

## Adult Asthma: *Factsheet*

### Tower Hamlets Joint Strategic Needs Assessment 2015

UPDATED 2015 QUARTER 1

#### Executive Summary

- Asthma is a common and long-term condition that affects the airways in the lungs, around 9-10% of adults in the UK suffer from Asthma<sup>6</sup>.
- Public Health England estimated that, based on 2008 figures, 8.9% of Tower Hamlets population have Asthma, 54% of whom have received a diagnosis<sup>9</sup>.
- Latest figures show that 12806 people in Tower Hamlets have been diagnosed with asthma; this is 4.5% of the population. This is a lower rate than London and England rates<sup>9</sup>.
- Inequalities exist between ethnic groups and asthma registrations in the older age groups. 12.9% of the Tower Hamlets South Asian population who are over 70 years old have been diagnosed with Asthma, compared with 8.3% of the white and 5.2% of the black population over 70 years old<sup>1</sup>.
- NICE guidelines recommend that people with asthma be given a structured annual review<sup>10</sup>. QOF data shows that 75% of those diagnosed and registered with a GP have received such a review, higher than the national average<sup>2</sup>.
- The rate of hospital admissions for asthma is 1.36 per 1000 population, higher than national figures. The average length of stay is 2.46 days for Tower Hamlets patients, longer than the national average length of stay for Asthma. However Tower Hamlets Emergency admission rate is 1.01 per 1000 population, very slightly lower than the national figure (2012/13)<sup>3</sup>.
- Mortality rates for Asthma have fluctuated over recent years, with a general decrease in trend. The latest rates for Asthma Mortality show that Tower Hamlets to be slightly higher than London and England rates, yet much lower than neighbouring local authorities at 2.75 per 1000 deaths<sup>4</sup>.

#### Recommendations

Further investigation is needed for the following:

- Why inequalities exist for Asthma registrations in the older age groups between ethnic groups and what are the implications of this on hospital admissions and mortality rates.
- The cause of inequalities in mortality by age group, i.e., why is crude mortality particularly high for the 35-64 and over 75 age groups.
- The views from patients on their experiences receiving diagnosis and care for Asthma in Tower Hamlets.

The following is recommended to enhance work towards reaching NICE quality standards for Asthma care:

- Implementation of a communication system between A&E and Primary care regarding patients who have recently attended A&E for an acute asthma episode to improve follow-up care.
- Additional Asthma training for health professionals in Primary Care to enable best practice for NICE quality standards (QS25) 3, 5 and 11.

#### 1. What is Asthma?

Asthma is a long-term condition that affects the airways in the lungs. Classic symptoms include breathlessness, tightness in the chest, coughing and wheezing.

The UK has the highest prevalence of asthma in the world, at around 9-10% of adults<sup>5</sup>, comprising an estimated 4.3 million adult sufferers in the UK<sup>6</sup>. Asthma the 9<sup>th</sup> leading cause of Years Lived with Disability<sup>7</sup> and is

responsible for about 1,000 deaths a year in the UK, the majority of which are preventable. Premature mortality from asthma in the UK was more than 1.5 times higher than the European average.

#### **Impact on an individual**

The symptoms of asthma can have a large bearing on an individual. The cough from asthma may wake a patient up at night keeping them from being well rested. As exercise is one of the known triggers of an asthmatic attack<sup>8</sup>, the condition may prevent suffers from engaging in exercise.

Loss of control of symptoms can lead to hospitalisation, resulting in time away from gainful employment. As many as 35% of adults surveyed report having had an asthma attack in the previous 12 months.

#### **Impact on NHS**

The NHS spends an estimated £1 billion a year treating and caring for people with asthma.

## **2. What is the policy context?**

An [NHS outcomes strategy for COPD and Asthma](#) (May, 2012) outline Asthma treatment and care objectives for each of the five domains within the NHS outcomes strategy, these are designed to: *“ensure that people with asthma, across all social groups, are free of symptoms because of prompt and accurate diagnosis, shared decision making regarding treatment, and on-going support as they self-manage their own condition to reduce the need for unscheduled health care and risk of death”*.

The five NHS outcomes framework domains are:

1. Preventing people from dying prematurely
2. Enhancing the quality of life for people with long-term conditions
3. Helping people to recover from episodes of ill health or following injury
4. Ensuring that people have a positive experience of care
5. Treating and caring for people in a safe environment<sup>9</sup>

The NICE quality standards in Section 3 outline how this can be achieved.

## **3. What are the effective interventions?**

### **NICE Quality Standards for Asthma (QS25)**

This document was published in February 2013 and describes 11 quality statements that should be referenced in order to commission or provide a high quality service. These statements make reference to a care pathway for Asthma care (see Figure A) and encompass three main topic areas: diagnosis, self-care support and treatment (outlined below).<sup>10</sup>

#### Diagnosis

1. People with newly diagnosed asthma are diagnosed in accordance with BTS/SIGN guidance.
2. Adults with new onset asthma are assessed for occupational causes.

#### Self-Care support

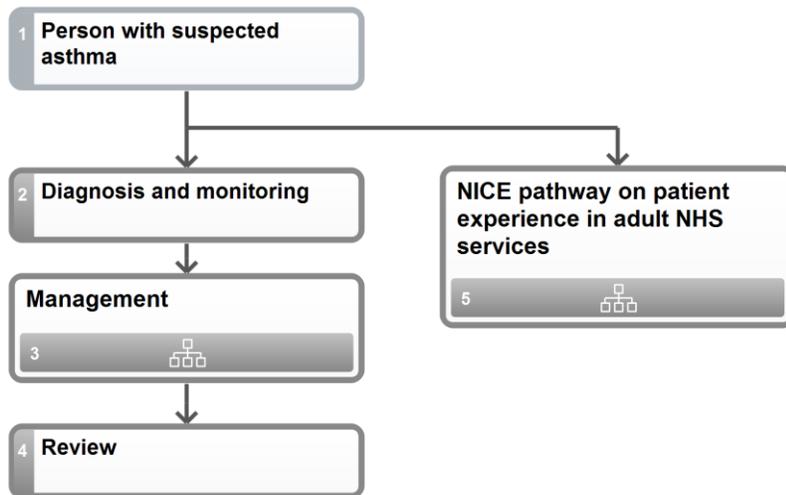
3. People with asthma receive a written personalised action plan.
4. People with asthma are given specific training and assessment in inhaler technique before starting any new inhaler treatment.

#### Treatment

5. People with asthma receive a structured review at least annually.
6. People with asthma who present with respiratory symptoms receive an assessment of their asthma control.

7. People with asthma who present with an exacerbation of their symptoms receive an objective measurement of severity at the time of presentation.
8. People aged 5 years or older presenting to a healthcare professional with a severe or life-threatening acute exacerbation of asthma receive oral or intravenous steroids within 1 hour of presentation.
9. People admitted to hospital with an acute exacerbation of asthma have a structured review by a member of a specialist respiratory team before discharge.
10. People who received treatment in hospital or through out-of-hours services for an acute exacerbation of asthma are followed up by their own GP practice within 2 working days of treatment.
11. People with difficult asthma are offered an assessment by a multidisciplinary difficult asthma service.

**Figure A: NICE overview care pathway for Asthma care**



Source: <http://pathways.nice.org.uk/pathways/asthma>

This pathway represents the guidance and quality standards and support materials available for Asthma Care.

### National Review of Asthma Deaths

The National Review of Asthma Deaths<sup>11</sup> investigated why there are still preventable asthma deaths in the UK. They found that in nearly 1 of 2 deaths investigated, the individual did not see medical assistance during their final asthma attack and over 1 in 2 were not under the care of specialist supervision in the last 12 months prior to their death, yet 10% had died within 28 days of being discharged from hospital after treatment for asthma. A set of recommendations arose from this review for the organisation of NHS services, prescribing and medicines use and patient factors and perception of risk. Some of the recommendations include:

- All those who have Asthma should have a Personalised Asthma Action Plan and an annual asthma review.
- Patients who have received more than 12 inhalers in 12 months should be invited for an urgent review of their asthma control

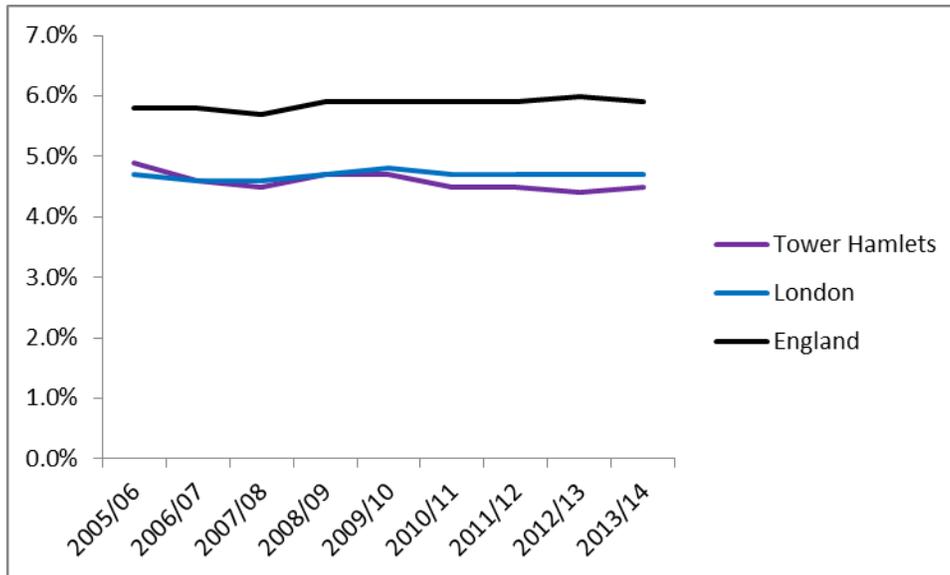
## 4. What is the local picture?

How many people in Tower Hamlets have Asthma?

- Public Health England<sup>12</sup> estimates that a total of 8.9% of the Tower Hamlets population, including adults and children, have Asthma, indicating that 46.9% of the Asthma sufferers in Tower Hamlets are undiagnosed, and therefore likely to be untreated. Although this figure is based on a 2001 health survey and 2008 population figures, it is the most up-to-date prediction that is currently available.
- The latest figures from the Quality Outcomes Framework data show that there are 12,806 adults and

children diagnosed with Asthma in Tower Hamlets in 2013/14. This equates to 4.5% of the Tower Hamlets population, lower than London rates at 4.7% and England rates of 5.9% (see Appendix A). A time trend of diagnosed prevalence shows that Tower Hamlets has been consistently significantly lower than national figures for diagnosed cases, and in recent years, slightly lower than London (Figure B).

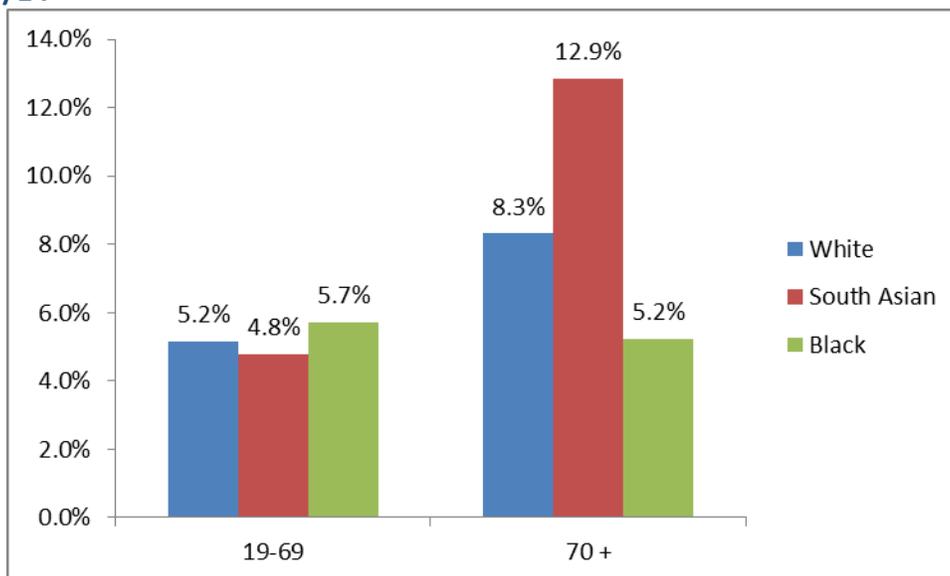
**Figure B: Time trend of prevalence of diagnosed Asthma in Tower Hamlets, London and England 2005-2014**



Source: Public Health England, Fingertips, 2015.

- When reviewing differences within ethnicities, substantial differences can be found in the older age groups for asthma registrations. 12.9% of the Tower Hamlets South Asian population who are over 70 years old have been diagnosed with Asthma, compared with 8.3% of the white and 5.2% of the black population over 70 years old (see Figure C).

**Figure C: Prevalence of diagnosed Asthma in Tower Hamlets by age and ethnicity, London and England, 2013/14**

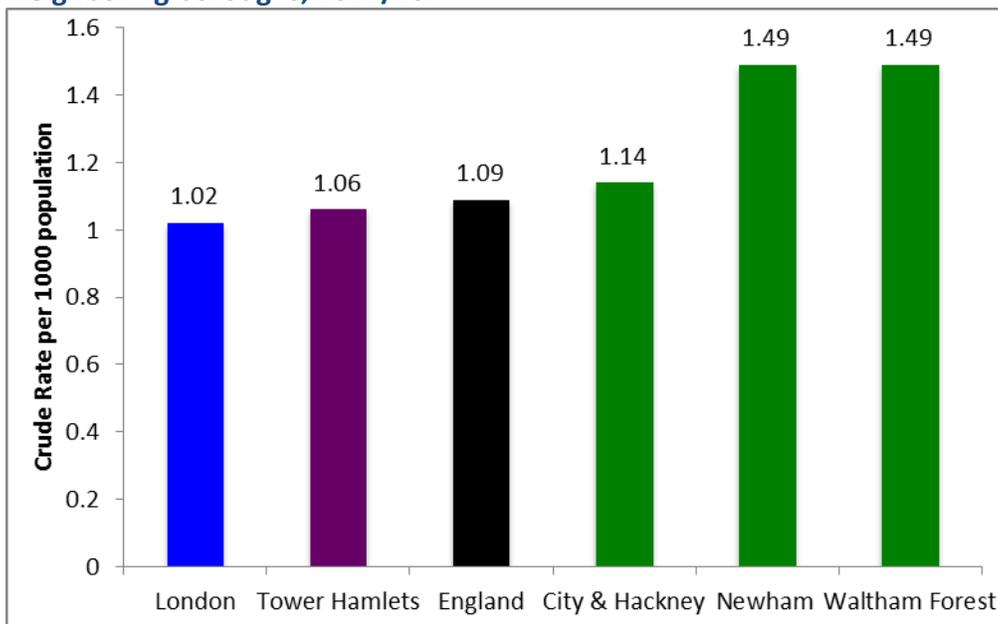


Source: Clinical Effectiveness data, 2013/14.

### Hospital admissions

- NHS Comparator data shows that people with asthma in Tower Hamlets go to hospital more often and spend more time in hospital than the London and national average. In 2012/13, the hospital admission rate for Asthma for the Tower Hamlets GP registered population was 1.36 per 1000 population, higher than the London rate of 1.19 and England rate of 1.21. The average length of stay is also slightly longer per patient at 2.46 days, whereas the London average is 2.4 and the England average is less than half of that at 1.09 days.
- Tower Hamlets is spending more on its admissions than national figures. The average cost per admission according to NHS comparators in 2011 is £1023, this is more costly than the London average cost at £951 and England at £946<sup>12</sup>.
- Emergency hospital admissions for Tower Hamlets, at a rate of 1.06 per 1000 population is slightly higher than London and slightly lower than the national rate, however much lower than our neighbouring boroughs (see Figure D).

**Figure D: Emergency Asthma admissions by population (crude rate) for Tower Hamlets, London, England and neighboring boroughs, 2012/13.**



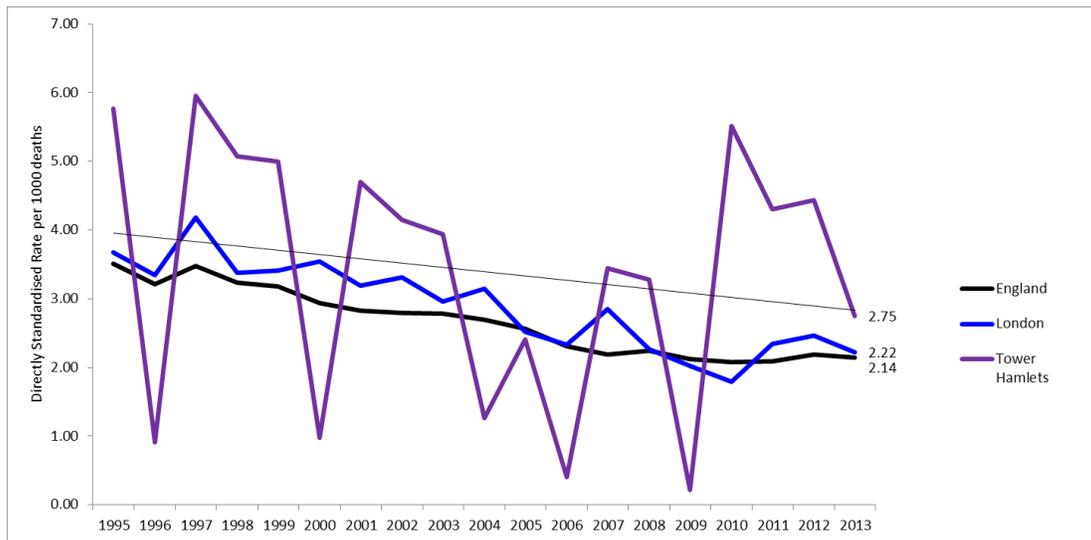
Source: NHS comparators, 2014

- The average cost per emergency admission according to NHS comparators in 2011 is £1002, this is again more costly than the London average cost at £945 and England at £943.
- The rate of emergency readmissions for Asthma patients in Bart's Health within 30 days in 2013/14 is 5%. Appendix B shows a breakdown of the monthly readmission rates, indicating readmission rates are reduced slightly in 2014/15 to 4% thus far. However, this data has only recently begun to be collated, therefore we will not be able to analyse trend data for some time.

### Mortality

- Mortality from Asthma in Tower Hamlets is higher than London and England at a rate of 2.75 deaths by Asthma per 1000 deaths. Figure E shows a time trend of these mortality rates, displaying that rates have been generally decreasing since 1995. When comparing with neighbouring local authorities, Tower Hamlets mortality by Asthma is much lower (Appendix C).

**Figure E: Mortality by Asthma in Tower Hamlets, London and England, 1995-2013.**



Source: HSCIC, 2015

- Further analysis of crude mortality rates broken down by age groups (Figure F) show that ages 25-64 and over 75's in Tower Hamlets have high mortality by Asthma compared with all comparators, whereas age groups 15-34 and 65-74 have zero mortality. This indicates a vast difference in inequalities by age when looking at asthma and mortality. The high prevalence of Asthma Mortality in the higher age group may be indicative a pattern of wrong diagnosis. It is estimated that currently 30% of people diagnosed with Asthma do not have clear evidence of asthma.<sup>13</sup>

**Figure F: Crude age-specific mortality rates by Asthma, 3-year average, in Tower Hamlets, London, England and neighbouring boroughs, 2011-13**

	15-34	35-64	65-74	75+
<i>LB Tower Hamlets</i>	0	1.73	0	30.59
<i>England</i>	0.16	0.73	2.11	17.34
<i>London</i>	0.15	0.8	2.49	18.5
<i>LB Hackney</i>	0.33	1.19	3.36	25.14
<i>LB Waltham Forest</i>	0	1.04	4.78	32.1
<i>LB Newham</i>	0	0	11.28	28.23

Source: HSCIC, 2015

Expenditure versus mortality outcomes

- A comparison of Spend versus Outcomes with regards to Asthma mortality in Tower Hamlets shows a relatively average spend in 2011/12 and slightly poor mortality outcomes when compared with other primary care trusts in England, this is illustrated in Appendix D.

**5. What is being done locally to address this issue?**

**Primary Care**

- The Network Improvement Scheme run by the NHS Tower Hamlets Clinical Commissioning Group (CCG) has offered an incentive scheme for practices to enhance their asthma services, this will be implemented from January 2015. Incentives will be given to practices for providing the following:

- Formal Educational sessions for clinicians on enhanced review of patients with asthma, and further incentives to carry out enhanced reviews of patients with suboptimal asthma control
- Educational sessions for administration and receptionist staff on reducing medicine waste and supporting the identification process or potential patients for review
- Working with the medicines management team to develop and update local guidelines and pathways. This work aims to harness practice expertise, share learning, and implement the latest evidenced based information and practice.
- Incentives for GP practices to engage in formal educational sessions
- Additionally, general education on Asthma is regularly provided during Protected Learning Times and Clinical Effectiveness Group training days.
- NHS Tower Hamlets CCG have also produced prescribing guidelines for Asthma with aims to control the asthma with minimal side effects, using a stepwise approach according to the patient's symptoms, the severity of asthma and follow-up reviews.<sup>14</sup>
- All patients who present to both primary and secondary care should be upskilled on inhaler technique and be given a self-management plan (within both primary and secondary care).

### **Secondary care**

Bart's Health offer a number of services for Asthma sufferers, including:

- A serious asthma clinic which is currently run by an asthma consultant.
- A fortnightly Difficult Asthma Service for severely affected asthma patients, or:
  - patients who have poor control on moderate dose of inhaled steroids plus long acting beta 2 agonist plus add-on therapy,
  - Or patients who continuously or frequently use oral steroids.
- Investigations, immune treatments and access to experimental treatments through numerous clinical trials.
- Enhanced asthma review service for a number of selected patients. This is supported by the Bart's Health Specialist Respiratory pharmacist and will assess medicines management of asthma sufferers.
- All patients admitted to hospital for Asthma should be reviewed by the Adult Respiratory Care and Rehabilitation Service whilst in hospital, this will be provided by ARCaRe.
- A fulltime pharmacist will be recruited in 2015 to work alongside ARCaRe to see patients on the wards and in casualty to review and make appropriate amendments to medications.

### **Adult Respiratory Care and Rehabilitation Service (ARCaRe)**

This is a multidisciplinary service for chronic lung disease patients, delivered within community settings. It provides reviews and support for patients with acute or difficult asthma so that they can manage their condition more effectively. All asthma patients who access ARCaRe will receive a personalized self-care plan. ARCaRe will also follow up routine asthma hospital admissions as well as casualty admissions for a review in line with NICE Guidance QS25<sup>10</sup>.

### **Overall Care**

Tower Hamlets CCG has reviewed the NICE quality standards for Asthma to ensure all standards have been implemented. This has highlighted that better follow-up of primary care patients who have recently attended hospital is required. This would involve implementing a system of communication between A&E and primary care services for such patients. It has also uncovered that more asthma training for health professionals is required, particularly for primary care on personalised action plans, structured annual reviews and identifying 'difficult asthma' cases which need referral secondary care.

### **Community Support**

The British Lung Foundation breathe easy group has a monthly support group in Tower Hamlets for people living with a lung condition and their carers. This group provides information and social support.

## 6. What evidence is there that we are making a difference?

Bart’s hospital has conducted an audit on asthma admissions to casualty and on the wards.<sup>15</sup> Findings do include patients who live and are registered with GPs outside of the London Borough of Tower Hamlets and show the following:

- 11% of those admitted to hospital were admitted again within the year for Asthma
- Only 63% of admissions were reviewed by a specialist respiratory team
- 53% of acute asthmatics received the recommended treatment of steroids within 1 hour or received an objective assessment of severity
- Only 6% of those admitted to hospital for asthma had a self-management plan
- A majority of patients had poor compliance or use of inhaler technique, with a median maintenance inhaler pick up of 5.8 inhalers out of 12 months (i.e. over 50% adherence).

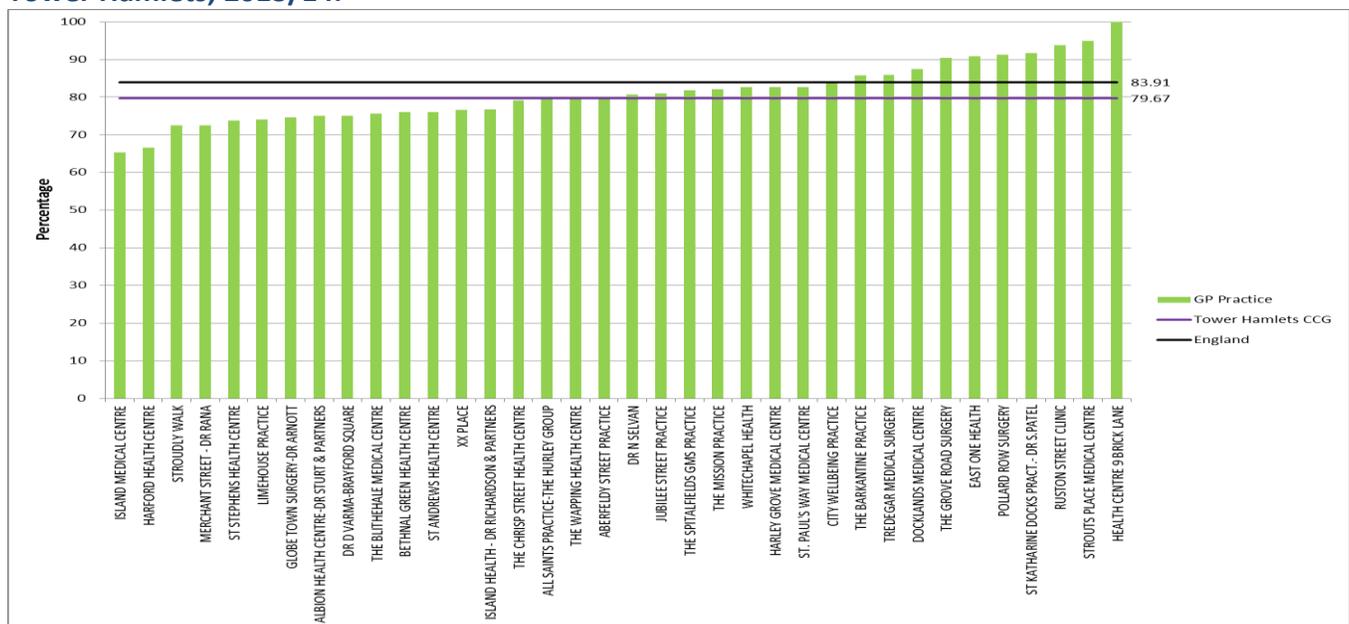
### Impact on Indicators

#### Quality Outcomes Framework (QOF)

The QOF is a voluntary incentive programme that allows for measure of GP surgery performances on a number of health topics. Performance of these topic areas can be compared nationally and between practices. In addition to GP registered prevalence there are two QOF indicators relevant for the adult population for which local data is available; AST002 which is an indicator for initial diagnosis, and AST003, an indicator for ongoing management. These are listed below:

- **AST002:** *The percentage of patients aged 8 and over with asthma (diagnosed on or after 1 April 2006), on the register with measures of variability or reversibility recorded between 3 months before or any time after diagnosis* (Figure G). Tower Hamlets is has slightly lower percentage of patients who have met this criterion at 79.7% than the national average, which sits at 83.9%.

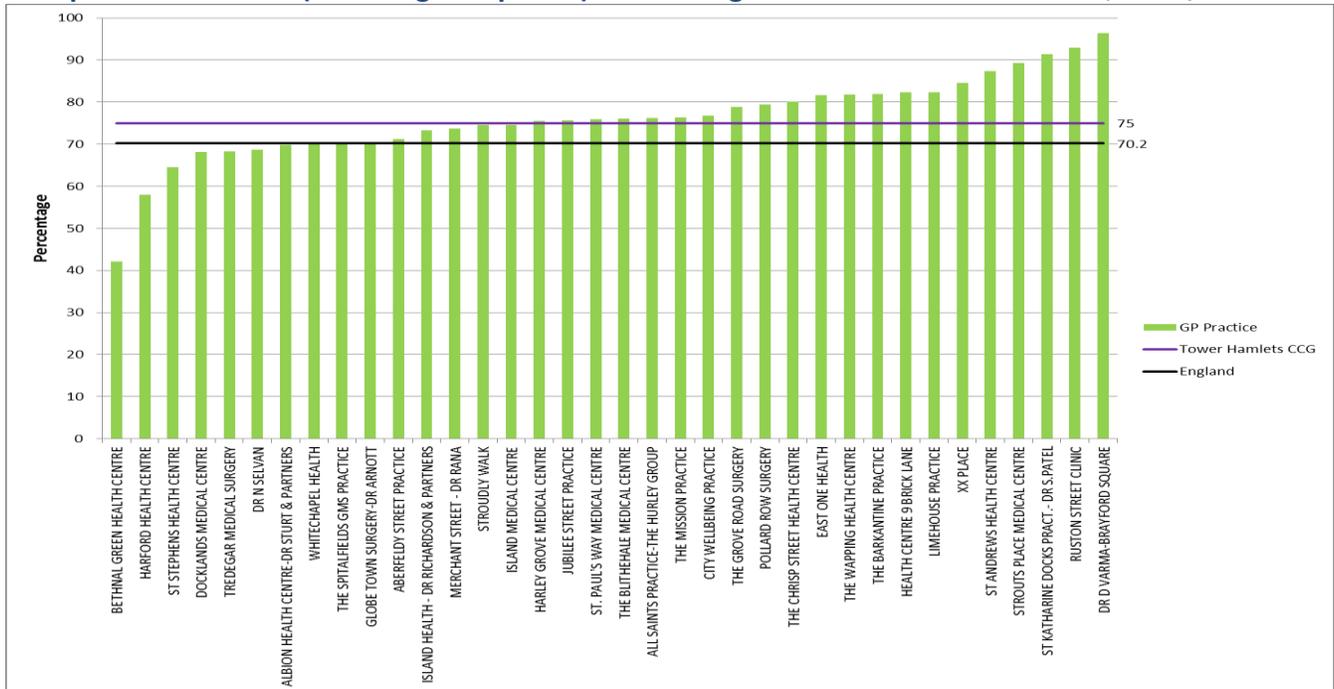
**Figure G: QOF AST002: ‘the percentage of patients aged 8 and over with asthma (diagnosed on or after 1 April 2006), on the register with measures of variability or reversibility recorded between 3 months before or any time after diagnosis’ results (including exceptions) for GP surgeries within Tower Hamlets, 2013/14.**



Source: Quality Outcomes Framework, 2015

- **AST003:** The percentage of patients with asthma, on the register, who have had an asthma review in the preceding 12 months that includes an assessment of asthma control using the 3 RCP questions (Figure H). Tower Hamlets has reached 75% of its patients for this review, slightly better than the England average at 70.2%. However there is great variability between the practice performances for this indicator. One practice has given a review to 96% of its patients in the last 12 months, yet another practice has only reached 42% of its patients for review.

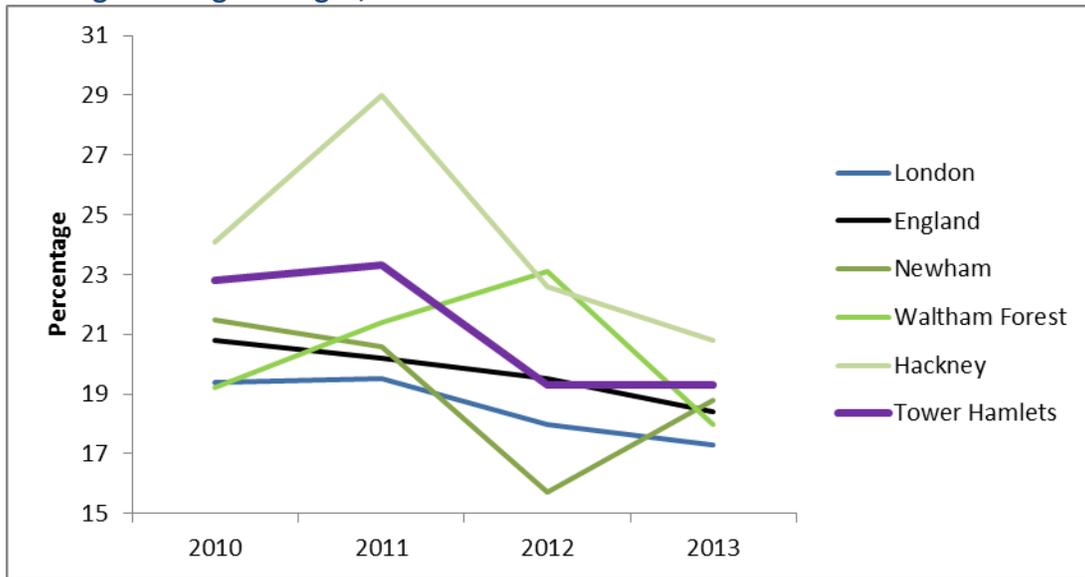
**Figure H: QOF AST003: ‘the percentage of patients with asthma, on the register, who have had an asthma review in the preceding 12 months that includes an assessment of asthma control using the 3 RCP questions’ results (including exceptions) for GP surgeries within Tower Hamlets, 2013/14.**



Source: Quality Outcomes Framework, 2015

- The percentage of people smoking in Tower Hamlets is reducing year by year, as it is throughout England. 2013 figures show that 19.3% of the Tower Hamlet population smoke, a 2.5% drop since 2010, although this figure was the same for 2012. Tower Hamlets smoking rates remain higher than London and England overall (see Figure I).

**Figure I: Time trend of percentages of adult (18+) residents who smoke in Tower Hamlets, London, England and neighbouring boroughs, 2010-13.**



Source: Public Health Outcomes Framework, 2014

- 95.7% of patients in Tower Hamlets who smoking and have a combination of certain conditions including Asthma have been offered smoking cessation advice or a referral to a specialist service. Appendix E shows that Tower Hamlets is performing very well against its comparators for this indicator.

## 7. What is the perspective of the public?

We do not currently have available information on the perspectives of the public regarding asthma and its treatment and care in Tower Hamlets.

## 8. What more do we need to know?

- To gain the views from patients on their experiences receiving diagnosis and care for Asthma in Tower Hamlets.
- Why do inequalities exist in the over 70 age group between ethnicity groups in asthma registrations. What are the implications of this on hospital admissions and mortality rates?
- What is the cause of the inequalities in mortality by age group, i.e., why is crude mortality particularly high for the 35-64 and over 75 age groups.

## 9. What are the priorities for improvement?

- Work towards increasing prevalence to ensure that ensuring that all those who have asthma have received diagnosis and appropriate treatment.
- Implementation of a communication system between A&E and Primary care regarding patients who have recently attended A&E for an acute asthma episode to improve follow-up care.
- Additional Asthma training for health professionals in Primary Care to enable best practice for NICE quality standards (QS25) 3, 5 and 11.

## 10. Contacts / Stakeholder Involvement

### Contacts

	NAME	CONTACT DETAILS
UPDATED BY	Ashlee Mulimba	C/O: Abigail.Knight@towerhamlets.gov.uk
SIGNED OFF BY	Abigail Knight	Abigail.knight@towerhamlets.gov.uk

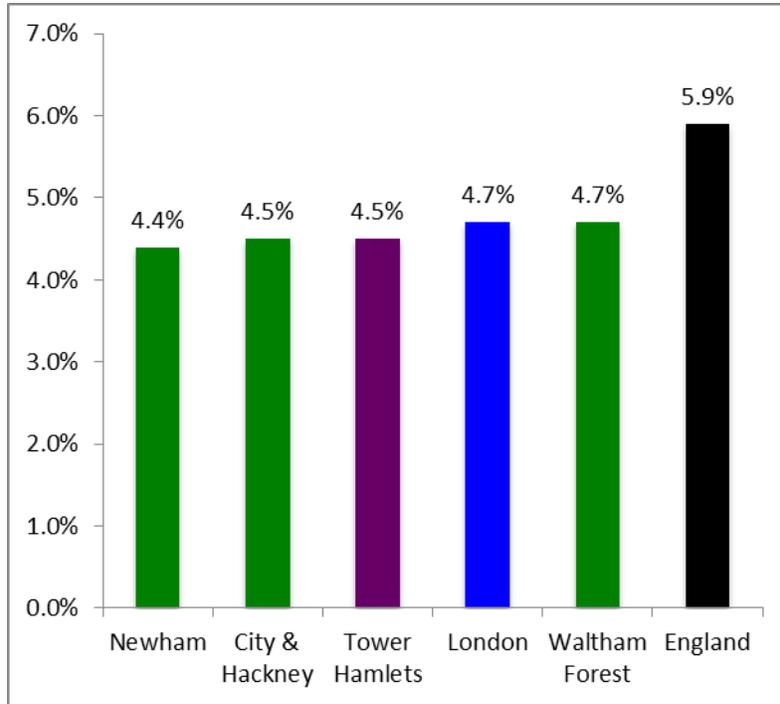
### Stakeholders

- Judith Shankleman, London Borough of Tower Hamlets, Public Health
- Abigail Knight, London Borough of Tower Hamlets, Public Health
- Geoff Mole, London Borough of Tower Hamlets, Public Health
- Peter Allen, North East London Clinical Support Unit
- Nabeela Bari, Tower Hamlets Clinical Commissioning Group
- Savitha Pushparajah, Tower Hamlets Clinical Commissioning Group
- Simon Lloyd Owen, Barts Health
- Zakia Khatun, Tower Hamlets Clinical Commissioning Group



## Appendices

### Appendix A: Prevalence of registered Asthma in Tower Hamlets, London, England and neighbouring counties, 2013/14



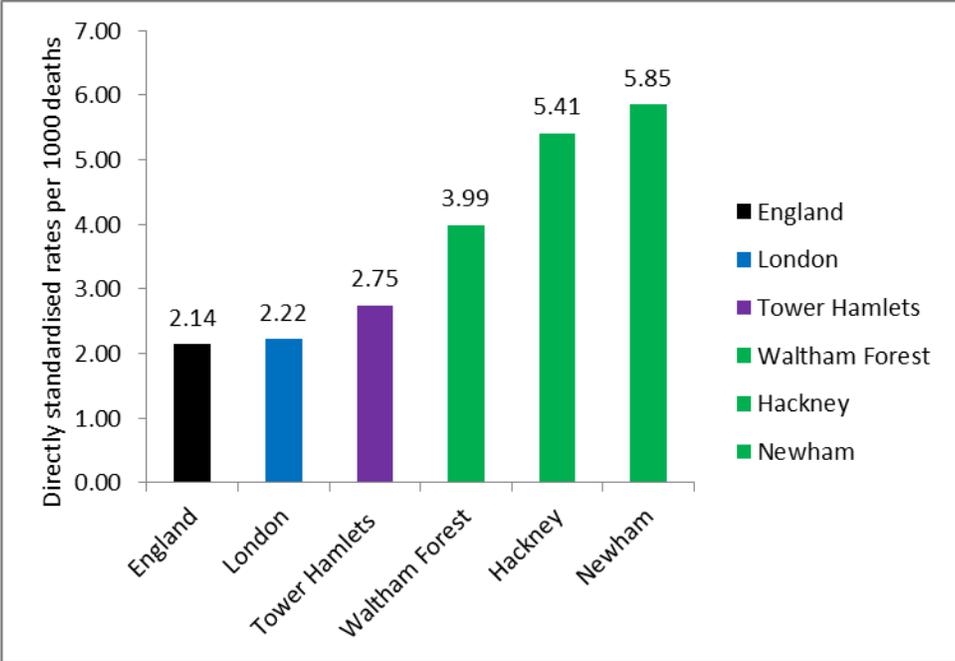
Source: Quality Outcomes Framework, 2014

**Appendix B: 30 Day Emergency Readmission rates for Asthma at Barts Health, 2013/14 and 2014/15.**

Fiscal year	Month	30 Day readmissions		Emergency Admissions	%
2013/14	April	2		39	5%
	May	0		58	0%
	June	0		38	0%
	July	3		46	7%
	August	0		42	0%
	September	4		57	7%
	October	5		77	6%
	November	1		80	1%
	December	5		67	7%
	January	3		72	4%
	February	2		51	4%
	March	8		79	10%
		<b>Sub Total 2013/14</b>	<b>33</b>		<b>706</b>
2014/15	April	6		80	8%
	May	3		64	5%
	June	1		74	1%
	July	1		63	2%
	August	2		54	4%
	September	3		62	5%
	<b>Sub Total 2014/15 YTD</b>	<b>16</b>		<b>397</b>	<b>4%</b>
	<b>Grand Total</b>	<b>49</b>		<b>1103</b>	<b>4%</b>

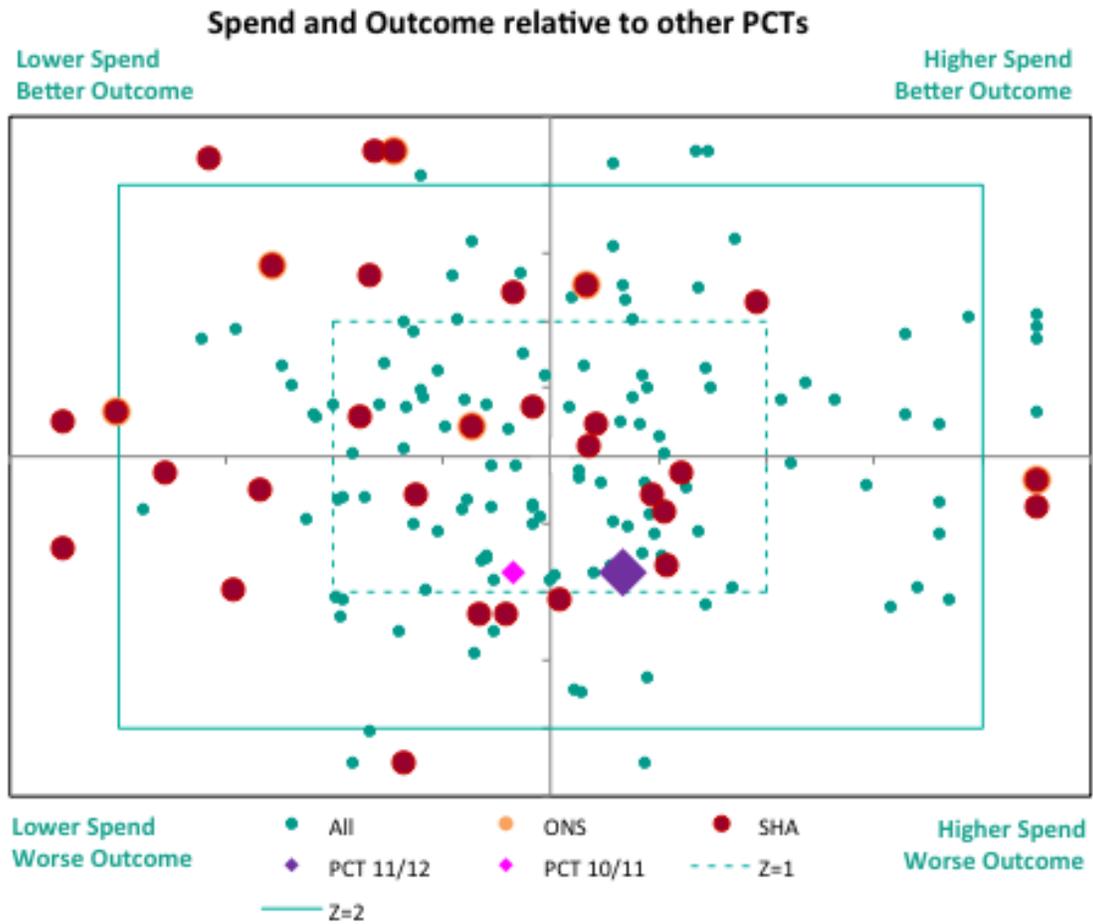
Source: SUS National readmissions extract and SUS Acute inpatient dataset, 2014.

**Appendix C: Mortality by Asthma in Tower Hamlets, London, England and neighbouring boroughs, all ages, 2013.**



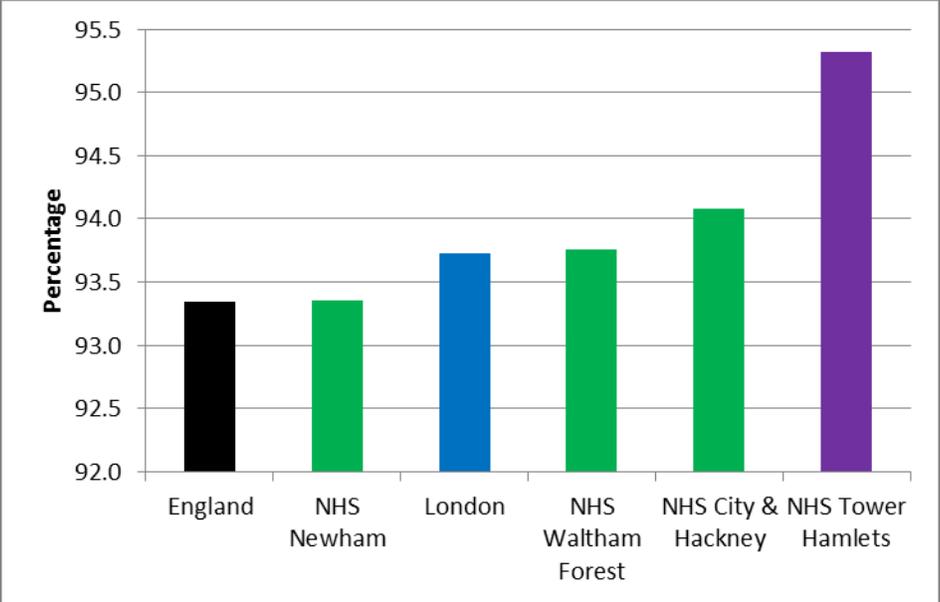
Source: HSCIC, 2015

Appendix D: Spend versus outcomes for Tower Hamlets PCT compared to other PCTs for Mortality from Asthma, 2011/12.



Source: PHE, SPOT tool

**Appendix E: Percentage of patients who smoke and have any combination of certain conditions including Asthma who have been provided with smoking cessation advice or referrals to specialist services in Tower Hamlets, London, England and neighbouring boroughs, 2012/13.**



Source: HSCIC, 2014

## References:

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- <sup>1</sup> Clinical Effectiveness data, 2013/14
- <sup>2</sup> Quality Outcomes Framework, 2015
- <sup>3</sup> NHS comparators, 2014
- <sup>4</sup> Health and Social Care Information Centre, 2015.
- <sup>5</sup> Department of Health. 2012. An Outcome Strategy for COPD and Asthma: NHS Companion Document
- <sup>6</sup> Asthma UK. 2014. Asthma Facts and FAQs. Accessible at: <http://www.asthma.org.uk/asthma-facts-and-statistics>
- <sup>7</sup> Disability-adjusted life years (DALYs) for 291 diseases and injuries in 21 regions, 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010.
- <sup>8</sup> Asthma UK. (2013). Asthma & Me. <http://www.asthma.org.uk/Shop/asthma-me-booklet>
- <sup>9</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/213055/121109-NHS-Outcomes-Framework-2013-14.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/213055/121109-NHS-Outcomes-Framework-2013-14.pdf)
- <sup>10</sup> <http://www.nice.org.uk/guidance/QS25>
- <sup>11</sup> Royal College of Physicians (2014). *Why Asthma Still Kills. The National Review of Asthma Deaths (NRAD)*. <http://www.bsaci.org/LiteratureRetrieve.aspx?ID=128628>
- <sup>12</sup> <http://fingertips.phe.org.uk/profile/inhale/data>
- <sup>13</sup> National Institute for Health and Care Excellence (2015). Asthma: Diagnosis and monitoring of asthma in adults, children and young people. NICE guideline. Draft for consultation, January 2015.
- <sup>14</sup> <http://www.towerhamletsccg.nhs.uk/Publications/Medicines%20Management/Formulary/Asthma%20Guidelines.pdf>
- <sup>15</sup> Naqvi M, Khachi H. An assessment of the management of adult patients presenting to the Royal London Hospital for exacerbation of asthma or chronic obstructive pulmonary disease.. September 2014.