

GP practice profiles & cancer intelligence

Sean McPhail

Overview

After 3 years of practice profiles...

...an analytical reflection perspective on their design:

- What is a profile?
- What is cancer intelligence?
- Choice of data
- Choice of context

Profile anatomy

Domain	Indicator (Rate or Proportion in brackets)	Practice indicator value	Practice indicator rate or proportion	Lower 95% confidence limit	Upper 95% confidence limit	CCG mean	England mean	Practice rates or proportion in CCG			Source	Period
								Lowest practice	Range	Highest practice		
Demographics	1 Practice Population aged 65+ (% of population in this practice aged 65+)	2096	21.9%	21.1%	22.8%	23.4%	16.4%	12.4%		31.6%	ADS	April 2011
	2 Socio-economic deprivation, "Quintile 1" = affluent (% of population income deprived)	Quintile 3	13.0%	12.3%	13.7%	15.2%	15.1%	9.0%		22.0%	APHO	April 2011
	3 New cancer cases (Crude incidence rate: new cases per 100,000 population)	58	607	461	785	629	471	338		969	NCIN/UKACR	2010
	4 Cancer deaths (Crude mortality rate: deaths per 100,000 population)	25	262	169	386	310	234	44		490	PCMD	2011/12
	5 Prevalent cancer cases (% of practice population on practice cancer register)	243	2.5%	2.2%	2.9%	2.3%	1.8%	0.8%		3.6%	QOF	2011/12
Cancer screening	6 Females, 50-70, screened for breast cancer in last 36 months (3 year coverage, %)	1025	78.4%	76.1%	80.6%	72.6%	72.5%	33.6%		78.4%	Open Exeter	2010/11-2011/12
	7 Females, 50-70, screened for breast cancer within 6 months of invitation (Uptake, %)	1007	79.4%	77.1%	81.6%	76.0%	74.3%	29.4%		81.2%	Open Exeter	2011/12
	8 Females, 25-64, attending cervical screening within target period (3.5 or 5.5 year coverage, %)	1693	77.1%	75.3%	78.8%	77.9%	75.3%	70.6%		86.2%	Open Exeter	2006/07-2011/12
	9 Persons, 60-69, screened for bowel cancer in last 30 months (2.5 year coverage, %)	787	65.3%	62.6%	67.9%	63.2%	57.4%	53.3%		70.0%	Open Exeter	2009/10-2011/12
10 Persons, 60-69, screened for bowel cancer within 6 months of invitation (Uptake, %)	382	64.2%	60.3%	68.0%	62.0%	55.7%	50.2%		68.7%	Open Exeter	2011/12	
Cancer Waiting Times	11 Two-week wait referrals (Number per 100,000 population)	301	3150	2804	3527	2440	1982	1266		4092	CwT	2011/12
	12 Two-week wait referrals (Indirectly age standardised referral ratio)	301	137.9%	122.7%	154.3%	n/a	100.0%	64.7%		172.3%	CwT	2011/12
	13 Two-week referrals with cancer (Conversion rate: % of all T'W'W referrals with cancer)	31	10.3%	7.4%	14.2%	13.3%	10.6%	5.4%		26.0%	CwT	2011/12
	14 Number of new cancer cases treated (% of which are T'W'W referrals)	78	39.7%	29.6%	50.8%	43.6%	46.5%	22.6%		71.4%	CwT	2011/12
	15 Two-week wait referrals with suspected breast cancer (Number per 100,000 population)	31	324	220	461	453	372	276		1070	CwT	2011/12
	16 Two-week wait referrals with suspected lower GI cancer (Number per 100,000 population)	57	597	452	773	409	335	205		716	CwT	2011/12
	17 Two-week wait referrals with suspected lung cancer (Number per 100,000 population)	9	94	43	179	76	78	0		138	CwT	2011/12
	18 Two-week wait referrals with suspected skin cancer (Number per 100,000 population)	77	806	636	1007	526	349	143		974	CwT	2011/12
Presentation & diagnostics	19 In-patient or day-case colonoscopy procedures (Number per 100,000 population)	65	680	525	867	730	623	338		1016	HES	2011/12
	20 In-patient or day-case sigmoidoscopy procedures (Number per 100,000 population)	27	283	186	411	319	433	44		438	HES	2011/12
	21 In-patient or day-case upper GI endoscopy procedures (Number per 100,000 population)	106	1109	908	1342	1070	1003	573		1972	HES	2011/12
	22 Number of emergency admissions with cancer (Number per 100,000 population)	80	837	664	1042	739	587	470		1134	HES	2011/12 ^a
	23 Number of emergency presentations (% of presentations)	13	20.0%	12.1%	31.3%	23.5%	23.7%	12.2%		36.6%	RtD	2008 ^b
	24 Number of managed referral presentations (% of presentations)	31	47.7%	36.0%	59.6%	50.1%	49.2%	31.0%		68.6%	RtD	2008 ^b
	25 Number of other presentations (% of presentations)	21	32.3%	22.2%	44.4%	26.5%	27.1%	9.5%		44.0%	RtD	2008 ^b

Profile anatomy

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Cancer Waiting Times	10 Persons, 6-17 years, screened for colorectal cancer (Uptake, %)	382					5.7%			6		
	11 Two-week wait referrals with suspected breast cancer (Number per 100,000 population)	301					198			17		
	12 Two-week wait referrals with suspected lower GI cancer (Number per 100,000 population)	301					0.0%			2		
	13 Two-week wait referrals with suspected lung cancer (Number per 100,000 population)	31					0.6%					
	14 Number of new cancer cases treated (% of which are TW/W referrals)	78					6.5%	22.6%		71.4%	C/W	2011/12
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Indicator names

Numbers, rates, and comparators

Spine chart & range of data

Sources & Dates

Profile anatomy

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QOF prevalence, Population, Deprivation, PCMD, Registry incidence

Screening – uptake and coverage

Cancer Waiting Times – conversion, detection and referral rates

HES – endoscopies and emergency admissions

Routes to Diagnosis

Health Intelligence

- ??

Intelligence

- Intelligence is information *you can act on.*

Choice of data

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Routes to Diagnosis

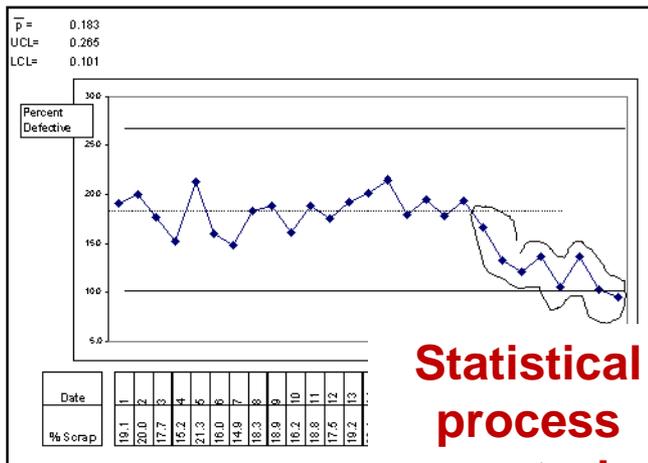
Choice of data

- ...but you only have the data you have
- (shhh – not entirely primary care data)
- What other new (or newly accessible) data could we use?

Why profiles?

- Simultaneously assess and benchmark a wide range of information at organisation level
- Holistic assessment of an organisation
- Goes beyond individual small numbers

What other tools might we use?

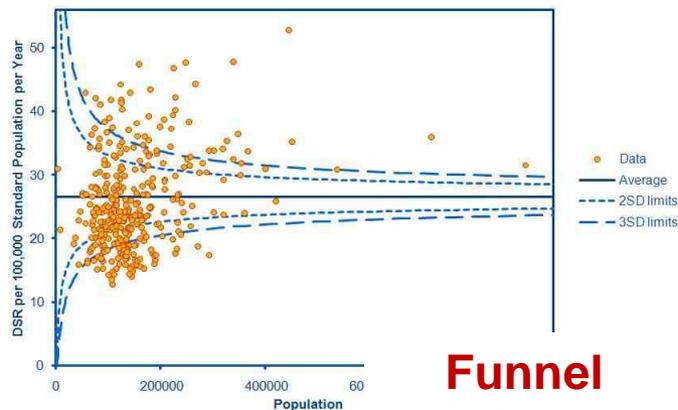


Statistical process control

PCT Name	updated	Year	East of England	Bedfordshire	Cambridgeshire	East & North Hertfordshire	Great Yarmouth & Lynn	Mid Essex	Northfolk	North East Essex	Northampton	South East Essex	South West Essex	Suffolk	West Essex	West Hertfordshire	
Improving lives, saving lives: FitAge II	Percentage of eligible children in Reception with height and weight measurements	Y	2007/08	87.8	93.6	87.1	95.0	86.1	91.1	76.7	90.9	93.1	89.5	84.0	90.0	90.3	91.2
	Percentage of obese children in Reception	Y	2007/08	9.3	8.7	8.9	8.7	10.4	12.6	8.7	9.1	9.0	12.6	8.3	10.8	8.8	8.2
	Percentage of eligible children in Year 6 with height and weight measurements	Y	2007/08	84.0	88.8	83.2	86.8	83.7	92.5	83.4	88.5	80.3	87.0	83.2	87.4	85.7	86.5
	Percentage of obese children in Year 6	Y	2007/08	16.7	15.1	17.0	16.3	18.6	20.9	15.7	19.0	15.9	19.1	16.9	17.5	14.4	17.6
Child Health	Percentage of women smoking at delivery*	Y	2007/08	14.3	19.6	11.6	14.0	DNR	17.4	10.5	13.1	20.4	16.1	14.0	11.2	13.8	14.4
	Percentage of maternities with known smoking status	Y	2007/08	98.2	95.8	100.0	100.0	DNR	96.0	95.1	95.5	94.7	100.0	98.8	98.6	99.1	97.2
	Percentage of mothers known to initiate breastfeeding*	Y	2007/08	73.0	65.3	73.0	73.8	68.1	DNR	73.8	73.3	57.0	70.3	83.8	73.3	75.8	
Sexual Health	Percentage of maternities with known breastfeeding status	Y	2007/08	98.1	95.2	100.0	98.0	97.6	DNR	95.2	93.8	100.0	97.8	98.1	94.4	95.6	
	Number of tests for Chlamydia per 100,000 aged 15-24	Y	2009/09 Q2	130.4	99.1	121.4	49.6										
Immunisation	Teenage conception rates per 1,000 females aged 15-17	Y	2004-05	22.8	22.5	24.9	27.8										
	Percentage of children who have had their first dose of MMR by their second birthday	Y	2007/08	84	65.7	84.0	84.4										

Tartan rugs

Lung Cancer Mortality in Under 75s, 2004-06



Funnel plots

Source: Compendium of Clinical and Health Indicators, I
Note: Population is adjusted due to Standardisation Calc

Health Profiles | HES | Publications | Resources | Tools | Work Streams | Contribute | Staff Area
National General Practice Profiles | Front page | Supporting documents | Feedback | User survey
 CCG PCT: [Bristol PCT]
 Practice: [L81013 - FISHPONDS FAMILY PRACTICE] BEECHWOOD ROAD, FISHPONDS, BRISTOL, BS16 3TD
 Search | Population | Spine Chart | Bar Chart | Scatter Plot | Definitions | Export Summary
 Registered Persons: FISHPONDS FAMILY PRACTICE 12633
 BRISTOL PCT 8648 (average)
 ENGLAND 6845 (average)
 L81013 - FISHPONDS FAMILY PRACTICE
 QOF achievement 994.3 (out of 1000)
 Weighted population 12269.3
 Male life expectancy 78.9 years
 Female life expectancy 82.1 years
 % of patients that would recommend their practice 85.0%
 Deprivation: Fifth more deprived decile
 1.7% asian, 1.7% ethnic groups

Interactive dashboards

The standardisation ladder

	Numbers	Rates	Age-sex standardised rates	Age-sex-deprivation/other standardised	All case-mix variable standardised
Audience	<p>_____ Clinicians _____</p> <p>Service planners/ _____ Epidemiologists _____ Commissioners _____ Central/regional management</p>				
Purpose	<p>Service _____ Clinical audit/ planning _____ improvement _____ Performance management</p> <p>_____ 'Service _____ epidemiology'</p>				
Difficulty	<p>Simple _____ Hard</p>				

Data + Context → Information

Users have varying:

- Purposes
- Knowledge of the domain of the information
- Knowledge of statistics

Adding context

Supporting domain knowledge

- Comparisons with other areas
- Guidance for interpretation / worked examples
- Adding automatically generated narratives

Supporting statistical knowledge

- Measures of statistical significance
- Guidance for interpretation
- Clear design

Closing thoughts

- How to maximise useful intelligence?
- Choice of data
- How do we add context to the data -
 - Positioning on the 'standardisation ladder'
 - Choosing the right data presentation format
 - Add features to increase context
- How does this enable action?
- Finally...



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