Information to support
practice clusters and locality planning

## Lyall Cameron

Primary Care Information Manager

NHS Ayrshire & Arran

Agenda

- Existing Systems

    - Primary Care Information System
    - Management Reports
    - Locality Planning Tool

- Current & Future Developments

    - Practice Cluster Reporting
    - Complex Patients
    - Enhanced Medication Summary
    - Dashboards

- Q&A

Primary Care Information System

Primary Care Information System

NHS Ayrshire & Arran
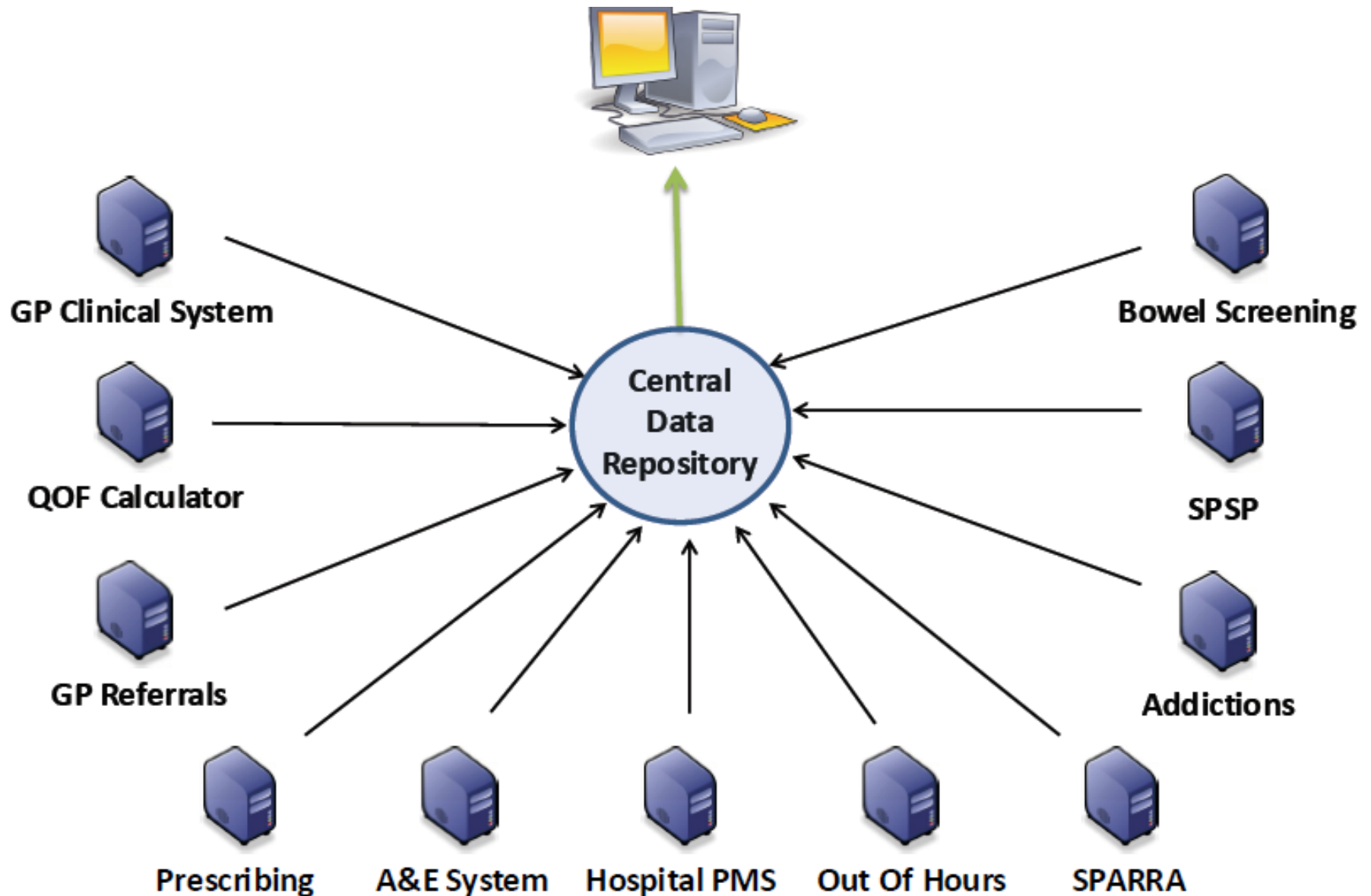
Practice - 80   (Practice)

Practice Profile

Demographics

Deprivation

Basic Health

Disease Registers

Disease Registers (Age / Gender)

Multi-morbidity

GMS Contract

QOF Achievement

QOF Exceptions

QOF Registers

Continuous Quality Improvement

Complex Patients

Polypharmacy

Secondary Care / Out Of Hours

A&E Attendances

Emergency Admissions

Elective Admissions

Referrals

Out Of Hours

Enhanced Services

Activity and Payment

FLU Vaccine Uptake

Other Services

Addictions

Bowel Screening

Demographics

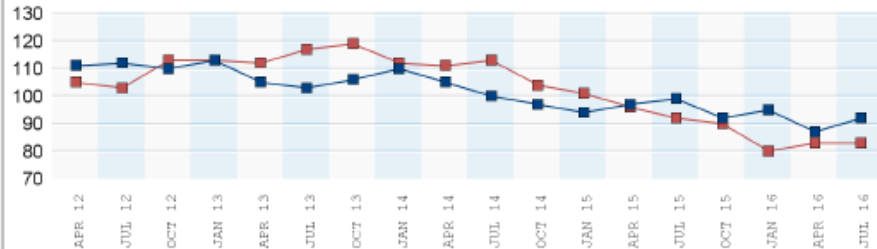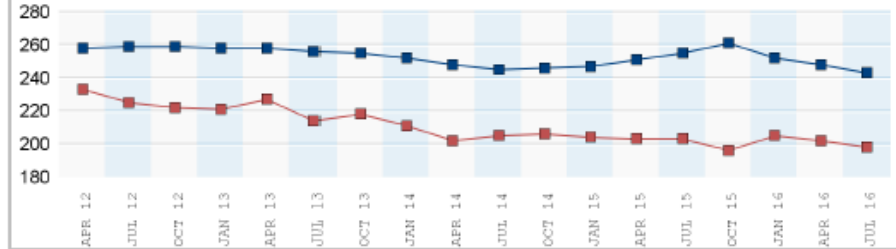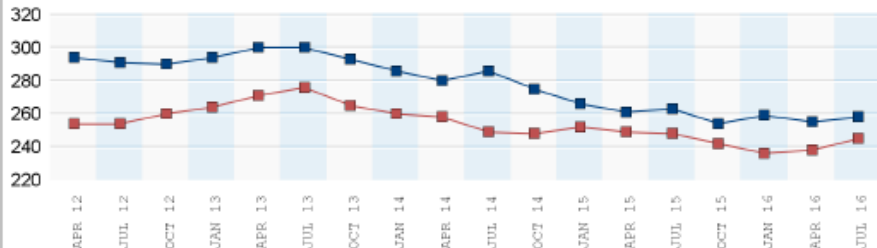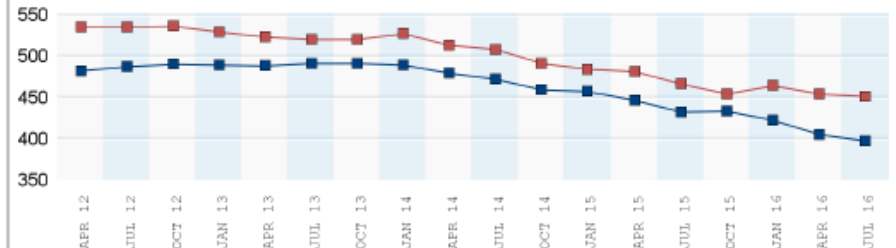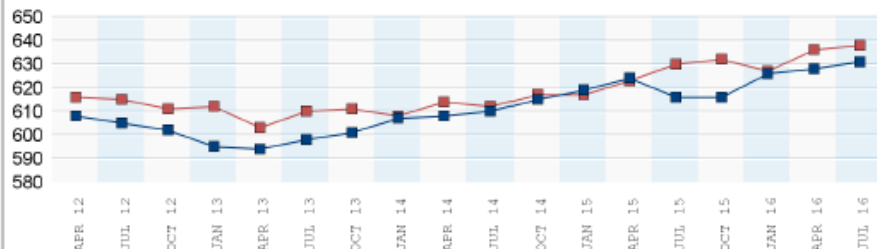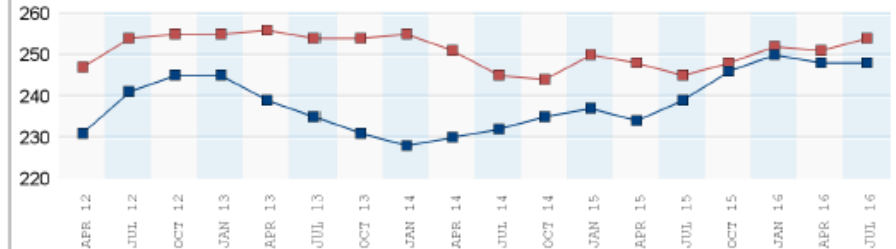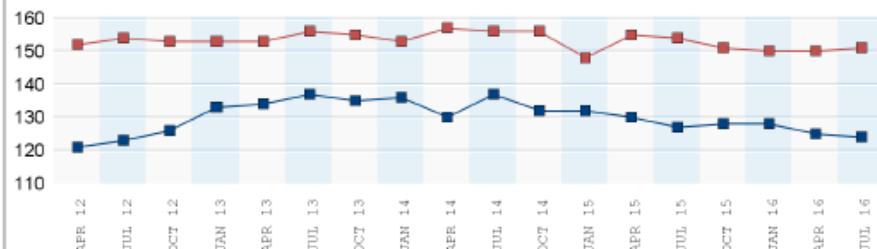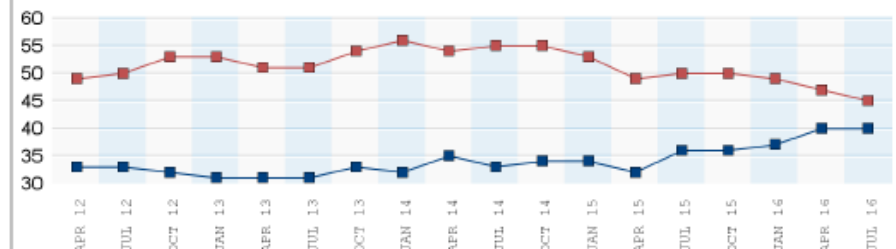The data extracted is pseuo-anonymised (the CHI is encrypted),
Please run the A&A QOF Disease Register Clinical Audits via EMIS Web to view the reports containing patient data

Disease	Reg Size	Prevalence	Num Not On Reg	Possible Prevalence	% On Reg	AA % On Reg	Ratio
AF	83	2.02%	67	3.66%	55.3%	43.3%	**1.28**
Asthma	349	8.51%	68	10.17%	83.7%	84.5%	0.99
Cancer	130	3.17%	331	11.24%	28.2%	38.0%	0.74
CHD	247	6.02%	162	9.97%	60.4%	42.6%	**1.42**
CKD	297	7.24%	28	7.92%	91.4%	83.0%	1.10
COPD	191	4.66%	142	8.12%	57.4%	53.4%	1.07
Dementia	72	1.76%	58	3.17%	55.4%	55.1%	1.01
Depression	327	7.97%	826	28.11%	28.4%	46.6%	**0.61**
DM	296	7.22%	22	7.75%	93.1%	90.6%	1.03
Epilepsy	48	1.17%	146	4.73%	24.7%	23.3%	1.06
HF	45	1.10%	55	2.44%	45.0%	29.4%	**1.53**
Hypertension	753	18.36%	57	19.75%	93.0%	81.5%	**1.14**
LD	36	0.88%	22	1.41%	62.1%	41.2%	**1.51**
MH	35	0.85%	144	4.36%	19.6%	16.4%	1.19
Obesity	557	13.58%	6	13.73%	98.9%	98.6%	1.00
Osteoporosis	23	0.56%	110	3.24%	17.3%	19.2%	0.90
PC	5	0.12%	0	0.12%	100.0%	96.9%	1.03
PVD	65	1.58%	194	6.31%	25.1%	18.0%	**1.40**
RA	31	0.76%	181	5.17%	14.6%	26.5%	**0.55**
STIA	156	3.80%	139	7.19%	52.9%	35.5%	**1.49**
Thyroid	175	4.27%	2	4.31%	98.9%	94.7%	**1.04**

These figures are aggregated numbers, based on our EMIS Web extract for A&A Practices with a sharing agreement and consent in place. Our extract is pseuo-anonymised (the CHI is encrypted), if you want a list of possible patients for each register, please run the A&A QOF Disease Register Clinical Audits via the EMIS Web application.

A&A Practices - Disease Prevalence with Possible Prevalence Stacked

A&A Practices - Percentage Register with Possible Patients Stacked

Multi-morbitity Data from EMIS Web (01/07/2016)
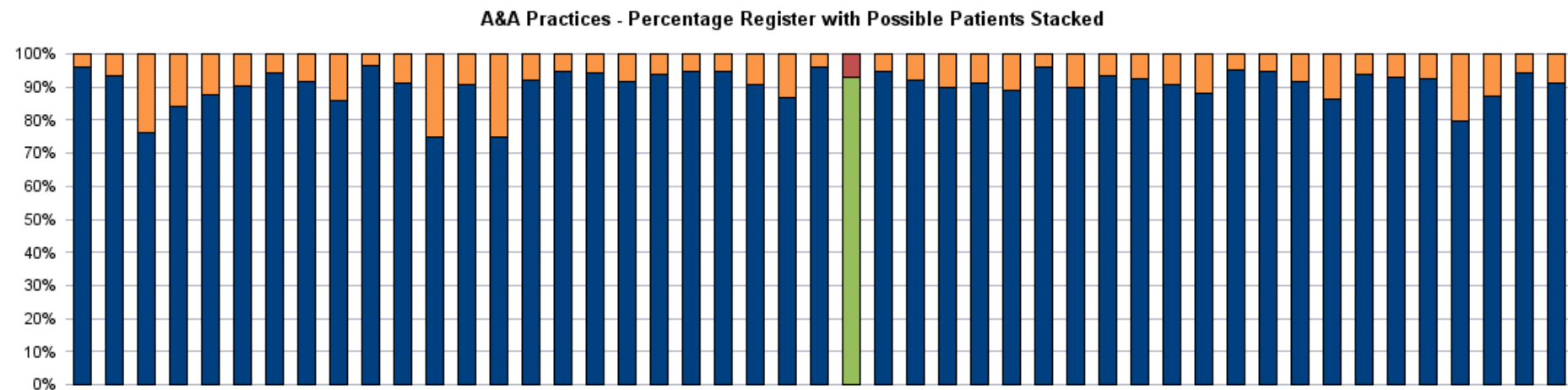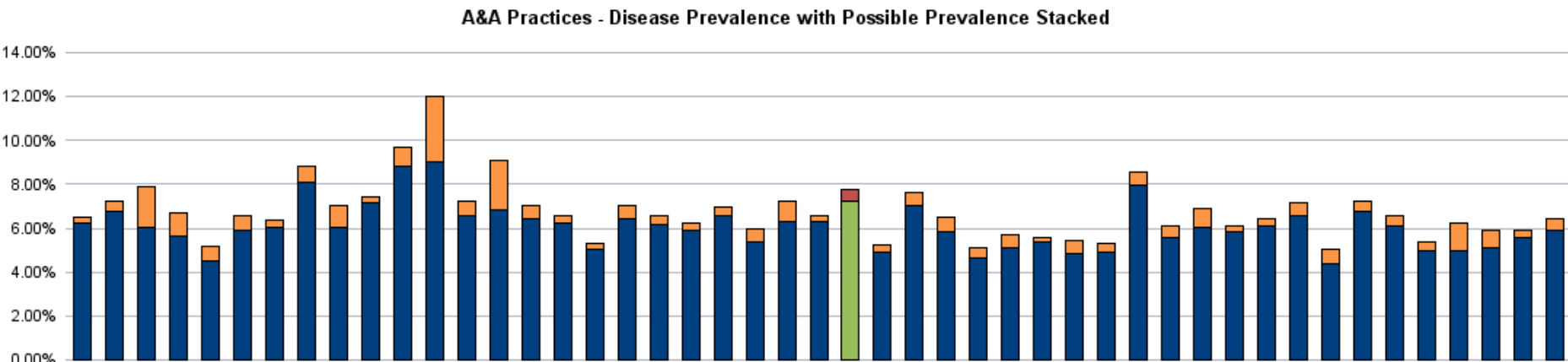
Disease Count	Patients	Practice Rate	AA Rate	Ratio
0	2,414	58.85%	61.96%	0.95
1	834	20.33%	21.08%	0.96
2	420	10.24%	9.16%	1.12
3	223	5.44%	4.41%	1.23
4	116	2.83%	2.08%	**1.36**
5+	95	2.32%	1.32%	**1.75**

Percentage of Listsize with Chronic Disease Count

Ref Date - 01/07/2016   Practice - 80

ONE	TWO	THREE	FOUR	FIVE +

A&A Practices
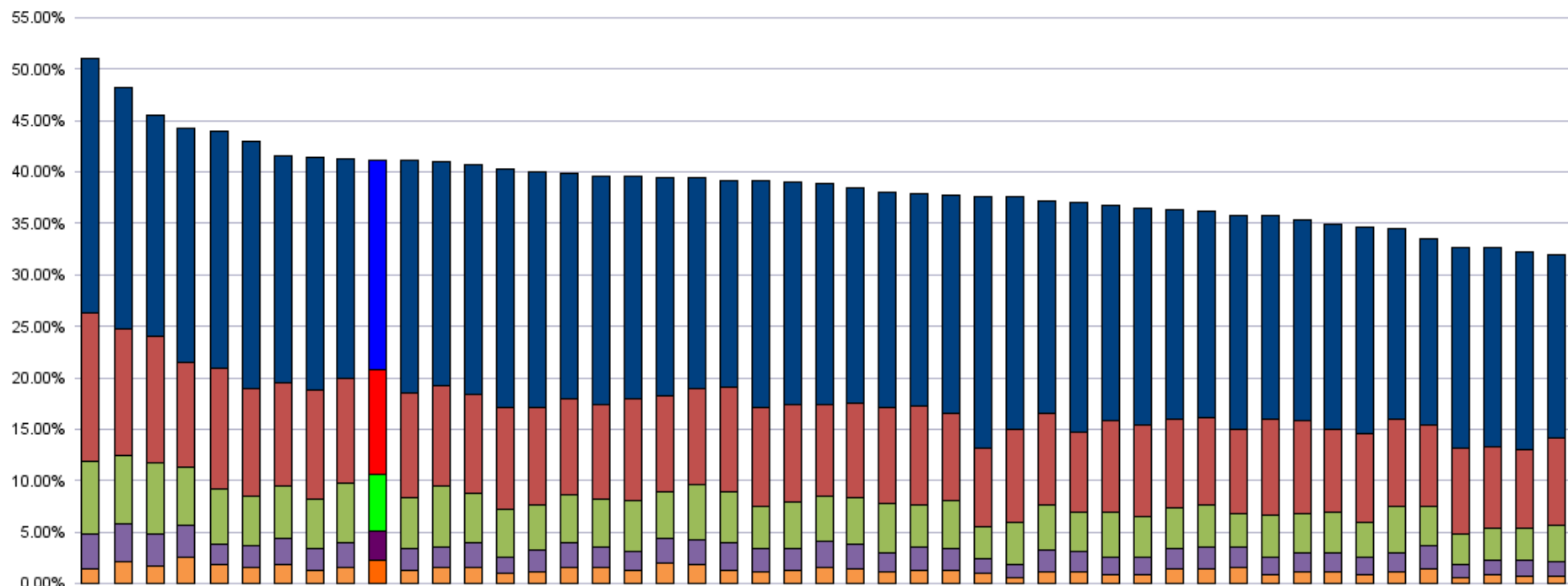
Click Here to complete your 'Monthly Declaration Form' when you are satisfied your monthly activity is accurate.

Click below for ES Reports	Estimated Payment	Apr	May	Jun	Jul	Aug	Total
	Estimated Payment	£368	£132	£4,648	£296	£841	£6,285
Anti-Coagulation Level 3		30	29	29	28	29	
		£0	£0	£823	£0	£0	£823.31
Carers		52	52	52	53	53	
		£0	£0	£0	£0	£0	£0.00
Contraceptive Implant - Insertions		2	1	2	0	1	6
		£52	£26	£52	£0	£26	£154.86
Contraceptive Implant - Removals		2	1	3	2	1	9
		£62	£31	£92	£62	£31	£277.11
Diabetes GP Care		253	250	249	249	250	
		£0	£0	£1,537	£0	£0	£1,536.51
Diabetes Insulin Initiation (DSN)		2	0	0	0	0	2
		£100	£0	£0	£0	£0	£100.00
Diabetes Insulin Initiation (Practice)		0	0	0	0	0	0
		£0	£0	£0	£0	£0	£0.00
Disease Modifying Drugs		43	49	47	50	50	
		£0	£0	£1,213	£0	£0	£1,213.07
Helicobacter Pylori		3	1	4	3	1	12
		£75	£25	£100	£75	£25	£300.00
Hepatitis B Completed		0	0	0	0	0	0
		£0	£0	£0	£0	£0	£0.00
Hepatitis B Exceptions		0	0	0	0	0	0
		£0	£0	£0	£0	£0	£0.00
IUCD Fitting		1	0	1	2	0	4
		£80	£0	£80	£160	£0	£319.68
IUCD Register		143	142	141	145	144	
		£0	£0	£752	£0	£0	£751.53
Learning Disability		34	36	36	36	36	
		£0	£0	£0	£0	£759	£759.14
Ring Pessary		0	1	0	0	0	1
		£0	£50	£0	£0	£0	£50.00

Some specialties have been grouped, use the left-hand column to drill down to individual specialties. The right-hand column contains hyperlinks to more detailed reports.

SpecialtyGroupL1	Referrals	Rate / 1000	AA Rate / 1000	Ratio	% Urgent	AA % Urgent	Urgency Ratio	Comparison Reports
Addictions	14	3.42	3.46	0.99	7.14%	14.21%	0.50	Addictions
Anaesthetics	5	1.22	1.86	0.66	0.00%	5.32%	0.00	Anaesthetics
Audiology	33	8.05	6.54	1.23	0.00%	1.23%	0.00	Audiology
Cancer Suspected	153	37.34	18.68	2.00	100.00%	100.00%	1.00	Cancer Suspected
Cardiology	107	26.12	15.60	1.67	23.36%	22.80%	1.02	Cardiology
Colorectal	25	6.10	5.01	1.22	20.00%	33.11%	0.60	Colorectal
Dermatology	147	35.88	21.75	1.65	29.93%	21.71%	1.38	Dermatology
Diagnostics	59	14.40	7.69	1.87	30.51%	34.43%	0.89	Diagnostics
Dietetics	72	17.57	9.46	1.86	4.17%	5.80%	0.72	Dietetics
Endocrinology and Diabetes	33	8.05	4.05	1.99	30.30%	17.23%	1.76	Endocrinology and Diabetes
ENT	115	28.07	18.46	1.52	23.48%	16.16%	1.45	ENT
Gastroenterology	42	10.25	6.58	1.56	21.43%	26.45%	0.81	Gastroenterology
General Medicine	3	0.73	0.71	1.03	0.00%	17.52%	0.00	General Medicine
General Surgery	115	28.07	21.81	1.29	13.91%	20.79%	0.67	General Surgery
Geriatric Medicine	39	9.52	2.49	3.83	17.95%	14.02%	1.28	Geriatric Medicine
Gynaecology	81	19.77	13.61	1.45	24.69%	18.33%	1.35	Gynaecology
Haematology	5	1.22	2.02	0.60	40.00%	24.42%	1.64	Haematology
MH	155	37.83	34.55	1.10	20.65%	14.26%	1.45	MH
MSK_Physio	335	81.77	49.94	1.64	15.22%	13.64%	1.12	MSK_Physio
Neurology	34	8.30	6.92	1.20	26.47%	18.98%	1.39	Neurology
Obstetrics	1	0.24	0.69	0.36	0.00%	18.56%	0.00	Obstetrics
Ophthalmology	27	6.59	4.79	1.38	22.22%	10.16%	2.19	Ophthalmology
Oral and Maxillofacial Surgery	14	3.42	2.37	1.44	28.57%	20.50%	1.39	Oral and Maxillofacial Surgery
Other Specialty	44	10.74	7.12	1.51	18.18%	13.49%	1.35	Other Specialty
Paediatrics	82	20.01	9.34	2.14	9.76%	11.70%	0.83	Paediatrics
Plastic Surgery	5	1.22	1.38	0.89	0.00%	12.67%	0.00	Plastic Surgery
Podiatry	83	20.26	6.57	3.08	3.61%	7.72%	0.47	Podiatry
Renal Medicine	3	0.73	0.99	0.74	0.00%	13.98%	0.00	Renal Medicine

Dermatology Referral Rate / 1000 Patients (01/09/2015 - 31/08/2016)

Practice - 80

Number of Dermatology Referrals by GP (01/09/2015 - 31/08/2016)

Practice - 80

Referring GP - Routine (Blue) / Urgent (Orange)
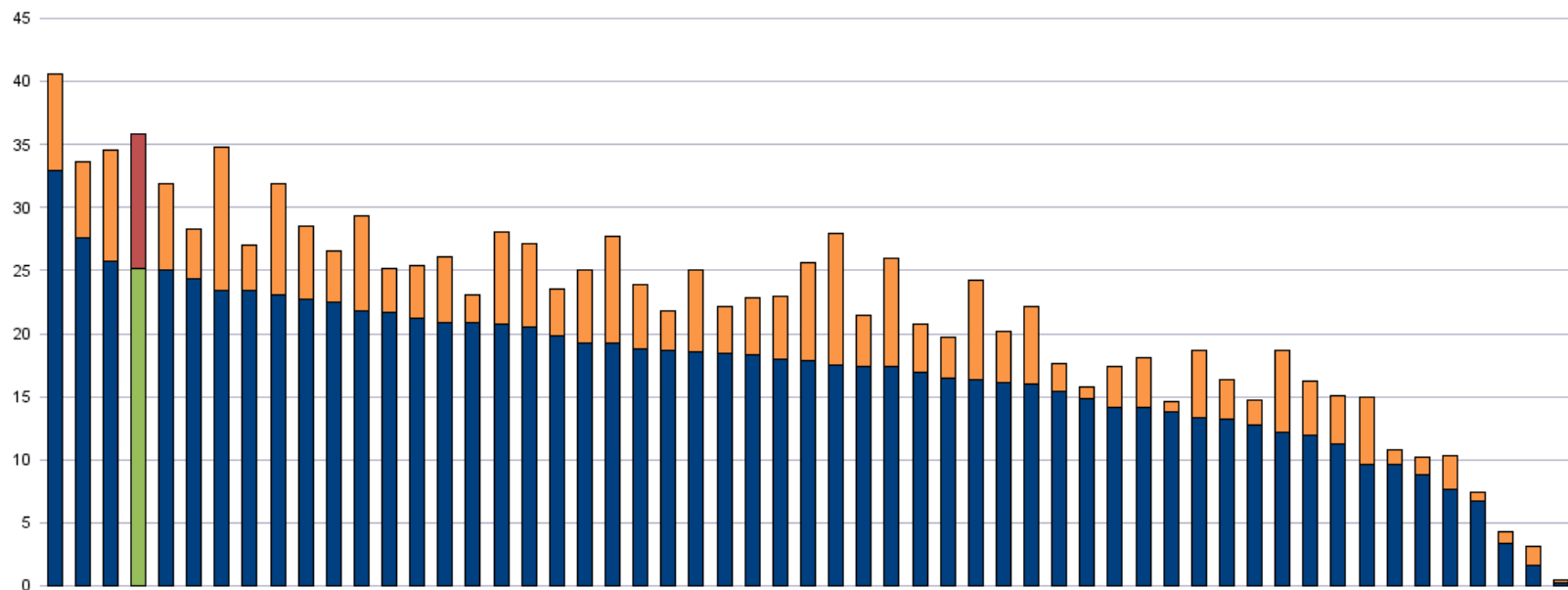
Management Reports

- Suite of reports used by primary care management team

- Data visible for all practices

- Standard Deviation to identify specific data for attention

Disease Register Trends By Practice
Diabetes

	01/04/2012			01/04/2013			01/04/2014			01/04/2015			01/04/2016		
A&A	5.17%			5.41%			5.59%			5.70%			5.87%		
	Reg	Prev	Diff	Reg	Prev	Diff	Reg	Prev	Diff	Reg	Prev	Diff	Reg	Prev	Diff
80	448	5.23%		455	5.31%	7	478	5.58%	23	511	5.96%	33	535	6.24%	24
80	256	6.28%		265	6.50%	9	263	6.45%	-2	261	6.40%	-2	274	6.72%	13
80	491	5.75%		502	5.87%	11	496	5.80%	-6	499	5.84%	3	504	5.90%	5
80	251	4.72%		262	4.93%	11	278	5.23%	16	283	5.33%	5	299	5.63%	16
80	87	3.89%		97	4.34%	10	96	4.29%	-1	96	4.29%	0	103	4.60%	7
80	463	5.21%		480	5.40%	17	490	5.51%	10	488	5.49%	-2	506	5.69%	18
80	477	5.44%		492	5.61%	15	504	5.74%	12	508	5.79%	4	493	5.62%	-15
80	447	5.57%		462	5.76%	15	471	5.87%	9	464	5.78%	-7	473	5.89%	9
80	438	5.50%		466	5.85%	28	464	5.82%	-2	469	5.89%	5	482	6.05%	13
80	109	7.30%		115	7.70%	6	118	7.90%	3	118	7.90%	0	121	8.10%	3
80	317	5.15%		342	5.56%	25	363	5.90%	21	371	6.03%	8	375	6.09%	4
80	406	5.20%		416	5.33%	10	449	5.75%	33	461	5.91%	12	469	6.01%	8
80	767	6.28%		830	6.79%	63	856	7.00%	26	844	6.91%	-12	873	7.14%	29
80	111	8.26%		118	8.78%	7	115	8.56%	-3	119	8.85%	4	121	9.00%	2
80	293	8.29%		300	8.49%	7	305	8.63%	5	315	8.91%	10	315	8.91%	0
80	337	5.49%		353	5.75%	16	370	6.03%	17	383	6.24%	13	399	6.50%	16
80	296	5.85%		324	6.40%	28	329	6.50%	5	338	6.68%	9	346	6.84%	8
80	331	5.44%		338	5.55%	7	343	5.63%	5	343	5.63%	0	342	5.62%	-1
80	251	5.98%		260	6.19%	9	263	6.27%	3	271	6.46%	8	268	6.39%	-3
80	212	5.47%		219	5.65%	7	229	5.91%	10	233	6.01%	4	243	6.27%	10
80	356	4.09%		369	4.24%	13	385	4.43%	16	414	4.76%	29	440	5.06%	26
80	212	4.95%		221	5.16%	9	245	5.72%	24	262	6.12%	17	276	6.44%	14
80	787	5.65%		789	5.66%	2	807	5.79%	18	818	5.87%	11	848	6.08%	30
80	406	5.25%		431	5.58%	25	434	5.62%	3	439	5.68%	5	449	5.81%	10
80	688	5.48%		743	5.92%	55	784	6.24%	41	797	6.35%	13	822	6.54%	25
80	535	4.81%		554	4.98%	19	564	5.07%	10	587	5.27%	23	613	5.51%	26
80	599	4.84%		656	5.30%	57	672	5.43%	16	670	5.41%	-2	680	5.49%	10
80	398	4.93%		408	5.06%	10	425	5.27%	17	413	5.12%	-12	423	5.24%	10
80	212	5.79%		218	5.95%	6	215	5.87%	-3	226	6.17%	11	225	6.14%	-1
80	228	5.56%		236	5.75%	8	238	5.80%	2	247	6.02%	9	256	6.24%	9
80	251	6.44%		264	6.78%	13	310	7.96%	46	297	7.63%	-13	320	8.22%	23
80	272	6.64%		263	6.42%	-9	273	6.66%	10	281	6.86%	8	294	7.18%	13
80	391	3.77%		419	4.04%	28	446	4.31%	27	488	4.71%	42	511	4.93%	23
80	323	4.83%		333	4.98%	10	329	4.92%	-4	339	5.07%	10	341	5.10%	2

H&SCP Information System

- System developed to support planning within South Ayrshire H&SCP

- Included many of PCIS data sources

- New extract required from all GP practices (patient's CHI number, postcode and anonymous ID)

- Linked to SIMD data to group patients by SIMD datazone

H&SCP Information System

- System contains 5 geographical levels of reporting

  ➢ All Patients (data from all consenting practices)
    ➢ HSCP (e.g South Ayrshire H&SCP)
      ➢ Locality (e.g Ayr South & Coylton)
        ➢ Neighbourhood (e.g Alloway & Doonfoot)
          ➢ Datazone (e.g S01005550)

- Currently no practice/patient level data available

South Ayrshire H&SCP Information System

Demographics	Basic Health	Chronic Disease	Planned Care	Unscheduled Care	Other Services	Social Services	Summary by Area
Populations by Area	Smoking Status	Multi-Morbidity	Referrals By Area	Out Of Hours	Addictions	Home Care	South Ayrshire Practices
Populations by Age/Gender	Alcohol Consumption	Disease Registers	Referrals by Specialty (All)	A&E Attendances	Community Nursing	OT	HSCP Summary
Deprivation	BMI		Referrals by Specialty (HSCP)	Emergency Admissions	AHPs	Social Work	Locality
Birth Rates	Blood Pressure		Referrals by Specialty (Locality)		ICES	Education	
Death Rates			Elective Admissions		Telecare		
			Out-Patient Attendances		Emergency Services		

Multi-Morbidity

	0	1	2	3	4	5	6	7	8	9	10+
South Ayrshire Practices	39,473	13,257	5,875	2,817	1,277	513	186	53	14	3	2
	62.19%	20.89%	9.26%	4.44%	2.01%	0.81%	0.29%	0.08%	0.02%	0.00%	0.00%

	0	1	2	3	4	5	6	7	8	9	10+
South Ayrshire HSCP	37,175	12,516	5,552	2,666	1,213	476	174	44	11	2	2
	62.13%	20.92%	9.28%	4.46%	2.03%	0.80%	0.29%	0.07%	0.02%	0.00%	0.00%
Other HSCP	2,008	659	295	142	61	35	11	9	3	1	
	62.28%	20.44%	9.15%	4.40%	1.89%	1.09%	0.34%	0.28%	0.09%	0.03%	
Unknown	290	82	28	9	3	2	1				
	69.88%	19.76%	6.75%	2.17%	0.72%	0.48%	0.24%				

	0	1	2	3	4	5	6	7	8	9	10+
Troon	11,804	3,907	1,693	745	311	140	47	12	1		1
	63.25%	20.94%	9.07%	3.99%	1.67%	0.75%	0.25%	0.06%	0.01%		0.01%
Prestwick	3,326	1,046	471	223	97	42	12	3	2		
	63.69%	20.03%	9.02%	4.27%	1.86%	0.80%	0.23%	0.06%	0.04%		
Ayr North and Former Coalfield Communities	3,573	1,241	514	289	130	58	13	2	1	1	
	61.37%	21.32%	8.83%	4.96%	2.23%	1.00%	0.22%	0.03%	0.02%	0.02%	
Ayr South and Coylton	8,829	2,894	1,338	678	334	115	47	13	3	1	
	61.95%	20.31%	9.39%	4.76%	2.34%	0.81%	0.33%	0.09%	0.02%	0.01%	
Maybole and North Carrick Villages	5,207	1,805	757	367	160	57	24	7			
	62.11%	21.53%	9.03%	4.38%	1.91%	0.68%	0.29%	0.08%			
Girvan and South Carrick Villages	4,436	1,623	779	364	181	64	31	7	4		1
	59.23%	21.67%	10.40%	4.86%	2.42%	0.85%	0.41%	0.09%	0.05%		0.01%

	0	1	2	3	4	5	6	7	8	10+
Girvan	2,213	825	358	175	81	27	15	2	1	
	59.86%	22.32%	9.68%	4.73%	2.19%	0.73%	0.41%	0.05%	0.03%	
South Carrick Villages	2,223	798	421	189	100	37	16	5	3	1
	58.61%	21.04%	11.10%	4.98%	2.64%	0.98%	0.42%	0.13%	0.08%	0.03%

	0	1	2	3	4	5	6	7	8	10+
S01005522	336	141	76	33	17	11	3	3		
	54.19%	22.74%	12.26%	5.32%	2.74%	1.77%	0.48%	0.48%		
S01005523	427	133	69	34	17	4			2	
	62.24%	19.39%	10.06%	4.96%	2.48%	0.58%			0.29%	

Current & Future Developments

- Recent upgrade to new BO version

- Merge practice and locality systems

- Update universe and reports to support clusters

- Complex Patients

- Enhanced Medication Summary

- Dashboards

- New modules

Current Developments
Supporting Clusters
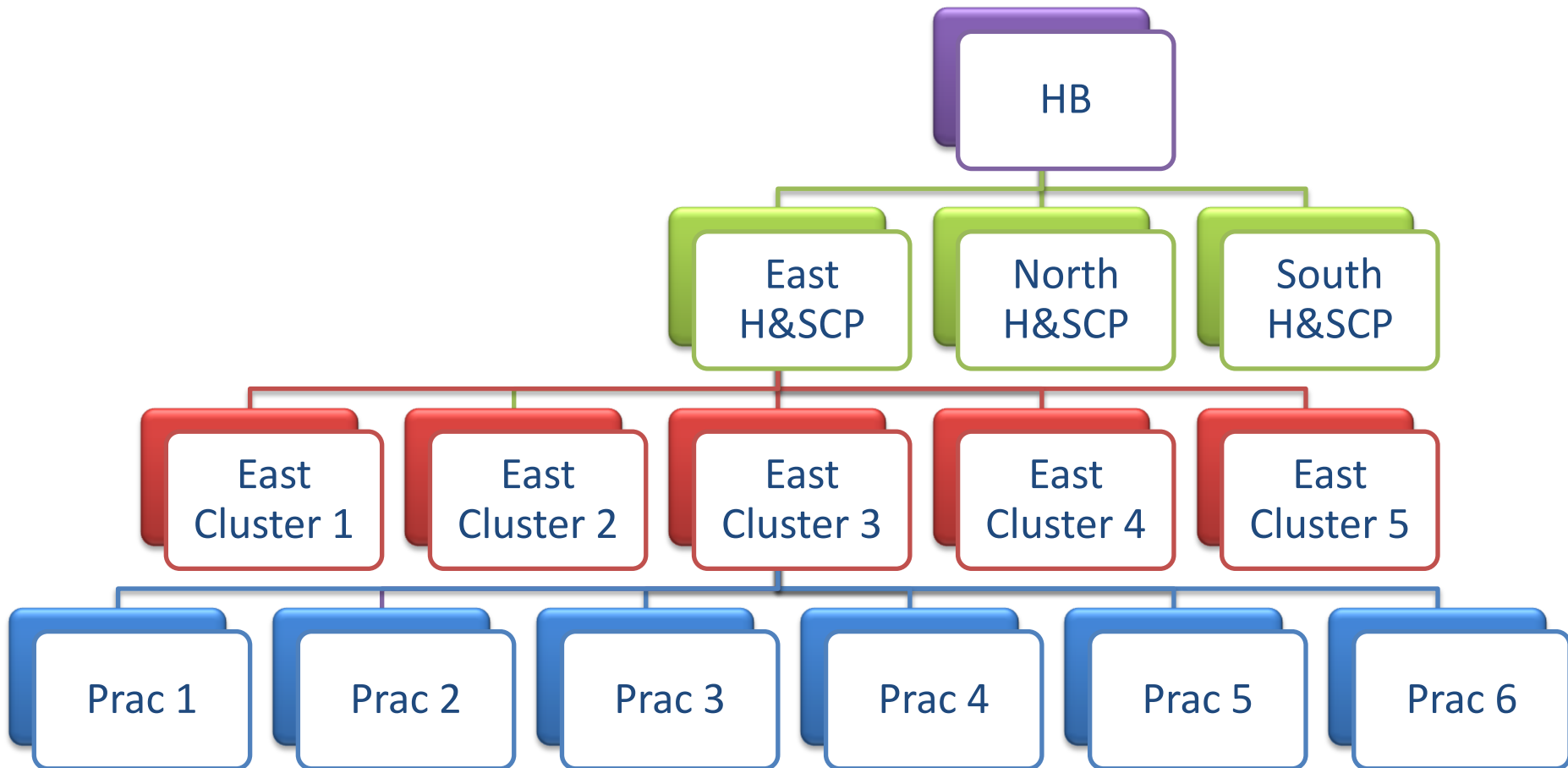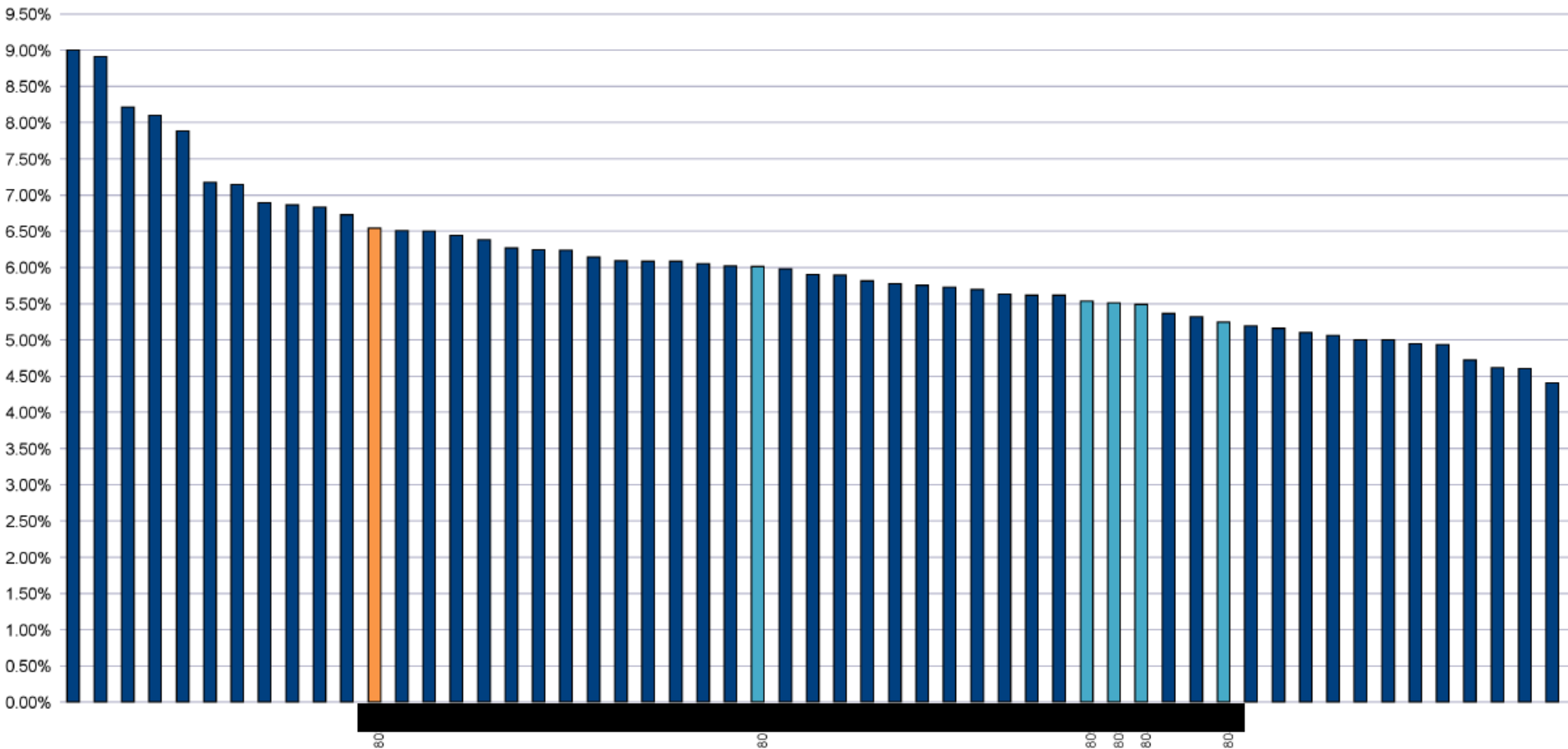
Current Developments
Supporting Clusters

Diabetes Prevalence

80	6.54%
Practices	5.75%
A&A Practices	5.87%

Current Developments
Supporting Clusters

Current Developments
Supporting Clusters
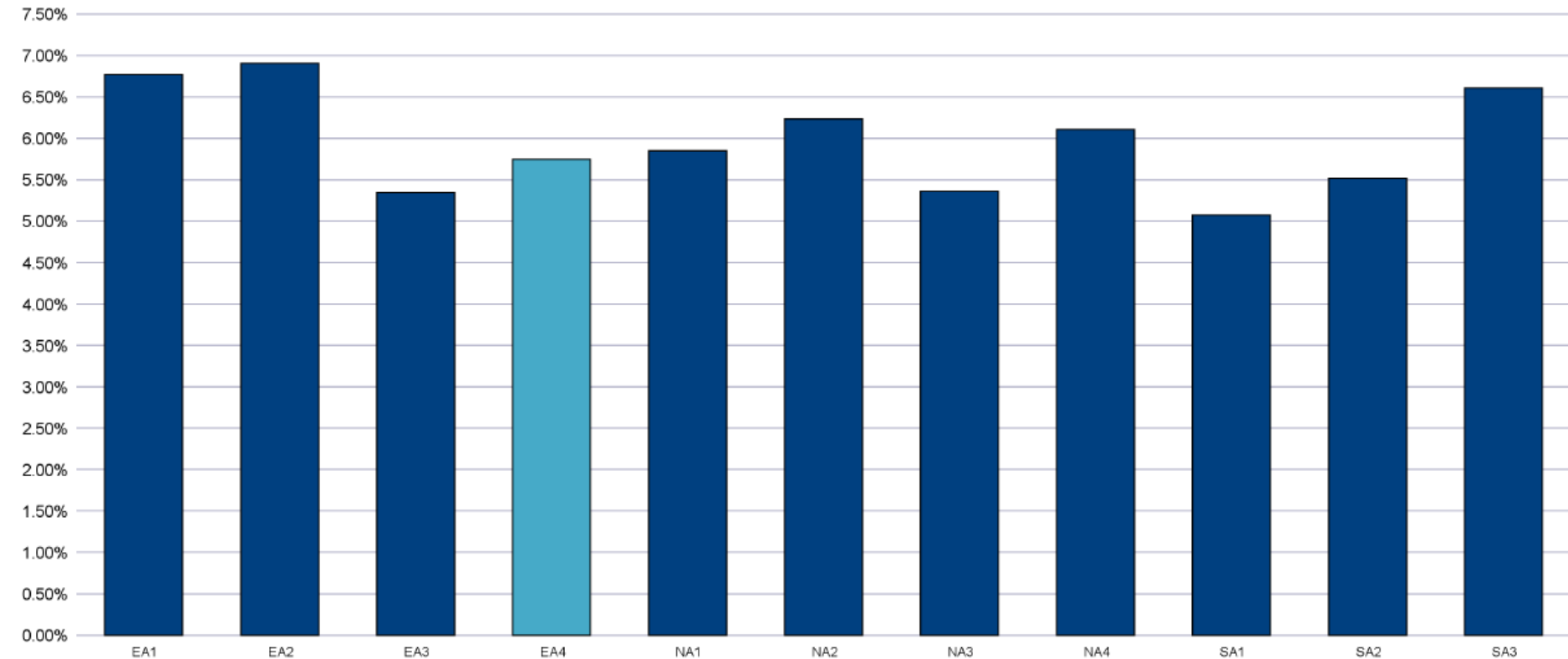
Current Developments
Universe Design

- Previously all data was linked using practice code

- Only secondary care data contained CHI

- Moving towards all data linked by CHI number

- Require postcode for locality planning

Previous Structure

Demographics

Deprivation

QOF

Enhanced Services

Flu Vacc

SPSP

Practice Code

A&E

Admissions

Referrals

ADOC

Bowel Screening

Addictions

SPARRA

Multi morbidity

Disease Registers

Basic Health

Proposed New Structure

Bowel Screening

Demographics

SPSP

Enhanced Services

QOF

Addictions

Basic Health

Multi-morbidity

Disease Registers

Immunisations

Consultations

Prescribing

eFI

Practice Code

CHI

Anon ID

Postcode

Datazone
Locality
HSCP

A&E

Admissions

Referrals

ADOC

Lab Results

Deprivation

Current Developments
Complex Patients

- New module developed to identify most 'complex' patients within each practice

- Include data from multiple sources
  - GP System (eFI, multi-morbidity, prescribing)
  - Secondary Care (A&E, Emergency Admissions)
  - OOH Contacts

- Data will be linked using CHI number

Complex Patients - Dataset

- Age   EMIS Web

- Care Home   EMIS Web

- Active Repeat Medication   EMIS Web

- Frailty score   EMIS Web

- A&E Attendances (12m)   Symphony

- Emergency Admissions (12m)   PMS

- Bed Days (12m)   PMS

- OOH Contacts (12m)   Adastra

Electronic Frailty Index

- The electronic frailty index (eFI) helps identify and predict adverse outcomes for older patients in primary care

- Information for the eFI is collected using existing electronic health record information

- The score is strongly predictive of adverse outcomes and has been validated in large international studies

- The eFI is presented as a score

  (e.g. if 9 deficits are present out of a possible total of 36 the FI score = 0.25)

Electronic Frailty Index

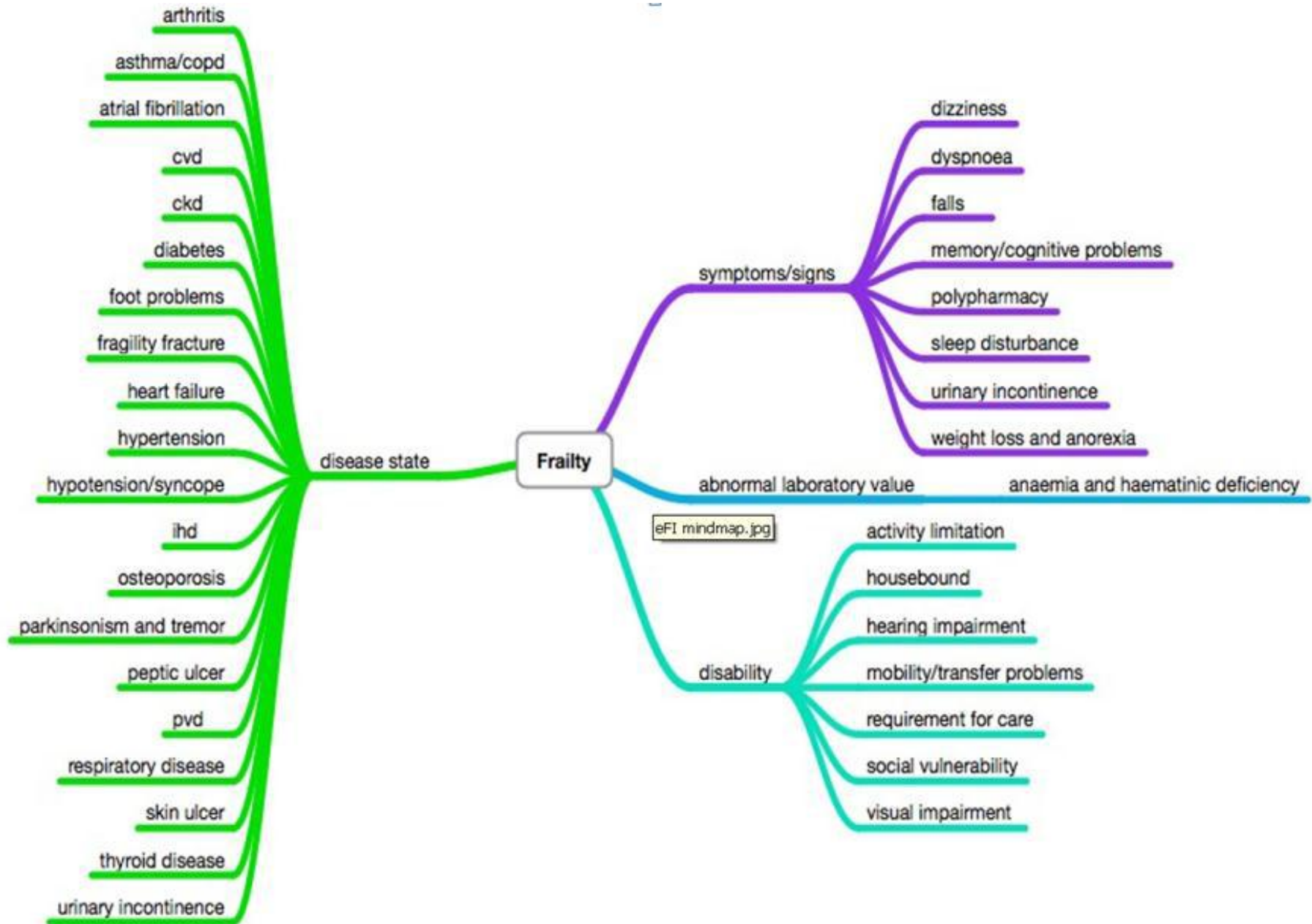The eFI can be used to score to define frailty categories:

Fit (eFI score 0 - 0.12) – People who have no or few long-term conditions that are usually well controlled. This group would mainly be independent in day to day living activities.

Mild Frailty (eFI score 0.13 – 0.24) – People who are slowing up in older age and may need help with personal activities of daily living such as finances, shopping, transportation.

Moderate Frailty (eFI score 0.25 – 0.36) – People who have difficulties with outdoor activities and may have mobility problems or require help with activites such as washing and dressing.

Severe Frailty (eFI score > 0.36) – People who are often dependent for personal cares and have a range of long-term conditions and multi-morbidity. Some of this group may be medically stable but others can be unstable and at risk of dying within 6 - 12 months.

Electronic Frailty Index

eFI mindmap.jpg

Frailty

disease state
- arthritis
- asthma/copd
- atrial fibrillation
- cvd
- ckd
- diabetes
- foot problems
- fragility fracture
- heart failure
- hypertension
- hypotension/syncope
- ihd
- osteoporosis
- parkinsonism and tremor
- peptic ulcer
- pvd
- respiratory disease
- skin ulcer
- thyroid disease
- urinary incontinence

symptoms/signs
- dizziness
- dyspnoea
- falls
- memory/cognitive problems
- polypharmacy
- sleep disturbance
- urinary incontinence
- weight loss and anorexia

abnormal laboratory value
- anaemia and haematinic deficiency

disability
- activity limitation
- housebound
- hearing impairment
- mobility/transfer problems
- requirement for care
- social vulnerability
- visual impairment

Current Developments
Complex Patients Report

CHI	Age	Gender	Repeat Meds	Multi-morbidity	Frailty Score	Care Home	Polypharmacy Review	ACP	A&E Attend	Emergency Admissions	Bed Days	OOH Home Visits	OOH PCTC	OOH Advice
1	91	Female	18	5	41.7%			29/07/2016	3	5	61	4		5
2	89	Female	16	7	50.0%	Yes			3	3	13	3		1
2	61	Male	8	2	36.1%				20	12	95	4		10
2	81	Male	22	8	38.9%			10/03/2014	5	5	44	1		
0	74	Male	26	9	41.7%				3	3	41	5		2
1	87	Male	14	4	38.9%				7	5	39	1		
0	60	Female	25	4	41.7%				3	3	32	3		3
2	93	Male	15	6	33.3%			16/12/2013	6	5	45	2		5
2	79	Female	15	3	33.3%				9	7	28	4		3
2	66	Male	13	3	25.0%				12	6	17	6		
2	68	Male	28	5	36.1%				4	4	34			1
2	83	Female	14	4	36.1%				3	3	30	2		
2	81	Female	10	5	38.9%				1	1	77	3		1
1	91	Female	6	4	47.2%				3	2	32	3		3
2	85	Female	14	5	44.4%	Yes		03/02/2014	1			1		5
1	94	Female	8	3	38.9%	Yes	18/08/2015		1	1	9			1
1	88	Female	14	3	30.6%				4	3	49	1		1
1	76	Female	11	2	25.0%				6	5	18			3
1	76	Female	14	5	44.4%		07/03/2016		2	2	90	1		
2	69	Female	23	6	41.7%				1	1	7	1		
2	58	Female	13	2	36.1%				2	4	12	3		

Current Developments
Enhanced Medication Summary

- New tool developed in collaboration with Prof Bruce Guthrie (Dundee University)

- Identifies patients with high-risk prescribing

- Detailed report available to clinicians containing information on prescribing risks, compliance etc

Future Developments

- Consultations Data

- Lab Results

- Immunisations

- CHI Linkage

- New GMS Contract Changes

Dashboards

- Currently 'Home' Page only contains hyperlinks to each module
- Plan to develop multiple dashboards
- The dashboard, reports available and level of access will be determined by the role and the organisation of the user
- For example a new dashboard will be developed for Practice Manager role, which will display relevant information on the practice data, highlight areas, and allow users to drill in to detailed reports
- Users will be consulted to confirm requirements

Questions?