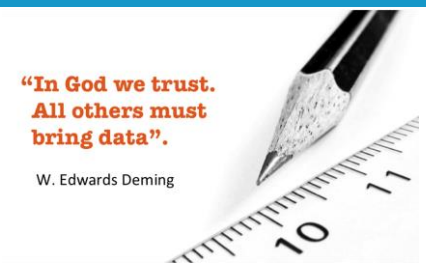
NHS
Ambulatory Emergency Care Network

Measurement Factsheets

#3 – Understanding the Potential Demand for AEC



What is the purpose of this factsheet?

A common question amongst people starting out on their AEC Journey is 'how can we understand the potential demand for our AEC Unit?' This fact sheet provides guidance on the process you can follow to analyse your admitted data set to understand the number of patients that will convert from overnight admission to same day care.

A Starting Point

The Directory of Ambulatory Emergency Care for Adults contains a list of Clinical Conditions that can be commonly managed in an AEC environment. Whilst it is not designed to be used as a demand management tool or an exhaustive list of conditions that can be managed in an ambulatory way, it does offer a useful starting point for anyone wishing to understand the potential demand for AEC.

Each condition/scenario is listed along with some HRG codes and ICD-10 codes as shown here:

Condition/Scenario	HRG Codes 14/15	HRG Codes 13/14 Detail	% potential ambulatory care (primary ICD-10 coded admissions)	Specific Safety Issues (not Exhaustive)	Evidence
Deep Vein Thrombosis	QZ20Z	Deep Vein Thrombosis	Very high – >90%	Thrombophilia or possible malignancy.	Procedures for the outpatient management of patients with deep venous thrombosis http://tinyurl.com/mepu8f8
ICD-10	I80.1, I80.2/I82.2 I80.3, M79.6, M79.8				

HRG codes for each primary diagnosis with the potential for ambulatory care are included. ICD-10 codes that make up this HRG are also included. The AEC Network Measurement Team has produced a spreadsheet containing all of these ICD-10 codes to facilitate analysis of your admitted data set to reveal patients that could potentially be converted from overnight admission to AEC.

What Analysis to Carry Out

By analysing your historic admitted patient data set and identifying patient episodes which match these ICD-10 codes or HRG codes, you will be able to understand the potential numbers of patients that your AEC Unit might deal with. An example of this analysis is shown below. Note that this analysis has focused on short stay patients within the historical admitted patient data set. The analysis **excludes elective patients**. Tariff data has then been added to understand the potential financial flows associated with this service change. This is a very useful step towards using the AEC Network Return on Investment Tool.

					% potential ambulatory care[2]		
Patient Spells[1]		**LOS Days**			**Min**	**Mid**	**Max**
ICD10 Diagnosis	**0**	**1**	**2**	**Total**	**30%**	**45%**	**60%**
Angina pectoris							
Angina pectoris with documented spasm	2	3	2	7	2	3	4
Angina pectoris, unspecified	67	137	30	234	70	105	140
Other forms of angina pectoris		1		1	0	0	1
Pain in throat and chest							
Chest pain, unspecified	294	219	50	563	169	253	338
Other chest pain	123	101	21	245	74	110	147
Precordial pain	105	85	25	215	65	97	129
Total	**591**	**546**	**128**	**1265**	**380**	**569**	**759**
Bed Days (over midnight stays)	**0**	**546**	**256**	**802**	**241**	**361**	**481**

					% potential ambulatory care[2]		
Tariff 2014/15[3]		**LOS Days**			**Min**	**Mid**	**Max**
ICD10 Diagnosis	**0**	**1**	**2**	**Total**	**30%**	**45%**	**60%**
Angina pectoris							
Angina pectoris with documented spasm	£1,224	£1,836	£1,224	£4,284	£1,285	£1,928	£2,570
Angina pectoris, unspecified	£41,004	£85,496	£20,931	£147,431	£44,229	£66,344	£88,459
Other forms of angina pectoris		£612		£612	£184	£275	£367
Pain in throat and chest							
Chest pain, unspecified	£178,400	£135,983	£33,500	£347,883	£104,365	£156,547	£208,730
Other chest pain	£75,127	£61,812	£14,339	£151,278	£45,383	£68,075	£90,767
Precordial pain	£64,260	£51,346	£21,385	£136,991	£41,097	£61,646	£82,195
Total	**£360,015**	**£337,085**	**£91,379**	**£788,479**	**£236,544**	**£354,816**	**£473,087**

Focus on patients with a zero, one or two day length of stay as these are most likely to convert to ambulatory care

Patient numbers can be converted to bed days

The analysis above also factors in the "% potential ambulatory care (primary ICD-10 coded admissions)" guidance from the Directory and shows it here as Min, Mid and Max range estimates.

Tariff data can be added

When interpreting this analysis you should bear in mind 'time of arrival' as this will help you plan your service opening times. It is also helpful to understand the numbers of patients that your opening hours may be excluding and to work with clinical teams to devise a process to book patients for the next day. It is important to note that this analysis will also highlight your highest volume clinical scenarios which will be useful in planning your service and designing staff training.

Some Issues to Consider

Clinical Coding

1. With the development of any new service it is crucial to understand the case mix of patients. This is typically achieved by considering the diagnoses that patients are given. Clinical coding is the process that converts information in patient notes into an agreed set of diagnosis and therefore HRG codes. This presents two problems: Robust, accurate and timely clinically coded data can only be created if the Clinical Coding Team have access to clear and legible clinical information that is accurate reflection of the patients' hospital encounter. Vague, ambiguous and/or incomplete clinical statements may potentially result in the assignment of codes that cannot be considered a true representation of the actual episode of care.
2. Diagnosis codes represent the end result of the diagnostic process whereas decisions about whether to place patients within an AEC unit are based on likely or possible diagnoses. So for example, if a patient has suspected Cellulitis, they will be directed to AEC. If they do they will be given a Cellulitis diagnosis code. If they don't, they will be given one of a number of other codes depending on what has been found. However, it may be still entirely correct that they have been treated in an ambulatory fashion.

So in order to address these two issues and use the Directory codes effectively for this analysis to reveal potential AEC activity, it is recommended that clinical teams and clinical coders work closely together to understand each other's information needs and requirements.

Similar Analysis Once You Are Up and Running

It is worthwhile repeating your analysis once the AEC Unit is open to understand:

- What types of patients with ambulatory sensitive conditions are being admitted or not referred to the AEC Unit for some reason—for example factors such as a day or time of arrival—and then take action to address or increase your volume of activity
- The percentage of patients treated in the AEC Unit per clinical scenario to understand if you are in line with potential percentages given in the Directory.

Some sites have found it useful to have a daily report on admitted patients to understand why they have been admitted overnight with ambulatory sensitive conditions. This allows continuous review and learning which helps drive further process improvements.

% of AEC sensitive conditions treated in an AEC Location

Admit In / Out of Hours? (All)

AEC Condition/ scenario (based on primary diagnosis)	AEC Threshold	%AEC sensitive conditions treated in AEC Location	AEC Activity	NEL (non AEC) IP Activity
Low risk chest pain	30-60%	5.5%	103	1759
Acute abdominal pain not requiring operative intervention	30-60%	6.5%	107	1528
Deep vein thrombosis	>90%	95.2%	1104	1157
Self-harm & Accidental Overdose part 2 (must incl. part 1)	60-90%	1.0%	8	810
Community-acquired pneumonia	10-30%	0.8%	6	793
Urinary tract infections	30-60%	3.4%	26	749
Chronic obstructive pulmonary disease (COPD)	10-30%	0.8%	6	714
Falls including syncope or collapse	60-90%	2.3%	15	637
Stroke	10-30%	0.4%	2	548
Head injury	60-90%	0.8%	4	517