



# Primary Care Benchmarking Project

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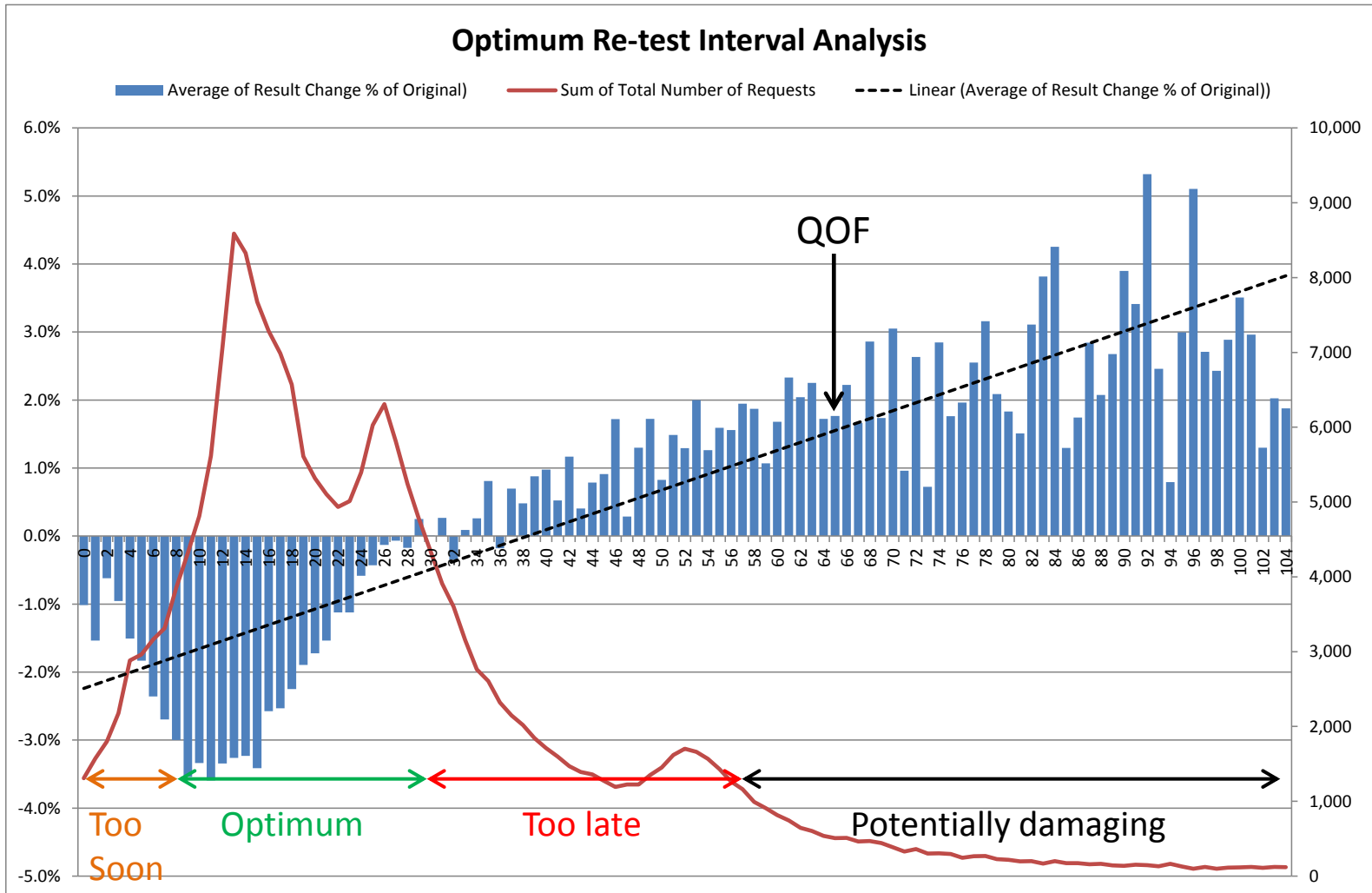
# What is the Primary Care Benchmarking Project?

- The new Primary Care Benchmarking Project is a tool that reports volumes of key marker tests, calculating testing rates per relevant patient group (where applicable) and analysing the impact of service usage on secondary care outcomes.
  - Test data collected for around 30 key marker tests done for Primary Care
    - Flexible list based on user requirements/special interest tests
  - Data reported by Provider, by GP Practice, and by CCG/Group/Network (Scotland as a whole 'could' be a group, for instance)
  - Data mapped to GP patient populations in a range of disease/condition specific registered populations
  - Demographic factors such as deprivation index and age profiles
  - Number of admissions, number of bed days and cost of admissions mapped from HES data (in England) to provide outcomes measures\*
  - Relevant guidance (eg NICE) and/or research included as targets/benchmarks, in addition to the ability to include any locally agreed targets/benchmarks

# What is it for?

- Enables labs to work with their customers/GPs to:
  - Monitor service usage, eg volume of requests
  - Demonstrate the value of their service to the customer and the wider health economy
  - Analyse the impact of appropriate requesting on patient outcomes
  - Inform demand management (optimisation!) strategy planning
  - Provide evidence around best practice
  - Monitor progress over time, assess the impact of any interventions
- Key points/objectives are as follows:
  - Joint working, creating a partnership between provider and customer
  - Have a positive impact on demand management strategies
  - Provide new data for research
  - Make pathology the centre of the patient care pathway, and turn it into the hub of patient care and improvement

# Why is this an issue?





# An Example of Benchmarking Outcomes (Diabetes Research)

- Our research shows that by just removing un-necessary over-requests for HbA1c tests, NHS England could **save over £1m on test costs alone** and **improve patient results by around 2%**
- Doing all HbA1c tests 'on time' would lead to an **increase in workload of 33%**
- GP practices who achieve better HbA1c results for their patients on average:
  - have 2.0 less DM related complications (secondary care visits) per year
  - have 0.9 days less per hospital stay on average per visit (DM related)
  - Generate cost of just under £2k less per year on average on DM related hospital bed days



# An Example of Benchmarking Outcomes (Diabetes Research)

## Over-Testing Strategy Analysis - Data for Latest 12 Months - HbA1c - National Up-Scale (England)

<i>Total number of HbA1c tests done (actual)</i>	<b>7,009,410</b>
<i>Over-Testing Strategy adjusted workload volume</i>	<b>6,661,141</b>
<b>Inappropriate HbA1c tests removed through OTS</b>	<b>348,269</b>
<b>Percentage reduction in HbA1c workload through OTS</b>	<b>4.97%</b>
<i>Total cost of HbA1c tests done (actual)</i>	<b>£21,028,230</b>
<i>Over-Testing Strategy adjusted cost</i>	<b>£19,983,423</b>
<b>Cost saved on HbA1c tests had OTS been achieved</b>	<b>£1,044,807</b>
<i>Average HbA1c test result (actual)</i>	<b>7.12</b>
<i>Over-Testing Strategy adjusted result (calculated)</i>	<b>6.97</b>
<b>Forecast change in average result had OTS been achieved</b>	<b>-2.03%</b>

# Potential Impact of HbA1c Improvement

- **GP practices with an average HbA1c of 7.12 or more:**
- Number of emergency admissions (diabetes related complications) per practice per year (average): 6.1
- Average number of days in hospital per emergency admission (DM related) per practice per year: 3.8
- Average cost of emergency admissions (DM related) per practice per year: £7,032
  
- **GP practices with an average HbA1c of 6.97 or less:**
- Number of emergency admissions (diabetes related complications) per practice per year (average): 4.1
- Average number of days in hospital per emergency admission (DM related) per practice per year: 2.9
- Average cost of emergency admissions (DM related) per practice per year: £5,225

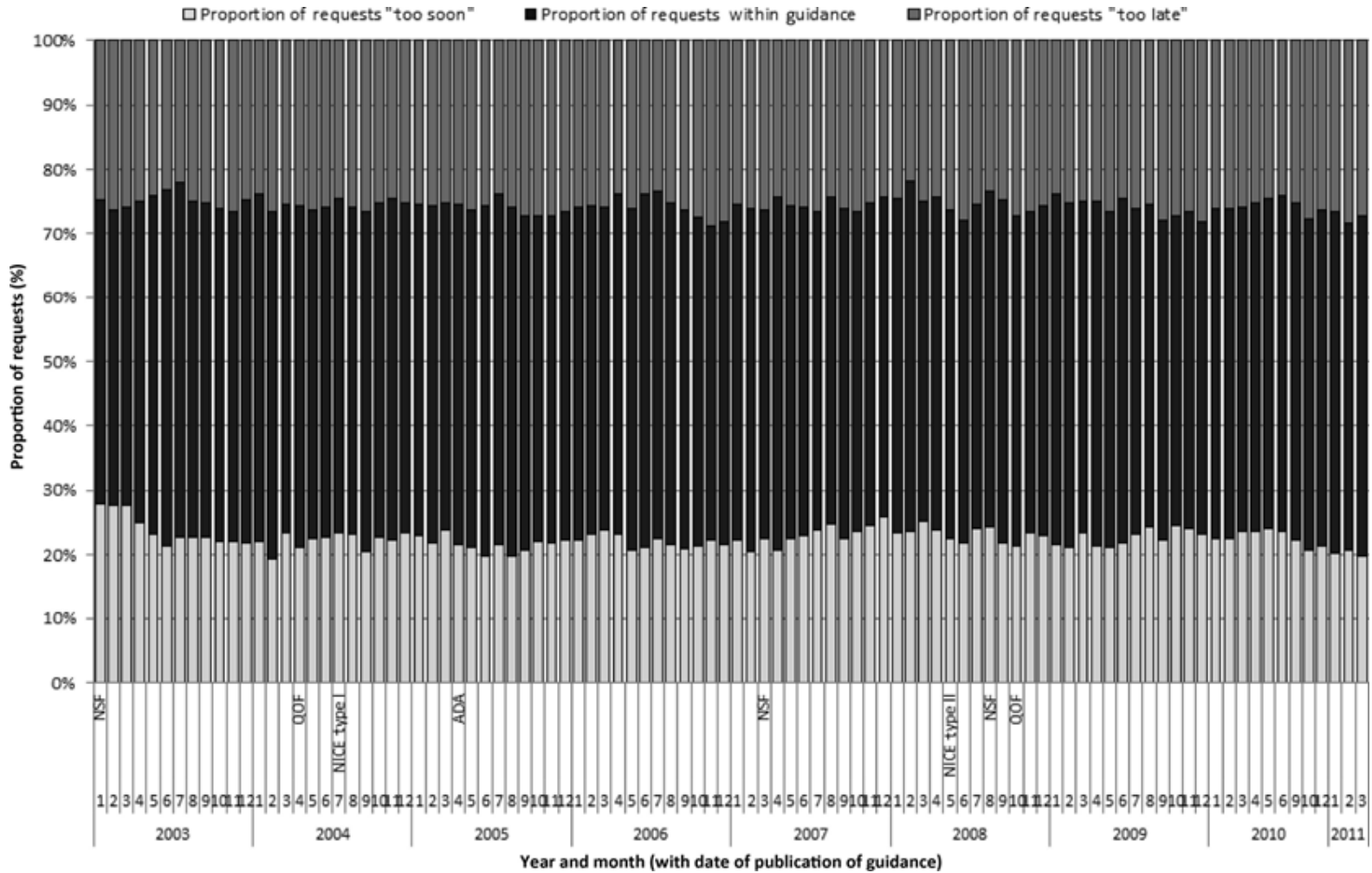
# Impact of late testing

- Proportion of tests done too late compared with avg length of stay

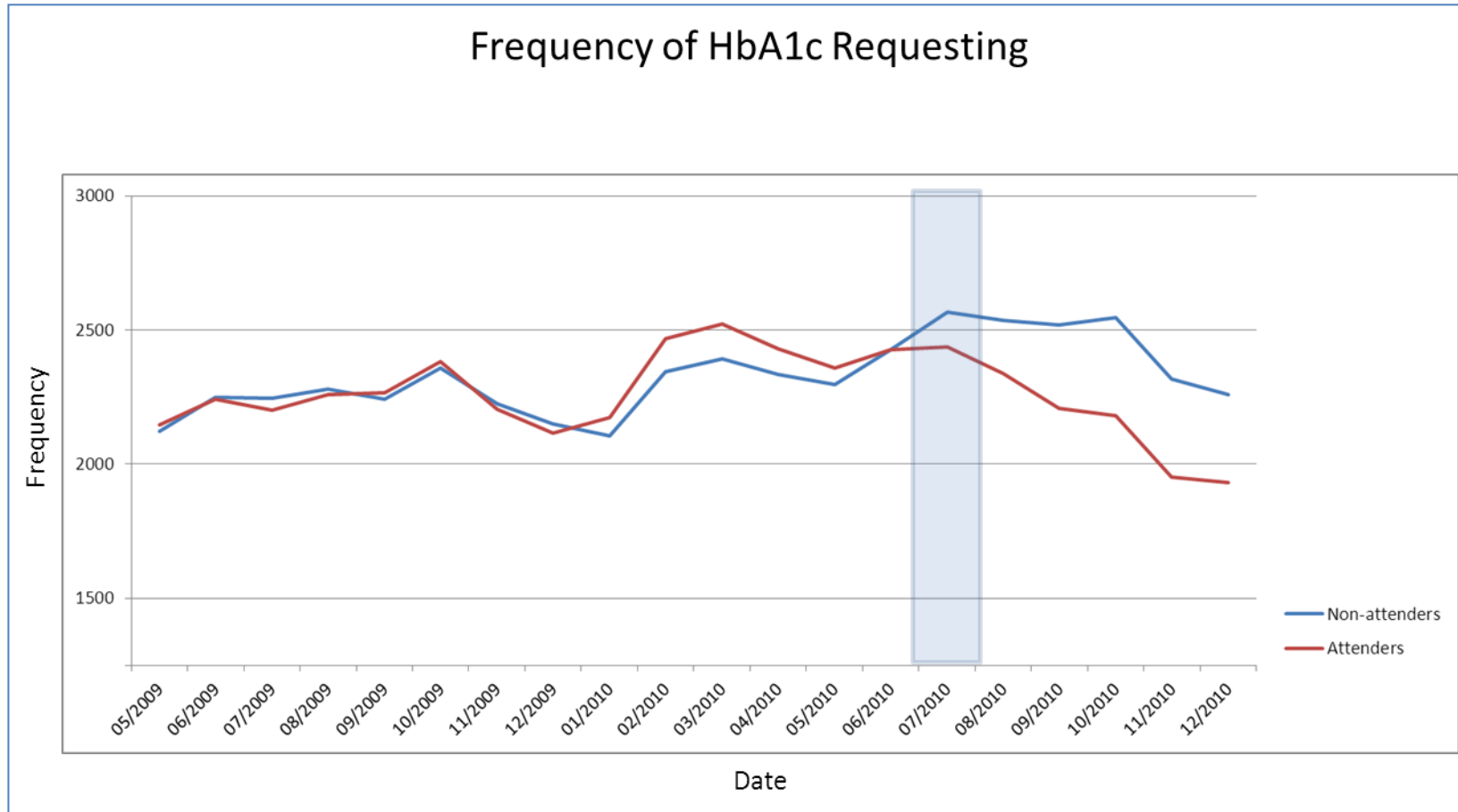




# Why is this an issue?



# Can we make a difference?





# Further Studies

- Paper submitted for publication which shows similar patterns in requesting behaviour for TSH (and free T4) requesting for patients on thyroxine therapy
- Paper submitted for publication which analyses how serum cholesterol levels may change following the diagnosis of type 2 diabetes mellitus and the opportunity for statin initiation, taking into account age and experience of side effects
- Additional research for diabetes currently underway to analyse 'time to target' forecasting and the impact of consistent vs sporadic testing patterns on demographic data (eg age)



# Primary care benchmarking: The story so far

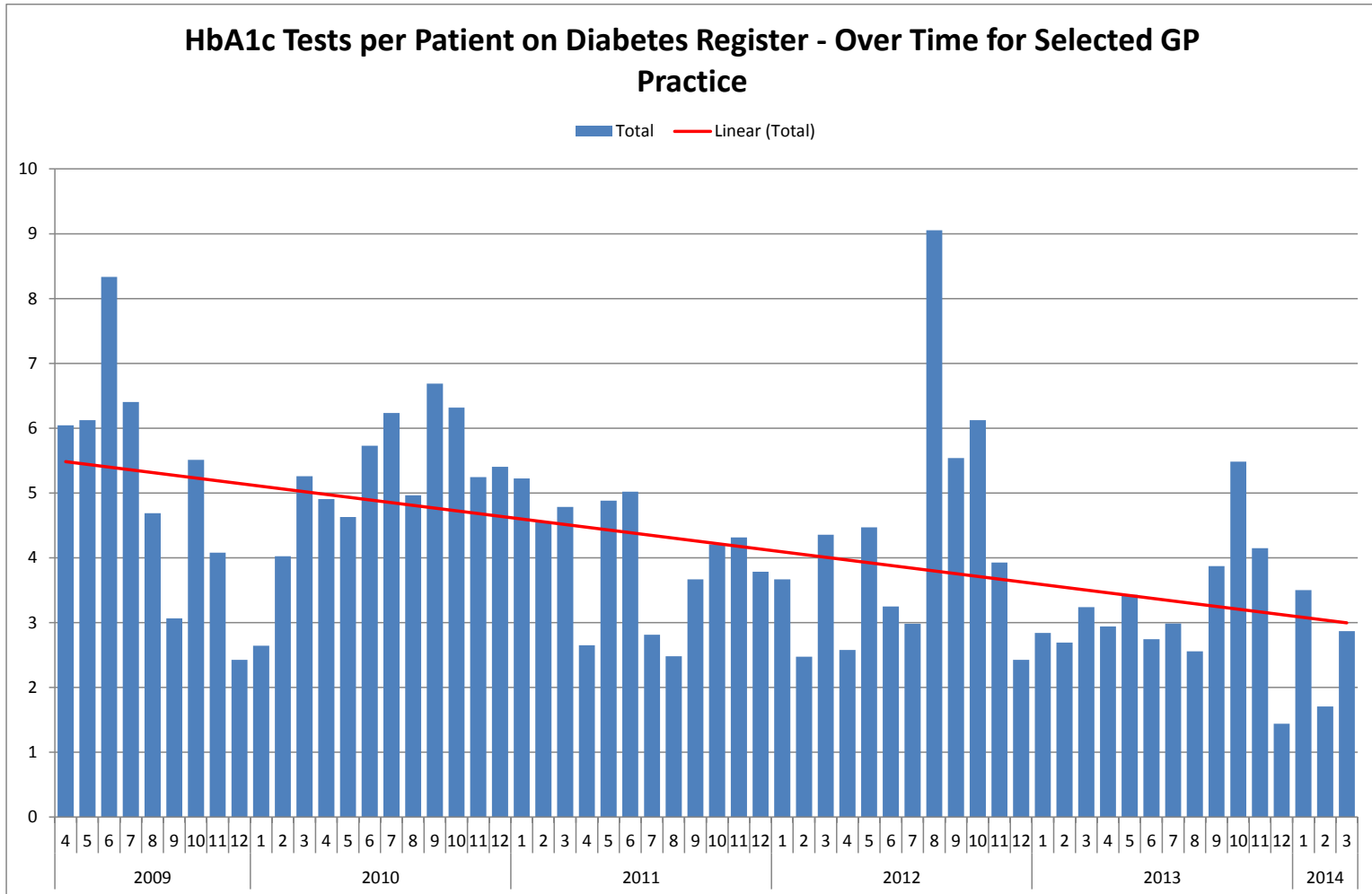
- Began as a joint initiative between Keele and Leeds (YCHI) in 2007
- Initial pilot in 2013 took data from two sites – UHNS and Wolverhampton – to prove and develop concept
- Pilot extended to an additional 4 sites in 2014 to further refine and develop the scope of the project with larger sets of data
- Successful pilot so far with a wealth of invaluable feedback from participants, including the following ideas:
  - ‘Forecasting’ tool for potential workload volume in practices not currently provided by the lab; uses for business planning and tendering for new contracts
  - Partnerships for research projects and grants/funded work

# First of the 'headline' examples

- Early analyses of the data (across all pilot sites) are already showing some interesting findings:
  - GP practices who request HbA1c tests within the recommended re-test interval according to NICE guidelines (1-2 tests per year) have 15.3 less diabetes-related emergency admissions per 1,000 patients than practices who request outside of the guidance.
  - They also have 88.6 less bed days (for diabetes-related emergency admissions) per 1,000 patients
  - Their cost of emergency admissions for diabetes is £37 per patient lower than those who request outside of the guideline.
- There is a genuine incentive for HbA1c tests to be requested on time
- Right test, right patient, right time (right method, right result!)

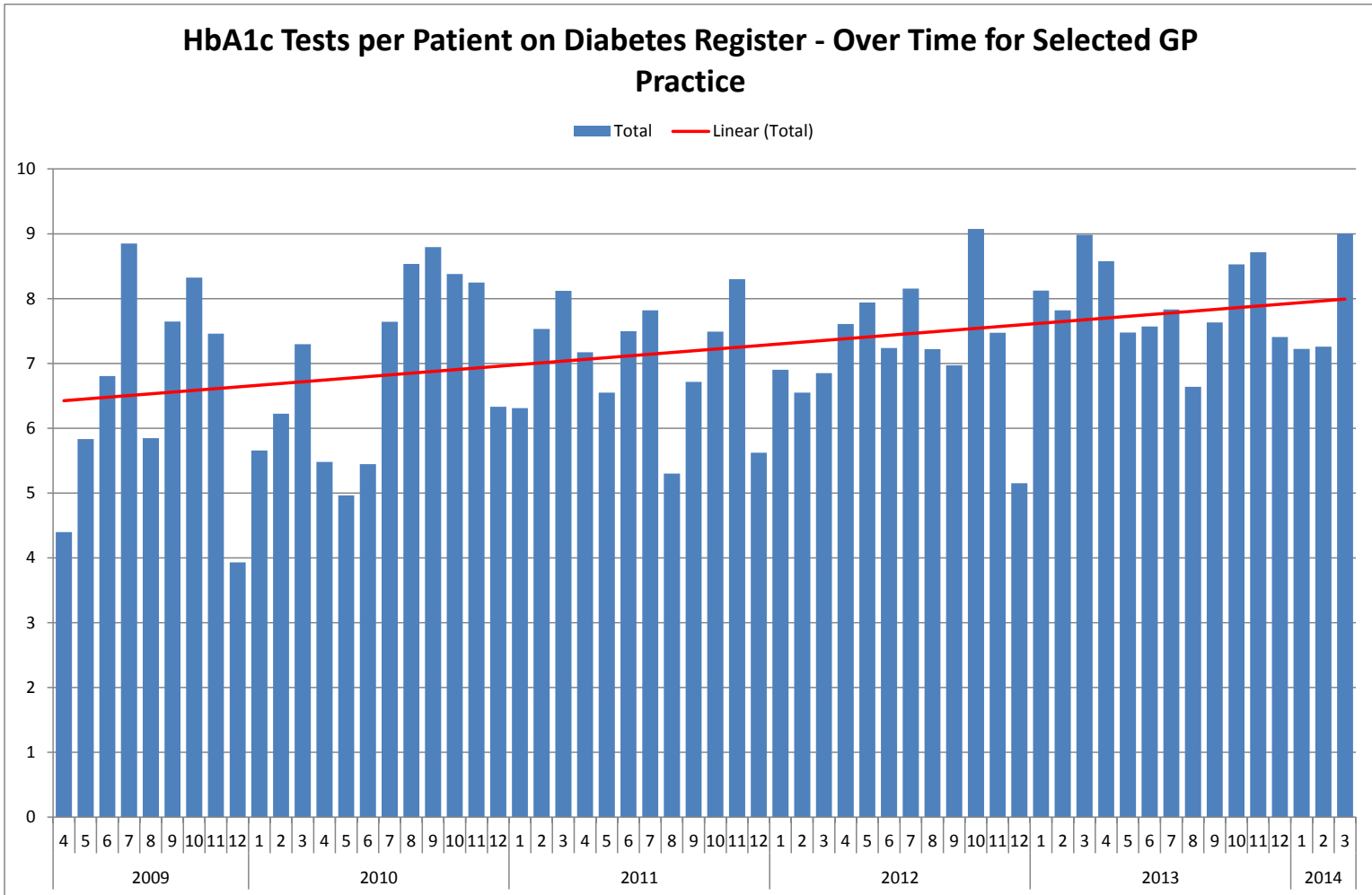
# Variability and Trends

## Steady Downward Trend

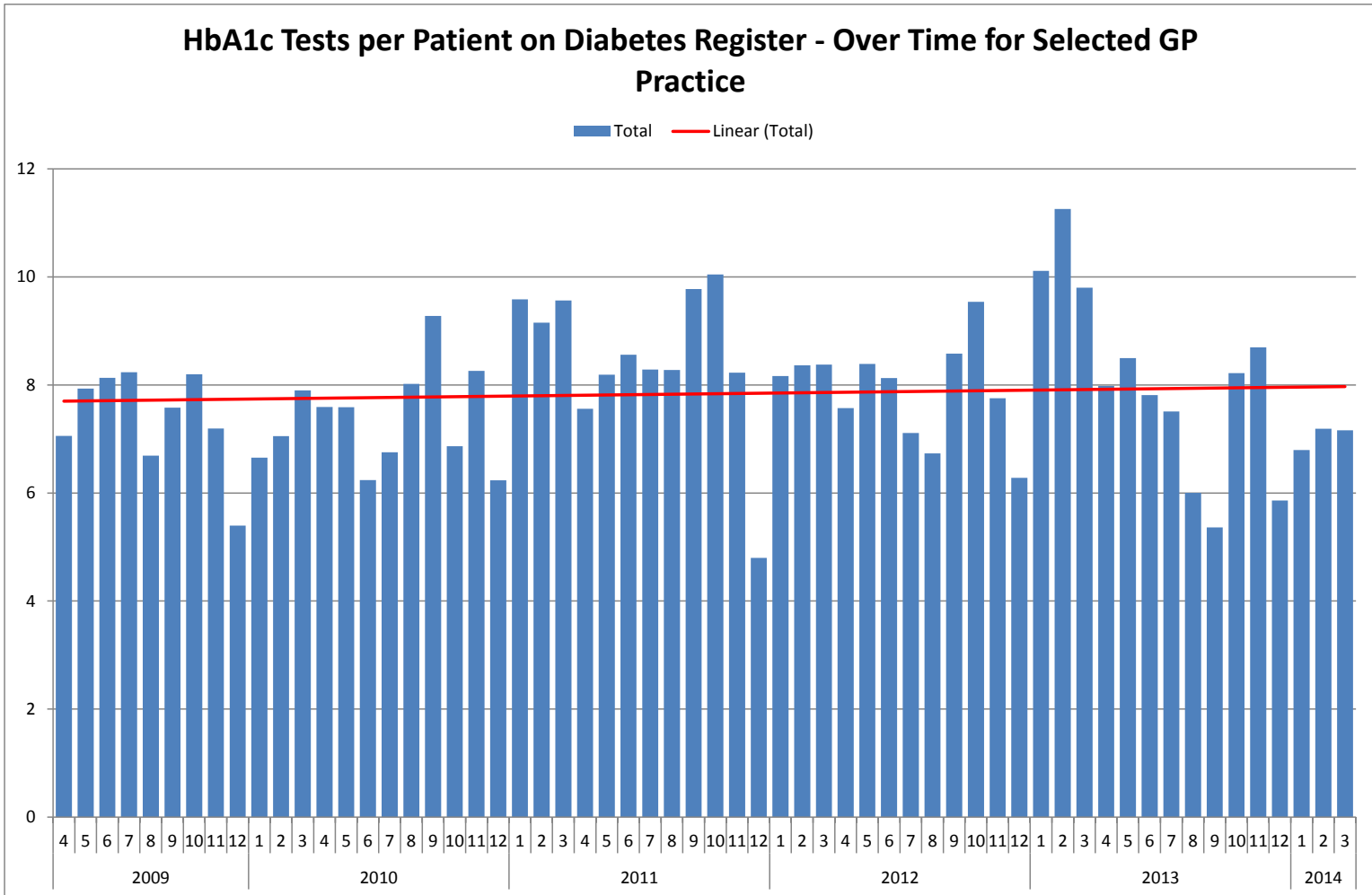


# Variability and Trends

## Steady Upward Trend



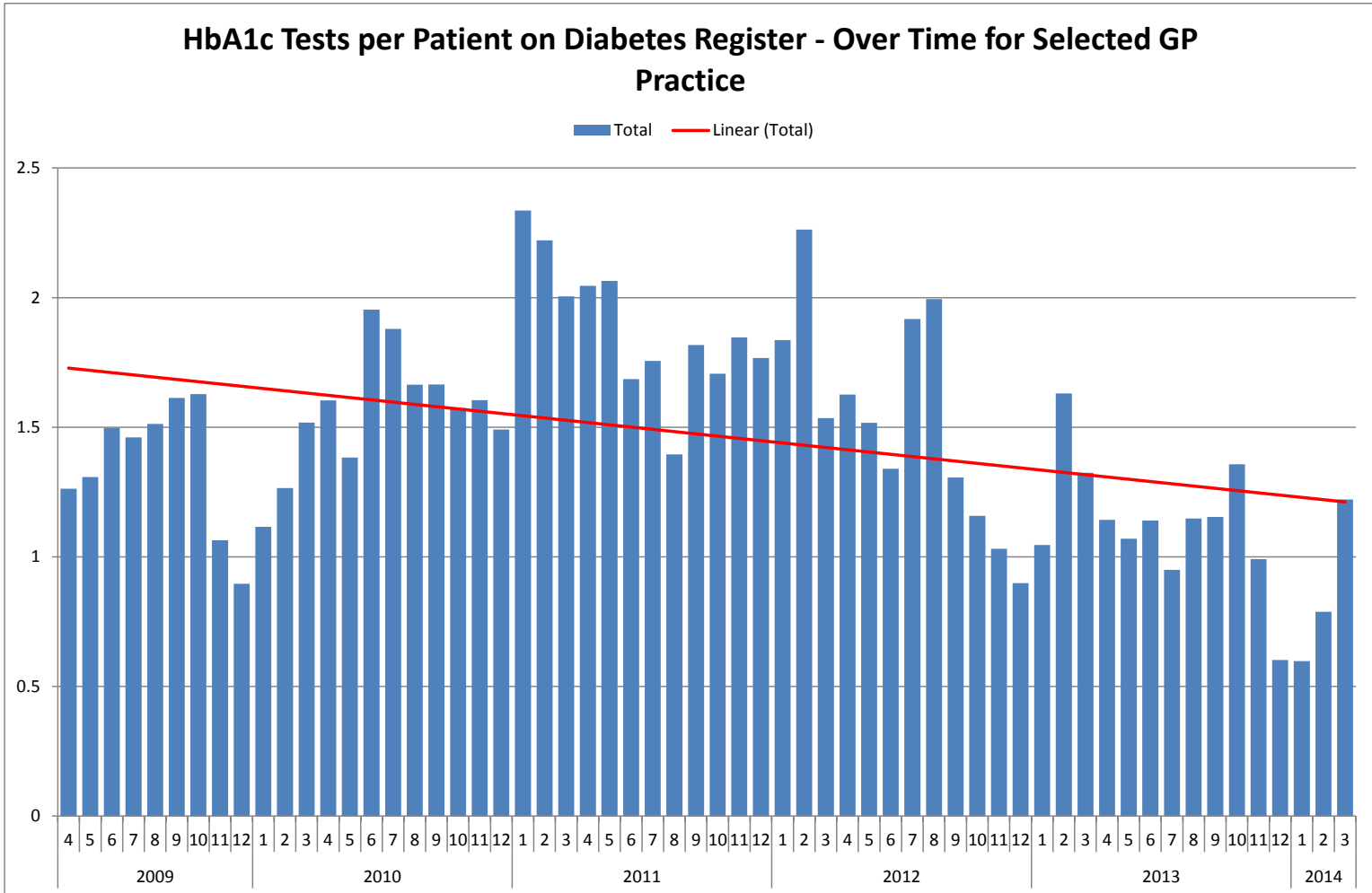
# Variability and Trends Consistent Over Time



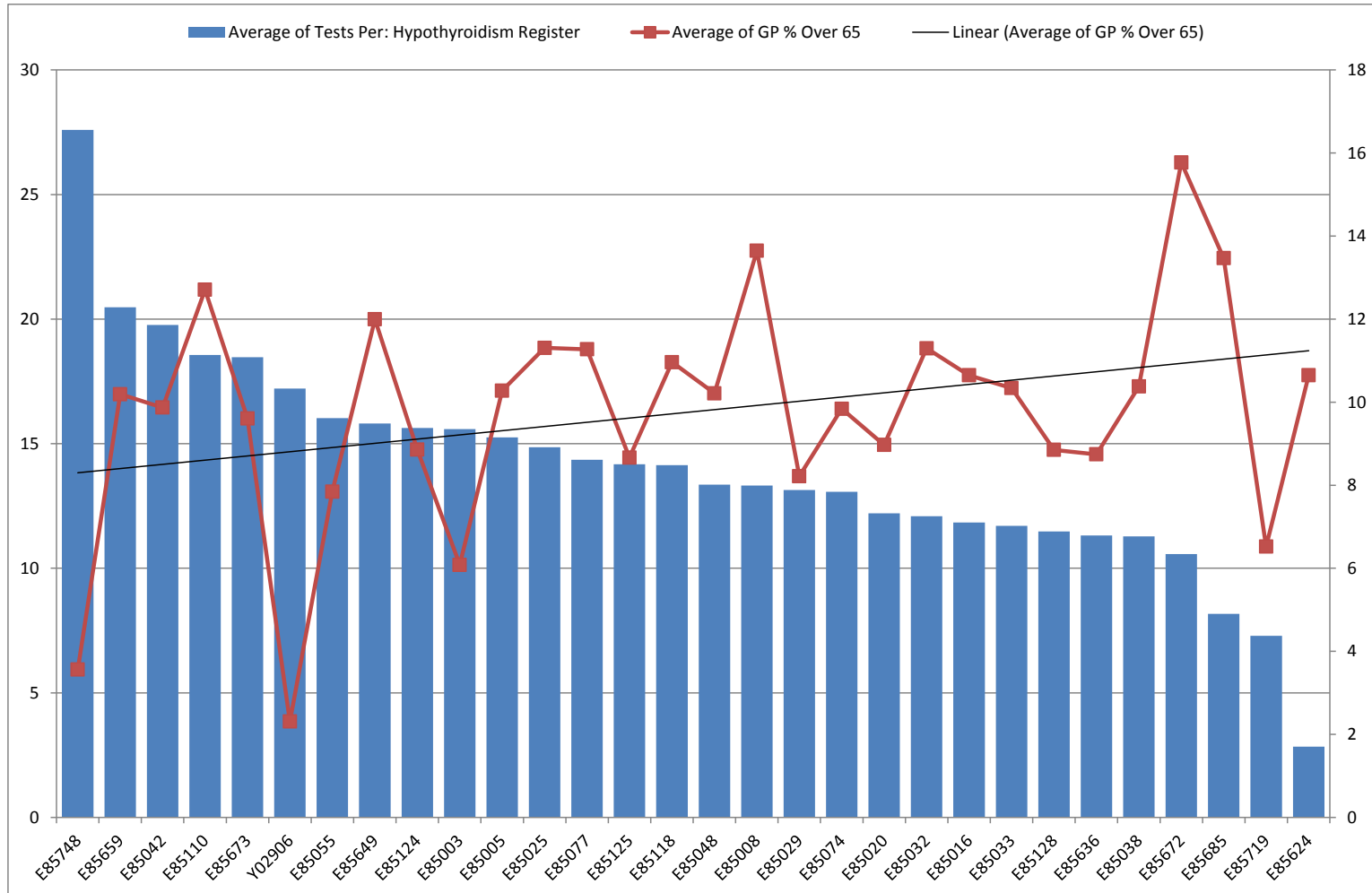


# Variability and Trends

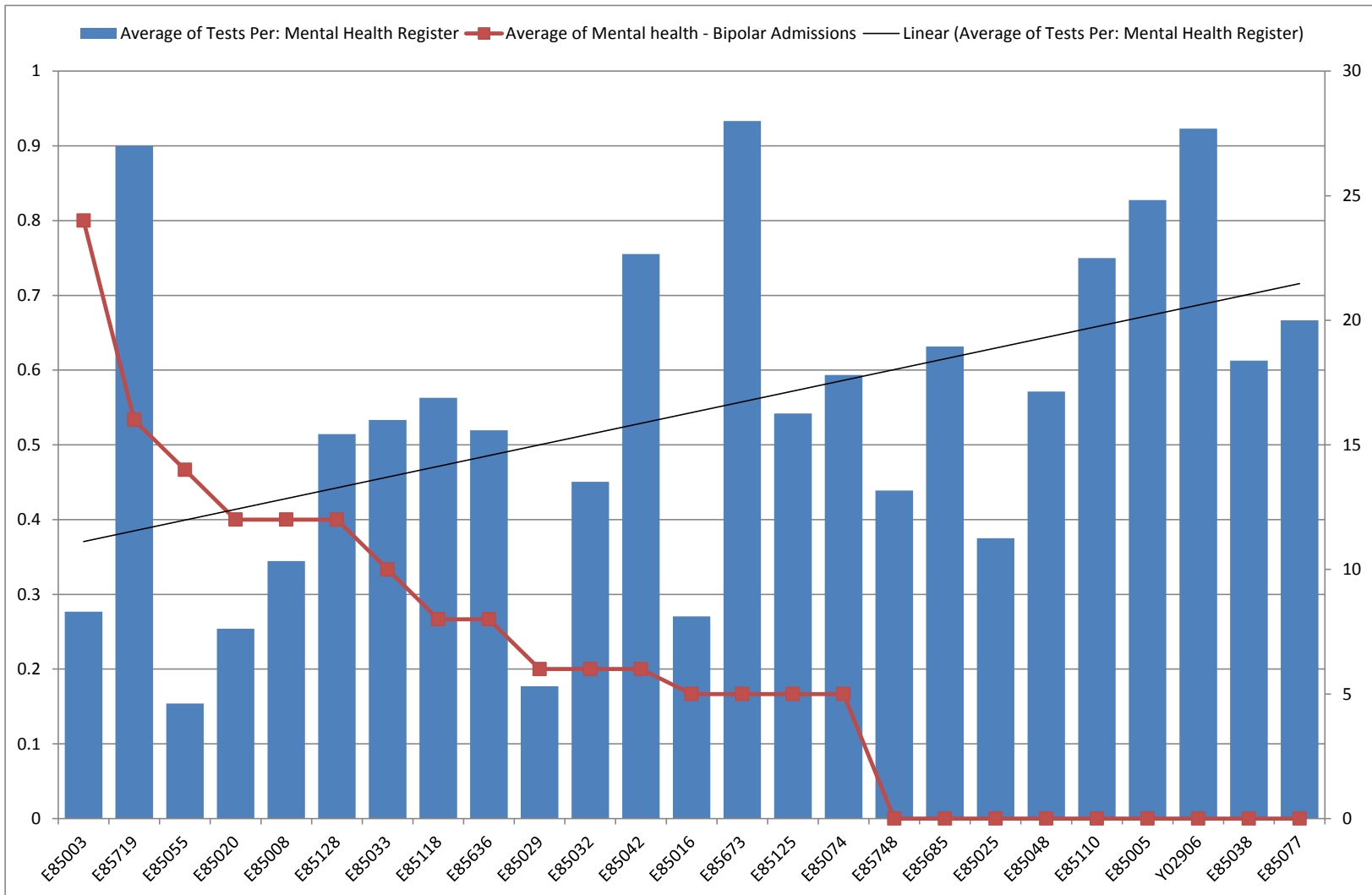
## Variable



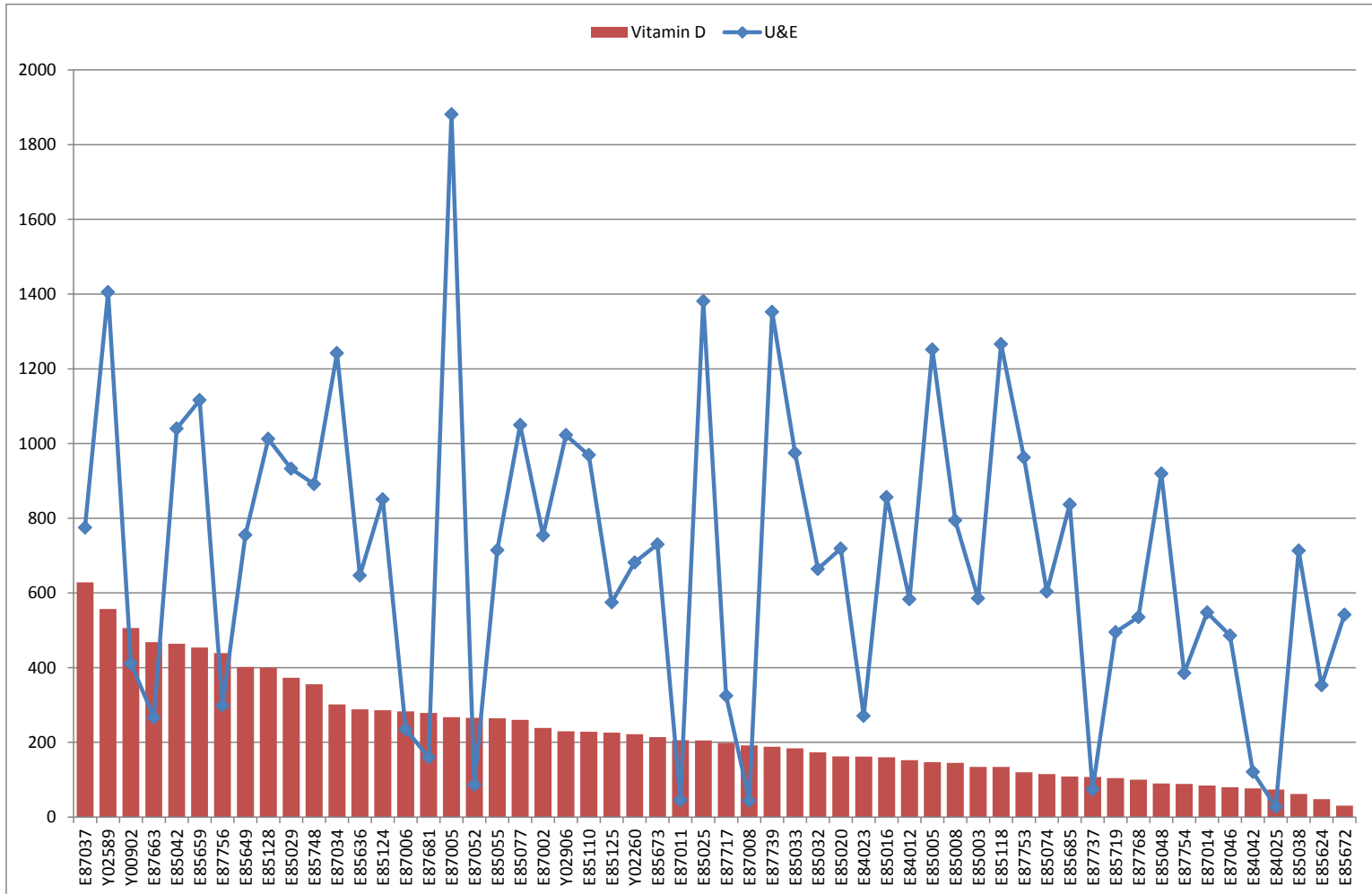
# Analysis With Population Data Using Data to Raise Questions



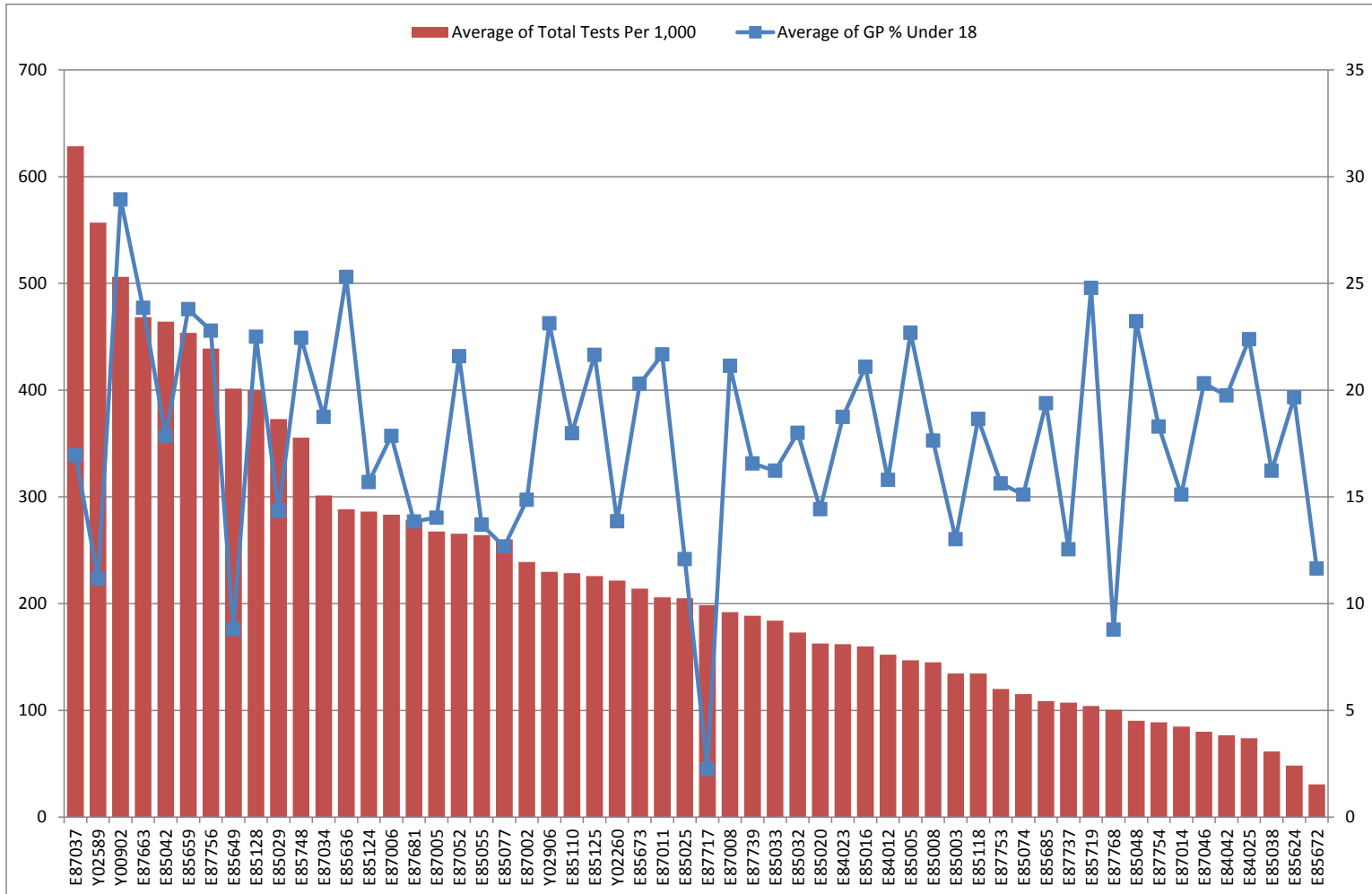
# Demand Optimisation Test Rate vs Outcome



# Inappropriate Requesting? Vit D (FOTM) vs U&E (Routine)



# Inappropriate Requesting? Vit D vs % of Population <18



# Dashboard – Comparative Data

## Diabetes Performance Dashboard Summary for Paddington Green Health Centre

Contextual	Paddington Green Health		
	Centre	Imperial Healthcare Average	Target
Practice List Size	8,486	7,468	
Diabetes Mellitus (Diabetes) Register (ages 17+)	506	320	
Diabetes Prevalence	6.0%	4.3%	
GP Deprivation Score (IMD)	36.1	23.4	
<b>Activity</b>			
Total Tests (HbA1c)	2,046	1,345	
Tests (HbA1c) Per: Diabetes Mellitus (Diabetes) Register (ages 17+)	4.0	6.8	1.5
NICE Guideline HbA1c Tests per Patient Per Year	1-2 Tests Per Patient Per Year		
<b>Outcomes</b>			
Diabetes Admissions	207	80	
Diabetes Bed Days	1,277	613	
Diabetes - Days Per Admission	6.2	7.7	7.0
Diabetes Admissions per Patient	0.41	0.25	0.25

# Dashboard – Comparative Data

## Diabetes Performance Dashboard Summary for North End Medical Centre

Contextual	North End Medical Centre	Imperial Healthcare Average	Target
Practice List Size	16,791	7,468	
Diabetes Mellitus (Diabetes) Register (ages 17+)	500	320	
Diabetes Prevalence	3.0%	4.3%	
GP Deprivation Score (IMD)	27.3	23.4	
<b>Activity</b>			
Total Tests (HbA1c)	3,728	1,345	
Tests (HbA1c) Per: Diabetes Mellitus (Diabetes) Register (ages 17+)	7.5	6.8	1.5
NICE Guideline HbA1c Tests per Patient Per Year	1-2 Tests Per Patient Per Year		
<b>Outcomes</b>			
Diabetes Admissions	156	80	
Diabetes Bed Days	998	613	
Diabetes - Days Per Admission	6.4	7.7	7.0
Diabetes Admissions per Patient	0.31	0.25	0.25



# Outcomes and Feedback

- The Primary Care Benchmarking Project houses a wealth of data – how do we best utilise it to help pathology laboratories and requestors/GPs to further improve patient outcomes and efficiency (cost)?
  - Will these data help make a difference?
  - How do we present the outputs?
  - Which other measures do we need to collect?
  - What is the most effective method of reporting back the key data?
- How do we address the questions the data raise? For example, looking at why the highest number of TSH tests per patient on hypothyroidism register compared with % of older population