913	15%	● 7.7%	11.0%	1.1%
Admitted for: Respiratory System	354	11%	12.9%	747	12%	● 9.0%	5.9%	1.1%
Admitted for: Digestive System	346	11%	3.1%	724	12%	● 7.5%	10.1%	0.9%
Admission Stay:								
Admission stay: Zero Days	973	31%	7.4%	1,837	30%	● 6.1%	21.8%	1.8%
Admission stay: 1 Day	761	24%	13.5%	1,472	24%	● 6.9%	14.2%	1.6%
Admission stay: 2-3 Days	646	21%	7.1%	1,298	21%	● 4.5%	6.0%	0.9%
Admission stay: 4+ Days	736	24%	-14.4%	1,579	26%	● -7.0%	-12.6%	-1.8%

* Key Growth components - adults under 55

- High growth through A&E and by GP Admission (although A&E is higher).
- Highest growing HRG Chapters: Digestive system (up 25%), Cardiac Surgery (up 23%), Immunology... & contacts with Health Services (up 16%), Urinary Tract & Male Reproductive (up 29%), Respiratory (up 21%).
- Growth in all bands of length of stay.

Emergency Admissions (Popn Growth Adj (Adults under 55)) - Summary by 'Admission Component' Sep-11								
Locality: TAUNTON & AREA Federation								
	Financial Year to Date (April - September 11)			12 months ending September 2011				
	Total Admissions	%age share of total	%YTD growth	Total Admissions	%age share of total	% annual growth	% growth from 2008/9	Weighted Annual Growth Effect
ALL ADMISSIONS	1,642		9.8%	3,292		● 14.1%	11.6%	14.1%
Admissions by Provider								
Admitted to: TAUNTON AND SOMERSET NHS FOUNDATION	1,477	90%	11.9%	2,966	90%	● 17.3%	15.6%	15.6%
Admitted to: SOMERSET PARTNERSHIP NHS FOUNDATION	80	5%	14.5%	139	4%	● -9.4%	-24.4%	-0.4%
Admissions by Source								
Admits through: A&E or Dental Casualty Depts	882	54%	26.4%	1,691	51%	● 23.9%	26.2%	12.3%
Admits through: Emergency - GP	493	30%	3.4%	994	30%	● 13.0%	6.0%	3.9%
Admissions by Health Resource Group (HRG) Chapter								
Admitted for: Digestive System	372	23%	22.1%	725	22%	● 24.9%	35.1%	5.5%
Admitted for: Cardiac Surgery and Primary Cardiac Cor	189	12%	9.9%	418	13%	● 23.7%	21.4%	3.0%
Admitted for: Immunology, Infectious Diseases and ot	224	14%	-1.6%	448	14%	● 16.7%	-1.8%	2.3%
Admitted for: Urinary Tract and Male Reproductive Sys	71	4%	26.4%	150	5%	● 29.1%	-6.0%	1.3%
Admitted for: Respiratory System	96	6%	12.5%	203	6%	● 21.3%	55.0%	1.3%
Admission Stay:								
Admission stay: Zero Days	744	45%	7.9%	1,421	43%	● 13.3%	24.0%	5.7%
Admission stay: 1 Day	406	25%	7.8%	822	25%	● 13.5%	6.0%	3.4%
Admission stay: 2-3 Days	286	17%	17.3%	600	18%	● 18.4%	16.3%	3.4%
Admission stay: 4+ Days	205	13%	11.1%	448	14%	● 12.0%	-12.2%	1.6%

- Digestive System Admissions in Adults aged under 55 as an example of...

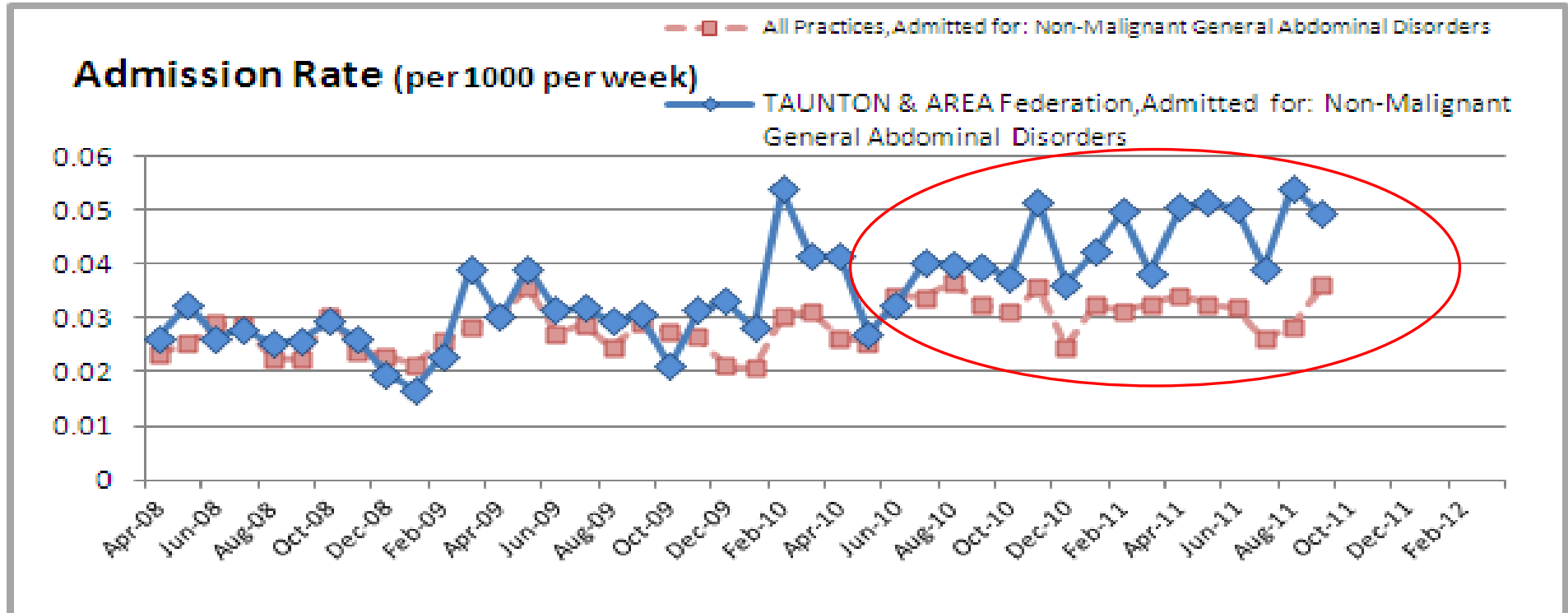
RESEARCHING THESE VARIANCES FURTHER

Digestive System < 55yrs

- Create a NERRT2 analysis tool just for admission for Digestive System in adults aged under 55.
- We can observe that:
 - 725 admissions which are up by 24.9% in the past year.
 - 49% (359 admits) of all admissions through GP, up by 11.2%
 - 39% (283 admits) of all admissions through A&E, up by 44.0%
 - 53% (382 admits) of all admissions coded for “Non-Malignant General Abdominal Disorders” (NMGADs). This is up by 28.3% in the same year.
 - All lengths of stay up: (Zero LOS up by 38.1%, 4+ day LOS up by 28.1%)
 - Some Practice Variation that may be worthy of consideration.
- Bridgwater shows the same trends which may suggest the value of some joint working on this issue.

Non Malignant General Abdominal Disorders

- 53% of all Digestive System admissions in adults under 55. Up by 28.2% in the past year.
- NERRT2 trend show a distinct deviation from the Somerset average starting around Aug 2010.
- Similar trend observable for Bridgwater Federation.



Next Steps

- Digestive System in adults < 55 presented as an example.
- Next Steps could include:
 - Eliminate changes in coding as a cause of observed results (already initiated)
 - Individual patient audit of 382 admissions for NMGAD.
 - Clinical consideration as to why the difference between GP & A&E growth.
 - Joint working with Bridgwater to understand admission processes for Digestive System at Musgrove Park Hospital
- Other areas of interest can be analysed to similar detail.
- Example NERRT2 reports (by Admission component and by Practice) are included in the handout.

End of results

For further queries contact:

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