Public Health England

Using linked primary care data to analyse patients presenting with non-specific but concerning symptoms

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The ACE Programme

Outline

- **Background**
- **Introduction to NCDA**
- **Methods**
  - Data linkage
  - Symptoms to build cohorts
- **Results**
- **Conclusions**

Background: ACE Programme – MDCs

‘Accelerate, Coordinate, Evaluate’
ACE Programme: Wave 2: evaluation

- 5 projects with 10 sites across England developing & trialling Multidisciplinary Diagnostic Centre (MDC) based pathways
- Focus on patients with non-specific but concerning symptoms
- Improving diagnostic pathway

Aim

Develop our understanding of patients who present with non-specific but concerning (‘vague’) symptoms and how they might be different from cancer patients with more obvious symptoms using cancer registrations and primary care data

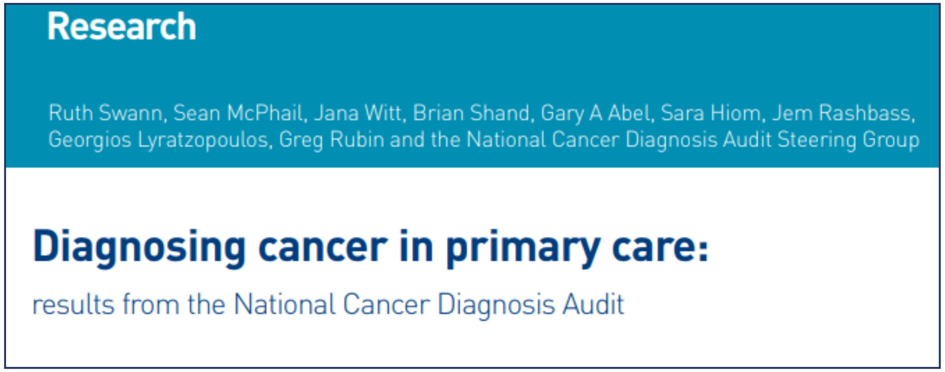
National Cancer Diagnosis Audit (NCDA)

National Cancer Diagnosis Audit (NCDA) – second audit of cancer in primary care

Rich source of primary care data for cancers diagnosed in 2014 in England

Cancer registration data sent to participating GP surgeries - completed primary care information

- Symptoms
- Investigations
- Time intervals
- Number of consultations
- Avoidable delays



Research

Ruth Swann, Sean McPhail, Jana Witt, Brian Shand, Gary A Abel, Sara Hiom, Jem Rashbass, Georgios Lyratzopoulos, Greg Rubin and the National Cancer Diagnosis Audit Steering Group

Diagnosing cancer in primary care:

results from the National Cancer Diagnosis Audit

http://bjgp.org/content/early/2017/12/18/bjgp17X694169

439 participating GP practices (~5% in England)

Public Health England

NHS England

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RCGP Royal College of General Practitioners

HDI healthdatainsight

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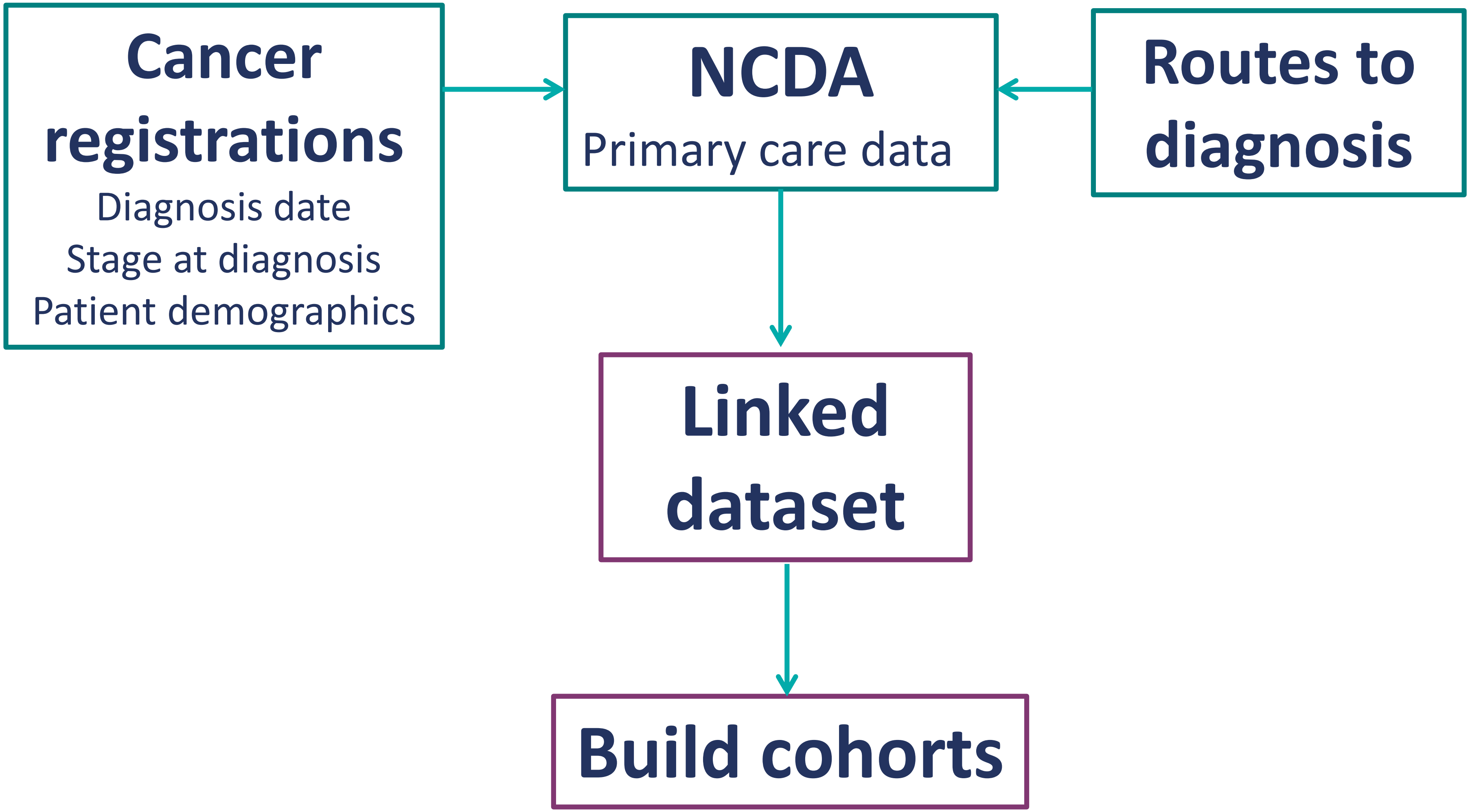
Methods: Data linkage



Cancer registrations

Diagnosis date
Stage at diagnosis
Patient demographics

NCDA

Primary care data

Routes to diagnosis

Linked dataset

Build cohorts

National Cancer Registration and Analysis Service (NCRAS), Public Health England (PHE)

Methods: Symptoms

Using symptom(s) at presentation to build a cohort of patients presenting ***ONLY*** with non-specific but concerning symptoms (NSCS) = **‘vague’**

The NSCS cohort was compared with the remainder of the cohort = **‘obvious’** (excluding those who had no symptoms recorded – unknown or screening)

MDC referral criteria: symptoms for ‘vague’ cohort

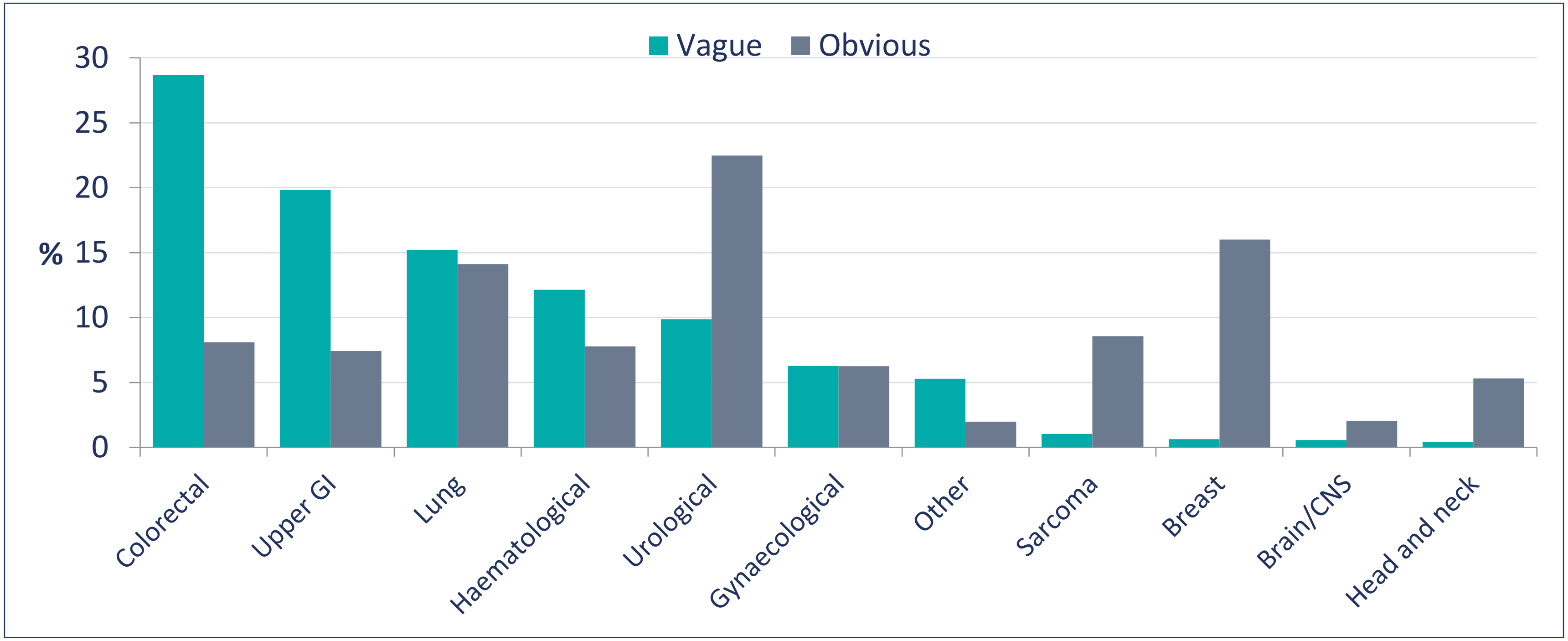
- Distention
- Abdominal pain (upper, lower, NOS*)
- Bowel habit change
- Diarrhoea
- Constipation
- Nausea and/or vomiting
- Lymphadenopathy (generalised & localised)
- Pallor
- Jaundice
- Back pain
- Chest pain
- Chest infection
- Loss of appetite
- Deep vein thrombosis
- New onset diabetes
- Fatigue
- Weight loss

* not otherwise specified

Results: Cohorts & sites

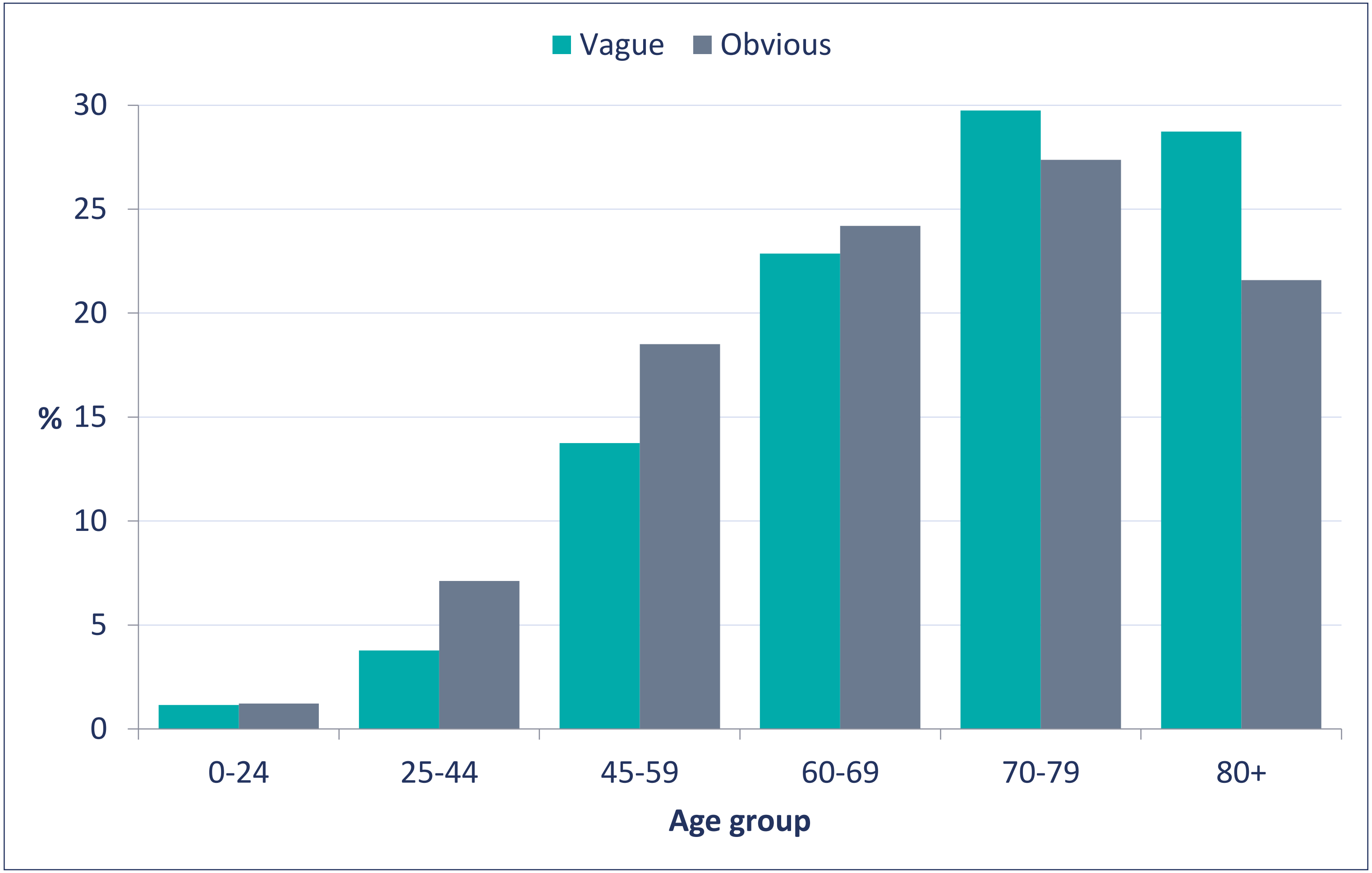
National Cancer Diagnosis Audit (NCDA) data – 2014 diagnoses

○ **17,042** cancers in total cohort
○ **2,865** cancers presented with **‘vague’** symptoms (17% of total)
○ **10,333** cancers presented with at least one **‘obvious’** symptom (61%)
○ **3,844** cancers had no symptoms recorded: screening/not known (22%)

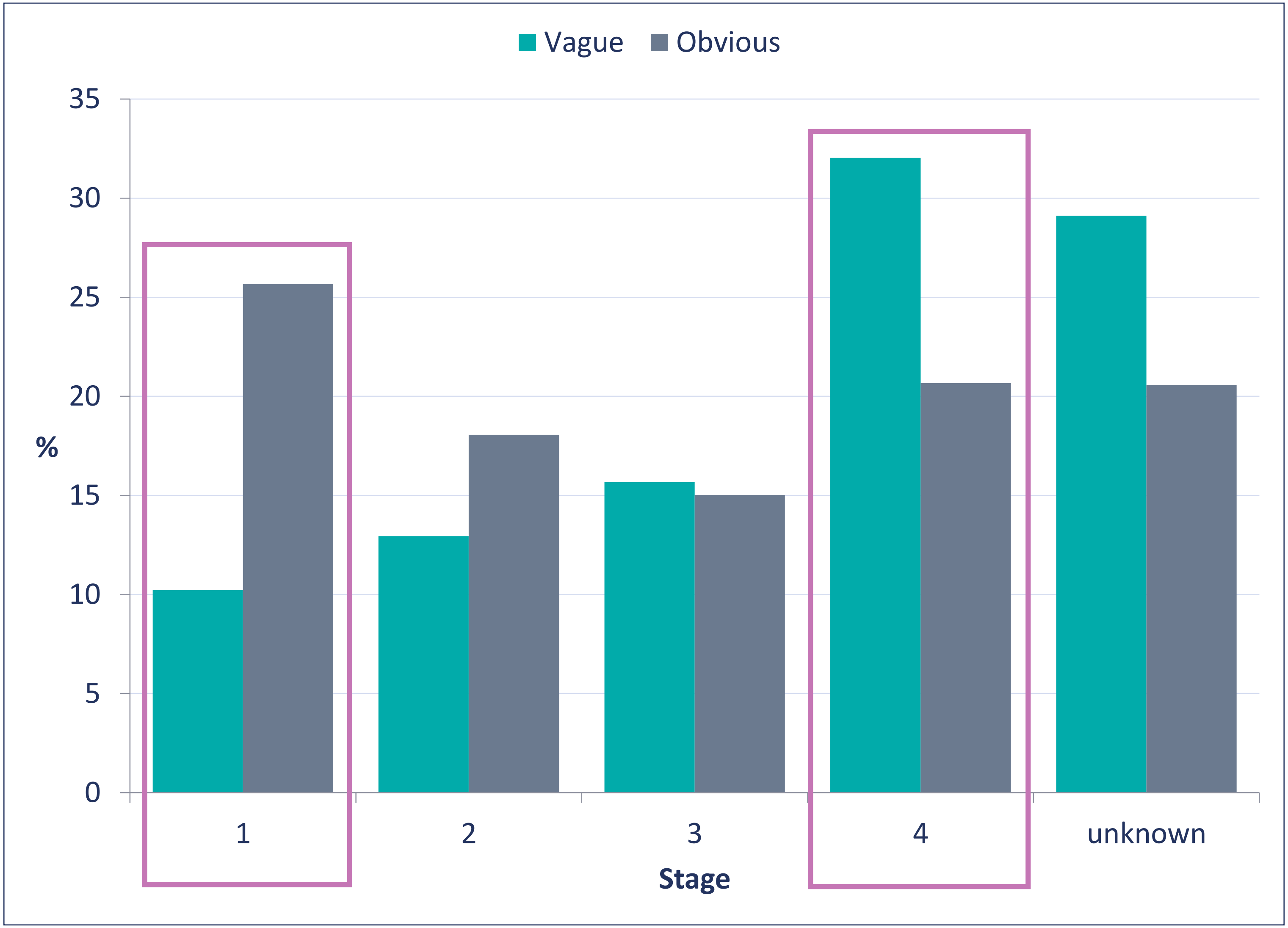


Results: Age at diagnosis

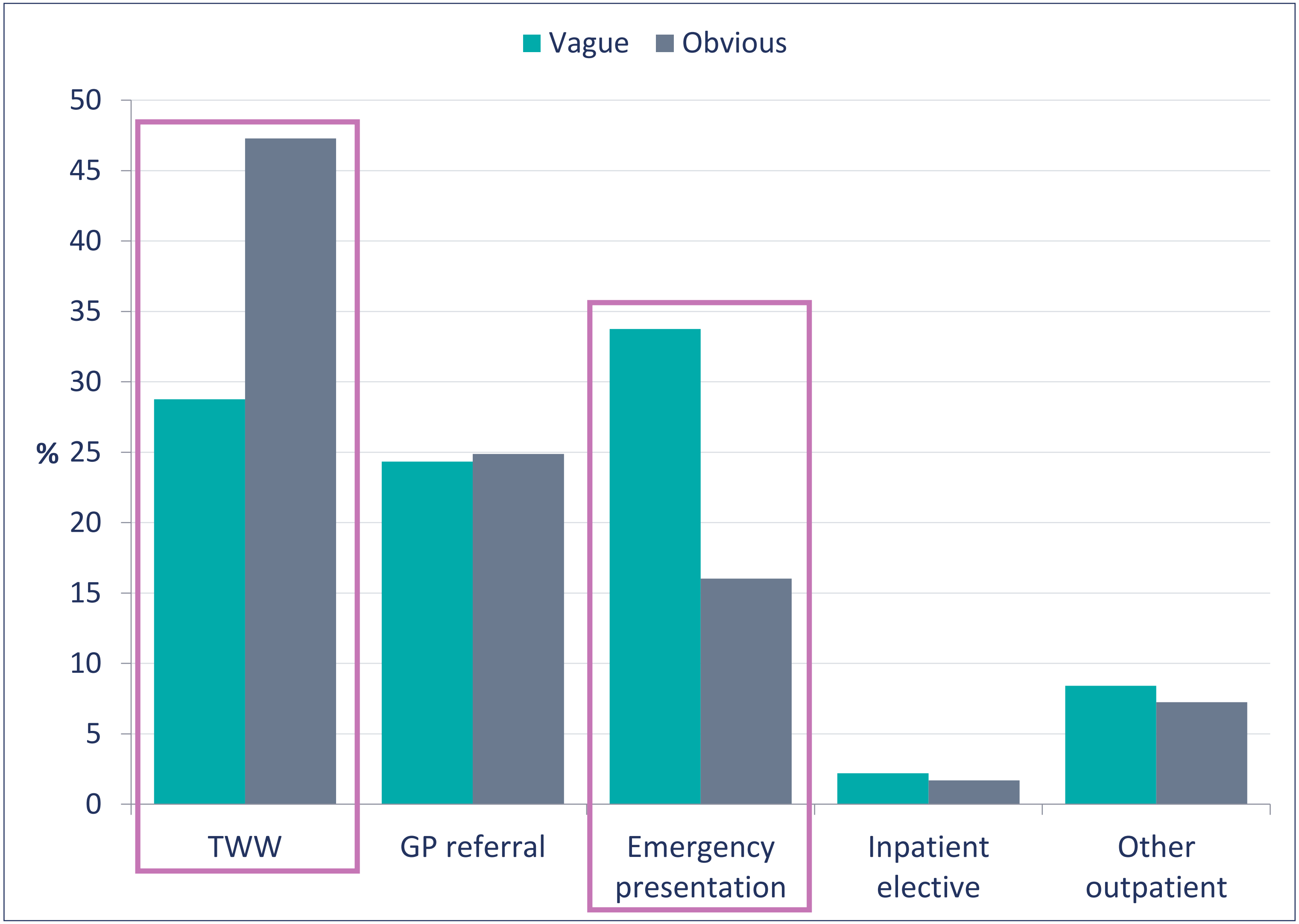
Median age (years)			
Vague	72	Obvious	69



Results: Stage at diagnosis



Results: Presentation route



TWW – Two Week Wait – urgent GP referral for suspicion of cancer

Results: Primary care time intervals (days)

	Vague		Obvious	
	n	Median days (5-95%)	n	Median days (5-95%)
Presentation to referral	2,048	11 (0 – 177)	8,045	2 (0 – 150)
Presentation to diagnosis	2,534	47 (1 – 307)	9,179	38 (3 – 327)
Presentation to first seen	2,212	25 (0 – 214)	8,418	18 (0 – 198)

Removing emergency presentations

	Vague		Obvious	
	n	Median days (5-95%)	n	Median days (5-95%)
Presentation to referral	1,489	14 (0 – 193)	7,101	2 (0 – 148)
Presentation to diagnosis	1,679	57 (6 – 331)	7,706	40 (6 – 331)
Presentation to first seen	1,546	29 (0 – 231)	7,260	19 (0 – 199)

Conclusions

- **Patients with ‘vague symptoms’ are:**
  - Older
  - Have higher proportions who
    - present via emergency route
    - are diagnosed at a later stage
    - have longer primary care and diagnosis intervals

- **Limitations**
  - 2014 diagnoses – policy changes in 2015
  - Symptom list – MDC referral guidelines
    - NICE - NG12 alarm & vague symptoms for referral onto cancer pathways

Acknowledgements

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