Harrow
JSNA Online

PUBLIC HEALTH REPORT

CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

Introduction

Chronic obstructive pulmonary disease (COPD) is the name for a group of lung conditions that cause breathing difficulties. It includes: Emphysema (damage to the air sacs in lungs) and chronic bronchitis (long term inflammation of the airways).

Respiratory disease continues to be a major cause of disability and premature mortality in the United Kingdom. It affects 1 in 5 people and is the third leading cause of death in England. Respiratory disease has been identified as one of the disease priority areas in the '2020-2030 NHS Long Term Plan'[1]. RightCare has also selected it as a focus area for 2019/20[2] and as part of this work is developing Asthma and Pneumonia toolkits, and 'Getting it Right First Time (GIRFT)' has a specialist respiratory programme.[3]

Tobacco control, immunisation, antimicrobial resistance, and supporting the Clean Air Strategy are all priorities for Public Health England (PHE), as defined in the 2019/20 remit letter. The annual remit letter sets out government priorities for PHE and its role across the health and care system. 'All Our Health' is a resource for healthcare professionals to help them to maximise their impact on improving health outcomes and reducing health inequalities; these include a number of relevant prevention topics.[4]

The condition cannot be cured or reversed, but there is well established evidence that healthcare and public health interventions reduce disease progression and mortality in people with COPD. Long-term oxygen therapy in appropriate patients, increases in physical activity and smoking cessation all improve survival. Non-invasive ventilation (NIV) substantially reduces mortality during COPD exacerbations complicated by acute respiratory failure, whilst long term (home) NIV reduces the risk of readmission or death in selected patients. Invasive ventilation and management in intensive care plays a key role in some severe hospitalised exacerbations. According to statistics from the British Lung Foundation, the UK is among the top 20 countries for COPD mortality worldwide. The UK has

[1] NHS (2019) The NHS long term plan [Accessed 15-10- 2019]
[2] RightCare NHS Rightcare workstreams: Respiratory [Accessed 15-10- 2019]
[3] Getting it right first time Medical Specialities: Respiratory [Accessed 15-10- 2019]
[4] PHE, The 2nd Atlas of variation in risk factors and healthcare for respiratory disease in England(Accessed: 15-10-2019)

one of the highest rates across Europe (almost three times higher than France and twice higher than Italy), with a rate 50% higher than the average across the European Union[5].

Context (COPD and Asthma)

In addition to lung cancer and pneumonia, COPD is one of the 3 leading respiratory causes of death in England. COPD was responsible for more than 26,000 deaths in England in 2017. Of COPD deaths 86% are estimated to be attributable to smoking. Other causes of COPD include occupational exposure to fumes and dust, air pollution and genetics. In many people with COPD, the underlying cause of death is related to co-existing conditions such as cardiovascular disease and cancer as shown in Table 7.1 (adapted from PHE)[6].

Table 7.1: Underlying cause of death for which COPD was a contributory factor in England (2015-2017)[2]	Count	Percentage
Cancer	25,830	32.4%
Acute heart disease	16,930	21.2%
Other	12,721	16.0%
Dementia	6,025	7.6%
Digestive diseases	4,516	5.7%
Chronic heart disease	4,290	5.4%
Stroke	3,999	5.0%
Genitourinary diseases	1,836	2.3%
Infections	1,387	1.7%
Liver disease	1,197	1.5%
Musculoskeletal disorders	771	1.0%
Blood diseases	176	0.2%
Pneumonia	37	0.0%
Total	**79,715**	**100.0%**

Source: adapted from PHE, The 2nd Atlas of variation in risk factors and healthcare for respiratory disease in England

Asthma is an inflammatory disorder affecting the airways, characterised by breathlessness, wheezing and coughing particularly at night. The most common type of asthma is allergic asthma triggered by immunoglobulin E (IgE) antibodies generated in response to environmental allergens such as dust mites, pollen and moulds. Consistent platelet-activating factor (PAF%) values from many studies suggest a median of 15% of asthma can be attributable to workplace exposures[7].

Deprivation, Asthma and COPD

It is estimated that in the UK around 550,000 respiratory diagnoses are made annually, of which around half are for asthma and COPD. Morbidity and mortality due to respiratory disease are not evenly distributed within the population but instead they are concentrated within deprived and other population groups. There is also a close association between high prevalence rates of respiratory conditions and current and past high rates of smoking.

[5] PHE, The 2nd Atlas of variation in risk factors and healthcare for respiratory disease in England(Accessed: 15-10-2019)
[6] PHE, The 2nd Atlas of variation in risk factors and healthcare for respiratory disease in England (Accessed: 15-10-2019)
[7] PHE, The 2nd Atlas of variation in risk factors and healthcare for respiratory disease in England-Asthma [Last accessed: 23-10-20190]

COPD and Asthma Diagnosis

According to the PHE 2nd Atlas of variation in risk factors many people with COPD are unaware they have the condition. More than 1 million people in England are currently diagnosed with COPD on patient registers and a further 2 million are undiagnosed. Failure to diagnose is not confined to people with very mild disease: more than 50% of people with moderate COPD have not been detected and around 20% of undiagnosed people have severe or very severe disease[8].

In 2017/18, the prevalence of asthma in England, defined as receiving asthma treatment in the last year, and based on data from GP QOF registers, was 6.0%. It is generally accepted that this is a conservative estimate based on known under reporting. The 2010 Health Survey for England indicated 9.5% of adults and children reported having asthma according to this definition, suggesting that many people with asthma are not included in GP registers.[9]

Economic Burden of Respiratory Diseases

The economic burden of respiratory diseases is substantial; excluding intangible costs, the estimated cost to the UK is £11.1 billion per year, or 0.6% of the UK's Gross Domestic Product (GDP) in 2014.

The global burden of disease study estimates that respiratory disease leads to 13% of all Disability adjusted life years (DALYs) lost in England. The proportion of contribution to total years of life lost (YLL) by lung cancer, COPD and lower respiratory infections are 7.4%, 5.5% and 4.3% respectively[10].

Local context (Harrow CCG) During 2017/18 Harrow CCG experienced 311 COPD related emergency admissions into hospital (with a rate of 258 per 100,000 of populations), the 4th lowest between 16 NNs also significantly lower than London and England average rate of 392 and 415 per 10,000 populations. According to the latest available data from 2012/13, in Harrow CCG 253 people were admitted to hospital by emergency admission. This is equal to a crude rate of 104 per 100,000 populations, not significantly different compared to the average of NNs, London and England with emergency admissions of 112, 102 and 109 per 100,000 populations respectively.

One of the main contributing risk factors associated with COPD is smoking. There is a direct correlation between smoking and COPD prevalence. Based on information from Annual Population Survey (APS) reported by PHE-Fingertips, within Harrow it is estimated over 10.8% of the adult population are smokers (not significantly different from London rate of 13.9% and England with 14.4%). This associates to approximately 20,774 smokers. However; QOF 2017/18 recorded number

[8] PHE, The 2nd Atlas of variation in risk factors and healthcare for respiratory disease in England [Last accessed: 15-10-2019]
[9] PHE, The 2nd Atlas of variation in risk factors and healthcare for respiratory disease in England-Asthma [Last accessed: 23-10-20190]
[10] PHE, The 2nd Atlas of variation in risk factors and healthcare for respiratory disease in England (Accessed: 15-10-2019)

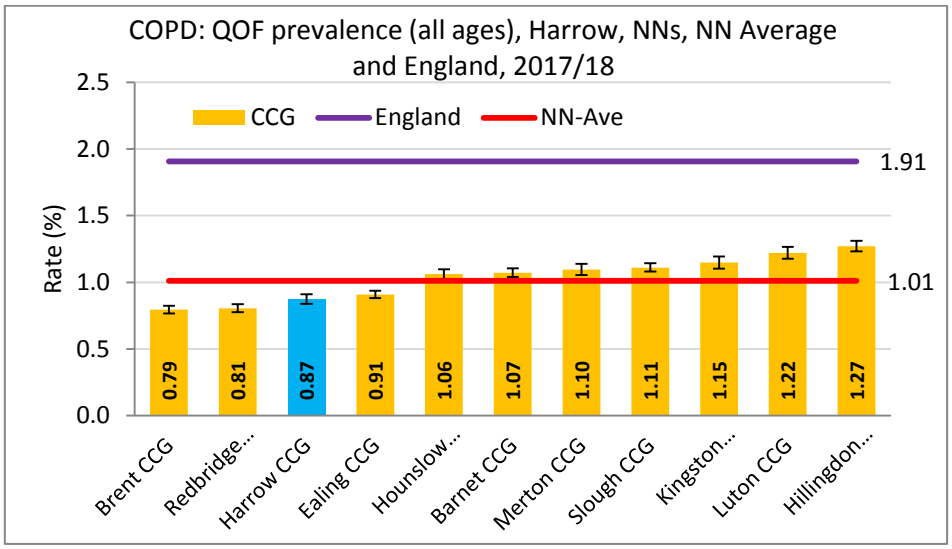
of registered smoker in Harrow CCG is 28,361 which accounts for over 14.5%[11] of adult population of 18 and over.

During 2017/18 Harrow CCG experienced 119 Asthma related hospital admissions for under 19 years old (with a rate of 194.2 per 100,000 of populations), the 4th highest between 16 Nearest Neighbours (NN) and similar to the London and England average rate of 188.1 and 186.4 per 10,000 populations.

Prevalence of COPD

Harrow CCG with 0.87% (N=2,329) has the third lowest COPD prevalence rates across the 11 Nearest Neighbours (NN) CCGs as illustrated in Fig 1. Harrow's rate is significantly lower than the NNs average (of 1.01%) and England average of 1.91%.

Fig 1 COPD: QOF prevalence (all ages), Harrow, NNs, NN Average and England, 2017/18

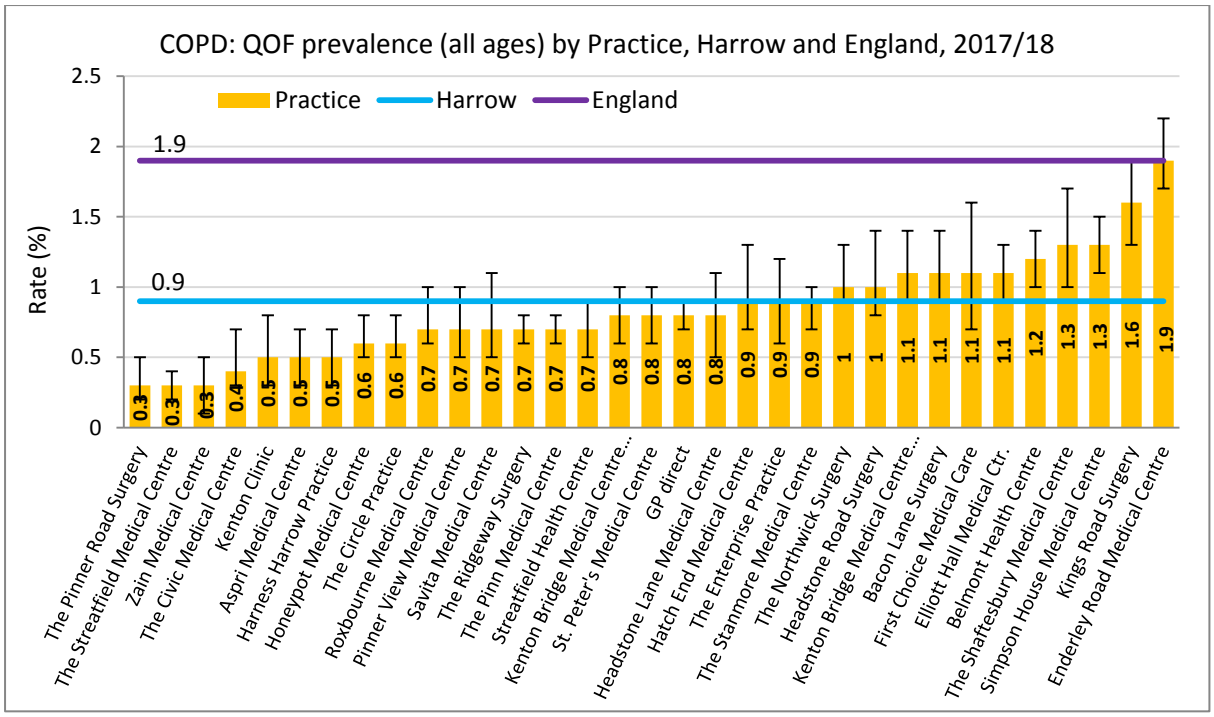


Source: QOF 2017/18, PHE – Fingertips, Inhale - Interactive Health Atlas of Lung conditions in England

The COPD prevalence 2017/18 is further broken down by GP practices within Harrow that demonstrates a large disparity between General Practices, varies from 0.3% to 1.9% (Fig 2).

[11] Source: QOF and GLA projection of population.

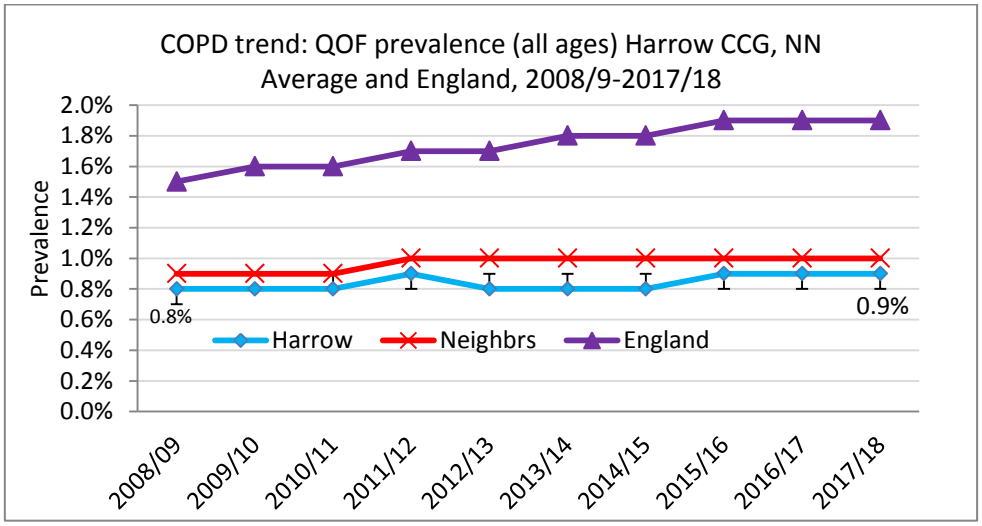
Fig 2 COPD: QOF prevalence (all ages), Harrow practices, Harrow and England, 2017/18



Source: QOF 2017/18, PHE – Fingertips, Inhale - Interactive Health Atlas of Lung conditions in England

Ten years trend in the prevalence of COPD in Harrow, NN and England is presented in (Fig 3). There has been slight but not significant increase for Harrow and around 27% increase nationally.

Fig 3 COPD trend: QOF prevalence (all ages) Harrow CCG, NN Average and England, 2008/9-2017/18

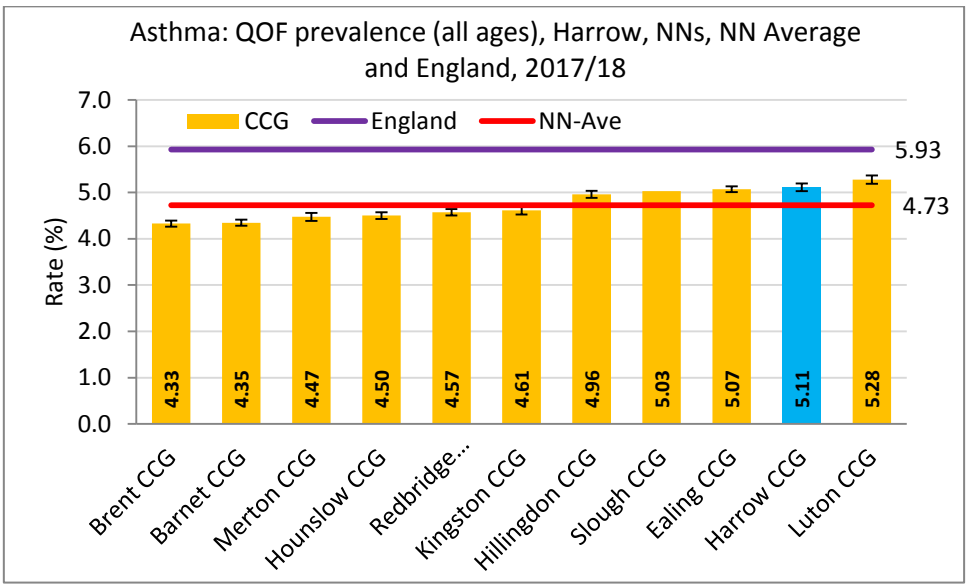


Source: QOF 2017/18, PHE – Fingertips, Inhale - Interactive Health Atlas of Lung conditions in England

Prevalence of Asthma

Based on Quality and Outcome Framework (QOF) 2017/18 data, the prevalence of asthma in Harrow (among the GP practices' registered population) was 5.11% (13,623 persons), the second highest prevalence between all NNs and significantly higher than the average of NNs. However, Harrow prevalence of asthma was significantly lower than England average of 5.93% (Fig 4).

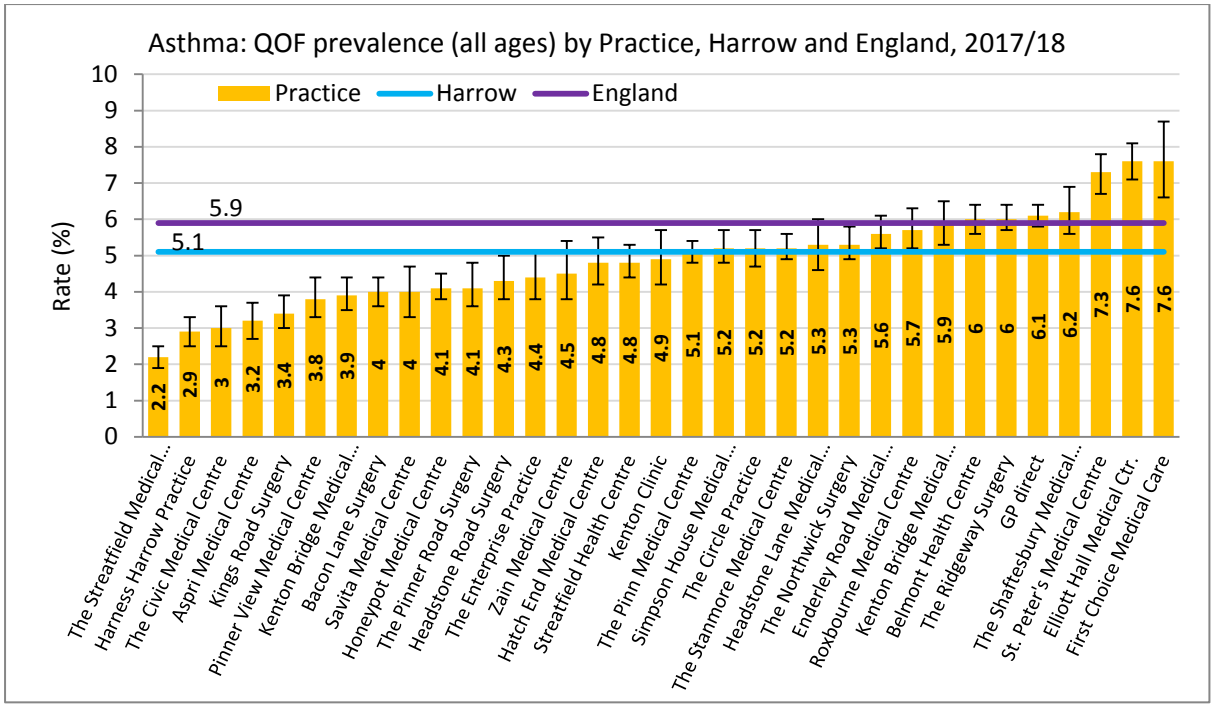
Fig 4 Asthma: QOF prevalence (all ages), Harrow, NNs, NN Average and England, 2017/18



Source: QOF 2017/18, PHE – Fingertips, Inhale - Interactive Health Atlas of Lung conditions in England

The highest and lowest asthma prevalence rate by Harrow practices in 2017/18 was 7.6% and 2.2% in that order (Fig 5).

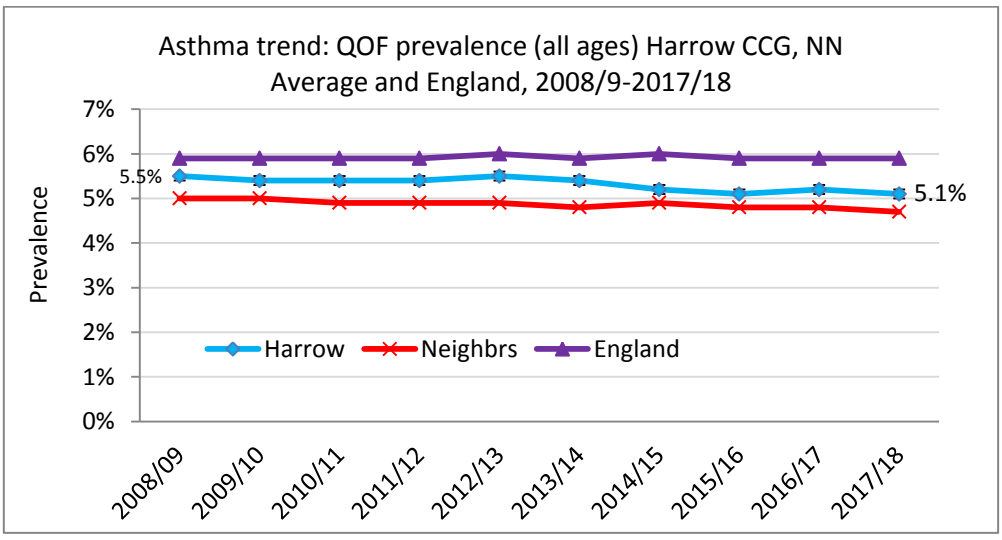
Fig 5 Asthma: QOF prevalence (all ages), Harrow practices, Harrow and England, 2017/18



Source: QOF 2017/18, PHE – Fingertips, Inhale - Interactive Health Atlas of Lung conditions in England

Ten years trend in the prevalence of Asthma in Harrow, NN and England is presented in (Fig 6). The trend shows over 7% decline in the prevalence of Asthma in Harrow but for England it does not show any changes. Harrow's prevalence has always been significantly lower than the national level and higher than the nearest neighbours.

Fig 6 Asthma trend: QOF prevalence (all ages) Harrow CCG, NN Average and England, 2008/9-2017/18

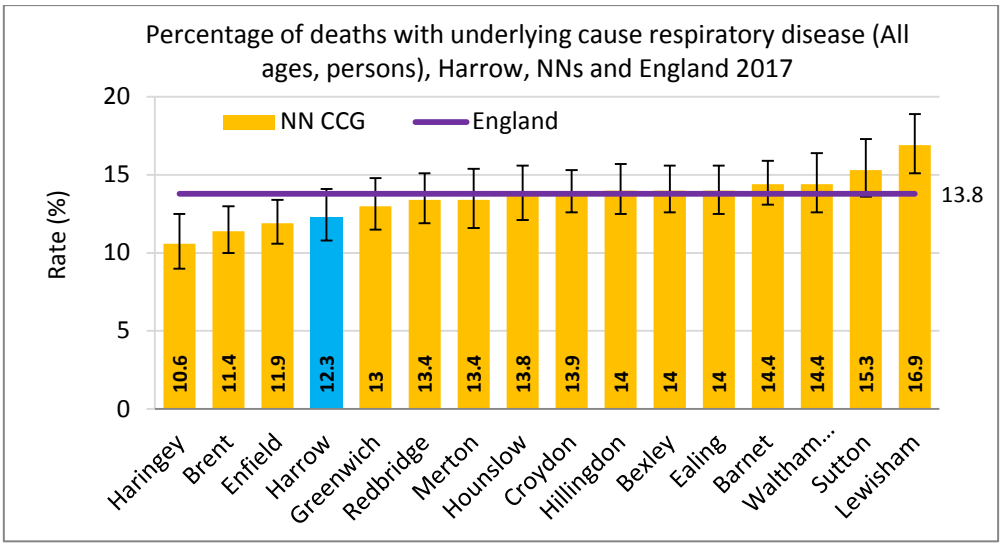


Source: QOF 2017/18, PHE – Fingertips, Inhale - Interactive Health Atlas of Lung conditions in England

Mortality from Respiratory disease

Harrow Percentage of deaths with underlying cause respiratory disease during 2017 was 12.3 (N=184), the 4th lowest between NNs but not significantly different from England (Fig 7).

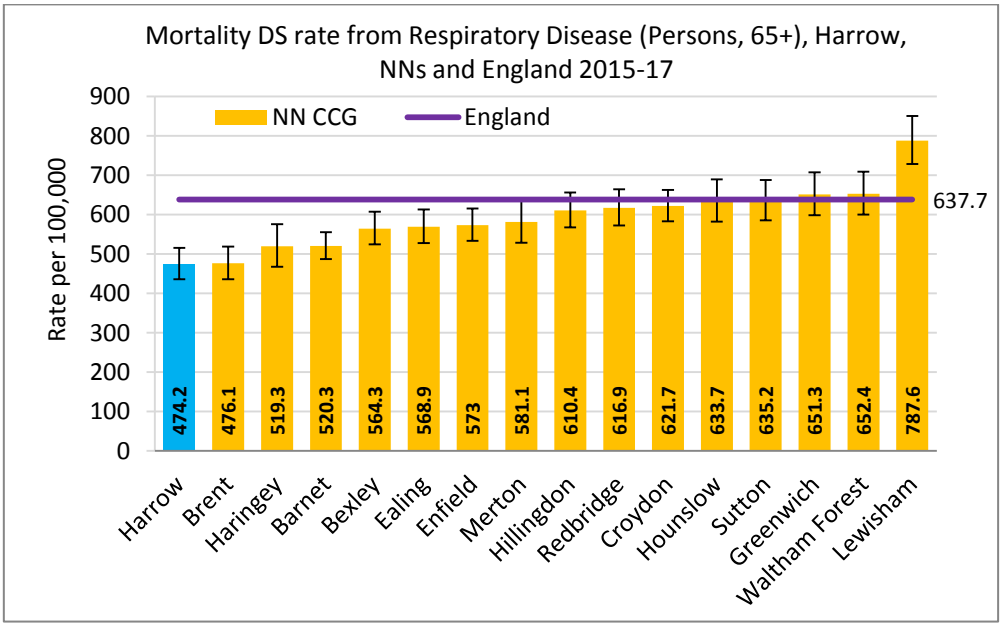
Fig 7 Percentage of deaths with underlying cause respiratory disease (All ages, persons), Harrow, NNs and England 2017



Source: Public Health England (based on ONS source data)

Respiratory disease is one of the major causes of death in the over 65's in England and smoking is the major cause of COPD, one of the major respiratory diseases. Death rate (per 100,000) of populations aged 65 and over in Harrow CCG during 2015-17 was 472.2 (N=563), the lowest between all NNs, also significantly lower than national average (of 637.7) (Fig 8).

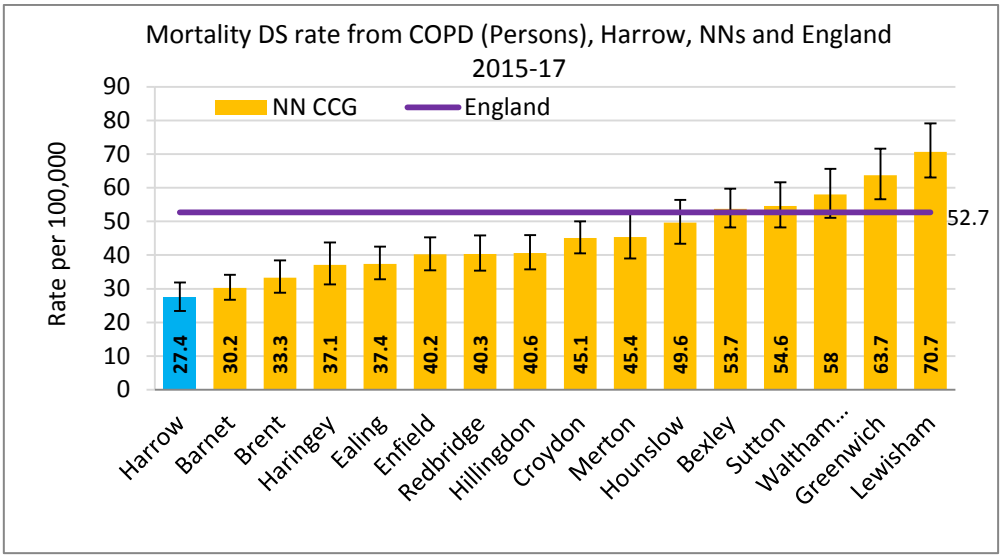
Fig 8 Mortality DS rate from Respiratory Disease (Persons, 65+), Harrow, NNs and England 2015-17



Source: PHE analysis of Office for National Statistics Mortality File

Fig 9 illustrates mortality rate (per 100,000 populations) from COPD in 2015-17. Harrow with rate of 27.4 (N=165) had the lowest rate between all NNs and significantly lower than National average of 52.7 per 100,000.

Fig 9 Mortality DS rate from COPD (Persons), Harrow, NNs and England 2015-17



Source: PHE analysis of Office for National Statistics Mortality File

NHS RightCare Commissioning for Value Focus Pack, Respiratory April 2016

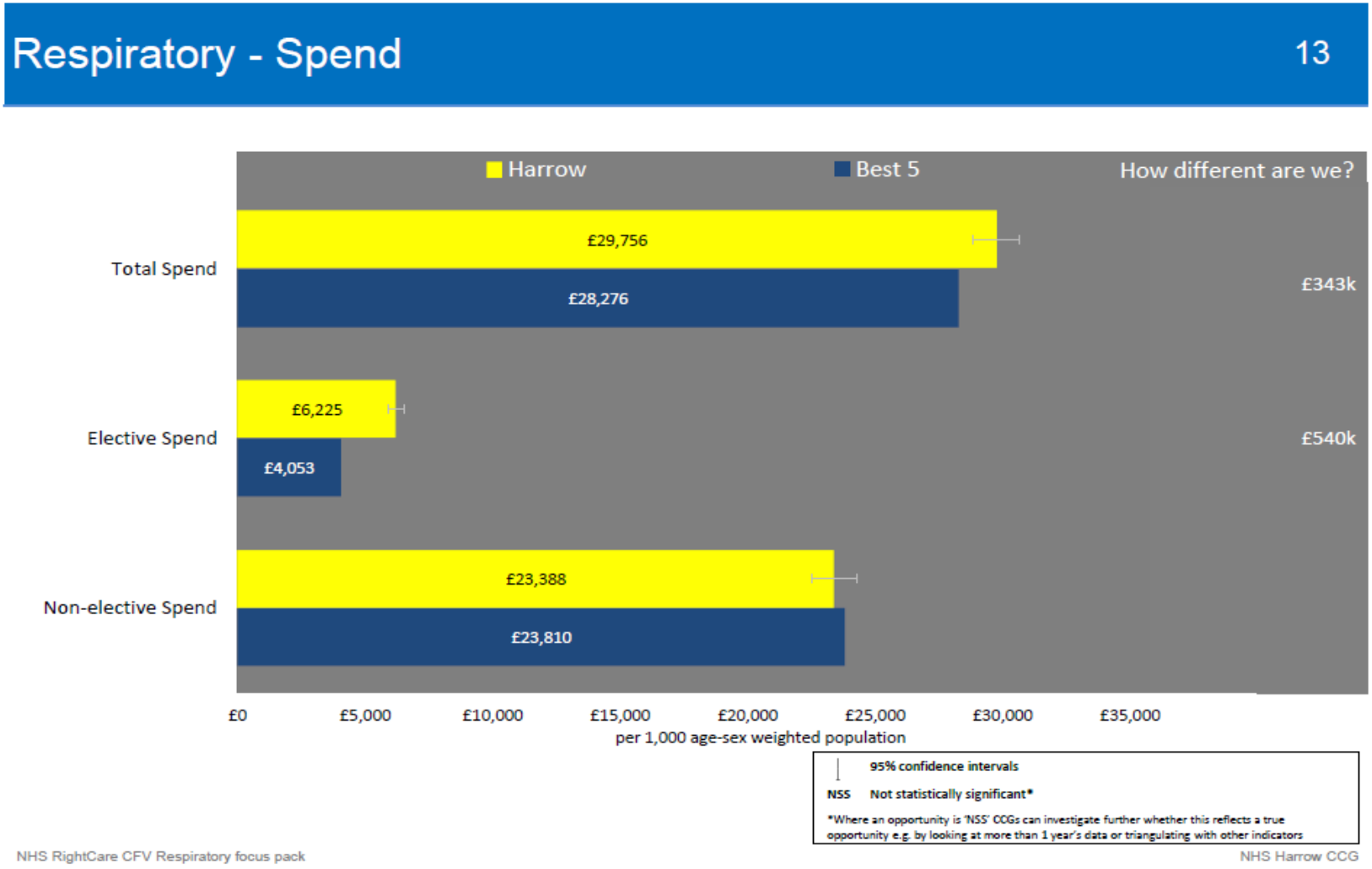
Harrow CCG is compared to the 10 most demographically similar CCGs. This is used to identify realistic opportunities to improve health and healthcare for your population. The analysis in this pack is based on a comparison with Harrow's most similar CCGs which are: Redbridge, Ealing, Hillingdon, Kingston, Hounslow, Luton, Barnet, Sutton, Slough and Merton.

Spend and activity

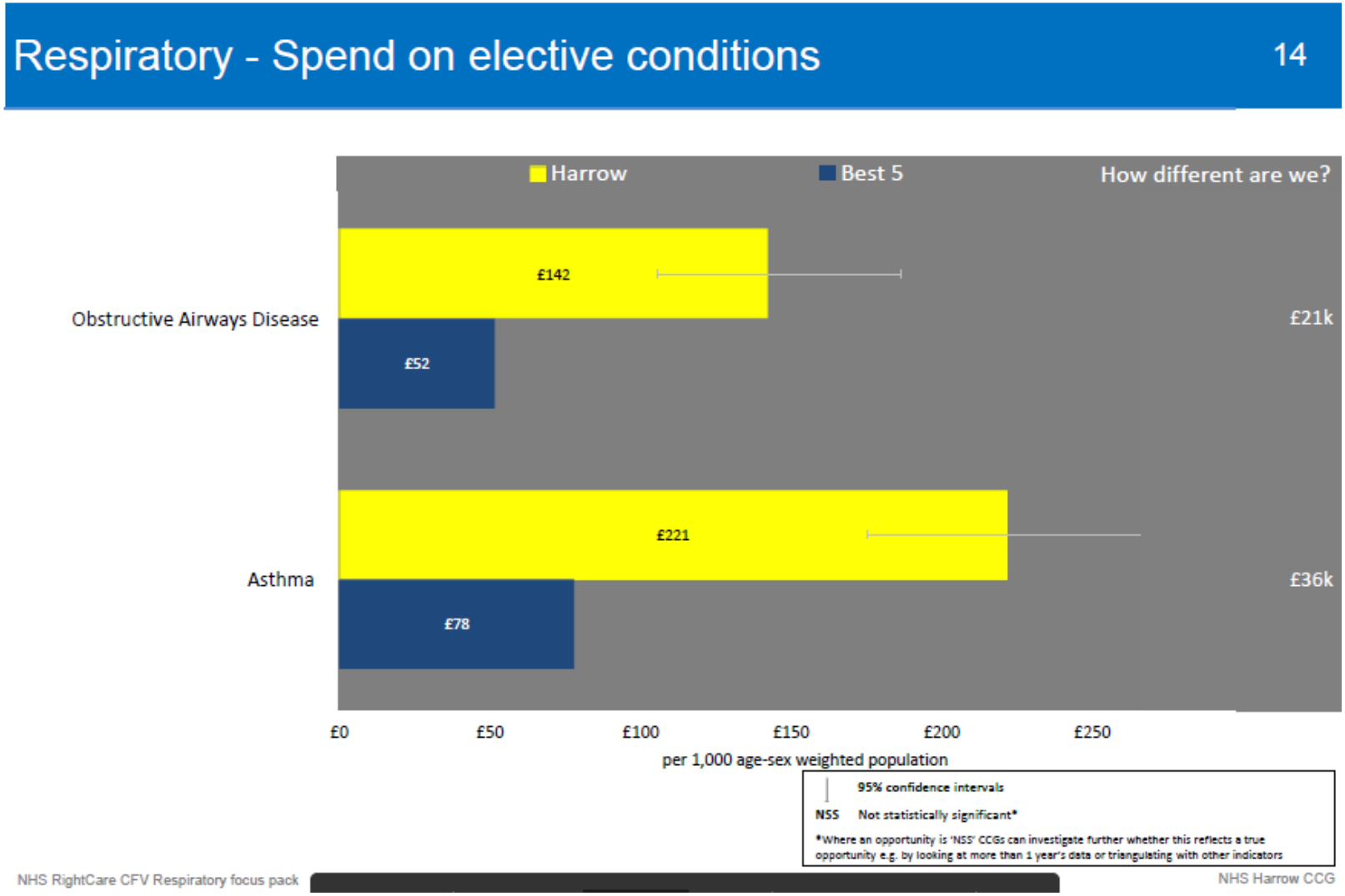
The intention of the following pages is to provide a more in-depth view of the 'Spend and activity' for the clinical areas of Harrow compared to your 10 most similar CCGs. The charts show the rate for Harrow (yellow bar), the best five comparator (blue bar) and also the absolute difference (The 'how different are we?' column)[12].

[12] *Source: NHS RightCare, CFV Focus packs for CVD, Neurological, Respiratory, Maternity – April 2016 [online] available from:* *https://www.england.nhs.uk/rightcare/products/ccg-data-packs/focus-packs/focus-packs-for-cvd-neurological-respiratory-maternity-april-2016/* *[Last accessed: 21-10-2019]*

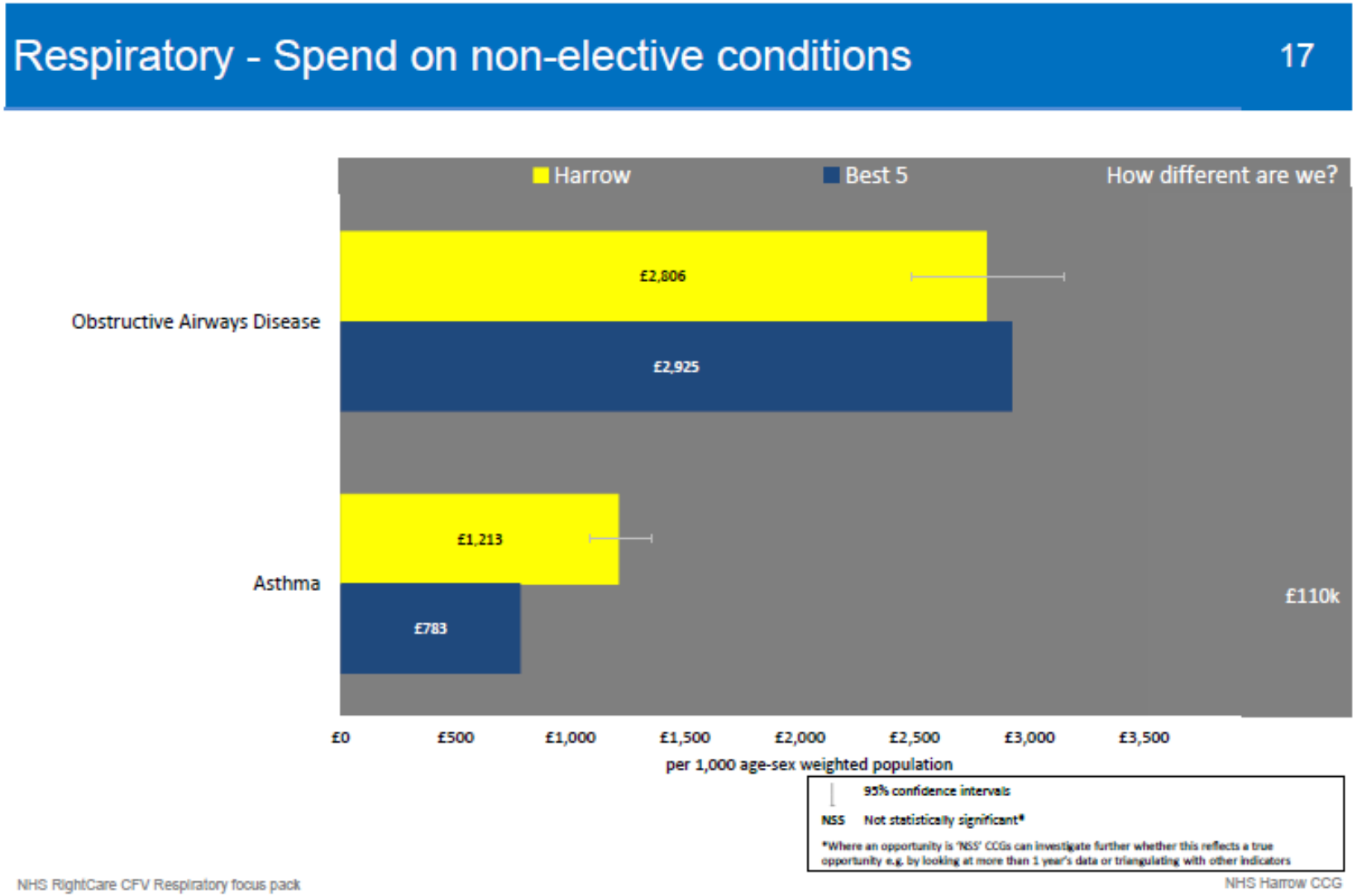
The Commission for Value Analysis from NHS England below compares Elective, and Non-Elective hospital spending for Respiratory disease for Harrow and the average of '5 Best' (out of the 10 similar CCGs). The graph shows Harrow's Total and Elective spending is significantly higher than the average of '5 Best' CCGs, in all aspects of hospital care but for Non-elective Spend is similar.



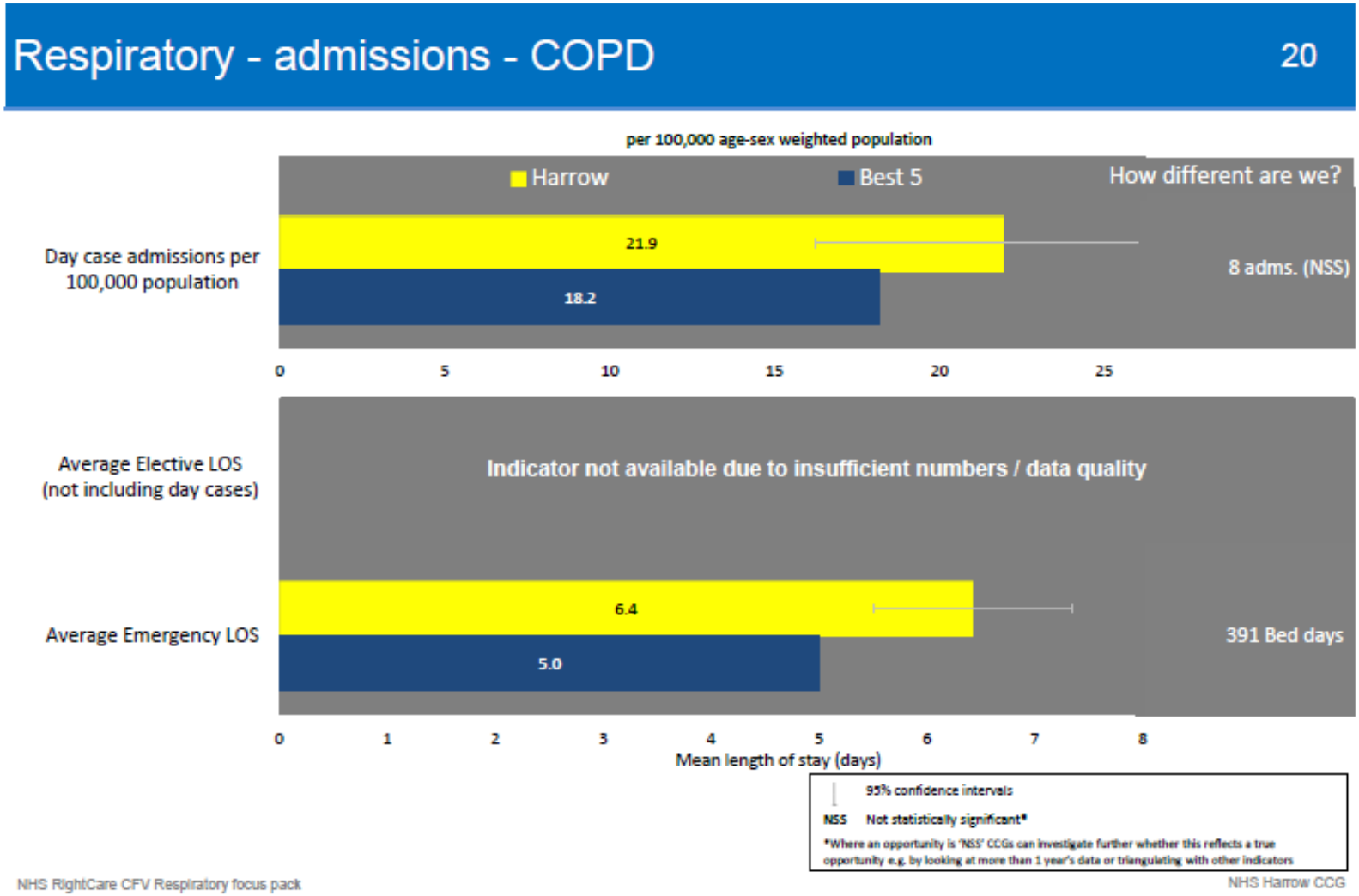
Respiratory Spend on elective conditions: Figure below shows on Average Harrow spends £142 per 1,000 population for Obstructive Airways disease and £221 for Asthma, both significantly higher than the average of Best 5 out of 10 similar CCGs with average spending of £52 and £78 per 1,000 population in that order.



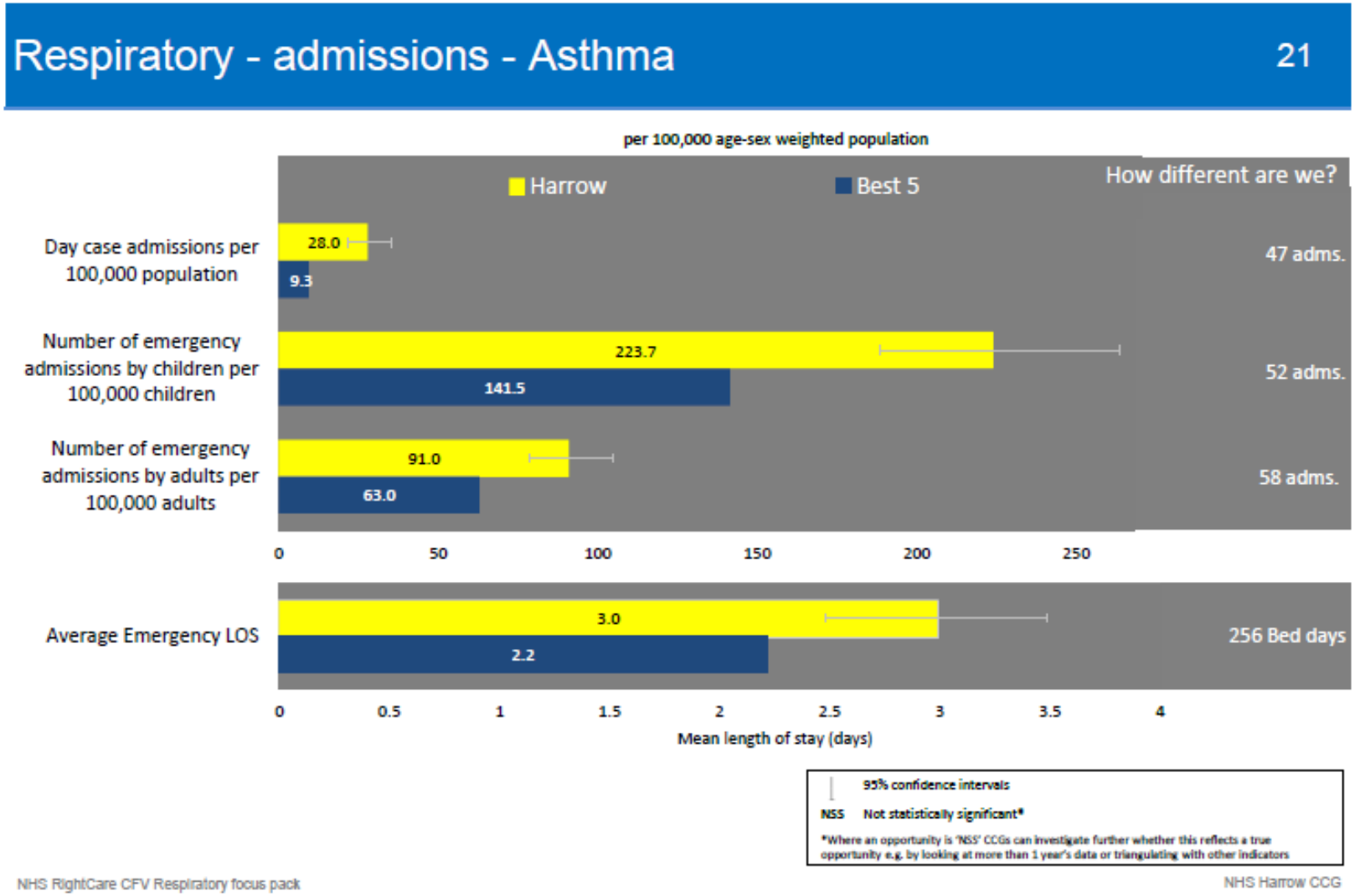
Respiratory Spend on non-elective conditions: Figure below shows on average Hounslow spends £2,806 per 1,000 populations for Obstructive Airways Disease, similar to the average of the Best 5 out of 10 similar CCG's and £1,213 for Asthma, significantly higher than the Best 5 (with £2,925 and £783 spending per 1000, in that order).



Respiratory admissions – COPD: Figure below shows that 'Mean length of stay (days)' of 'Average Evemergency Length of Stay' for Harrow patients is significantly longer than the average of 5 best out of ten similar CCGs.



Respitatory admissions – Asthma: Figure below shows the 'Mean length of stay (days)' for all different type of addmissions for Harrow patients are significantly longer than best 5 out of ten similar CCGs.



NW London Respiratory Programme - Harrow Response:

The following objectives were taken forward:

- Introduction of a Primary Care Enhanced Service for patients with Asthma / COPD, has been in effect since April 2018 and is embedding and expanding
- Embedding the Community Respiratory Service has been in operation since 2016, making a difference to the local population.

What are we doing in Harrow?

We offer the following local services for respiratory conditions in Harrow:

- Primary Care Enhanced Service for patients with Asthma / COPD
- CLCH Community Respiratory Service, which provides the following:
  - Case Management for patients with COPD
  - Respiratory clinics for patients with COPD
  - Pulmonary Rehabilitation for patients with all respiratory conditions
  - Home Oxygen Service - Assessment and Review

What are we doing that's working well?

- Pulmonary Rehabilitation: Improving patients' quality of life, improving self-management, reducing exacerbations and hospital admissions.
- Home Oxygen Service - Assessment and Review: Patients are being reviewed as per the BTS guidelines. Safe prescribing and monitoring of oxygen is now in place reducing risks. Reviewing the monthly concordance report resulting in reducing oxygen costs to the CCG by removing equipment inappropriately prescribed.
- Case Management: Assessing and reviewing patients with complex respiratory conditions and helping to self-manage has improved quality of life and also reduced exacerbations and hospital admissions.
- Close working relationships between the community team and hospital-based Respiratory Consultant and Respiratory Nurse Specialist to discuss patients.
- Joint working with CNWL Harrow Talking Therapies to support respiratory patients with psychological needs, anxiety and stress management.

What didn't go well and why?

- The community service was delivered well within CCG targets; however difficulty in recruiting specialist nurses and physiotherapists has been a problem.
- Smoking Cessation being decommissioned by the local authority.
- Breathe Easy Group having to stop their monthly meeting due to not having a suitable venue to hire.

What local respiratory services are making a real impact?

- Setting up Pulmonary Rehabilitation in two venues in Harrow has been beneficial to patients.
- Home Oxygen Service: ensuring safe prescription and monitoring.
- Case Management: ensuring patients self-manage their conditions better.

What local improvements in respiratory are you most proud of?

- The setting up and running of Pulmonary Rehabilitation since October 2016.
- Assessing and reviewing all adult patients on home oxygen to ensure safe prescribing and use of oxygen which has also resulted in reducing cost in oxygen for the CCG. Reducing from 250 patients using oxygen in 2016 to 168 patients as at August 2019.

Respiratory programme initiation

On 10th of October 2019 a workshop was organised by The North West London health and care partnership led by Dr Sarah Elkin. The key priorities identified for the emerging programme of work as follows:

Immediate priorities:

- Set up online platform for sharing of resources and learning and circulate supporting data
- Develop a logic model including activity and finance
- Map smoking cessation services, engage with Local Authorties
- Develop clear instructions on patient finding in primary care
- Simplify data collection and templates across NWL to use the same codes
- Complete demand and capacity exercise for PR, map locations
- Share Ealing's work on social prescribing signposting for respiratory conditions
- Investigate PAM scores and motivational interviewing use in PR
- Arrange learning visits to Trusts developing joined up cardiac and pulmonary rehab
- Learn from diabetes re training and education; dashboard; templates, frameworks
- Work with WSIC and population health to develop a comparative dashboard
- Work with ICHP colleagues to develop and trial case finding tools with support from London Clinical Network

Priorities for 2020/21:

- Implement virtual clinics/registry reviews across priority PCNs
- Develop and implement plan to roll out diagnostic hubs
- Consider options for improved patient information including group consultations
- Investigate opportunities for shared long term conditions resources e.g. hot line/call centre
- Review diagnostic hub business case, develop and implement local case for change
- Work with PCN pharmacists on inhaler usage and reviews
- Develop and implement plans for PR capacity and quality
- Review pathways from diagnosis

It was also agreed to design and implement an integrated model of respiratory care in 2021/22.