



IHWC Data Olympics

Data Challenge 3: How is data being used to evaluate the return on investment in health professional education?

UK Entry

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First question: What is the investment?

In England the central budget is (currently) almost £5billion per year.

That's

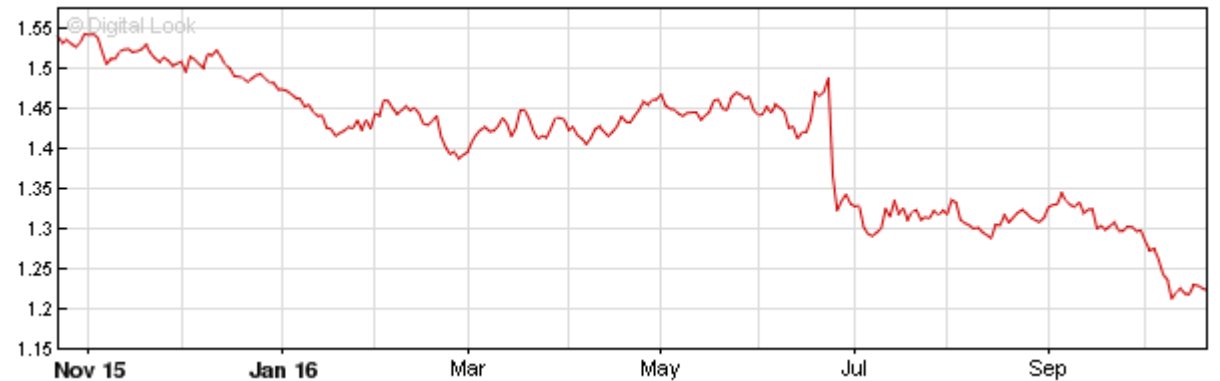
~6.1Billion USD

~8.1Billion CAD

~8 Billion AUD

~8.5 Billion NZD

Pound Sterling - United States Dollar



Or ~3.4% of the annual Health budget



Second Question: What do we get from it?

Sub questions (that I have helped answer)

- What is the retention of locally trained healthcare workforce?
- Which specialties do medical schools produce?
- Is there variation by trainees in demographic characteristics?
- Does having a trained workforce really matter?

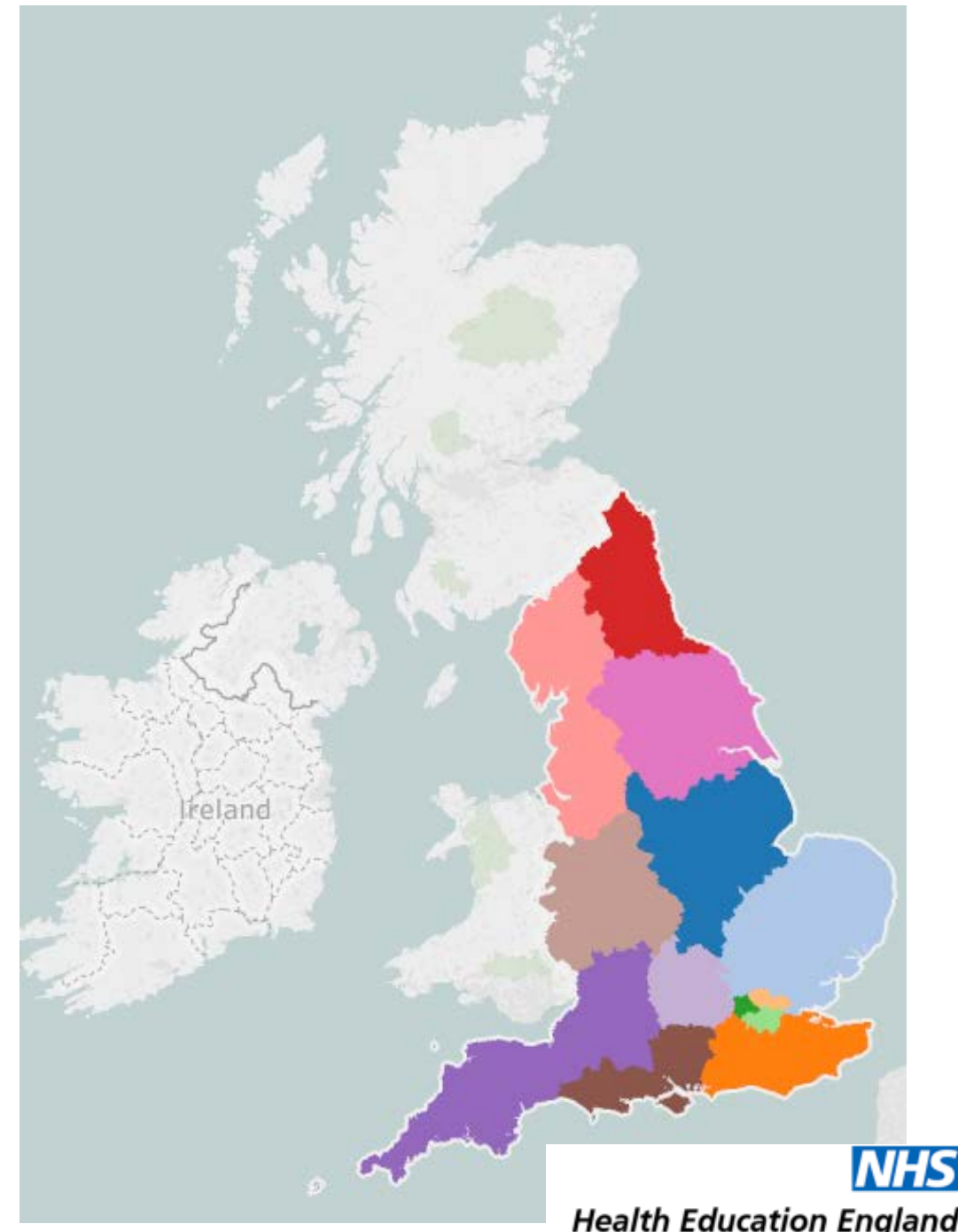


Trainee Retention

England is subdivided into 13 HEE Local Offices, responsible for the provision of the future health workforce for their patch.

(Historically) they commission local universities to train the number of health workers needed in their patch in the future.

But how many stay to provide healthcare in their patch?



Trainee Retention

Using the Destination of Leavers of Higher Education Survey (DLHE) undertaken by the Higher Education Statistics Agency.¹

HEE project looked at the retention of:

- ~112.5K graduates (~65% response rate)
- 34 different healthcare occupations
- Used a Tableau visualisation

1. <https://www.hesa.ac.uk/support/definitions/destinations>

This dashboard displays the out migration of the selected occupation by selected Education Commissioner. The map displays a heat map of migration by Education Commissioner, with the larger blue dots showing the location of training locations of that occupation, the smaller blue dots are other HEI locations. "Rest of UK" covers Channel Islands and Isle of Man. "England" covers those graduates that are employed in an England wide body.

Occupation
Adult Nurse

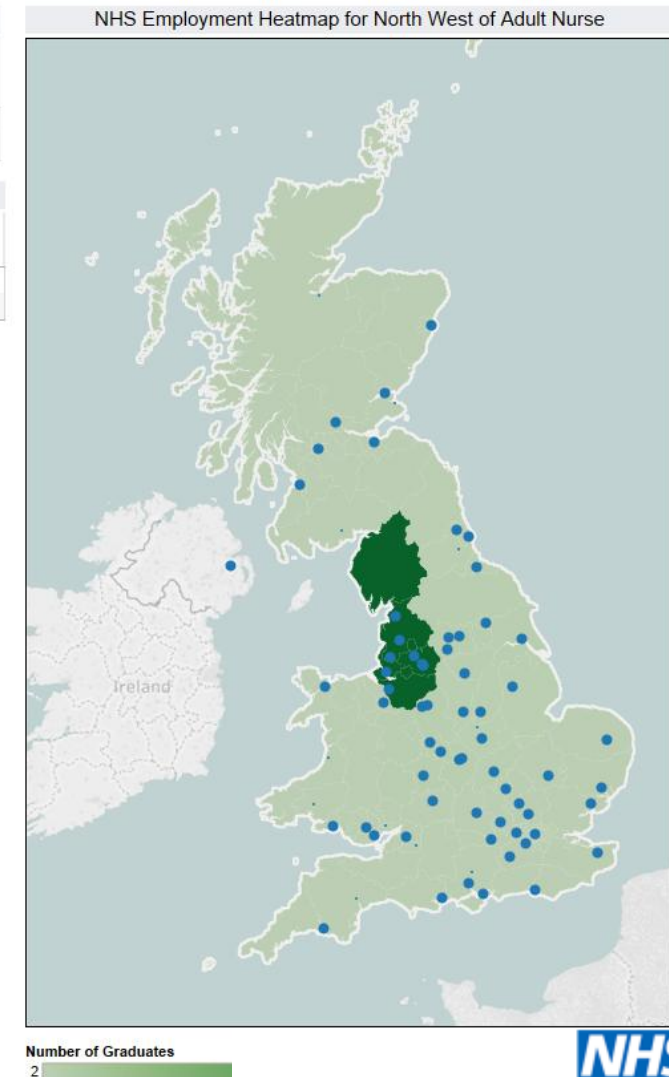
Education Commissioner
North West

North West Local Retention within and outside the NHS			
	Retained within Ed. Commissioner and NHS	Retained within Ed. Commissioner, outside NHS	Grand Total
Graduates	2,206	353	2,559
% of Graduates	86.2%	13.8%	100.0%

North West Summary Retention				
	Retained within Ed. Commissioner	Retained within NHS, outside Ed. Commissioner	Other	Grand Total
Graduates	2,559	137	97	2,793
% of Graduates	91.6%	4.9%	3.5%	100.0%

NHS Employment Location		
	Graduates	% of Graduates
East Midlands	18	0.8%
East of England	9	0.4%
KSS	5	0.2%
London NC&E	11	0.5%
London NW	5	0.2%
London South	5	0.2%
North East	10	0.4%
North West	2,206	94.2%
Rest of UK	5	0.2%
Scotland	2	0.1%
South West	3	0.1%
Thames Valley	4	0.2%
Wales	9	0.4%
Wessex	3	0.1%
West Midlands	26	1.1%
Yorks & Humber	22	0.9%
Grand Total	2,343	100.0%

Employment		
	Graduates	% of Graduates
Further study	62	1.7%
NHS Employee	2,343	62.9%
Not an NHS Employee	347	9.3%
Not answered/Unemployed	932	25.0%
Part time further study	38	1.0%
Working outside UK	3	0.1%
Grand Total	3,725	100.0%

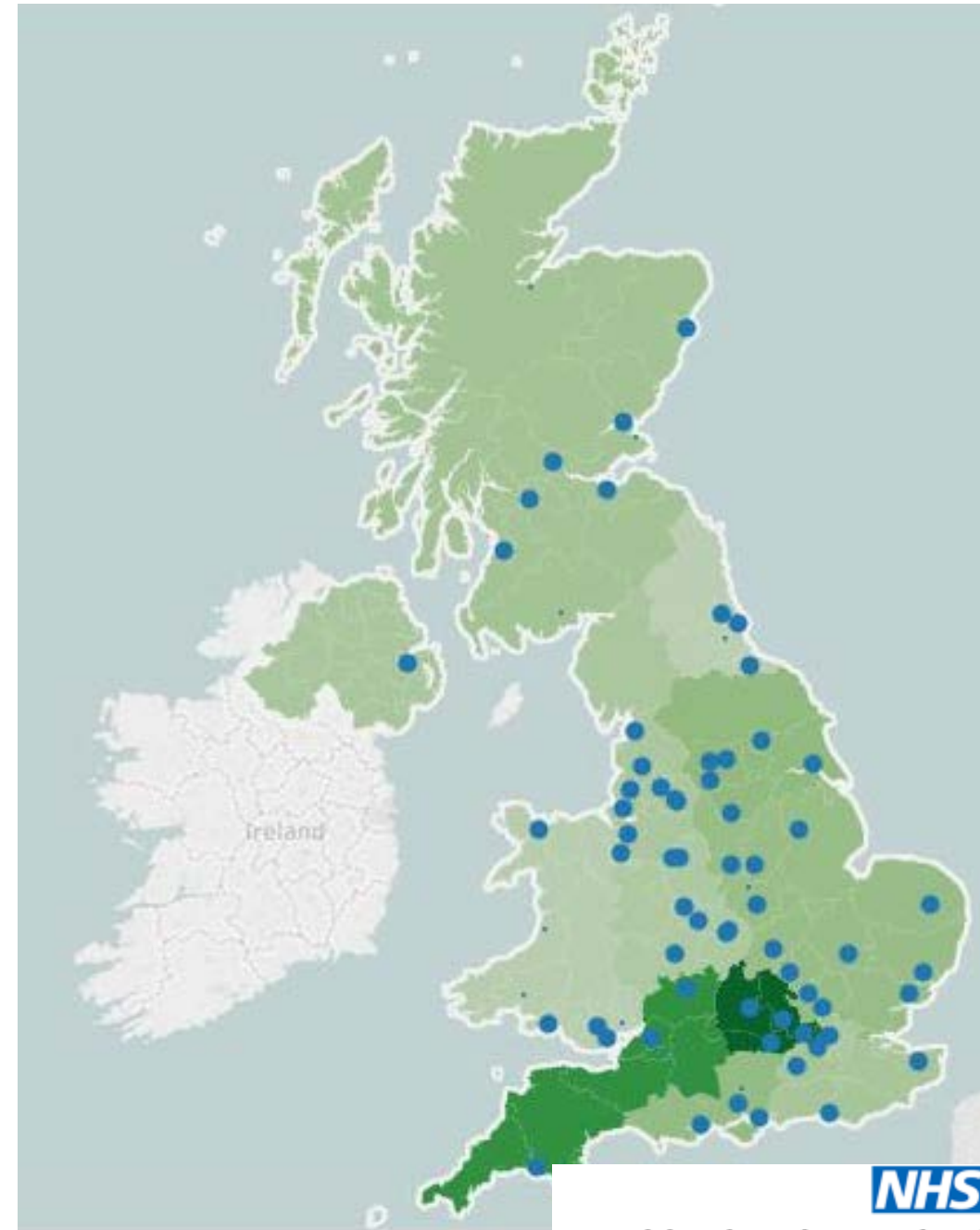


Example Findings

Adult Nurse Retention in Thames Valley (aka Oxford)

- 26.5% stayed in Thames Valley with NHS
- 25.4% moved to North West London
- 14.4% moved to the South West

Conclusion: Local planning needs to recognise national needs and regional flows



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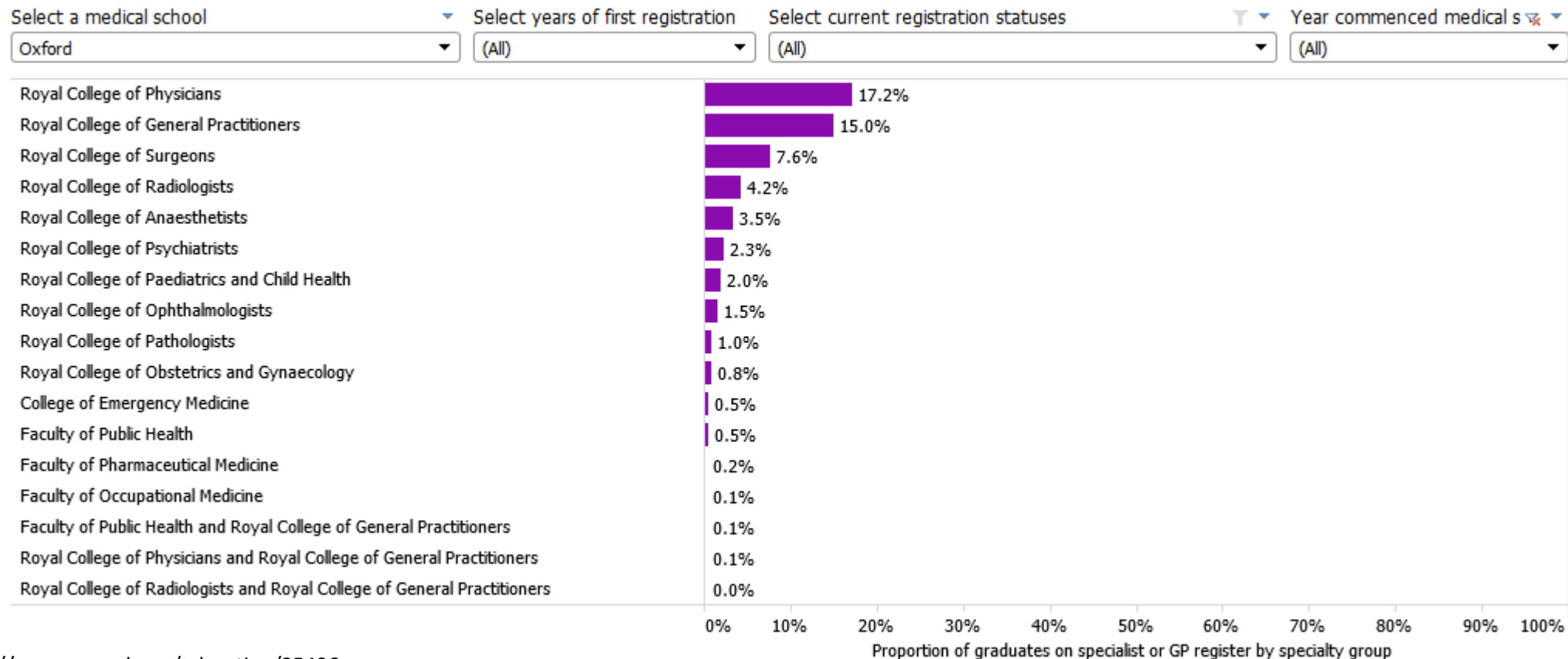
Sub questions

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Which specialties do medical schools produce?

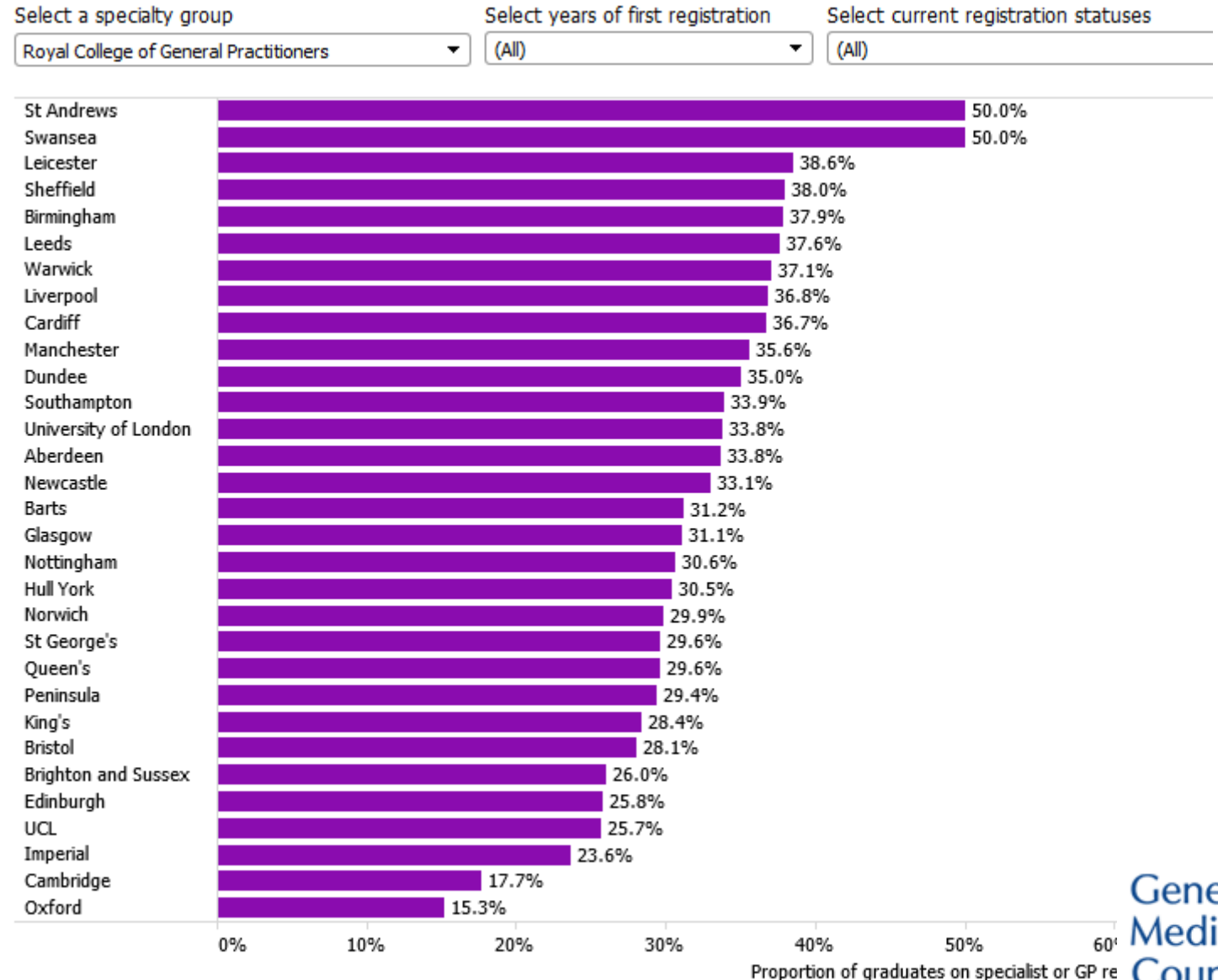
General Medical Council has a public visualisation which answers this question by medical school



Which specialties do medical schools produce?

Conclusion: different medical schools generate different types of Doctors.

But for the purposes of workforce planning we need to be cautious not to try and make some medical schools GP factories



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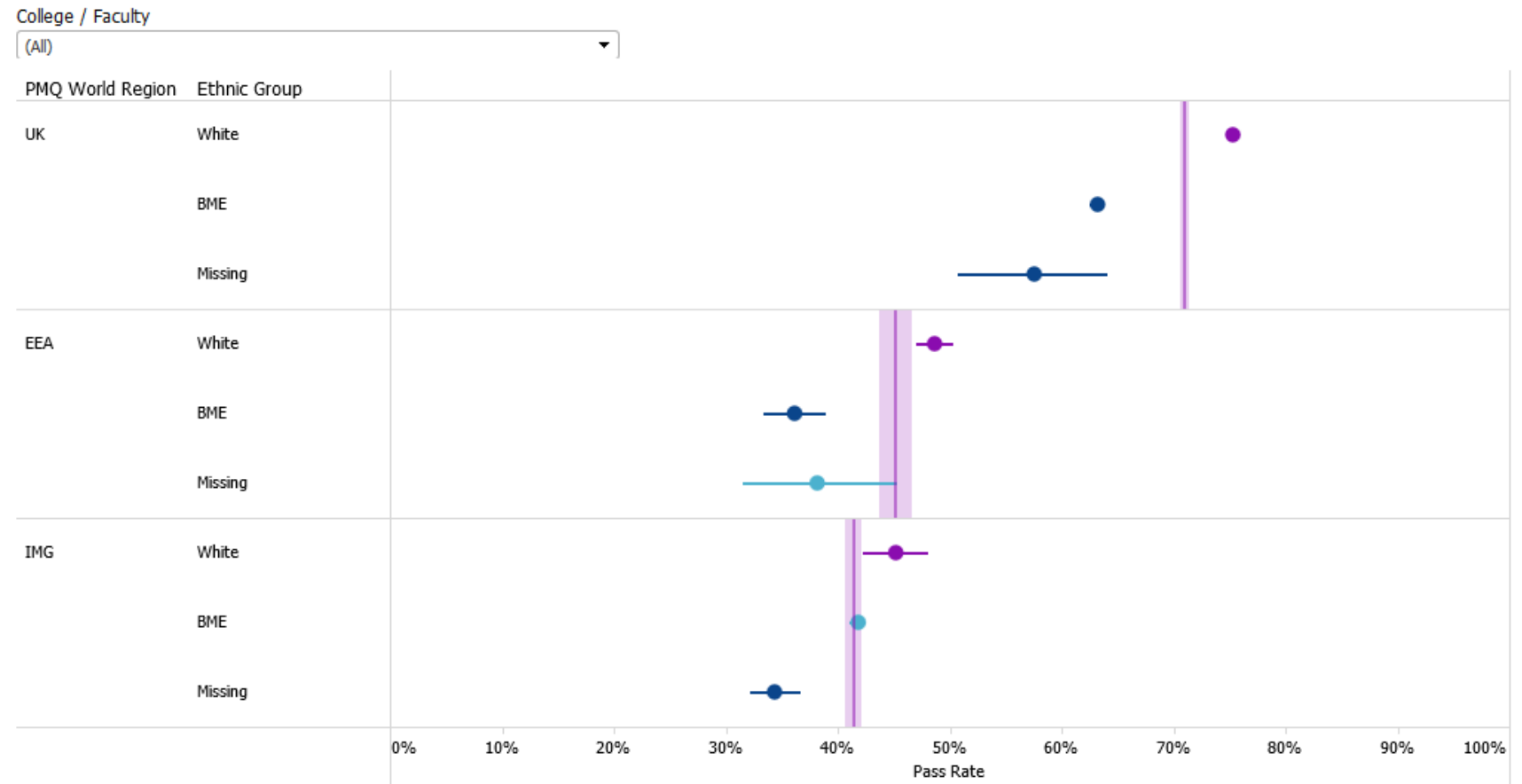
Is there variation by trainees demographic?

General Medical Council publishes data on outcomes:

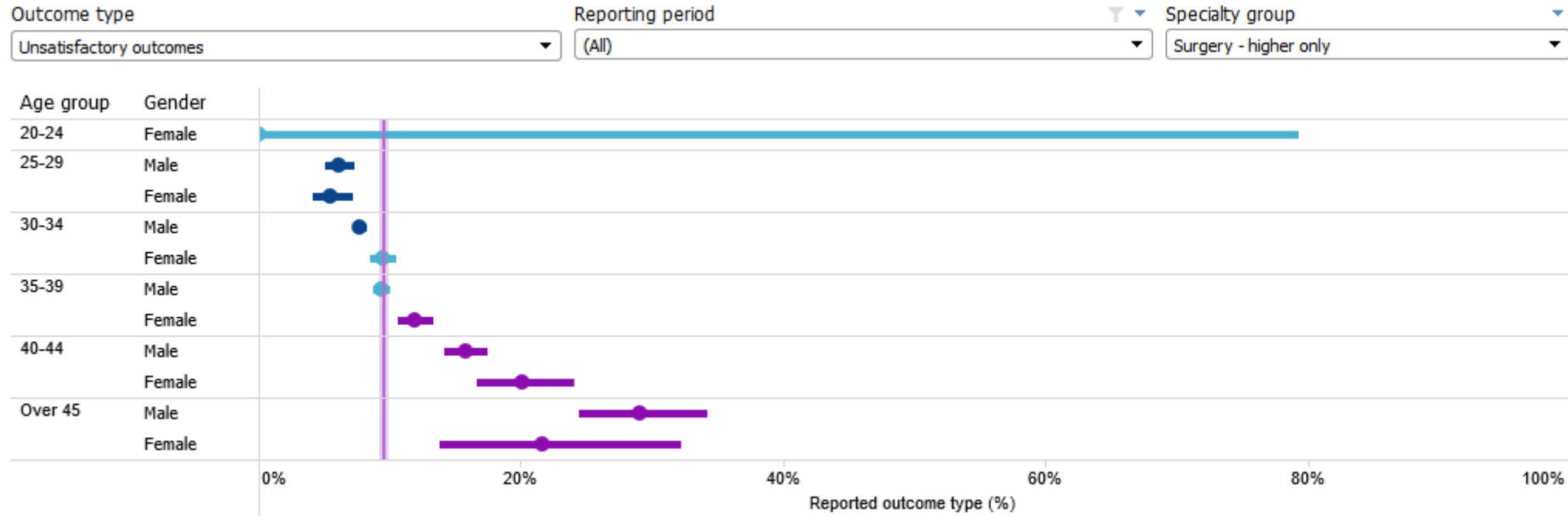
- Exam
- Annual Review
- Recruitment

Looking at Postgraduate Medical Exam outcomes by PMQ & Ethnicity

Shows White UK PMQ are far more likely to pass exams compared to UK BME



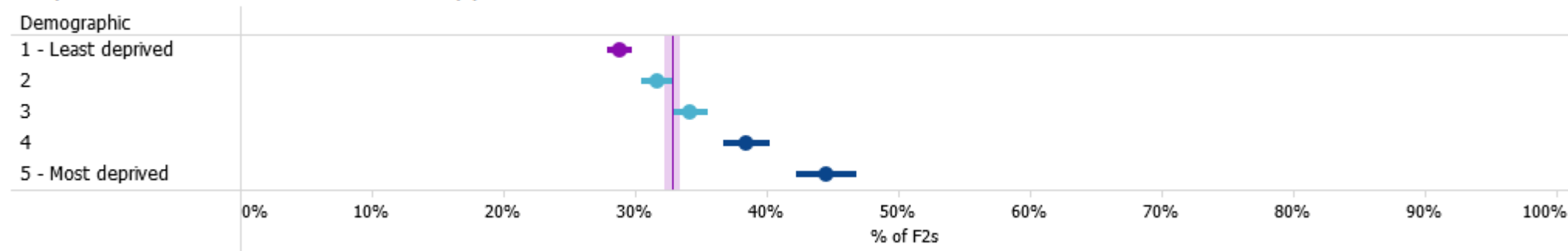
Looking at Postgraduate Medical review outcomes by age and gender



Shows older doctors in training are more likely to fail their annual review

Looking at Postgraduate Medical recruitment outcomes

Proportions of F2s who Made an application to General Practice in round one



Doctors whose parental home is in the most deprived areas of the UK are more likely to make an application to General Practice

In fact they are more likely to make an application and not a take a “year out” from medical training

Is there variation by trainees' demographics?

Yes

The GMC, in association with all organisations working in medical training, is undertaking research to identify why this variation occurs and how it can be addressed.

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Do we know having a trained workforce really matter?

The NHS Benchmarking database which combines 1400 workforce planning and development data sets from around 20 sources into one easily accessible location.

Enables comparisons to be made across organisations.



Does having a trained workforce really matter?

	England Average	CCG with highest patient satisfaction	CCG with lowest patient satisfaction
GP Satisfaction survey, overall GP experience	43%	52%	34%
GP to patient ratio	2279	1959	2556
Practice Nurse to patient ratio	6177	4905	8240
Healthcare assistant to patient ratio	13927	11513	20148

There may be many reasons behind cause of variation e.g. vacancies.
But having a trained workforce matters

And finally

“It is the mark of a truly intelligent person to be moved by statistics.”

George Bernhard Shaw



