





# Tilbury Integrated Healthy Living Centre Needs Assessment

A Thurrock Joint Strategic Needs Assessment (JSNA) Product

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## Foreword

The health and wellbeing experienced by our population does not happen by chance. Moreover, it is a product of a complex multi-factoral influences including underlying socio-economic variables such as poverty, education, crime, housing and employment; social and community variables such as aspiration, community cohesion and community resilience, lifestyle choices and access to high quality health and wellbeing services.

In 1971 Tudor-Heart published a paper describing the *'inverse care law'*. Tudor-Heart's premise was simple; that the populations with the greatest health needs end up with the poorest quality health services. Regrettably, 44 years later, in 2015, the complex interplay of influences on wellbeing described above still combine in Thurrock to confirm their premise.

This report examines the health and wellbeing needs of the population of two wards, under the care of five GP practices in Tilbury. Thurrock residents living in Tilbury St. Chads and Tilbury Riverside live in wards classed as within the most 20% deprived in both Thurrock and England. Predictions based on sound public health epidemiological research from Public Health England conclude that a boy born today in Tilbury will die 10 years before a boy born seven miles up the road in Orsett. However this prediction is not an inevitability if coordinated action is taken now by the NHS, council, voluntary and community sector and the community themselves to address the underlying factors that lead to the conclusion.

Thurrock Council is committed to a major regeneration programme in Tilbury. NHS Thurrock CCG in conjuction with NHS England are committed to improving the primary and community health care offer available to its residents. Thurrock Council for Voluntary Services and the many community and voluntary organisations that they represent are committed to improving community wellbeing, and many within the population of Tilbury have shown huge enthusiasm to engage and support this new agenda.

This report has been commissioned on behalf of all of these key stakeholders. It examines in detail the health and wellbeing needs of the population of Tilbury, including the wider determinants of health, lifestyle factors, and the current quality of primary and community care. It aims to be the starting point in a conversation to inform a 'blue print' for a new integrated health and wellbeing facility for the population of Tilbury, such that the conclusions are Tutor-Heart are not perpetuated for the next 44 years.

Ian Wake Director of Public Health

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## 1. Introduction

This report was requested by NHS Thurrock CCG and Thurrock Council to assess the health and wellbeing needs of the population of Tilbury, the examine the quality of the current primary care provision and the define a 'blue print' for a new Integrated Healthy Living Centre which would encompass services an enhanced primary care facility together with wellbeing services and potentially other clinical and social services traditionally provided in alternative settings.

It is divided into three parts:

- Part one considers the needs of the population of Tilbury
- Part two considers the current level of service provision and how it is being used
- Part three attempts to define a possible future 'blue print' for a new Integrated Healthy Living Centre.

As is so often the case in situations like this, turning a 'blue print' into reality is often at least in part down to the 'art of the possible'. However the authors hope that this report will provide a useful starting point for those tasked with that responsibility.

## 2. Background

There are five GP practices in Tilbury, two of which has been recently closed following inspections by the Care Quality Commission that deemed them to be inadequate. NHS England and NHS Thurrock CCG have put temporary special measures in place in order to ensure continuity of primary care to the residents of Tilbury.

We know that under-doctoring and nursing is a huge issue and people are waiting for an unacceptable length of time in order to obtain a GP appointment. We also know that if people cannot get a GP appointment they are more likely to use more expensive parts of the system such as A&E, and that under-doctoring leads to a reduced ability of GP practices to care proactively for patients with long term conditions, increasing the risk of patients experiencing an emergency event such as diabetic coma, stroke or other stroke.

In Thurrock we have a vision to provide more integrated health and social care services, and provide a more holistic population health approach to the way in which we commission services. In Tilbury our vision is to create a new Integrated Healthy Living Centre which incorporates Primary care, but also aspects of secondary care, and wellbeing services to address the underlying causes of ill-health.

Influences on health and wellbeing can be thought of a chain of events as set out in figure 1. We have structured this report to mirror this chain of influences. Figure 1



## PART 1: WHAT ARE THE CURRENT HEALTH AND WELLBEING NEEDS OF THE PEOPLE OF TILBURY?

## 3. DEMOGRAPHY

## 3.1 Current Population Size

Data from July 2015 shows that the practice registers for the GPs registered in Tilbury have a combined population of **20,534** patients (source: HSCIC GP Population data, July 2015). 50.2% are male and 49.8% are female. When looking at the age breakdown of this population, it can be seen there are some differences compared to the rest of the Thurrock population. Tilbury has a larger proportion of children and young people under 30, and a smaller proportion of older adults, particularly males aged 60 years and above.



Figure 2: Tilbury GP Registered Populations by age and sex, July 2015

Source: HSCIC GP Population data, July 2015

When comparing these data to the population estimates of the two administrative wards that cover Tilbury (Tilbury St. Chads and Tilbury Riverside and Thurrock Park), the GP registers have a higher number registered – 20,534, compared to the 2013 ward estimates which show a combined total of 13,202. It should however be noted that the GP figure may include residents who do not live in Tilbury as two of the practices have branch premises elsewhere in Thurrock (one in Grays and one in East Tilbury).

#### 3.1.1 Ethnicity

Data from the 2011 Census indicates that 15.7% of Tilbury St. Chads residents and 17.7% of Tilbury Riverside and Thurrock Park residents are from a BME group. These are both slightly higher than the Thurrock average of 14.1%, but lower than other parts of the borough where BME groups make up almost a third of residents.



#### Figure 3: Proportion of residents classifying themselves as from a BME group, by ward, 2011

#### Source: Public Health England

#### 3.1.2 Fertility Rate

Both Tilbury wards have a higher fertility rate than the Thurrock average. Whilst the rate per 1,000 women aged 15-44 years was 71.1 in Thurrock for 2008-2012, it was 81.0 in Tilbury St. Chads and 93.8 in Tilbury Riverside and Thurrock Park. This can be seen in the figure overleaf.

#### Figure 4: Crude Fertility Rate per 1,000 women, by ward, 2008-2012



#### Source: Public Health England

#### 3.1.3 Population Projections

As with national and borough populations, the population of Tilbury is set to increase in coming years. Using information held by the Council on known developments in the area and applying a ratio of 2.65 persons per new house (based on the current Tilbury ratio), it is estimated that this alone would result in an increase of 437 residents by 2019. This can be seen in the table below.

#### Table 1: Application of known housing developments to current Tilbury population, by 2019

	2015	2019
Number of extra houses (known builds)	_	165
Tilbury GP-registered population	20,534	20,971
Additional residents		437

Source: Thurrock Council, HSCIC and Office for National Statistics

The Office for National Statistics produces local authority level population projections which are based on previous trends. Applying the Thurrock rate of change to the Tilbury population generates 862 additional residents by 2019. The projections can be extended further, and enable an estimate of 3,337 additional residents by 2031.

	2015	2016	2017	2018	2019	2020	2021	2022	2023
Thurrock % Change	/	1.03	1.02	1.07	1	1.05	1.04	0.97	0.96
Tilbury Population	20,534	20,746	20,959	21,184	21,396	21,621	21,846	22,059	22,271
Additional Residents	/	212	425	650	862	1,087	1,312	1,525	1,737

Source: Office for National Statistics and HSCIC

	2024	2025	2026	2027	2028	2029	2030	2031
Thurrock % Change	0.95	0.89	0.94	0.87	0.81	0.86	0.85	0.79
Tilbury Population	22,484	22,684	22,896	23,096	23,284	23,483	23,683	23,871
Additional Residents	1,950	2,150	2,362	2,562	2,750	2,949	3,149	3,337

The Council has an aspiration to build 1,000 new homes in Tilbury – however there is no timescale in place for these to be delivered. Using the basis that there are currently 2.65 residents per house to account for this growth, this would bring an additional 2,650 residents to Tilbury.

#### 3.1.4 How can the new Tilbury Integrated Healthy Living Centre help?

The above information indicates that Tilbury has a larger population of younger generations and a high fertility rate compared to other parts of the borough. This means there are large numbers of young families. The population of Tilbury is set to increase, and with the Council's ambitious regeneration programme for Tilbury, may change the demographic profile of the area. The new Health Facility should ensure it provides a range of services to support young children and their families to stay healthy – particularly those such as immunisations, breastfeeding support services, parenting, sexual health, mental health and healthy lifestyle services. It should closely coordinate, and potentially host, many of the services operating from Tilbury Children's Centre that already support some of this and also link with other health workers working out in other local locations such as school nurses and health visitors. In addition, the Health Facility should be able to flexibly accommodate this future population increase, whether this is limited to the known growth or the desired growth linked to the regeneration programme.

## 4. WIDER DETERMINANTS OF HEALTH

## 4.1 Deprivation

According to the Index of Multiple Deprivation 2015, Tilbury contains the majority of the Lower Super Output Areas (LSOAs) which have the highest IMD scores in Thurrock, with the highest score of 53.08 located within Tilbury. Tilbury also has some of the most deprived LSOAs in the country - 3 of its LSOAs (18D, 18E and 18H) are amongst the 10% most deprived in England.



#### Figure 5: IMD score by ward, 2015

Source: Department for Communities and Local Government

#### 4.1.1 How does deprivation impact on health?

Deprivation is directly linked to life expectancy and the length of disability free life. This essentially means that those living in poorer areas not only die sooner, but also they will spend more of their shorter lives with a disability. The consequences of poverty, higher levels of harmful behaviour and lower levels of protective behaviour are seen most clearly in the distribution of illnesses and health status. When compared to those living in more affluent communities, populations living in areas of high deprivation statistically have:

- higher levels of mental illness
- increased likelihood of developing a long-term condition, particularly chronic respiratory conditions, cardiovascular disease and arthritis
- a higher prevalence of unhealthy lifestyle behaviours such as obesity, physical inactivity and smoking

Children living in areas of high deprivation:

- Experience a higher risk of infant mortality
- Are at higher risk of acute illnesses requiring hospital admission
- May be more likely to experience emotional and behavioural problems
- Are less likely to maintain a healthy weight
- Are more likely to experience problems with oral health
- Are more likely to achieve lower levels of educational attainment

In addition, young people growing up in areas of high deprivation:

- Are more likely to conceive and become teenage parents
- Are more likely to enter the youth justice system
- Are more likely to smoke
- Are at higher risk of becoming NEET
- May experience lower earnings and poorer qualifications in adulthood

This will impact accordingly on the use of health services - the inverse care law states that the availability of good medical care tends to vary inversely with the need for it in the population served. Research by Mercer & Watt (2007) found that access to care generally took longer, and satisfaction with access was significantly lower in the most deprived areas. Patients in the most deprived areas had more problems to discuss (especially psychosocial), yet clinical encounter length was generally shorter. GP stress was higher and patient enablement was lower in encounters dealing with psychosocial problems in the most deprived areas. Variation in patient enablement between GPs was related to both GP empathy and severity of deprivation. There is also the added complication of the larger demand on primary, secondary and community care due to the higher likelihood of patients exhibiting unhealthy lifestyle behaviours and earlier onset of long-term conditions.

#### 4.1.2 How can the new Tilbury Health Centre help?

The information above indicates that Tilbury patients are already statistically at risk of receiving poorer quality care that is unlikely to meet their needs. The personnel employed in the new Health Facility will have a key role in both treating current needs, but in anticipating future needs to avoid costly service use at a later date. Inclusion of diagnostic services within the facility (e.g. x-ray/ultrasound) should result in numerous benefits to Tilbury patients: there are reduced time delays in receiving a service and a subsequent result, service will be easier to access by patients, and also result in fewer demand on hospital services for diagnostic services that can be undertaken in primary care. Employment of a multi-skilled workforce in the Health Facility will enable patient needs to be assessed holistically, look to reduce stress/workload of GPs by filtering out inappropriate consultations (e.g. those that could be met by a pharmacist), and should aid the addressing of some of the poorer outcomes experienced by patients in deprived areas - e.g. public health preventative services should support people to maintain healthy lifestyle behaviours, a targeted sexual health service should help reduce potential numbers of unplanned pregnancies and teenage parents, colocation of IAPT mental health services could support children who might be at risk of emotional/behavioural problems etc. There is also a role for the Health Facility to host some of the wider community services that can support the place-based outcomes – e.g. inclusion of an area to enable further education and learning opportunities would support people to improve their skills and lead to a greater likelihood of employment, thereby reducing the likelihood of health problems associated with unemployment (see later section on Employment for further detail). The multi-faceted approach of this

facility will also improve inter-agency working relationships and ensure each professional is in a position to be able to advice/guide the person to the best avenue to meet their needs.

### 4.2 Housing

#### 4.2.1 Persons per household

The average number of persons per household for both Tilbury wards is 2.65, which is higher than the national average of 2.36. Tilbury St Chads (2.57) has more persons per household than Tilbury Riverside and Thurrock Park (2.72). Both are higher than the Thurrock average of 2.52 persons per household.

Figure 6: Average number of persons per household for Tilbury wards, Thurrock and England, 2011



Source: Census 2011

#### 4.2.2. Overcrowded households

A household can be classified to be overcrowded if it has fewer bedrooms than the notional number recommended by the bedroom standard (a recommended notional number of bedrooms for each household, based on the size of the household, age, sex, marital status and relationship among members of the household). An occupancy rating of -1 or fewer could indicate overcrowding within a household. In both Tilbury wards, there is a higher proportion of households with an occupancy rating of -1 or fewer than the Thurrock and England averages, with 7.54% of Tilbury Riverside and Thurrock Park and 8.20% of Tilbury St. Chads households having one or more bedrooms under the bedroom standard (Thurrock average =42% and England average = 4.64%).





Source: Census 2011

#### 4.2.3 Needs of residents living in Tilbury's Council Homes

Some residents who are living in Council accommodation have particular health needs. The table below outlines these for residents in both Tilbury wards. The highest level of need overall is for those with low mobility, who make up 36.7% of the specialist needs recorded (40 out of 109). Mental Health need is the second highest category, with 19 residents (17.4%).

Table 3: Health	needs for those	in Council	accommodation i	in Tilbur	y wards, 2015
					/ /

Ward/Needs	Grand Total
Tilbury Riverside and Thurrock Park	68
Alcohol Dependency	1
Hearing	12
Learning Disability	1
Low Mobility	25
Mental Health Needs	11
Other Needs	12
Visual	4
Wheelchair User	2
Tilbury St. Chads	41
Drugs Substance Misuse	1
Hearing	2
Learning Disability	4
Low Mobility	15
Mental Health Needs	8
Other Needs	5
Visual	5
Wheelchair User	1
Grand Total	109

Source: Housing Team, Thurrock Council

There is a housing development on the site of Calcutta Road which aims to produce 37 units to HAPPI (Housing our Ageing Population: Panel for Innovation) standard by 2017.

#### 4.2.4 How does poor housing impact on health?

Housing is a massive driver of health inequalities – generally speaking, older people, children and those with long-term conditions are at greater risk of adverse health due to poor housing conditions. There is a large body of evidence to indicate that poor housing can impact on the following health conditions:

- **Respiratory problems** this is particularly linked to residents living in cold homes and houses with mould, although is also associated with general overcrowding. (Research suggests that around 1 in 18 dwellings in England have appreciable dampness or mould.) This can lead to increased development of conditions such as asthma and bronchitis, and worsening of existing respiratory conditions. In addition, insufficient ventilation in houses can lead to increased indoor pollutants such as radon, carbon monoxide and nitrogen dioxide.
- **Circulatory problems** cold homes are linked to an increased risk of hypertension and cardiovascular disease. Excess Winter Deaths due to circulatory diseases are estimated to be between 40-50% (Marmot Review Team, 2011).
- Mental Health increased exposure to noise due to poor home insulation can result in increased stress and anxiety levels, and also lead to an increased risk of ischemic heart disease. Stress can also be exacerbated by feeling of overcrowding or fuel poverty. Depression and feelings of isolation could also develop as people feel they cannot escape their situation.
- Falls and accidents poor quality housing leads to an increased number of falls, due to an increased number of trip hazards or poor quality furnishings.
- Mortality rates The Marmot Review Team (2011) found that residents who live in the coldest homes have a 20% greater risk of Excess Winter Deaths than those in the warmest homes, simply due to their houses being colder. The risk factors for respiratory problems might also contribute to a rise in mortality rates. It is also known that mortality rates increase during extreme hot weather; and although there is not conclusive evidence to link housing quality to this, it should be ensured that houses are adequately ventilated to reduce this risk.

The Memorandum of Understanding (2014) signed by a range of health, social care and local government organisations recognises that the right home environment can:

- Delay or reduce the need for primary care and social care interventions
- Prevent hospital admissions and readmissions
- Enable timely discharges from hospital
- Enable rapid recovery from ill-health or planned admissions

#### 4.2.5 How can the new Tilbury Integrated Healthy Living Centre help?

From the above it can be seen that Tilbury has a higher number of people per household, and a larger proportion of overcrowded households than the national average. Services should be designed to support those in overcrowded households, providing targeted advice and assistance to potentially help overcrowded families in social rented housing move into the private sector or access relevant small capital grants to improve their homes. Part of the health centre could be designated for this purpose, and could also provide a base to share information through training and briefing to other front line services. Advice should be available to residents regarding their needs and options for housing adaptations, potentially reducing falls and resulting in savings to the future healthcare bill.

#### 4.3 Employment

#### 4.3.1 Residents residing in Council properties

The table below shows the economic status of residents who live in Council-owned properties in Tilbury wards, categorised as those who claim housing benefit and those who do not. Out of 417, 266 claim housing benefit, which is 63.8%. The table also shows that whilst there are a number in both wards who are not working (44.8%), this is not a majority.

#### Economic Activity Total No Housing Housing Benefit Benefit Tilbury Riverside and Thurrock Park 290 187 103 Full Time Work 44 8 36 Not Working 133 101 32 Part Time Work 47 27 20 64 49 15 Retired Unknown 2 2 0 Tilbury St. Chads 127 79 48 Full Time Work 22 2 20 Not Working 54 41 13 Part Time Work 4 1 3 Retired 44 34 10 2 Unknown 3 1 Grand Total 417 266 151

#### Table 4: Economic activity for those in Council-owned properties from Tilbury wards, 2015

Source: Housing Team, Thurrock Council

#### 4.3.2 Benefits Claimants

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Data from February 2015 indicates that 1,665 adults aged between 16-64 years from the two Tilbury wards were claiming at least one benefit. Tilbury claimants accounted for 13.71% of all Thurrock claimants, despite Tilbury residents aged 16-64 only accounting for 8.06% of the Thurrock population of this age group. The figure below depicts the proportion of adults aged 16-64 years from both Tilbury wards who claim a benefit compared to the Thurrock average, and it can be seen that both Tilbury wards have much higher proportions than the Thurrock average (11.70%).



Figure 8: Proportion of working aged adults claiming a benefit in Tilbury wards, Thurrock and Great Britain, 2015

Source: NOMIS and ONS small area population estimates 2013

When looking at Employment Support Allowance claimants, again Tilbury residents make up a higher proportion of total Thurrock claimants than their population would suggest 13.04% of ESA claimants come from Tilbury wards, but their population of 16-64 years only accounts for 8.06% of the total Thurrock population. The figure below depicts the rate of ESA claimants per 1,000 population for both Tilbury wards, and as above, it can be seen that Tilbury residents have higher rates of ESA claimants than the Thurrock average.



Figure 9: Rate of ESA claimants for Tilbury wards and Thurrock, 2015

Source: NOMIS and ONS small area population estimates 2013

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When looking at the conditions experienced by ESA claimants, it can be seen that the highest proportion claim for a mental health condition (44.80% in Tilbury and 43.63% in Thurrock). Tilbury has a higher proportion of those who claim for a respiratory/circulatory condition or an injury/poisoning than the

Thurrock average, but a lower proportion of those who claim for a nervous system condition, musculoskeletal condition or "other" condition than the Thurrock average. This can be seen in the table below.

Condition	Tilbury Proportion	Thurrock proportion
Mental	44.80%	43.63%
Nervous system	5.60%	6.78%
Respiratory/Circulatory	8.80%	6.99%
MSK	16.00%	17.54%
Injury/Poisoning	7.20%	5.95%
Other	17.60%	19.10%

Source: NOMIS

#### 4.3.3 How does employment impact on health?

There is a well-established link between employment and health – in general, having a job is better for health than having no job. Research by the UCL Institute of Health Equity (2015) have cited four ways in which work can however have an adverse effect on health: through adverse physical conditions of work; adverse psychosocial conditions at work; poor pay or insufficient hours; and temporary work, insecurity, and the risk of redundancy or job loss.

Negative health impacts from unemployment and worklessness include:

- Higher mortality rates evidence summarised by the World Health Organisation found that, even after allowing for other factors, unemployed people and their families suffer a substantially increased risk of premature death
- Increased use of medical services including higher numbers of medical consultations, increased consumption of medication, and higher hospital admission rates
- Higher rates of depression and anxiety Catalano *et al* (2011) found that unemployment is associated with a 15-30% increase in the reported symptoms of depression and anxiety
- Increased substance use and abuse Catalano *et al* (2011) found that unemployment is associated with a doubling of alcohol intake
- Worse general health
- Increased risk of cardiovascular disease.

#### 4.3.4 How can the new Tilbury Health Centre help?

The information above shows that Tilbury has a high proportion of working aged adults who are claiming a benefit of some sort, and also a high rate of those claiming employment support allowance. Looking at the economic status of those in Council properties, 44.8% of those in Tilbury properties are not currently in employment and 63.8% claim housing benefit. Whilst benefits claimants are not necessarily an indicator of worklessness, it can highlight an issue of low incomes which are requiring supplementation by a benefit, or a health condition which means a person is unable or less able to work – 44.80% of ESA claimants in Tilbury cite a mental health issue as their reason for claiming. This could indicate that there are a large number of people not currently receiving the support required to get back into work, or that people may not fully understand the benefits system and therefore could mean people are not accessing the right benefits for

their needs. The new health facility should look to support those looking to improve their employment prospects, via offering advice and information to remove employment barriers, improve job searching and application skills and career advice, debt advice and how to manage money. This is being developed through the Tilbury Community Hub based in the Library, but could have a more permanent home in the new Health Facility; meaning GPs will be able to better assess the patient in a more holistic way and also have direct access to relevant support and information.

#### 4.4 Education and Skills

Pupil attainment by the age of five can be measured by the achievement of a "Good Level of Development" (GLD) at the Early Years Foundation Stage (EYFS). For Tilbury schools, achievement of a GLD was below the Thurrock average of 73%, with only 56% of pupils at one school (Lansdowne) achieving this standard. However the schools were closer to the national average of 66%.





Source: Thurrock Council

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According to Census data, both Tilbury wards have a higher proportion of residents with no qualifications than either the Thurrock or England averages (24.4% and 27.6% compared to 20.7% and 18.2% respectively).





Source: Census 2011

#### 4.4.1 Digital Skills

Go ON UK has combined various sources research into the use and experience of digital services within all UK local authorities into a combined indicator to estimate whether an area is at risk of "digital exclusion". Whilst the below statistics are only available at a Thurrock level, it is worth considering that some of these outcomes may be worse in Tilbury, given the higher proportion of residents with no qualifications and high deprivation levels.

The quintile values shown are for the UK (quintile 1 = worst 20%, quintile 5 = best 20%). In Thurrock:

- 8.9% of households do not receive broadband speeds of at least 2MBps (National Quintile 4)
- 4.6% of adults have never been online (National Quintile 5)
- 76% of adults have all 5 Basic Digital Skills (National Quintile 3)
- 34% of adults have used all 5 Basic Digital Skills in the last 3 months (National Quintile 1)
- The Combined Digital Indicator estimates Thurrock to be at "Low" risk of digital exclusion

Source: Go ON UK Digital Exclusion Heatmap, 2015

#### 4.4.2 How do Education and Skills impact on health?

Numerous outcomes in adult life are influenced by their early years. The quality of a child's early life experience is shaped by a number of factors, including socio-economic status, access to high-quality early education and care, and the influence of 'good parenting' (Ofsted, 2014). Research cited by the Department for Education (2011) found that vocabulary at age 5 is the best predictor of later social mobility for children from deprived backgrounds – those who start school as confident speakers with good language skills are more likely to become successful learners and achieve in life. Educational attainment throughout school is lower in deprived areas, and this can affect future life chances – young people with fewer qualifications are more likely not to be in education, employment or training (NEET) after leaving school and find it more

difficult to secure employment as they get older. They may also have had poor childhood health or not had the support to fully comprehend the consequences of poor lifestyle behaviour choices (such as smoking). Having few or no qualifications can make it more difficult to move into work and increase the likelihood of obtaining a lower paid or unsecure job. This could then lead to the adverse health impacts cited in the section above on unemployment. Digital skills are becoming more and more important in today's society, with many services and employment opportunities accessed online. This is also true of health services, with resources such as NHS Choices becoming more frequently used, as well as social networking, learning opportunities and other forms of communication. Those who are *digitally excluded* could be at risk of isolation and potentially find it harder to engage with services.

#### 4.4.3 How can the new Tilbury Integrated Healthy Centre help?

The data above highlights that whilst Thurrock as a whole has a GLD higher than the national average, the Tilbury schools are not all performing at this level. This could be having serious impacts on the health and educational outcomes for our children and young people. Whilst many of the services operating from the current Tilbury Children's Centre already aim to improve the health of those aged 0-5 years, the new Health Facility should look to reinforce this, supporting breastfeeding uptake, uptake of childhood immunisations, parenting programmes and to potentially host services that support children to maintain a healthy weight. The consequences of Tilbury wards having higher proportions of adult residents with no qualifications than the Thurrock or national averages could result in residents experiencing the negative health impacts described above. This could then impact on uptake of unhealthy lifestyle behaviours (e.g. smoking). The new Health Facility should look to support residents in improving their education and skills, potentially by providing a local hub for employers and learners to access high quality relevant training, hosting Adult Community Learning sessions, promoting volunteering opportunities and Time Banking.

The data above shows that whilst Thurrock as a whole is at *Low* risk of digital exclusion, only 34% of adults have used the five basic digital skills in the last 3 months. This is likely to be worse in Tilbury, as affordability has been cited in national research as a barrier to using digital services in areas with low incomes. The new Health Facility has an opportunity here to support residents in accessing online services – this is an approach that has been in part explored by the current Tilbury community hub, but could have a more permanent home in the health facility. This could also lead to numerous benefits to health – access to health information online can provide people with reassurance or confidence about their own health or health of others, potentially reducing the number and length of GP consultations. It would also empower people to better manage their own health and gain a better understanding of the different resources available to support them, as well as facilitating the process of booking GP appointments or ordering repeat prescriptions where required. Engaging and training residents in using digital skills and accessing services may also reduce the risk of isolation and empower them with current skills and knowledge to positively impact on employment opportunities.

## 4.5 Air Quality

Thurrock as a whole has pockets of very poor air quality. In 2011 the Council investigated in more detail the annual mean exceedence for NO2 along Calcutta Road and Dock Road in Tilbury. Continuous monitoring data and diffusion tube monitoring for 2010 confirmed that there was an exceedence. The report concluded that an Air Quality Management Area (AQMA) should be declared for the annual mean NO2 along Calcutta Road and Dock Road as a result of road transport emissions. The other AQMAs in Thurrock are further to

the south and west of the borough. Work underway for the upcoming Air Quality and Health Strategy has found that whilst there is heavier use of LGVs and HGVs in Tilbury than other parts of Thurrock, it is the pollution coming from cars that is a bigger contributing factor to the poor air quality in this area.

#### 4.5.1 How does air quality impact on health?

There is substantial evidence that air pollution has adverse effects on health. Adverse health effects from short and long term exposure to air pollution range from premature deaths caused by heart and lung disease to worsening of asthmatic conditions, and can lead to reduced quality of life and increased costs of hospital admissions. Research by the World Health Organisation's International Agency for Research on Cancer (IARC) in 2013 concluded that outdoor air pollution is carcinogenic, with the particulate matter component of air pollution most closely associated with increased cancer incidence, especially cancer of the lung. An association was observed between outdoor air pollution and increase in cancer of the urinary tract/bladder. In their briefing, Natural England (2012) found that green spaces provide micro climates that aid particulate removal for cleaner air helping to reduce respiratory conditions.

#### 4.5.2 How can the new Tilbury Integrated Healthy Living Centre help?

Whilst the new Health Facility alone is unlikely to be able to mitigate the impacts from the poor air quality in Tilbury, it can participate in and support wider initiatives being led by the Council to both reduce emissions and exposure. For example, the facility could support patient education of the adverse effects of poor air quality, and potentially operate an *Air Alert*-type service to contact those particularly vulnerable to the adverse impacts (e.g. those with long-term conditions) on days when levels are predicted to be higher and advising them to take measures to modify their exposure (e.g. amend their physical activity routine). It can also support staff and patients with travel plans which encourage active travel and reduce reliance on cars.

#### 4.6 Crime

Data on reported crimes from September 2014 – August 2015 shows that there were 1,900 crimes reported to the police that took place in the two Tilbury wards. This equates to 143.9 crimes per 1,000 residents (based on 2013 ward population estimates). The table below outlines the distribution of crimes across the locality, and it can be seen that Tilbury Riverside has a higher rate of crime (154.1) than Tilbury St. Chads (132.2), and that both areas have a higher rate of crime than the Thurrock average (105.2).

#### Table 5: Number and rate of crime in Tilbury wards, 2014-15

	Tilbury Total	Tilbury Riverside and Thurrock Park	Tilbury St Chads
Number of crimes	1,900	1,089	811
Number of residents	13,202	7,069	6,133
Crimes per 1,000 residents	143.9	154.1	132.2

Source: UKCrimeStats.com

The most common types of crime in Tilbury were:

- Anti-Social Behaviour (34.6% of offences)
- Violent Crime (20.4%)
- Criminal Damage and Arson (11.6%)

Whilst not quantified here, domestic violence has been identified by the Thurrock Community Safety Partnership as a priority type of crime. Confidential data indicates that Tilbury is one of the 'hotspots' in Thurrock for domestic violence.

#### 4.6.1 How does Crime impact on health?

Research by Bellis et al (2012) found the following consequences of crime on health:

- Physical injury potentially leading to disabilities or disfigurement, or in the case of sexual assault, pregnancy or disease
- Relationship difficulties reduced trust, intimacy and increased isolation
- Self-harm and suicide particularly stemming from youth violence and bullying
- Post-traumatic stress/anxiety or aggression
- Disruption to eating or sleeping patterns
- Increase in alcohol or drug misuse as a form of self-medication or coping mechanism
- Reduction of physical exercise in parks and public places leading to a higher level of inactivity amongst the population and an increase in the associated long-term conditions.

Indirect links with health were also found, with crime potentially impacting on educational or professional attainment and victims of violence potentially needing to leave their homes.

There is also a large economic cost associated with the effects of crime on health – Bellis *et al* (2012) indicated that violence is estimated to cost the NHS  $\pounds$ 2.9 billion every year, with the total cost to society being estimated at  $\pounds$ 29.9 billion each year.

#### 4.6.2 How can the new Tilbury Integrated Healthy Living Centre help?

The data above shows that there is a higher rate of crime in Tilbury than the Thurrock average. Services operated from the new Tilbury Integrated Healthy Living Centre could look to both reduce the health impacts felt by victims or potential victims, and affect some of the known risk factors for committing crime, thereby contributing to a crime reduction. Hosting services such as specialist domestic abuse and sexual violence services, sexual health services and IAPT would bring together existing services that currently support victims of crime and promote better cross-service relationships as well as supporting a more holistic approach to assessing needs as a whole. The Health Facility could also contribute to a reduction in crime by hosting lifestyle services aiming to promote health and reduce likelihood of perpetrating crime – such as drug/alcohol misuse (as many crimes are committed under the influence of a substance), or services aiming to promote good mental wellbeing (as many potential perpetrators have mental health issues themselves). There is also the potential to link up with existing initiatives such as the current Hate Crime Ambassador employed by Thurrock Coalition with Essex Police funding, who currently runs drop in sessions in Tilbury on a Monday to encourage victims of Hate Crime to speak up.

## 4.7 Access to Transport

Access to a car or van is a measure of accessibility to services. It can be seen from the map below that compared to other parts of Thurrock, the two Tilbury wards have a comparatively high percentage of households who do not have access to a car or van (28.6% in Tilbury St Chads and 34.2% in Tilbury Riverside and Thurrock Park, compared to the Thurrock average of 20.1%).



Source: Census 2011

#### 4.7.1 How does accessing services impact on health?

Being able to access services means people are more likely to be feeling better connected within their community and improve choice and therefore encourage them to feel more empowered. Conversely, those who have reduced access to services have a reduced choice and could by that "forced hand" result in poor quality of care because they have no other option. This could have a number of longer term impacts to both physical and mental health – the feeling of being "trapped" can have a negative impact on mental health and wellbeing, and also potentially lead to a greater risk of isolation if there are limited opportunities to interact with others.

#### 4.7.2 How can the new Tilbury Health Centre help?

The fact that nearly a third of Tilbury households do not have access to a car or van means that there is likely to be a heavy reliance on public transport to access locations further afield and high use of local facilities. The danger is that if the current facilities/services are not meeting the needs of the population and they are less able to access services elsewhere, there is a risk that residents may become more isolated, or access inadequate provision and therefore potentially compound issues in the future. This presents a strong case for providing a wide range of different health and other community services from the new Health Facility, as residents can plan their journeys to one destination and has many of their needs met there, rather than having to make several different journeys. It can also encourage social inclusion, which may be particularly important for certain community groups. As Tilbury residents currently have a range of poor public health outcomes and high usage of health services as a whole, consideration should be given as to how these can be collocated. The work of the Local Area Coordinators has been instrumental to date in terms of helping to increase social cohesion, enable residents to feel informed about their available options, and ultimately support people to help each other, thereby reducing the demand on statutory services. Reserving a portion of the new Health Facility for drop in use by the Local Area Coordinator for Tilbury would have numerous benefits to health: it would improve inter-agency working and knowledge of available services/resources to communicate to residents, it would raise the profile of isolation as a health issue by locating a service designed to reduce this alongside health services, and would assist the LAC in identifying people who would benefit from their support.

## 4.8 Summary of Needs: Wider Determinants of Health:

The information in the above section tells us that Tilbury patients:

- Live in some of the most deprived areas in the country, and are therefore statistically at risk of receiving poorer quality care
- Are more likely to live in an overcrowded household, which could lead to poorer health outcomes
- Have a higher proportion who claim benefits, which highlights an issue of low income again leading to poorer health outcomes
- Tilbury's children are not achieving good levels of educational attainment, and this is further reflected in a higher proportion of Tilbury's adults having no qualifications
- May be less confident in using Digital Skills to access information
- Live in or close to an area of poorer air quality
- Live in an area with a high crime rate
- A third of Tilbury households do not have access to a car or van, therefore relying on public transport to access services



## 5. Health Lifestyle Behaviour

#### 5.1 Breastfeeding

#### 5.1.1 How does Breastfeeding impact on health?

There has been significant reliable evidence produced over recent years to show that breastfeeding is a major contributor to public health and has an important role to play in reducing health inequalities even in the industrialised countries of the world. Breast milk is the best form of nutrition for infants and exclusive breastfeeding is recommended for the first six months (26 weeks) of an infant's life; additionally there is evidence that the longer the duration of breastfeeding, the greater the health benefits in later life. According to a review undertaken by the World Health Organisation in 2007, the available evidence suggests that breastfeeding has long term benefits such as lower blood pressure and lower total cholesterol for breastfeed subjects, as well as a reduced prevalence of overweight/obesity and type 2 diabetes and better success in intelligence tests. Another review looked at evidence for health outcomes for breastfeeding mothers, and found lactation to be associated with reduced risk for type 2 diabetes, breast and ovarian cancer. Early cessation of breastfeeding or not breastfeeding was associated with an increased risk of maternal postpartum depression.

Looking at prevalence of infants who have been totally or partially breastfed in Thurrock in 2014-15, it can be seen that prevalence ranges from 49.45%-43.73% throughout the year. For Tilbury GPs, prevalence for quarters one and two were slightly higher than the Thurrock average, but decreased for quarters three and four, reaching a low of 35% by quarter four. This decrease for quarter four followed the same pattern as the Thurrock average.



Figure 13: Proportion of infants that are totally or partially breastfed in Tilbury and Thurrock

Source: Unify2

#### 5.1.2 How can the new Tilbury Integrated Healthy Living Centre help?

The data indicates that the prevalence of breastfeeding at 6-8 weeks in Tilbury women has decreased during 2014-15 to a level below the Thurrock average. This is concerning, as the evidence above outlines the many benefits breastfeeding can bring both to the child and the mother. There are currently a range of services being offered around Tilbury and BTUH which support mothers to breastfeed – it would be beneficial if the new Health Facility could support coordination of these, and perhaps host some of the breastfeeding has a traditionally lower uptake amongst low income mothers and also those who left school at an early age, it is important that the Tilbury Integrated Healthy Living Centre undertakes targeted activities to improve access to breastfeeding support and raise awareness of breastfeeding benefits amongst these women. This could have benefits to future prevalence of long term conditions, including post-partum depression, and therefore reduce demand on the health service.

#### 5.2 Smoking

#### 5.2.1 Smoking Prevalence

Smoking prevalence can be ascertained from two ways – by estimates based on survey data, or by recording of smoking status from GP registers. When compared to other areas of Thurrock, the two Tilbury wards have the highest estimated adult smoking prevalence, with 22.4% of those in Tilbury Riverside and Thurrock Park and 22.7% of those in Tilbury St. Chads estimated to smoke. This can be seen in the map below (Tilbury wards are outlined in blue).





Figure 15 shows the smoking prevalence recorded at GP practice population level for those aged 15+ for Thurrock with the Tilbury GP practices shown in red.





In total there were 4095 smokers aged 15+ recorded in the five Tilbury Practices which gives an overall 15+ smoking prevalence for Tilbury of 25.7%. This is significantly greater than Thurrock's overall prevalence of 20.3%, and also greater than the ward-level estimate presented above. However these figures are likely to be an under-estimate of the true prevalence of smoking in Thurrock, partly because the smoking status of patients is generally not recorded for all patient records at GP practice level, and secondly because some smokers may be reluctant to admit that they smoke to NHS health professionals.

#### 5.2.2 How does Smoking impact on health?

#### Adults

There is a large body of evidence to demonstrate the causal links between smoking and a number of diseases, including cancers, circulatory and respiratory conditions, diabetes and rheumatoid arthritis. About 70% of the lung cancer burden can be attributed to smoking alone. Second-hand smoke has been proven to cause lung cancer in non-smoking adults. Smokeless tobacco (also called oral tobacco, chewing tobacco or snuff) causes oral, oesophageal and pancreatic cancer. Smoking has also been shown to diminish general health status and have other adverse effects on the body, such as causing inflammation and impairing immune function. It is ultimately responsible for a large number of premature deaths every year.

#### Children

Child and adolescent smoking causes serious risks to respiratory health both in the short and long term. Children who smoke are two to six times more susceptible to coughs and increased phlegm, wheeziness and shortness of breath than those who do not smoke. They are also more likely to continue smoking during their adult lives and have a lower chance of quitting. Smokers who start smoking at an early age have a higher risk of developing lung cancer or heart disease. In addition, there are enormous economic costs to society associated with smoking. Research by Action on Smoking and Health (ASH) estimated that

Source: QOF2014-15

smoking costs the UK economy £13.1 billion per year, including £2 billion in direct treatment costs to the NHS. (Action on Smoking and Health, 2014) Children and young people are also more susceptible to the effects of passive smoking, particularly if there is a parent at home who smokes. They are at higher risk of respiratory infections, asthma, bacterial meningitis and cot death.

#### Smoking in pregnancy

Smoking during pregnancy can cause serious pregnancy-related health problems, complications during labour and an increased risk of miscarriage, premature birth, still birth low birth-weight and sudden unexpected death in infancy. It has been found to increase the risk of infant mortality by 40% (National Institute for Health and Clinical Excellence, 2010). Evidence has shown that smoking prevalence during pregnancy is much higher among lower socioeconomic groups (Gray, et al., 2009) and teenage mothers.

#### 5.2.3 The financial impact of smoking

According to the ASH Ready Reckoner 2014, the cost to the NHS of current and ex-smokers who require care as a result of smoking-related illnesses is £404,000 per year in Tilbury Riverside and Thurrock Park and Tilbury St. Chads. The annual cost to Adult Social Care is a further £152,000 per annum.

#### 5.2.4 Use of current commissioned stop smoking services

The public health team commission *Vitality* to provide a stop smoking service in Thurrock. Within Tilbury, Vitality runs a clinic within Tilbury Children's Centre on Friday mornings which currently has varied uptake. The four Tilbury pharmacies [Asda, Asset, Chapharm and Boots] and two GPs [Sai Medical Centre and Shehadeh Medical Centre] have Level 2-trained smoking cessation staff.

Figure 16 shows the percentage of smokers setting a quit date in 2014/15 through an NHS stop smoking service for each GP practice in Thurrock, with the five Tilbury practice populations identified in red.



Figure 16 % of patient recorded as smokers setting a quit date through an NHS stop smoking service

Source: Vitality and QOF

National research suggests that 75% of current smokers wish to quit. Despite this and the high prevalence of smoking in Tilbury, GPs and other front line health professionals are failing to identify and refer sufficient numbers of smokers to NHS stop smoking services. With the exception of Dr. Mukhopadhyay, all other GP

practices perform significantly worse than the Thurrock mean on this metric. Out of the 4095 patients aged 15+ recorded as smokers in Tilbury, only 135 (3.3%) set a quit date through an NHS commissioned stop smoking service.

Figure 17 shows the percentage of patients recorded as smokers aged 15+ who successfully quit smoking at four weeks through an NHS stop smoking service in 2014/15



Figure 17 % of smokers successfully quitting at four weeks through an NHS stop smoking service in 2014/15

Again, with the exception of Dr. Mukhopadhay's practice, Tilbury practices perform poorly on four quit success compared to other GP practices in Thurrock. In total only 68 out of the 4095 smokers in Tilbury successfully quit smoking for four weeks using an NHS stop smoking service. National research suggests that 9% of smokers who quit for four weeks manage to quit smoking permanently. Therefore the total impact that NHS stop smoking services in Tilbury in 2014/15 is estimated to have had is to reduce the number of smokers by six. As such these services are having virtually no impact on the prevalence of smoking in Tilbury.

#### 5.2.4 How can the new Tilbury Integrated Healthy Living Centre help?

The above critique on the impact of current smoking cessation programmes in Tilbury is shocking. Differences in smoking prevalence's between affluent and deprived communities has been calculated to account for up to half of all health inequality outcomes. This means Tilbury has large numbers of people who could start smoking, on top of the large numbers who already do. The new Health Facility must incorporate an evidence-based smoking cessation service, which should work closely with long term condition management services, mental health services and GPs to identify those who smoke and support them to quit. A concerted effort must be made by all front line staff to identify and refer smokers into stop smoking services. All professionals working in the new Health Facility should also undertake Making Every Contact Count (MECC) training to enable them to identify and support smokers.

#### 5.3 Obesity

#### 5.3.1 Child Obesity Prevalence

In order to provide as robust an indicator as possible at small area level, Public Health England aggregate three years of data from the National Child Measurement Programme and produce estimates of obesity and excess weight prevalence in Reception and Year 6-aged children. The two graphs below show data for each ward in Thurrock for Reception and Year 6-aged children respectively. It can be seen that for Reception-aged children, Tilbury St. Chads appears to have the highest estimated prevalence (11.9%) of obesity and is higher than other parts of Thurrock; however the wide confidence intervals mean that neither of the Tilbury wards have significantly different prevalence to the Thurrock average (9.5%) for the years 2011/12-2013/14.



#### Figure 18 Childhood Obesity Prevalence at year 6.

Source: Public Health England

Neither Tilbury ward is significantly different from the Thurrock average for obesity in Year 6-aged children although Tilbury St. Chads does have the highest prevalence compared to any other ward in Thurrock.

#### 5.3.2 Adult obesity prevalence

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Adult obesity levels in Tilbury can be estimated using survey data. Ward-level adult obesity prevalence estimates for those aged 16+ estimate that the two Tilbury wards have an obesity prevalence of 29.9%. This is above the England and Thurrock estimates from that survey data (24.1% for England and 28.1% for Thurrock).

#### Figure 19: Modelled Obesity Prevalence by ward, 2006-2008

Percentage of the population aged 16+ with a BMI of 30+, modelled estimate, 2006-2008 - source: Public Health England, NHS IC © Copyright 2010



©PHE - © Crown copyright and database rights 2014. Ordnance Survey 100016969 – ONS © Crown Copyright 2014 - Ward (2013 boundaries) Source: Local Health

#### 5.3.3 Use of Current Services

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*Vitality* delivers a weight management programme on a Friday afternoon at Tilbury Children's Centre. The Public Health team also fund some community initiatives via grants, including:

- Tai Chi 4 Health Trevor Rawson runs a weight management programme at the Flagship Centre
- Cookery Classes/Weight Loss support cookery classes were provided earlier in 2015 at Tilbury Children's Centre, but the weight loss support element runs from the clinic in Grays. The provider has however indicated that direct access to a weight loss clinic within a Tilbury health centre would be helpful to residents.

Active Tilbury (not a Public Health service): Active Tilbury offers the residents of Tilbury wards over 14 years around 25 sports and exercise activities every week from venues such as the Martial Academy, the Children's Centre, Tilbury Youth Centre and Gateway Academy. Pathways for engaged participants to take part in sports and exercise outside of these sessions are set up by linking with local clubs and gyms.

Data from Vitality indicates that for 2014-15, there were 72 referrals for their weight management service from people registered with Tilbury GPs. When looking at the referrals against the number of people recorded on QOF Obesity registers, the referral rate per 1,000 patients varies between practices. Dr Shehadeh has the lowest rate of referrals from his list of obese patients (24.44 per 1,000) whilst Dr Ramachandran had the highest (154.93 per 1,000). When compared to the Thurrock average, it can be seen that the overall Thurrock rate is fairly low (37.37 per 1,000) and that three of the five Tilbury GPs have higher referral rates. This can be seen in the figure below.


Figure 20 Referrals to Vitality Weight Management Service in 2014/15

Source: Vitality and QOF

*Vitality* state that their current weight management programme is fairly well attended, although lower than other parts of Thurrock such as Grays, South Ockendon and Stanford.

Information on the community initiatives:

- *Tai Chi 4 Health* the weight management programme is currently running with only 75% of the places filled. Trevor states that they do not get a significant number of enquiries from Tilbury residents for this programme or the other activities he provides elsewhere.
- *Cookery Classes/Weight Loss support* information from the provider suggests that Tilbury currently has the lowest uptake of both the weight loss support and cookery classes in the borough.

Active Tilbury (not a Public Health service): The current usage is approximately 100-150 residents per week across all activities.

# 5.3.4 How does Obesity impact on health?

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The increasing prevalence of obesity amongst adults and children is a major public health challenge both nationally and internationally. There is a large body of evidence to indicate that being overweight or obese can increase the risk of developing a range of other health problems such as coronary heart disease (CHD), type 2 diabetes, some cancers, stroke and reduce life expectancy.

The consequences of obesity are not limited to the direct impact on health. Overweight and obesity also have adverse social consequences through discrimination, social exclusion and loss of or lower earnings, and adverse consequences on the wider economy.

There are numerous factors for obesity, as it is a very complex condition. Some of the known inequalities in obesity prevalence include:

- Age prevalence of overweight and obesity generally increases with age, although there is a decline in prevalence among those aged 75 years and over.
- Income those living in low income households have the highest prevalence of obesity and those living in high income households have the lowest. These differences are particularly marked among women: women living in the lowest income households have double the prevalence of obesity (31%) compared to those living in the highest income households (15%)
- Ethnicity there is some ethnic variation: women from Black African groups appear to have the highest prevalence of obesity and men from Chinese and Bangladeshi groups have the lowest
- Poor diet those who are malnourished in early years have a higher risk of obesity in later life
- Household having family members who are obese or overweight can increase the risk of obesity or overweight
- Mental health issues having a mental health condition can lead to different behaviour choices that can lead to overweight or obesity.

There are also environmental influences that can impact on behavioural choices (such as amount of physical activity undertaken or diet) which can lead to overweight or obesity.

# 5.3.5 How can the new Tilbury Integrated Healthy Living Centre help?

The information above shows that Tilbury has a high prevalence of adult obesity and a relatively low usage of commissioned weight management services. The new Health Centre has a role in hosting and coordinating these services, and providing accurate advice regarding healthy choices (particularly targeted towards low income families to help them to live well) and the adverse consequences of overweight and obesity in both children and adults. There is also the need for the promotion of NHS Health Checks and breastfeeding in early detection of associated diseases and prevention of compounding factors. The Facility can also look towards addressing some of the determinants of obesity, including hosting IAPT services and working closely with them to address underlying mental health issues associated with eating or physical activity behaviours. The "digital hub" portion of the Health Facility would also support people to access healthy choices information directly, signpost to relevant services and improve general health education. All health professionals would be MECC trained to enable them to identify and support individuals at risk of becoming overweight or obese.

# 5.4 Substance Misuse

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Modelled estimates of the population aged 16+ years who binge drink estimate that 18.3% of residents in both Tilbury wards are binge drinkers, which is similar to the Thurrock average of 18.4%. The map below shows the estimates by Thurrock ward, and it can be seen that there are other parts of Thurrock with higher estimates of binge drinkers.

#### Figure 21 Modelled estimates of binge drinking





#### Source: Public Health England

There is national data available which shows that high deprivation is correlated with both alcohol-related mortality and alcohol-specific hospital admissions. As the majority of Tilbury LSOAs have fairly high levels of deprivation, it is likely that Tilbury has higher rates of alcohol-related mortality and hospital admissions compared to other parts of the borough.



#### Figure 22 Alcohol related mortality by deprivation decile - England





# 5.4.1 Current Service

The Adults substance misuse service is provided by *Addaction* who provide needle exchange within three of the Tilbury pharmacies [Asda, Boots and Asset]. Boots and Asset pharmacy also provide supervised consumption of opiate substitute medication. Whilst the group and key work sessions are run from Grays, clients from Tilbury are still able to access them and would be refunded any travel tickets.

Wize Up provides the young people's substance misuse service. Whilst the provider accesses the schools in that area for some of their work, they also attend the homes of young people or the local Children's Centre.

## 5.4.2 How does substance misuse impact on health?

Substance misuse has a number of adverse effects on health: cardiovascular disease, mental health problems, liver disease and lung damage can all be caused or impacted upon by an individual's use of drugs. In particular, the prevalence of co-existing mental health and substance use problems (termed 'dual diagnosis') may affect between 30 and 70 percent of those presenting to health and social care settings. Not only does substance misuse cause physical and mental ill health, it can also cause homelessness, poverty and crime. They are associated with other social and physical problems that influence misuse, such as unemployment, low self-esteem, perceived failure, relationship problems and psychological problems.

## Children and Young People

The risk to children of substance misuse can come from their own use of drugs/alcohol, or parental use within the family home. The risk-harm profile identifies 10 key items to gauge the vulnerability of young people entering specialist substance misuse services – they are more likely to be NEET, have contracted an STI, have a child, be in contact with the youth justice system, be receiving benefits by the time they are 18, and half as likely to be in full-time employment. The vulnerabilities are:

- Opiate and/or crack user
- Alcohol users

- Using 2 or more substances
- Began using main problem substance under 15
- No Fixed Abode/ unsettled housing
- Not in education, employment or training
- Involved in self harm
- Involved in offending
- Pregnant and/or parent
- Looked after child

Children of parental users can be at risk in terms of:

- Access to drugs or drugs paraphernalia within the home, e.g. tablets, needles etc.
- Violence in the home
- Exposure to a number of strangers within the home
- Neglect of their own needs, potentially resulting in poorer health and educational attainment and poor mental health

## Unborn children

Substance use during pregnancy may result in premature birth, low birth weight and potential chemical dependence for the child when s/he is born such as Foetal Alcohol Spectrum Disorder.

# 5.4.3 How can the new Tilbury Integrated Healthy Living Centre help?

As Tilbury contains many of the most deprived LSOAs in England, it is likely that it has a higher rate of alcohol-specific hospital admissions and alcohol-related mortality than other parts of Thurrock. The new Health Facility has a role in terms of hosting a specialist drug and alcohol treatment service – particularly for young people who may feel less comfortable accessing the service currently operating from the Children's Centre, but also to address some of the vulnerabilities to young people likely to misuse substances highlighted above – e.g. wider community services hosted within the Facility could support those with No Fixed Abode/unsettled housing or at risk of becoming NEET. Specialist sexual health services would support those at risk of self-harming. Colocation of IAPT would also consolidate the relationship between substance misuse and mental health services, and enable closer working between professionals.

# 5.5 Sexual Health and Teenage Pregnancy

## 5.5.1 Sexual Health in Tilbury

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Due to the small numbers involved, it is not possible to show how many new sexually transmitted infections (STIs) occur in residents of Tilbury compared to other parts of Thurrock. However the graph below shows the rates of new STIs by deprivation quintile in Thurrock for those diagnosed in GUM clinics, and knowing that the majority of Tilbury LSOAs are in the most deprived quintile, it is likely that Tilbury has a high rate of new STIs compared to other parts of the borough.



Source: Thurrock LASER Report, 2013

# 5.5.2 Teenage Pregnancy in Tilbury

Data on the rates of under 18 conceptions is released at ward level for aggregated 3 year periods. The latest data is for 2011-13, and it can be seen from the map below that under 18 conceptions within the two Tilbury wards are in the highest quintile in Thurrock.



## Figure 24 Teenage Pregnancy Prevalence by quintile – 2011/13

# Source: ONS

Thurrock as a whole has a rate of under 18 conceptions that is significantly greater than England's. As such, the fact that the two Tilbury wards fall into the top quintile within Thurrock with regard to under 18 conception rates suggests that teenage pregnancy is a significant issue in Tilbury. HES (Hospital Episode Statistics) data indicates that in 2014, 3% of deliveries were to mothers aged under 18 years in both Tilbury St. Chads (CIs 1.9-4.7) and Tilbury Riverside and Thurrock Park (CIs 1.9-4.5), which is the highest proportion in Thurrock.

# 5.2.3 Current Services

Thurrock Council's Public Health team commission an Integrated Sexual Health Service comprising of:

- Access to full integrated contraceptive and family planning clinic, located in Orsett and Grays
- Postal Chlamydia Screening Kits
- Contraception through C-Card scheme
- Education based health service, i.e. Delay speakeasy and Go Girls
- *Primary Care Contract* which include management/delivery of Emergency Hormonal Contraceptive, C-Card, Chlamydia Screening, LARC offered within General Practice and pharmacy

# Primary Care Contracts

The intention of the Public Health team is to increase LARC as well as other forms of contraception to reduce unwanted pregnancy and reduce abortion rates (cost to CCG). Going forward sexual health will be looking at a hub model whereby there will be outreach clinics based at areas of high prevalence whilst still maintaining open access but targeted services to fit specific need.

Unfortunately no GP practice in Tilbury has opted to contract with Public Health to deliver sexual health services, which means that Tilbury residents have to travel to other parts of the borough such as Grays or Corringham to access these services. Work is in process to encourage sign ups to this contract via streamlining the current contract, as well as potentially signing up to the HIV self-sampling contract which are kits accessible to all.

# 5.2.4 How does poor sexual health further impact on health?

Relationships and sexual practices can be influenced by a number of factors, including:

- Social norms
- Peer pressure
- Religious beliefs
- Culture
- Confidence and self-esteem
- Substance misuse
- Coercion and abuse

Unsafe sex impacts on health services and the wider community in a number of ways. Untreated STIs can facilitate HIV transmission and increase susceptibility to HIV. Late diagnosis of STIs and HIV also make them more costly to treat, with gonorrhoea becoming particularly difficult as it can quickly develop resistance to antibiotics. Unintended pregnancies can also lead to abortions, which can in turn have detrimental effects both in terms of mental health and future fertility, potentially resulting in more costly interventions for future

planned pregnancies. There are also impacts to health in dealing with the consequences of rape or sexual assault, which can be substantial and have a long lasting duration.

# 5.2.5 How does Teenage Pregnancy impact on health?

Unwanted teenage pregnancy is a major underlying driver of health inequalities. Teenage mothers are at greater risk of experiencing a range of poor outcomes, which include:

- Being less likely to finish their education, and more likely to bring up their child alone and in poverty
- Experiencing an infant mortality rate that is 60 per cent higher than for babies born to older mothers
- Experiencing a rate of post-natal depression that is three times that experienced by older mothers and a higher risk of poor mental health for three years after the birth

Children of teenage mothers are generally at increased risk of poverty, low educational attainment, poor housing and poor health, and have lower rates of economic activity in adult life. Sons of teenage mothers are more likely to be imprisoned when compared to their peers born to older mothers.

A number of risk factors have been identified to be associated with teenage pregnancy:

- Living in a deprived area
- Limited knowledge regarding contraception and sexual health advice
- Family structure children living in care or those from lone parent backgrounds may be more likely to become teenage parents. Additionally, those whose mothers were teenage parents are also more likely to become teenage parents.
- Educational attainment on average, deprived wards with poor levels of educational attainment have under-18 conception rates twice as high as similarly deprived wards with better levels of educational attainment (Department for Education and Skills, 2006).
- Disengagement from school the Department for Education and Skills found that among the most deprived 20% of local authorities, areas with higher rates of absenteeism have higher under-18 conception rates.
- Participation in early and risky behaviours including early onset of sexual activity, and substance misuse
- Mental health problems particularly self-esteem and confidence levels, which can impact on their choices
- Some ethnic groups are more likely to experience teenage pregnancy than others however it is unclear whether this is an independent factor.

Children of teenage parents are much more likely to become teenage parents themselves, meaning that if not addressed, teenage pregnancy perpetuates health inequality between generations.

# 5.2.6 How can the new Tilbury Integrated Healthy Living Centre help?

The information shown above emphasises the fact that Tilbury has one of the highest rates of teenage pregnancy in the borough, yet appears ill-equipped to manage this with the current clinic services based in Grays and Orsett and no sign ups to the Primary Care Contract in Tilbury. There is also the evidence that

prevalence of STIs is higher in deprived areas, and Tilbury has several of the most deprived LSOAs in the country. The new Tilbury Integrated Healthy Living Centre should make it a priority to sign up to deliver the services listed in the Public Health Primary Care Contract, whilst also providing advice and guidance on wider sexual health and pregnancy issues, and signposting to other existing services already offering support such as Children's Centres, Social Care services, School Nurses and Parenting Services. It might also consider signing up to the HIV self-sampling contract which is kits accessible to all. The Health Facility will also look to mitigate some of the risk factors for teenage pregnancy and poor sexual health – such as specialist substance misuse support and co-location of IAPT mental health services, and also via wider community services provide guidance towards housing options, supporting teenage parents to access further education options or employment opportunities. By taking a more holistic view of the determinants and factors, this should result in a longer term benefit to health (in terms of costs and resources, unplanned pregnancies and the accompanying consequences) both in terms of costs and resources.

# 6. EPIDEMIOLOGY – The current disease burden experienced by people in Tilbury

# 6.1 Self-reported Health

The 2011 Census asked people to report on their own perceived views of their health and wellbeing. In 2011, 8.8% of the residents of Tilbury St. Chads felt that their day to day activities were limited "a lot", which is higher than the Thurrock average of 7.2% but similar to the national average (8.3%). 7.6% of Tilbury Riverside and Thurrock Park residents felt their day to day activities were limited "a lot".





Source: Census 2011

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Residents are also asked about their health in the GP Patient Survey. In the 2015 release, it can be seen that there is a wide variation at practice level for those who consider themselves to have a long-standing health condition. However it should be noted that due to the relatively low sample size, the confidence intervals are fairly wide. The Sai Medical Centre (F81708) has the lowest proportion of those with long standing health conditions (34%), whilst Dr Mukhopadhay's practice (F81719) has the highest proportion (68%). This can be seen below, benchmarked against the Thurrock and England average.



Figure 26: Proportion of respondents with a long-standing health condition, Tilbury GPs, 2015

# 6.2 Life Expectancy

Life expectancy for both males and females in the Tilbury area is lower than the England and Thurrock averages.

#### 6.2.1 Males

Data for 2008-2012 shows that the life expectancy at birth for males in Tilbury St. Chads is 75.7 years and for Tilbury Riverside and Thurrock Park is 73.6 years [Thurrock average is 79.1 years and England average is 78.9 years]. This can be seen on the map in figure 27.



## Figure 27 Life Expectancy in Thurrock for males, 2008-12

# Source: Public Health England

Source: GP Patient Survey, 2015

## 6.2.2 Females

Data for 2008-2012 shows that the life expectancy at birth for females in Tilbury St. Chads is 79.1 years and for Tilbury Riverside and Thurrock Park is 78.1 years [Thurrock average is 82.6 years and England average is 82.8 years]. This can be seen on the map below.





#### Source: Public Health England

## 6.2.3 Premature Mortality

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The standardised mortality ratio (SMR) is a way of comparing death rates between populations and England (controlling for differences in age structure between different populations). The SMR for England is set at 100. An SMR above 100 indicates a mortality rate that is greater than England's. Premature mortality rates in Tilbury are significantly higher than the England average. The standardised mortality ratio for mortality due to all causes for those aged under 65 years in Tilbury is 152.7 and for those under 75 years is 150.2 (SMR for England is 100). When looking at some of the key causes of death, SMRs for three of the main causes (cancer, circulatory disease and coronary heart disease) are also above the England average, with SMRs of 136.9, 181.8 and 179.2 respectively. When comparing to the Thurrock SMRs, Thurrock's highest SMR is 112.9 (for all circulatory diseases under 75 years).





This may be partly explained by the fact that our cancer screening coverage in Tilbury is lower than the Thurrock average, as well as reduced primary care capacity to identify and manage patients (this is explored further in the sections below).

Source: Public Health England

# 7. LONG TERM CONDITIONS AND THEIR MANAGEMENT

# 7.1 Long Term Conditions in Tilbury

In 1948 when the NHS was founded, almost half of the population died before their 65<sup>th</sup> birthday. In 2015 this figure dropped to 18%. However, although living longer, our population are increasingly doing so with long term conditions. Spend on patients with long-term conditions accounts for over 70% of the entire NHS budget. Effective management of long term conditions is absolutely vital in order to prevent patients' health, wellbeing and independence from deteriorating and to prevent them being admitted to hospital or requiring social care packages. It is important to note that the data presented in this section relates to that reported by the five Tilbury GP Practices in their 2014/15 QOF (Quality Outcomes Framework) returns. Since April 2015, following inspections by the Care Quality Commission, NHS England, NHS Thurrock CCG and Thurrock Council have worked closely together to address concerns raised about the quality of primary care in some of the Tilbury practices, including in some instances appointing new providers. As such, work is already underway to address some of the clinical quality issues highlighted in this chapter.

Figure 30 shows the prevalence of the most common long term conditions in Tilbury, Thurrock and England using GP QOF data. This estimates prevalence from the number of patients on GP disease registers who have already been diagnosed as having a long term condition.



#### Figure 30 - Recorded prevalence of Long Term Conditions in Tilbury, Thurrock and England in 2013-14

#### Source: QOF, 2013-14

Tilbury has a greater percentage of patients diagnosed with hypertension (high blood pressure), depression, diabetes, asthma, kidney disease, hypothyroidism, cardio-vascular disease, coronary heart disease, COPD (Chronic obstructive pulmonary disease), cancer, stoke, heart failure and peripheral arterial disease compared to Thurrock. Percentages of people known to be living with high blood pressure, depression, diabetes, hypothyroidism and COPD are also significantly greater than England's.

# 7.2 Non-diagnosed Long Term Conditions

ERPHO (Eastern Region Public Health Observatory) produced modelled expected estimates of disease prevalence for certain long term conditions in GP practice populations based on the best published evidence and considering differences in demography and other risk factors known about a GP practice population. By comparing the variation between these modelled prevalence figures and the LTC prevalences in figure 30 of patients already diagnosed we can estimate numbers of patients within a given practice population who are living with a long term condition that is not diagnosed, and therefore the completeness of GP long term condition QOF registers. A register that is significantly incomplete suggests poor case finding of patients with long term conditions, meaning that there may be a significant proportion of patients on a GP's list have a long term condition and that are not being managed or treated. ERPHO generated estimated prevalences for Hypertension, Diabetes, Stroke, Atrial Fibrillation and COPD. When comparing the modelled estimates for each practice to the observed prevalence, for each condition, the condition with the largest gap between observed and the modelled estimate was Hypertension. The figure below shows the total estimated prevalence of hypertension by Tilbury GP, broken down by the diagnosed/observed prevalence and the estimated undiagnosed prevalence generated by the ERPHO estimates. It can be seen that Dr Patel has the highest difference between observed and estimated prevalence of Hypertension (9.74%), and Dr Ramachandran has the smallest difference (3.50%); although they still have the lowest prevalence of Hypertension in Tilbury. Dr Mukhopadhyay has the highest total prevalence of Hypertension (25.41%). (Error! Reference source not found.)



#### Figure 31: Diagnosed and non-diagnosed Hypertension in Tilbury

### Source: QOF 2013-14 and ERPHO Modelled Disease Estimates 2011

Using this it has been possible to calculate an estimate of how many cases may not be diagnosed. This can be seen in the table below by GP and condition. We have also indicated where the observed levels are higher than expected. Which could mean that diagnosis rates are good, or that diagnostic protocols have not been followed and the wrong people are on the register. An audit of diagnostic procedures is needed to asses this.

GP PRACTICE	Hypertension	Diabetes <sup>1</sup>	Stroke <sup>1</sup>	Atrial Fibrillation	COPD
SUNTHARALINGAM R & PARTNER	103	*	3	16	0
Shehadeh e	530	89	46	47	0
RAMACHANDRAN M K & RAJA V	88	*	*	12	0
SAI MEDICAL CENTRE	244	63	11	12	0
MUKHOPADHYAY P K & PARTNER	133	*	33	42	0
Total for Tilbury	1098	152	93	129	0

#### Table 6: Estimated number of undiagnosed cases by GP and condition

Source: QOF 2013-14 and ERPHO Modelled Disease Estimates 2011

<sup>1</sup> \* indicates that the observed prevalence is larger than the expected.

We estimate that in Tilbury practices there are 1098 patients who have Hypertension, 152 who have Diabetes and 129 with Atrial Fibrillation who are not diagnosed and thus not treated. Without good quality primary care and education on self-care these conditions will only worsen and result in high cost activity in secondary care and increased need of Social Care packages.

Evidence suggests (see QOF section below) that offering patients with LTC good quality care does reduce levels of non-elective activity for these conditions.

# 7.3 Quality outcomes framework (QOF)

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QOF records certain quality of care information on how patients who are diagnosed with diseases are treated in primary care. It was set up as an incentive system and GP practices get paid for the percentage of their "diseased population" that they offer certain tests, medication reviews and treatments for. The indicators are based on evidence of good quality care for the conditions.

There has been much debate over recent years whether QOF actually achieves good outcomes for patients in terms of reducing the risk of major events requiring hospitalisation. However a study published in the BMJ this year showed that nationally the introduction of QOF was in fact associated with a decrease in emergency admissions for these incentivised conditions. They also state that:

" Contemporaneous health service changes seem unlikely to have caused the sharp change in the trajectory of incentivised ACSC admissions immediately after the introduction of the Quality and Outcomes Framework. The decrease seems larger than would be expected from the changes in the process measures that were incentivised, suggesting that the pay for performance scheme may have had impacts on quality of care beyond the directly incentivised activities.<sup>4</sup>

Figure 32 shows the findings from their research.

Figure 32 Effect of a national primary care pay for performance scheme on emergency hospital admissions for ambulatory care sensitive conditions



We can therefore use QOF scores as a proxy for quality of care for patients with Long-Term Conditions. We have chosen a sub-set of these indicators that are used by CQC to assess quality to give an indication of this.

These are shown in the figures below.

**Note:** All figures are for 2014/15 and labels are shortened versions of the full QOF indicator. A list of the full QOF indicators is available <u>http://qofportal.uk/qof-read-codes/clinical-domain/</u>

The radar charts show a global view of how practices LTC patients are being managed. Generally the larger the drawn area (blue line with points) the better that practice is at managing the condition as a whole. They also show where conditions may be well managed in one area and not in others.

# 7.4 Clinical Management of Patients with Hypertension

We estimate that there are 4,191 patients with hypertension in Tilbury, including 1,098 who are not yet diagnosed.

Of those who are diagnosed the QOF tells us about the quality of their care and how well managed their condition is in general. Specifically for Hypertension it looks at the control of patients' Blood Pressure, levels of physical activity (including brief interventions) and lifestyle advice, and treatment with statins for patients with a CVD risk score of 20% or higher. All of these indicators are aimed at reducing the risk of patients suffering from a CVD event in the future.



Of all the patients diagnosed with hypertension on the practice list in **Dr Mukhopadhay's practice** only 68% had their blood pressure under 150/90 mmHg at their latest reading and only 61% of those who are under the age of 80 had their blood pressure measured as under 140/90. Only 54% are having their physical activity levels assessed (although out of those who have an assessment, 89% who were inactive are a brief intervention). Only 61% were offered any level of Lifestyle advice. 67% of new patients (aged 30-74) with a CVD risk assessment of 20% or more are treated with statins.

#### Figure 33)

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Of all the patients diagnosed with hypertension on the practice list at the Sai Medical Centre 77% had their blood pressure under 150/90 mmHg at their latest reading and 73% of those who are under the age of 80 had their blood pressure measured as under 140/90. 87% are having their physical activity levels assessed (of those who have an assessment, 92% who were inactive are a brief intervention). 70% were offered any level of Lifestyle advice. (Figure 34) However, the data suggests that no new patients (aged 30-74) with a CVD risk assessment of 20% or more are treated with statins. (Error! Reference source not found.) Any atients that this applies to have a 20% (or more) risk of having a CVD event in the next 10 years. This will likely require hospitalisation and may result in the need for Social Care support afterwards. This could be (and hopefully is) a data recording issue.



#### Figure 35: QOF Indicators for Hypertension Care 2013/14 Dr. Ramachandran's Practice

Of all the patients diagnosed with hypertension on the practice list In **Dr Ramachandran's MK practice** 70% had their blood pressure under 150/90 mmHg at their latest reading but only 62% of those who are under the age of 80 had their blood pressure measured as under 140/90. Only 67% are having their physical activity levels assessed (and of those who have an assessment, only 56% who were inactive are having a brief intervention). 66% were offered any level of Lifestyle advice. Only 50% were offered any level of Lifestyle advice. 67% of new patients (aged 30-74) with a CVD risk assessment of 20% or more are treated with statins. (Figure 35)



Of all the patients diagnosed with hypertension on the practice list In **Dr Suntharalingham R practice** 65% had their blood pressure under 150/90 mmHg at their latest reading but only 55% of those who are under the age of 80 had their blood pressure measured as under 140/90. Only 50% are having their physical activity levels assessed (although out of those who have an assessment, 96% who were inactive are a brief intervention). Only 35% were offered any level of Lifestyle advice. All of new patients (aged 30-74) with a CVD risk assessment of 20% or more are treated with statins.(Figure 36)



Figure 37: QOF indicators for Hypertension care 2013/14 – Dr Shehadeh Medical Centre

Of all the patients diagnosed with hypertension on the practice list of **The Shehadeh Medical Centre** 87% had their blood pressure under 150/90 mmHg at their latest reading and 83% of those who are under the age of 80 had their blood pressure measured as under 140/90. 90% are having their physical activity levels assessed (and 95% who were inactive are a brief intervention). 84% were offered Lifestyle advice. However, only 43% of new patients (aged 30-74) with a CVD risk assessment of 20% or more are treated with statins.

## 7.4.1 Summary of Hypertension care

Generally the Shehadeh medical centre's patients appear to be well managed, with the exception of treating those with a CV risk assessment of higher than 20% with statins which does need to be improved.

When other practices in Tilbury are compared, management of patients with hypertension in 2014/15 was variable with a significant minority of patients experiencing an inadequate level of care on some QOF indicators. Controlling high blood pressure is usually relatively straight forward and inexpensive. Conversely uncontrolled hypertension places patients at significant increased risk of more serious cardio-vascular events such as strokes, and heart attacks. The impact of such events can have a catastrophic impact on the lives of the patients concerned and drive significant additional and preventable cost to CCG, hospital and council budgets. Improving both the diagnosis and clinical management of Hypertension in Tilbury must be a key priority for the new Health and Wellbeing centre.

# 7.5 Clinical Management of Patients with Heart Failure (HF) and Atrial Fibrillation (AF)

We estimate that there are 328 patients with AF in Tilbury, including 129 who are not yet diagnosed. And 189 patients are currently diagnosed with HF.

Of those who are diagnosed the QOF tells us about the quality of their care and how well managed their condition is in general. Specifically for AF and HF it looks at treatment with specific drugs, and for AF the inclusion of a CHADS2 score (with appropriate treatment). All of these indicators are aimed at reducing the risk of patients suffering from a further CVD event in the future. **Care should be taken in interpreting some of the figures below, as absolute numbers of patients requiring each clinical intervention are relatively small**.





Figure 38 shows that patients registered with Dr Mukhopadhyay who are on the HF disease register are generally well diagnosed. All patients (excluding those exception reported) have had their diagnosis confirmed appropriately, using an ECG or specialist assessment. However only two thirds with LVD are being treated with an Ace Inhibitor or ARB. This has dropped from the 80% achievement in 2013/14. Patients with AF are also generally well managed.



Figure 39: QOF indicators for HF and AF - Sai Medical Centre

Figure 39 shows clinical management of AF and HF patients registered with the Sai Medical Centre. Care should be taken when interpreting figure 39 as the absolute numbers on both AF and HF registers 12 and 5 respectively and so their disease registers are very small. There is one patient with HF with LVD not being treated with an ACE-I or ARB and three patients with a CHAD2 score >1 that have not been anticoagulated.



#### Figure 40: QOF indicators for HF and AF - Dr Ramachandran MK Practice

Figure 40 shows that if patients who have been exception reported have registered with **Dr Ramachandran's practice** are excluded, then there is excellent clinical management of AF and Heart Failure, with 100% of patients receiving appropriate clinical management on all metrics. However there is a high level of exception reporting on two metrics; patients with a CHAD2 score >1 treated with an anti-coagulant, and patients with HF with LVD treated with and ACE/ARB/beta blocker. For these two metrics only 59% and 50% of patients respectively are receiving appropriate clinical management although again the absolute numbers of patients is relatively small. The reasons for exception reporting remain unclear and could include good clinical reasons. However this level of exception reporting could warrant further investigation as these patients are potentially at significant increased risk of more serious cardio-vascular events.



Source: QOF, 2014/15

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Figure 41 shows variable clinical management of patients registered with **Dr Suntharalingham practice** who are on AF and HF disease registers. Only 64% have had their HF diagnosed appropriately; i.e. have had their diagnosis confirmed using an ECG or specialist assessment, although once diagnosed HF clinical management appears good. 91% of those with LVD are treated with ACE-Inhibitor or ARB and 100% of those are also treated with a beta-blocker. However, in this practice only 67% of diagnosed AF patients with CHADS2 score recorded or more than one are anti-coagulated. Exception reporting makes no difference to these figures. Again, the overall AF register size is small, but five patients with AF who have been assessed as at high risk of a stroke are not anticoagulated. These patients require urgent review.



Figure 42: QOF indicators for HF and AF – The Shehadeh Medical Centre

Source QOF 2014/15



Figure 42 shows that 90% of patients registered at **the Shehadeh Medical Centre** who are on the HF disease register are diagnosed appropriately; i.e. have had their diagnosis confirmed using an ECG or specialist assessment. 100% of those with LVD are treated with ACE-Inhibitor or ARB and 100% of those are also treated with a beta-blocker (if patients who are excepted are excluded). 81% of patients with AF with a CHAD2 score above 1 are treated with an anti-coagulant or excepted, suggesting than nearly a fifth of patients with AF who are at high risk of a stroke are not being clinically managed appropriately.

# 7.5.1 Summary of HF and AF Care

There is some variation in clinical management of HF and AF between different GP practices in Tilbury, although absolute numbers of patients not receiving clinical interventions recommended by NICE nor exception reported are relatively low. Review shows the total number of patients on each of the five clinical intervention metrics in the radar diagrams that are not receiving an appropriate clinical intervention and have not been exception reported. Practices should identify and review these patients urgently.



Table 7: Absolute	numbers c	of AF.	and HF	natients	requiring	clinical	review
	numbers e		anain	padento	requiring	chincun	1 C VIC W

	Patients with a CHAD2 score>1 not anticoag ulated nor	Patients with a CHAD2 score =1 not on anti- platelet therany nor	Patients with a diagnosis of heart failure not confirmed by an ECG or by specialist assessment 3 months before or 12 months after entering on to the	Patients with a current diagnosis of heart failure due to left ventricular systolic dysfunction, not currently treated with an ACF-I or ABB or	Patients with a current diagnosis of HF due to left ventricular systolic dysfunction who are currently treated with an ACE-1 or ARB, but not currently treated with a beta- blocker
Practice Name	excepted	accepted	register	excepted	heart failure
SUNTHARALINGAM R	5	0	8	8	1
SHEHADEH MEDICAL CENTRE	12	1	4	4	0
RAMACHANDRAN MK	0	0	0	0	0
	3	0	2	2	0
MUKHOPADHYAY SURGERY	1	1	0	0	1
TILBURY	21	2	14	14	2

# 7.6 Clinical Management of Stroke, Transient Ischaemic Attack (TIA)

In 2014/15 in Tilbury, 313 patients were diagnosed with a stroke or TIA. Of those who are diagnosed the QOF tells us about the quality of their care and how well managed their condition is in general. Specifically for Stroke and TIA it looks at keeping blood pressure within a healthy range in order to reduce the risk of further strokes and other CVD events, and treatments with anti-platelets, anti-coagulants and aspirin, flu vaccination is also included.



#### Source: QOF 2014/15

In **Dr Mukhopadhay's practice** only 10% of patients who have had a stroke or TIA (STIA) event are referred for further investigation. Blood pressure has been maintained within only healthy limits for 60% of STIA

patients after exceptions have been excluded. Cholesterol is recorded in only 63% of patients and 48% of STIA patients and 45% of PAD patients have this recorded as below 5mmol/l. 70% of patients with a non-haemorrhagic stroke or history of TIA had been prescribed an anti-platelet agent or anti-coagulant in the previous 12 months, over a quarter remained unimmunised against flu even after excepted patients were excluded. (Figure 43)



Care should be taken when interpreting figure 49, as the total number of patients on the practice's stroke register was only 21. No patients who have had a stroke or TIA (STIA) event and are registered at the **Sai Medical Centre** were referred for further investigation in 2014/15 although only one patient was diagnosed with a stroke or TIA by the practice that year. Blood pressure has been maintained within healthy limits for 71% of STIA patients. Influenza immunisation coverage is generally good. 13 out of the 17 patients whose stroke was non-haemorrhagic or had a history of a TIA were taking an anti-platelet or an anticoagulant.



# Source: QOF 2014/15

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Clinical management of stroke/TIA is generally good at **Dr Ramachandran's MK practice**. 50% of patients who have had a stroke or TIA (STIA) event and are registered at are referred for further investigation although there were only two new patients added to the stroke/TIA register in 2014/15 so the 50% figure

relates only to one patient. Blood pressure for STIA patients is generally well controlled and all patients with a non-haemorrhagic had a record of taking anti platelet or an anti-coagulant. After exception reported patients are excluded, all patients on the stroke/TIA register were vaccinated against flu.



## Figure 46: QOF Indicators for Stroke and TIA Care - Dr. Suntharalingham Practice

#### Source: QOF 2014/15

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No new patients were added to the stroke/TIA register so no referral for further investigation were required at Dr Suntharalinngham's practice. Blood pressure has been maintained within healthy limits for 79% of STIA patients after patients who were exception reported were excluded. Four patients with nonhaemorrhagic stroke or a history of TIA were not prescribed an anti-platelet agent or anti-coagulant. Flu immunisation coverage is generally good. (Figure 46)



In line with performance on other cardio-vascular LTCs, clinical management of patients with stroke/TIA at The Shehadeh Medical Centre is generally very good across all metrics. Dr. Shehadeh may wish to consider sharing his practice's protocols for management of patients with cardio-vascular disease with clinical colleagues in other GP practices in Tilbury.

Table 8 shows the absolute numbers of patients not exception reported and not receiving each of the four recommended clinical interventions for each practice in Tilbury. Practices should identify and review these patients in order to reduce their risk of further serious cardio-vascular events.

	STIA patients in whom the last blood pressure reading (measured in the preceding 12 months) was greater than 150/90 mmHg	Non-haemorrhagic stroke patients and those with a history of TIA, with no record of an anti- platelet agent, or an anti-coagulant is being taken, nor exception reported	Patients with a stroke or TIA (diagnosed on or after 1 April 2014) who have no record of a referral for further investigation between 3 months before or 1 month after the date of the latest recorded stroke or the first TIA	STIA patients not immunised against flu nor exception reported
SUNTHARALINGAM R	9	4	0	4
SHEHADEH MEDICAL CENTRE	9	3	0	1
RAMACHANDRAN MK	3	0	1	0
SAI MEDICAL CENTRE	6	4	1	3
MUKHOPADHYAY	19	9	9	13
TILBURY	46	20	11	21

Table 8: Stroke TIA Patients not receiving recommended clinical intervention	Table 8: Stroke	<b>TIA Patients</b>	not receiving	recommended	clinical	intervention
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#### 7.6.1 Stroke Hub

The stroke Hub is a post stroke rehabilitation service. The overall outcome of the service is to enhance a patient's quality of life, improve their physical health and optimise their social and psychological well-being by ensuring comprehensive and timely rehabilitation and long term support is available and provided for individuals, who have experiences a stroke and their carers.

The figure below depicts referral rate to NELFT's Stroke Hub by the patients' registered GP, and it can be seen that referral rates vary across practices. The GP with the highest rate is Dr Mukhopadhyay (280.00 per 1,000 patients on the Stroke QOF register, which equates to seven referrals), and the GP with the lowest was Dr Suntharalingham (20.41 per 1,000 patients on the Stroke QOF register, which equates to one referral).





Source: NELFT and QOF

# 7.6.2 Avoidable Stroke admissions

Modelling work by one of the authors in 2013 (model for Essex, Southend and Thurrock) looked at the impacts of detection of Hypertension, CHD and AF on emergency admissions for Stroke. The model included improving detection rates and also what would happen if all GP practices improved care quality on 6 QOF indicators. The model output for each GP practice how many strokes would be saved, the cost to the NHS of those strokes and the cost to Social Care.

The assumptions are detailed in Appendices 2 and the outputs for Tilbury are detailed below.

	Current Average Number of Stroke Admissions Annually	admissions avoided	NHS Saving (avoided non-elective admission only)	Social Care Saving	Individual Saving (Self Funded SC proportion)	NET Saving	system saving
YR 1	23	5	£58,144	£37,902	£9,487	£105,534	£79,470
YR 2	23	5	£59,072	£102,941	£25,768	£187,781	£116,991
YR 3	23	5	£59,852	£159,247	£39,861	£258,960	£149,450
YR 4	23	6	£60,633	£208,048	£52,077	£320,758	£177,689
YR 5	23	6	£61,407	£250,466	£62,695	£374,568	£202,329
Total over	r 117	27	£299,108	£758,604	£189,888	£1,247,601	£725,930

#### Table 9: Stroke Avoidable Admissions in Tilbury

So if all else remained the same, given the assumptions in appendix 2, by increasing the detection rates of CHD and hypertension to 95% over 5 years, and improving the six quality of care indicators up to the level of the worst performing practice in the top quintile nationally over 5 years. We could save 5-6 admissions due to stroke in Tilbury patients per year. Over a period of 5 years these admissions would have cost approximately £300K to the NHS.

Additionally the estimated social care cost of these strokes over 5 years would have been approximately £1M (split between SC and individual funding).

To prevent these strokes the new health facility, therefore, needs to have the ability to diagnose and offer good quality of care to patients who are hypertensive, and/or suffer from other CVD conditions. Additional benefits would be a reduction in patients developing conditions such as Diabetes.

## 7.6.3 Stroke care summary

Clinical management of stroke in Tilbury is variable with patients registered at the Shehadeh Medical centre receiving the best levels of care. The percentages of STIA patients with blood pressure controlled, and those receiving anti-coagulant or anti-platelet therapy could be improved at Dr. Sunthralingham's and Sai Medical Centre although the absolute numbers of patients are small. Management of patients at Dr. Mukhopadhay's surgery appears to be poorer than at other surgeries in Tilbury.

There is too much variation in referral rates between Tilbury practices for the Stroke Hub. Good stroke rehabilitation has been shown to increase the long term independence of patients following a stroke and reduce demand on social care.

# 7.7 Clinical Management of Patients with Diabetes

We estimate that there are around 1210 people in Tilbury are Diabetic, including 152 who are not diagnosed. Of those who are diagnosed the QOF tells us about the quality of their care and how well managed their condition is in general. Specifically for Diabetes it looks at keeping HbA1c, blood pressure and cholesterol within a healthy range, as well as testing and treatment for albuminuria, foot examination and risk classification, dietary reviews, referrals to education programmes, flu coverage. These care indicators are used to monitor, manage and prevent some of the complications of Diabetes including: Diabetic Coma and Ketoacidosis, limb amputations, and blindness.



#### Figure 49: QOF Indicators for Diabetes Care – Shehadeh Medical Centre

Overall patients with diabetes at the Shehadeh medical centre appear to have their condition well managed. Figure 49) When the other practices are compared to this they fall short in the following areas (figure 50to 53):

**Control of HbA1C:** Lower proportions of patients with diabetes have their HbA1C recorded as equal to or below 59mmol/mol in all of the other four practices. Only 42% and 43% of patients with diabetes at Dr. Sunthralingham's and Dr. Ramachandran's practices respectively achieved this level of HbA1C control. (Figures 50-53).

**Control of Blood Pressure:** With the exception of the Sai medical centre all other practices in Tilbury compare badly to the Shehadeh medical centre in terms of the percentage of Diabetic patients whose blood pressure is being maintained within a recommended range. (Figures 50-53).

**Control of Cholesterol levels:** Lower percentages of diabetic patients at Dr Mukhopadhay's practice, the Sai Medical centre, and Dr Sunthralingham's practice have levels of cholesterol within the recommended range when compared to patients at the Shehadeh medical centre. Most striking, however, are the levels in Dr Ramachandran's practice where only 58% of diabetic patients have cholesterol levels lower than or equal to 5mmol/l after exception reported patients were excluded. (Figures 50-53).

Micro-albinurea testing and treatment: In the last 12 months only 58% of Dr Mukhopadhay's patients with diabetes and a diagnosis of nephropathy or micro-albuminuria were treated with an ACE inhibitor or ARB.. Conversely, the Sai Medical Centre achieved a figure of 94% with no patients exception reported. (Figures 50-53).

Foot examination and Classification: Only 51% of patients with diabetes at Dr. Mukhopadhay's surgery had a record of a foot examination with risk classification. Conversely Dr. Ramachandran achieved a figure of over 91% after exception reported patients were excluded. (Figures 50-53)

Newly Diagnosed referred to education programme: No newly diagnosed patients at Dr. Sunthralingham's surgery received a referral to a structured patient education programme. At Dr. Mukhopadhay's surgery the figure was only 12%. (Figures 50-53).

Flu Vaccination: Immunisation coverage for flu in patients with diabetes is significantly lower in Dr. Sunthralingham's practice, The Sai Medical Centre and Dr. Mukhopadhay's practice compared to the Shehadeh Medical Centre and Dr. Ramachandran's. (Figures 50-53).



Figure 50: QOF Indicators for Diabetes Care - Dr Mukhopadhyay

Figure 51: QOF Indicators for Diabetes Care - Dr Ramachandran



Figure 52: QOF Indicators for Diabetes Care - Sai Medical Centre



Figure 53: QOF Indicators for Diabetes Care – Dr Suntharalingham



7.4.1 Absolute numbers of patients not receiving diabetes clinical management interventions recommended by QOF

	Patients on the diabetes register, in whom the last IFCC- HbA1c was more than 59 mmol/mol in the preceding 12 months and had not been exception	Patients on the diabetes register in whom the last blood pressure reading (measured in the preceding 12 months)was more than 150/90 mmHg and had not been exception	Patients with diabetes, on the register, whose last measured total cholesterol (measured within the preceding 12 months) was more than 5 mmol/l and had not been exception	Patients on the diabetes register without a record of a foot examination in the previous 12 months that included a risk classification, nor exception	Newly diagnosed patients with diabetes not referred to a structured diabetes patient education programme nor exception	Patients on the diabetes register not immunised against flu nor exception	Patients on the diabetes register, with a diagnosis of nephropathy (clinical proteinuria) or micro- albuminuria who are not currently treated with an ACE-1 (or ARBs) nor exception
SUNTHARALINGAM	91	38	54		6	21	13
SHEHADEH MC	147	27	63	42	0	15	10
RAMACHANDRAN MK	147 70	18	57	12	0	2	5
	25	10		12		10	1
	35	13	26	27	3	10	1
MUKHOPADHYAY	51	34	40	65	7	25	15
TILBURY	403	140	240	231	16	73	44

Table 10: Patients on QOF Diabetes registers not receiving clinical interventions

Table 10 shows the absolute numbers of patients on each GP practice's diabetes QOF register who did not receive a successful clinical intervention to control their diabetes as recommended by QOF. In total the five GP practices failed to achieve the 771 clinical interventions/management required.

# 7.4.2 Community Diabetes Team

NHS North East London Community Foundation Trust (NELFT) are commissioned by NHS Thurrock CCG to provide a Community Diabetes Service. This is a multi-disciplinary team offering support to patients with diabetes, with the intention of increasing the quality of life and delivering cash releasing savings through reduction in avoidable secondary care activity for diabetes. The service specification states that they should contribute to improving the performance on the following biometrics:

- HbA1C outcomes in line with QOF
- Cholesterol below 5m/mol

The figure below depicts referral rate to NELFT's Diabetes Team by the patients' registered GP, and it can be seen that referral rates vary across practices. The GP with the highest rate is Dr Ramachandran (425.37 per 1,000 patients on the Diabetes QOF register, which equates to 57 referrals), and the GP with the lowest was Dr Mukhopadhyay (69.18 per 1,000 patients on the Diabetes QOF register, which equates to 57 referrals). It is concerning that Dr Ramachandran's practice has the highest referral rates to this service and yet has the worst outcomes in terms of the metrics the team is supposed to be supporting. The reasons for this are unclear.





Source: NELFT and QOF

# 7.4.2 Summary of Diabetes care

Prevalence of diabetes in Tilbury is high, ranging from 5% to 9% of each of the five GP practice's over-all lists of patients aged 17+. However, management of Diabetes is variable between and within Tilbury practices. Generally the Shehadeh medical centre appears to have Diabetic patients who are well managed and have better outcomes than the other practices and management of many patients at Dr. Sunthralingham's practice and Dr. Mukhopadhay's surgery is worrying. The absolute numbers of patients with diabetes across Tilbury with uncontrolled HbA1C, blood pressure, cholesterol levels are of particular concern, as is the numbers of patients who are not having an annual foot examination.

In 2014/15 there were 19 emergency admissions due to Diabetes from Tilbury practices. These would have cost the CCG around £53K. However, it is difficult to ascertain that diabetes is the underlying cause in admissions due to the way diagnoses are coded at Basildon Hospital and as such, these figures are likely to be an under-estimation. A new health facility needs to ensure that Diabetic patients are appropriately diagnosed and managed. There is a strong evidence base in terms of patient education programmes for diabetes and these should be available at the new Integrated Healthy Living Centre as part of any diabetes community management offer.

# 7.5 Care of patients with Respiratory Disease

In 2014/15 around 462 people in Tilbury had a diagnosis of COPD (we don't estimate there to be a large amount who are not diagnosed), and 1117 are diagnosed with Asthma.

The QOF tells us about the quality of their care and how well managed their condition is in general. Specifically for respiratory disease it looks at COPD patients having flu vaccination, FEV1 recorded, assessment using MRC dyspnoea score and its results, and confirmation of the diagnosis using spirommetry test. For Asthma it looks at measures of variability /reversibility, review, and smoking records. These care indicators are used to monitor, manage and prevent some exacerbations of the conditions which can result in unplanned care activity.



Source: QOF 2014/15

#### Figure 56: QOF Indicators for Respiratory Disease – Dr Ramachandran




Patients with respiratory disease in Tilbury were best managed in the Shehadeh Medical Centre (Figure 55). Dr. Ramachandran also achieved maximum QOF points for COPD management although had a high rate of exception reporting than The Shehadeh Medical Centre (Figure 56).

A lower proportion of patients diagnosed with respiratory disease registered with Sai Medical Centre, Dr. Sunthralingam and Dr. Mukhopadhyay received all recommended clinical management intervention:

Diagnosis of COPD was confirmed by spirommetry between 3 and 12 months of being placed on the COPD register in only 20% of patients at Dr. Sunthralingham's practice. (Figures 57-59)

An annual review of COPD patients was only undertaken with 42%, 35% and 27% of patients at The Sai Medical Centre, Dr. Sunthralingham's practice and Dr. Mukhopadhay's surgery respectively once excepted patients were excluded. (Figures 57-59)

**An annual FEV1 test** for COPD patients was only recorded for 45%, 32% and 32% at Dr. Sunthralingham's Practice, The Sai Medical Centre and Dr. Mukhopadhay's practice respectively. (Figures 57-59)

A record of oxygen saturation value for COPD patients with an MRC score of 3+ was only made in 60% and 53% of cases at The Sai Medical Centre and Dr. Mukhopadhay's surgery respectively, although absolute numbers of patients in this cohort at the Sai Medical Centre are very small. (Figures 57-59)

An annual review of asthma patients was only undertaken with 54%, 40% and 36% of patients at the Sai Medical Centre, Dr. Sunthralingham's practice and Dr. Mukhopadhay's practice respectively once excepted patients were excluded.





Source: QOF 2014/15













Table 11: Absolute numbers of patients on COPD and Asthma QOF registers who did not receive clinical management interventions hows the absolute numbers of patients on the COPD and Asthma QOF disease registers in the five Tilbury practices who did not receive the clinical management interventions recommended by QOF. In 2014/15, the five GP practices failed to undertake a total of 771 clinical management interventions with patients on their COPD and asthma disease registers in 2014/15.

Table 11: Absolute numbers of patients on COPD and Asthma QOF registers who did not receive clinical management interventions

<b>GP PRACTICE</b>	Patients who did not have their COPD diagnosis confirmed with Spirommetry within 3-12 months of being placed on the COPD register	Patients who did not receive an annual COPD review including an MRC score test nor were exception reported	Patients who did not have a record of an FEV1 test in the preceding 12 months nor were exception reported	Patients with an MRC score of 3+ who did not have a record of oxygen saturation in the previous 12 months	Patients with COPD who were not immunised against flu, nor exception renorted	Asthma patients who did not receive an annual review
SUNTHARALINGAM R	20	47	38	5	11	99
SHEHADEH MEDICAL CENTRE	9	23	31	2	3	168
RAMACHANDRAN MK	1	2	4	0	0	25
SAI MEDICAL CENTRE	6	18	21	2	6	32
MUKHOPADHYAY SURGERY	9	46	42	9	2	90
TILBURY	45	136	136	18	22	414

Source: QOF

#### 7.5.1 The NELFT COPD team

The NELFT COPD team is a pro-active service which provided pulmonary re-hab, stop smoking services, and other services to pro-actively manage COPD patients with an MRC score of 3 or more with the aims of avoiding unplanned activity in secondary care, and when admissions do occur facilitate fast discharge back into a community setting.

The south west Essex respiratory review led by one of the authors demonstrated a negative association between referrals into this service and unplanned care admission rates for COPD suggesting that practices who referred a greater proportion of patients with COPD with an MRC score of 3 or more were likely to have lower levels of unplanned care admissions. The referral rate of COPD patients into the community respiratory team explained 29% of the variation in unplanned care admission rates for COPD between practice populations, suggesting that the team is effective at managing patients with serious COPD and reducing the likelihood of an avoidable admission to hospital.

The figure below depicts referral rate to NELFT's COPD team by the patients' registered GP, and it can be seen that referral rates vary across practices. Referrals are looked at using the number of patients with an MRC score of 3 or more as the denominator. The GP with the highest rate is The Sai Medical Centre (33.33 per 100 patients with an MRC score of 3 or more, which equates to 2 referrals), and the GP with the lowest was Dr Shehadeh (6.06 per 100 patients with an MRC score of 3 or more, which equates to 4 referrals). Interestingly the practice with the lowest referral rate is the Shehadeh Medical Centre; the practice that appears to be offering the best quality clinical care to patients and with the best patient outcomes as measured by the QOF.

Figure 60: referrals to COPD team



Source: NELFT and QOF

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## 7.5.1` Summary of respiratory care

Care of respiratory conditions is very variable between GP practices in Tilbury. All but the Shehadeh and Sai medical Centres are offering poor management and patient care.

If these conditions are not well managed they can result in repeated secondary care activity. Therefore we would recommend that the new health facility ensure that Asthma and COPD patients are getting reviewed regularly and are being managed in line with the QOF recommendations.

# 8. Mental Health and Wellbeing in Tilbury

## 8.1 Mental ill health prevalence

The prevalence of mental ill-health in the community can be assessed in part through demand from a given population for mental health treatment. QOF requires GP practices to place patients on registers for depression or more serious mental ill health (SMI) such as schizophrenia, bi-polar disorder or other psychoses.

## 8.1.1 Recorded Prevalence of Depression

Figure 61 shows the recorded prevalence of depression in patients aged 18+ for each GP practice population in Thurrock.



#### Figure 61 QOF 2014/15 recorded depression prevalence in patients aged 18+

Source: QOF 2014-15

Depression prevalence in Tilbury varies widely between GP practices. Three practices have prevalence above the Thurrock mean, with the Shehadeh Medical Centre having the greatest prevalence in Thurrock. Conversely the Sai Medical Centre has a prevalence significantly below the Thurrock mean and one of the lowest in Thurrock.

It is worth noting that QOF depression prevalence is a function of a number of factors including underlying prevalence of depression within a population, the population's willingness to seek treatment from their GP and the clinical practice used by the GP to make a diagnosis. Given that the five practices serve the same population, it seems unlikely that the underlying prevalence would be significantly different between different practice populations. As such, differences between practice populations in terms of willingness to

access help from their GP and differences in clinical practice with regard to diagnosis or case finding explains the wide variation in Figure 61

However given nationally published evidence suggesting that a significant proportion of depression remains undiagnosed and treated, particularly in older people, the recorded prevalence may be an under-estimation of true prevalence, suggesting that adult depression is a significant issue in Tilbury.



#### 8.1.2 Prevalence of Serious Mental Ill-Health (SMI)

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Figure 67 shows the percentage of patients aged 18+ diagnosed with a serious mental illness such as schizophrenia, bi-polar disorder or other psychosis in each practice population in Thurrock. The practices with the four highest prevalences of SMI are in Tilbury. Conversely the Sai Medical Centre has a relatively low prevalence of SMI, but due to their small list size this could simply be a product of statistical random variation.

Given the distressing and often noticeable symptoms of SMI, it would seem less likely that recorded prevalence is a product of unwillingness to seek help when compared to depression, and more likely that Tilbury has a greater underlying prevalence of SMI in its population.

Source: QOF 2014/15

## 8.2 Referral of Patients with Depression to Talking Therapies

NHS Thurrock commissions an IAPT (Increasing Access to Psychological Therapies) service that offers cognitive behavioural therapy and other talking therapies to patients who have been diagnosed with depression.



The chart below shows the estimated percentage of patients diagnosed with depression, referred to IAPT in 2014/15.

Despite having relatively high prevalences of diagnosed depression in Tilbury, with the exception of Sai Medical Centre, referral of this cohort of patients to IAPT services is low in the GP practice populations of Tilbury. The reasons for this are unclear and could include unwillingness within the population to access talking therapies, barriers to access such as times of appointments or referral behaviour of practice staff themselves. However this warrants further investigation.

# 8.3 Clinical Management of Patients with Mental ill-health including depression and dementia in Primary Care

Figures 68-9 show the clinical management of patients with depression, SMI and dementia in the five Tilbury GP practices.

In line with management of many other long term conditions discussed in the previous chapter, The Shehadeh Medical Centre appears to be offering good quality of care to patients with poor mental health, Depression and Dementia (Figure 63)

Figure 63 QOF Indicators for SMI, Depression and Dementia Care - Shehadeh MC





Source: QOF 2014/15

Similarly, care for patients in Dr. Ramachandran's practice for patients with SMI, depression and dementia is relatively good, although the practice exception reported a greater percentage of patients compared to The Shehadeh medical centre. (Figure 64)





Figures 70 to 72 show that care for patients with depression, dementia and SMI in the other three practices needs to be improved with insufficient proportions of patients receiving all interventions recommended by QOF, although the absolute numbers of patients at Sai Medical Centre are small.

Figure 65: QOF Indicators for Mental Health / Depression / Dementia – Dr Suntharalingham



Source: QOF 2014/15





Source: QOF 2014/15



Figure 67: QOF Indicators for SMI / Dementia / Depression - Dr. Mukhopadhyay

Source: QOF 2014/15

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## 8.4 Mental Ill-health and Co-Morbidities

A report by the (King's Fund, 2014) identified that at least 23.5% of the total population in England are currently living with a Long-Term Condition (LTC). This high prevalence has increased the resource burden in both primary care and secondary care (50% of all GP appointments, 64% of all outpatient appointments and over 70% of inpatient bed stays) have been attributed to LTCs, (King's Fund 2014). In 2008 the King's Fund estimated that 3.1% of people in England had multi-morbidity (three or more LTCs). Individuals with an LTC are more than twice as likely to suffer from depression as the rest of the population, (National Institute for Health and Clinical Excellence (NICE) 2011). They estimate that 20% of the population in people with an LTC also suffer from depression.

Applying the above national prevalence estimates for multi-morbidities and comorbidity of one LTC + depression indicates there could be 641 people registered with Tilbury GPs with three or more LTCs and 973 people with one LTC + depression. However the true number of cases is likely to be higher than these modelled estimates.





Source: Kings Fund 2008 and QOF 2013-14





#### Source: NICE 2011 and QOF 2013-14

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The Kings Fund research clearly demonstrated that patients with a long term condition and comorbid depression were much more likely to have a greater level of mortality and morbidity and to cost the health

and social care system significantly more. It is therefore imperative that this cohort of patients is identified and treated for their depression.

## 8.5 Other Service Provision in Tilbury

Residents from Tilbury can access the depot clinic for Mental Health services. Whilst there are no SEPT groups held in Tilbury, all clients have access to the groups that Resource Therapy provide as well as the support from Grays Hall. SEPT have inferred that they don't perceive a larger number of clients coming from Tilbury, but did say that their needs at times can be much more complex.

## 8.6 Mental Health and Wellbeing Summary

Throughout this section we saw some recurring themes:

- There is a high prevalence of mental ill-health within the Tilbury population.
- Quality of Care for patients diagnosed with mental ill-health conditions is variable both between and within practices in Tilbury, with too many patients diagnosed with depression, dementia and serious mental ill health not receiving all of the interventions necessary to keep them well.
- The Shehadeh Medical centre appears to be consistently offering good quality clinical care and advice and his patients' outcomes are consistently higher than the other practices in Tilbury.

Conditions that appear to be being managed less well than others include Respiratory conditions, Diabetes and Mental Health, Depression and Dementia. However there is still plenty of room for improvement on all areas.

Evidence shows that offering good quality care does reduce activity in a secondary care setting as well as quality of life for individuals.

# PART B: WHAT DO WE CURRENTLY HAVE AND HOW DO WE CURRENTLY USE IT?

# 9. PRIMARY CARE

## 9.1 General Practice

Tilbury has five GP centres currently:

- Dr Suntharalingham (currently run by College Health) code F81110
- Sai Medical Centre code F81708 also running Dr Mukhopadhay's list code F81719
- Dr Ramachandran code F81652
- Dr Shehadeh (currently run by College Health) code F81206

The map below depicts the locations of these GP premises. It also shows the location of a GP practice (Dr Saha – F81734) which has closed; however there is some data within this needs assessment showing the patients of that practice.



## Source: SHAPE

Table 12: Information on the five GP Practices in TilburyTable 12 shows further information on the five Tilbury GP practices.

### Table 12: Information on the five GP Practices in Tilbury

Practice Code	Premises	GMS/ PMS	Net Internal Area (M²)	Ownership	Rent Type	Hours currently operating including extended hours	No. of rooms/type	
F81110	Dr Suntharalingam R Practice, The Health Centre, London Road, Tilbury, Essex RM18 8EB		154.42	NHSPS	NELFT	53.5		
F81206	The Shehadeh Medical Centre, Quebec Road, Tilbury, Essex RM18 7RB		529.40	Owned by the Doctor	Notional	57.5		
F81652	Dr Ramachandran MK Practice, Medic House, Ottawa Road, Tilbury, Essex RM18 7RJ	PMS	88.00	Owned by the Doctor	Notional	53.75	1 x waiting room, 1 x treatment room, 1 x dispensary, 2 x consultation rooms, 1 x reception, 2 x toilets	
F81708	Dr Patel Practice, Sai Medical Centre, 105 Calcutta Road, Tilbury, Essex RM18 7QA	GMS	158.00	Owned by the Doctor	Notional	53.75	2 x consulting rooms, 1 x nurses room, 1 x treatment room, 1 x waiting room, 3 x toilet, 1 x reception room, 1x staff room, 1 x managers room, 1 x meeting room, library.	
F81719	Dr Mukhopadhyay PK Practice, The Doctor's Surgery, 57 Calcutta Road, Tilbury, Essex RM18 7QZ	GMS	199.00	Owned by the Doctor	Notional	54	1 x waiting room, 2 x consultation rooms, 2 x nurses rooms, 1 x store room, 1 x sickness room, 3 x toilets, 1 x reception room, 2 x office, 1 x store room, 1 x kitchen	

Source: NHS England

#### 9.1.1 General Practice Workforce

Figure 70 shows each GP practice list size per FTE GP in Thurrock, Tilbury and England for 2014/15.



Figure 70 GP Practice list size:FTE GP, 2014/15

The average number of patients cared for by a FTE GP in England is 1391. Thurrock is significantly 'under doctored' with the average number of patients per FTE being 2,032 in 2014/15. All but four GP practices have list sizes per FTE GP that are greater than England's. In Tilbury the situation is even worse with the mean number of patients per FTE GP being 3,181 in 2014/15. The figure in Dr. Shehadeh's practice was 6,832.

Figure 71 shows the association between GP practice population deprivation and ratio of patients:FTE GP in Thurrock.





Figure 71 clearly demonstrates a positive association between practice population deprivation and the ratio of patients:FTE GP. As practice population deprivation is an extremely good proxy measure for overall health need, this suggests that the *inverse care law* referred to in the Foreword of this document is a potential problem in Thurrock, as practice populations with greater levels of ill-health are more likely to be registered to practices with more patients per FTE GP. Practice deprivation can be used to explain almost 30% of the difference in size of ratio between the practice list size and the number of FTE GPs employed. A practice with fewer GPs for a given number of patients is in turn likely to be able to offer fewer appointments and have less capacity to undertake proactive long term condition management to help keep patients well. Whilst association does not prove causality, Figure 71 suggests under-doctoring could have an impact on driving health inequalities within Thurrock and demonstrates the need to increase the number of GPs both to the Borough as a whole but also to a greater extent, in our more deprived areas.

Since 2014/15 numbers of FTE employed GPs has reduced. Tilbury has 20,534 patients registered to the five practices listed above. However as some are run by other means, there are actually only 3.0FTE GPs permanently employed. This means there are currently **6,844.67** patients per permanent GP in Tilbury. When looking at patient: GP ratios elsewhere in the country, the highest ratio for any CCG is <u>2,163</u> (NHS Swale). Thurrock as a whole was the 4th worst in the country (others below were Luton, Bexley and Swale). [Source: HSCIC]

Although the mean number of patients per FTE in England is 1391, the very high levels of morbidity and mortality in Tilbury compared to England would suggest a smaller ratio is necessary in order to counteract the Inverse Care Law. Using a ratio of 1300 patients per FTE GP, Tilbury should have <u>15.8FTE</u> GPs - this equates to the need to attract an additional **12.8FTE** GPs to Tilbury.

## 9.1.2 Practice Nurses

GP practice nurses are a key part of the GP practice clinical workforce and deliver a number of essential clinical interventions to patients including wellbeing programmes such as smoking cessation, cervical screening, immunisations and long term condition management such as diabetes clinics or management of patients with high blood pressure.

The recommended ratio of patients to FTE practice nurse in England is a maximum of 4000:1 although the England average ratio is actually smaller than this at 3729:1

Figure 72 shows the ratio of patients:FTE Practice Nurse for the five practices in Tilbury, together with the England and Tilbury mean ratios.



Figure 72 Ratio of Patients:FTE Practice Nurse 2014/15

Two practices, Sai Medical Centre and Dr. Ramachandran are recorded as having no practice nurses in 2014/15. The ratios of patients:FTE practice nurses in the three other practices are all significantly greater than England's. This is undoubtedly constraining local practices to offer good quality care to patients.

In total in 2014/15 Tilbury had 3.84FTE Practice nurses. In order to increase capacity to the England mean, Tilbury would need 5.51 FTE Practice Nurses.

## 9.2 Long Term Conditions Management Clinics

Table 13 shows additional clinical services provided from within each of the five GP surgeries in Tilbury.

Clinic / Health Service	Dr Suntharalingham (Tilbury Health Centre)	Shehadeh Medical Centre	Dr Ramachandr an	Sai Medical Centre	Dr Mukhopadhy ay
24hr Blood Pressure	√	✓	GP Service	✓	Dr
Adults Continence	✓	×	Only -	×	Mukhopadhy
Asthma Checks	×	$\checkmark$	Currently no	✓	ay patients
Baby Weighing	✓	×	additional	×	are under Sai
Cervical Screening	×	×	Clinics	✓	Iviedical
Child Continence	√	×	onereu	×	this practise
Child Immunisation	×	×		✓	is under
Chiropody (Diabetic / Circulation Patients)	√	×		×	review) and patients are
Community Psychiatric Nurse	✓	×		×	being treated
COPD Checks	×	✓		✓	at the Sai
Counselling	✓	×		×	Medical
Diabetic Nurse	√	✓		✓	Centre
Dietician	✓	×		×	
Blood Test (Phlebotomy)	×	$\checkmark$		×	
DVT	×	×		✓	
EWMHS (Emotional Wellbeing & Mental Health Service)	$\checkmark$	×		×	
Flu Vaccinations	×	×		✓	
Health Checks	×	×		✓	
Health Visiting	✓	×		×	
Heart Failure	✓	×		×	
Paediatrician (Stars - Special Needs / Child Behavioural)	$\checkmark$	×		×	
Pulmonary Rehab	$\checkmark$	×		×	
Sexual Health	×	×		×	
Speech / Language (Under 5's)	$\checkmark$	×		×	
Travel Vaccinations	×	×		$\checkmark$	

Table 13: Additional Services provided within General Practice

Table 13 demonstrates a wide variation in provision of clinical services between different practices within Tilbury. It is particularly concerning that child immunisation, flu vaccination, cervical screening and sexual health services and health checks are not uniformly provided to all patients locally from within each surgery given the needs previously identified.

## 9.3 Pharmacies

The two wards of Tilbury St. Chads and Tilbury Riverside and Thurrock Park contain four pharmacies. When compared to Thurrock as a whole, both Tilbury wards have a high density of pharmacies compared to their population size than Thurrock (Tilbury Riverside and Thurrock Park has 28.3 pharmacies per 100,000, and Tilbury St. Chads has 32.6 pharmacies per 100,000 compared to the Thurrock average of 21.8).



Figure 73 Pharmacies per 100,000 population, Tilbury and Thurrock



Pharmacies in Tilbury provide a range of services to patients, including:

- Diabetes screening
- Respiratory and Lung Check service
- Minor Ailments
- Substance misuse
- Needle Exchange
- Waste Management
- Weight Management
- Social Prescribing
- Gluten Free Products supply and management
- Incontinence products
- Travel Vaccinations
- Well man clinics

They also have the potential to provide services such as NHS Health Checks, Medicines Use Reviews, New Medicines Service and Seasonal Immunisation where commissioned.

## 9.4 Dentists

92

#### 9.4.1 Current Dental Provision

There are two dental practices in Tilbury – Elite Dental Studio (Civic Square) and Bailey & Gibbons (Dock Road).



Source: SHAPE

93

#### 9.4.2 Use of Current Provision

Data collected from the NHS Business Services Authority indicates that 860 different children aged 3-5 years from the two Tilbury wards attended a dentist between February 2012 and February 2014. This is just over 88.7% of the total children aged 3-5 years in those areas for that two year period, which is above the Thurrock average (81.5%). The figure below depicts Tilbury children aged 3-5 years attending dentists by ward and compared to the Thurrock average for total attendances and by reason for attendance. It can be seen from the figure that both Tilbury wards had a higher proportion of children attending for treatment than the Thurrock average (20.7% for Tilbury Riverside & Thurrock Park and 23.5% for Tilbury St Chads, compared to 14.9% for Thurrock).





Source: NHS Business Services Authority

## 9.5 Opticians

There is one optician in Tilbury on Calcutta Road – K Lewis and partners.

## 9.6 Primary Care Out of Hours service

## 9.6.1 Current Service Provision

Out of hours care is offered by IC24. It can be accessed between the hours of 6.30-8am Monday-Friday, and 24 hours over the weekend. Patients can either ring NHS 111 or visit the premises at Thurrock Community Hospital. Depending on need, patients will either receive a telephone call from a clinician, be invited to visit the premises for an appointment, or receive a home visit.

## 9.6.2Use of Current Service

Data from the GP Patient Survey indicates that Dr Suntharalingham (71.25%) and Dr Ramachandran (71.77%) had the highest proportions of patients knowing how to contact out of hours services.



Figure 75 Awareness of the GP out of hours service 2014-15



Dr Suntharalingham had the highest number of patients contacting OOH services with a rate of 169.50 per 1000. Dr Ramachandran had the lowest number of patients contacting the OOH services with a rate of 16.77 per 1000 patients, even though he had the highest proportion aware of how to contact the service (figure above). The average across Thurrock was 73.65 per 1000 patients.



Figure 76 Contact rate with OOH service 2014-15

95

Source: NEL Commissioning Support Unit

# 9.10 Minor Injuries Service

The figure below depicts the access rate to NELFT's Minor Injuries Service by the patients' registered GP, and it can be seen that in comparison to the Thurrock CCG referral rate, the majority of Tilbury GPs have higher access rates to the service than the rest of Thurrock. The GP with the highest rate is Dr Mukhopadhyay (131.72 per 1,000 registered patients, which equates to 333 referrals), and the GP with the lowest was Dr Patel (98.47 per 1,000 registered patients, which equates to 297 referrals).



Figure 77 Rate of access to minor injuries service by registered GP practice population

It is unclear why access rates to the minor injuries service from Tilbury patients is generally higher than Thurrock's. It may reflect the level of under-doctoring and nursing in primary care and/or a greater rate of injury amongst the Tilbury population.

## 9.11 Summary of Current Primary Care Provision

Tilbury has some of the worst levels of under-doctoring and under-nursing in both Thurrock and England. We estimate that almost 13 additional FTE GPs and 2 additional FTE practice nurses are needed to be employed locally to meet the needs of the population.

There is significant variation in the services that different practice populations can access from their surgery. In 2014/15, cervical screening and childhood immunisations were only offered at one of the five practices. Despite the high rates of teenage conceptions, no practice is offering an integrated sexual health service to patients.

Source: NELFT and HSCIC GP population data, 2015

There is adequate provision of pharmacies within Tilbury and good access to dentists.

With the exception of one practice, rates of access to the Primary Care Out of Hours Service were greater than for Thurrock as a whole. Rates of access to the minor injuries unit at Orsett are also greater than the Thurrock mean. This may be a reflection of the inadequate numbers of FTE GPs identified above.

# **10. SECONDARY CARE**

## 10.1 Current Service Provision

Tilbury residents can current access three locations for secondary care services:

<u>1)</u> Basildon & Thurrock University Hospital

BTUH hosts the nearest A&E provision as well as a range of other clinics and services.

## 2) Orsett Hospital

Orsett Hospital is open during weekday hours and offers non-acute services for all Thurrock residents including:

- Epilepsy nursing
- Speech and language therapy adult's service
- Musculoskeletal physiotherapy

There is a minor injuries unit onsite open 7 days a week which is nurse-led.

## 3) Thurrock Community Hospital

Thurrock Community Hospital is located in Grays and offers a range of non-acute services accessible by all Thurrock residents, including:

- Continence clinic
- Drop-in phlebotomy service
- Falls clinic
- Paediatric physiotherapy
- Specialist community children's services
- Speech and language therapy children's service
- Wheelchair service
- Musculoskeletal physiotherapy

## 10.2 Outpatients Clinics

In 2014/15 there were 17,854 outpatient attendances by Tilbury patients. When considering where these patients were registered, it is roughly in proportion with the registered population at each GP practice.

When considering the speciality codes for outpatient attendances, the most common were for trauma and orthopaedics (2526) and ophthalmology (1609).



Figure 78 10 most common speciality codes for outpatient attendances for Tilbury Patients. 2014/15

For those attendances with a procedure recorded, the most common procedures performed in outpatient services for Tilbury patients can be seen below – the most common is a diagnostic blood test (546 attendances).





#### Potential for treatment in Primary Care

Of the 17,854 attendances, 12,752 (71.42%) of these were recorded with a priority code of Routine. When considering the main procedures undertaken during these appointments, it is envisaged that many could be addressed in primary care with the correct resources. This is particularly true for diagnostic tests, which make up the largest volume of procedures for Routine attendances.

## 10.3 A & E Attendance

Out of the five Tilbury GP practices, practice F81110 (Suntharalingham) had the highest rate of attendance at A&E, with a rate of 342.2 per 1,000. Practice F81708 (Patel) had the lowest rate of attendance (215.9 per 1,000). The mean for Thurrock was 260.0.



Source: Mede Analytics

The average cost per A&E attendance in Thurrock was £110.19 in 2014/15. Of the five Tilbury practices, three had lower costs per attendance, and two had higher costs (F81719 – Mukhopadhyay and F81110 – Suntharalingham).





<sup>100</sup> 

#### Source: Mede Analytics

The data presented in the graph below supports the assumption above in that patients from Dr. Mukhopdayhyay's and Dr. Sunthralingham's practices are attending A&E in high volumes with costly conditions. This graph shows that both of these practices have higher proportions of patients attending A&E who then go on to be admitted to hospital than the Thurrock average (F81719 = 25.9% and F81110 = 23.4% compared to the Thurrock average of 22.7%).



Figure 82: Conversion rate, A&E attendance to admission

#### 10.3.1 A&EAttendances that could have been treated elsewhere

Attending A&E for clinical conditions that are could have been treated in a more local clinical setting are both inconvenient for patients and put additional an unsustainable pressure and cost on the Thurrock health economy. When attending A&E, the clinical complexity (and cost) of a patent's investigation and treatment is coded into one of 10 categories. These are then used to charge the CCG under the Payments by Results (PbR) tariff system. Coding for investigation and treatment runs from 0 (no significant investigation/treatment) to 5 (the most clinically serious/complex investigation and treatment). As such, HRG coding is a good method of ascertaining the severity of clinical case mix of patients attending A&E.

Of 7,790 A&E attendances from Tilbury Town practices 6,627 (85%) were classified into the three least clinically serious categories:

- Emergency Medicine, No Investigation with No Significant Treatment
- Emergency Medicine, category 2 Investigation with category 1 Treatment
- Emergency Medicine, category 1 Investigation with category 1-2 Treatment

Source: Mede Analytics

Category one and two investigations include:

Category 1 Investigations
Arterial/capillary blood gas
Biochemistry
Dental investigation
Electrocardiogram
None
Other
Pregnancy test
Urinalysis

Category 2 Investigations that required Category 1 treatment
Arterial/capillary blood gas
Bacteriology
Biochemistry
Blood culture
Cardiac enzymes
Clotting studies
Electrocardiogram
Haematology
Urinalysis
X-ray plain film

Figure 83 shows the breakdown of HRG coding for Tilbury patients attending A&E in 2014/15. It shows that the vast majority of patients from Tilbury attended A&E for investigations or treatment that were coded in the least clinically serious HRG coding categories.

#### Figure 83 Breakdown of A&E Attendance by HRG Code



There are similar numbers of attendances for most investigation and treatment categories during the day

and night-time with the exception of those requiring no-significant investigation or treatment. This indicates that most people with these conditions would rather attend A&E / Primary care facility in the daytime.



## Investigations performed at avoidable attendances



These can be broadly categorised as attendances that could have been dealt with elsewhere in a primary care setting. The total cost of these to the CCG was £584,003.

The cost of 6,627 GP appointments would be in the region of  $\pm$ 304,888 ( $\pm$ 46 per appointment). Which results in an opportunity to save around  $\pm$ 279,115?



Darker=avoidable

#### Source: SUS

Figure 84: % of patients attending A&E that required no investigation nor significant treatment



#### Source: Mede Analytics

On average 43.23% of patients attending A&E from Tilbury practices did not require any investigation or significant treatment. The Shehadeh Medical Centre had the highest number proportion of attending A&E who did not require any significant investigation or treatment.

The top 15 diagnoses for these categories are given below. The case-mix appears to be similar in the daytime and evening but to a lesser extent. Exceptions include, there is a higher proportion of the caseload being diagnosed as Gastro-intestinal-other and Infectious disease (not notifiable) during the evening and night-time and a higher proportion being diagnosed as contusion/abrasion and local infection in the daytime.

Unfortunately a large number of people do not leave A&E with a diagnosis at all and so no conclusions can be drawn about these people.

		Top 15 Diagnoses of Tilbury patients visiting A&E and	
Top 15 Diagnoses of Tilbury patients visiting A&E and	Out of Hours	receiving no investigation and no significant	Normal Hours
receiving no investigation and no significant treatment	(18:00 to 7:59)	treatment	(8:00 to 17:59)
Diagnosis not classifiable	206	Diagnosis not classifiable	2033
NONE	145	NONE	254
Soft tissue inflammation	26	Soft tissue inflammation	84
Respiratory conditions - other non-asthma	25	Laceration	50
ENT conditions	17	Ophthalmological conditions	36
Gastrointestinal conditions - acute abdominal pain	16	Sprain/ligament injury	36
Sprain/ligament injury	14	Muscle/tendon injury	28
Psychiatric conditions	11	ENT conditions	26
Head Injury - other head injury	10	Contusion/abrasion	25
Gastrointestinal conditions - other	9	Respiratory conditions - other non-asthma	23
Laceration	9	Head Injury - other head injury	19
Muscle/tendon injury	8	Gastrointestinal conditions - acute abdominal pain	16
Nothing abnormal detected	8	Local infection	16
Ophthalmological conditions	8	Nothing abnormal detected	16
Infectious disease - non-notifiable disease	7	Psychiatric conditions	16

There are similar numbers of users in the day and night-time for those who have category 2 investigations and category 1 treatments. This indicates that any attempt to move this activity from A&E into a primary care facility would need to provide a constant level of access, 24 hours.

The top 15 diagnoses for this categories are given below. Again Case mix is similar in the day-time and evening/ night-time with the exception of there being more cardiac conditions, Ischemia and infarction, septicaemia and no abnormalities found in the daytime and more lacerations and psychiatric conditions at night time.

Unfortunately a large number of people do not leave A&E with a diagnosis at all and so no conclusions can be drawn about these people.

Top 15 Diagnoses of Tilbury patients visiting A&E and		Top 15 (Tied ranks=17) Diagnoses of Tilbury patients	
being coded category 2 investigation and category 1	Out of Hours	visiting A&E and being coded category 2 investigation	Normal Hours
treatment	(18:00 to 7:59)	and category 1 treatment	(8:00 to 17:59)
NONE	250	NONE	318
Diagnosis not classifiable	135	Diagnosis not classifiable	139
Soft tissue inflammation	66	Soft tissue inflammation	105
Gastrointestinal conditions - acute abdominal pain	61	Respiratory conditions - other non-asthma	81
Respiratory conditions - other non-asthma	61	Gastrointestinal conditions - acute abdominal pain	72
Sprain/ligament injury	46	Sprain/ligament injury	71
Cardiac conditions - other non-ischaemia	30	Cardiac conditions - other non-ischaemia	44
Urological conditions (including cystitis)	30	Gastrointestinal conditions - other	40
Gynaecological conditions	26	Urological conditions (including cystitis)	40
Gastrointestinal conditions - other	25	Contusion/abrasion - contusion	39
Dislocation/fracture/joint injury/amputation - joint inju	23	Dislocation/fracture/joint injury/amputation - closed f	36
Dislocation/fracture/joint injury/amputation - closed fracture/	21	Gynaecological conditions	27
Muscle/tendon injury	21	Local infection	26
Psychiatric conditions	20	Muscle/tendon injury	24
Contusion/abrasion - contusion	19	ENT conditions	22
ENT conditions	18	Central Nervous System conditions - other non-epilep	19
Central Nervous System conditions - other non-epilepsy	15	Septicaemia	18
Laceration	15	Cardiac conditions	17
Gastrointestinal conditions - haemorrhage	12	Nothing abnormal detected	17
Local infection	10	Cardiac conditions - myocardial ischaemia & infarction	10
		Dislocation/fracture/joint injury/amputation - joint inj	10
		Gastrointestinal conditions - haemorrhage	10

Top 15 Diagnoses of Tilbury patients visiting A&E and		Top 15 Diagnoses of Tilbury patients visiting A&E and	
being coded category 1 investigation and category 1-2	Out of Hours	being coded category 1 investigation and category 1-2	Normal Hours
treatment	(18:00 to 7:59)	treatment	(8:00 to 17:59)
NONE	78	Diagnosis not classifiable	88
Diagnosis not classifiable	69	NONE	77
Respiratory conditions - other non-asthma	34	Laceration	40
ENT conditions	28	Respiratory conditions - other non-asthma	39
Laceration	24	Ophthalmological conditions	35
Gastrointestinal conditions - acute abdominal pain	19	ENT conditions	29
Soft tissue inflammation	18	Soft tissue inflammation	24
Urological conditions (including cystitis)	16	Muscle/tendon injury	20
Local infection	15	Local infection	15
Gastrointestinal conditions - other	14	Gastrointestinal conditions - other	14
Head Injury - other head injury	14	Head Injury - other head injury	13
Infectious disease - non-notifiable disease	14	Urological conditions (including cystitis)	13
Ophthalmological conditions	12	Infectious disease - non-notifiable disease	12
Burns and scalds - thermal	10	Gynaecological conditions	10

#### 10.3.2 A&E Diagnoses (all HRG coded attendances)



Figure 85 Top 10 most common reasons for A&E attendance

When analysing why Tilbury patients attended A&E in 2014/15, the most common cause was gastrointestinal conditions (408 attendances) followed by respiratory conditions (359 attendances) and cardiac conditions (167 attendances). Many of these causes could be seen in Primary care if capacity were available.

When analysing what diagnostic investigations were routinely performed for Tilbury patients in 2014/15, it was found that patients most commonly did not require any investigation while in A&E (1788 patients). The most common investigation performed was Haematology (1232 patients) followed by X-ray (1143 patients) and clotting studies (321 patients).



#### Figure 86 Top 10 most common investigations performed in A&E

Source: Mede Analytics

## 10.4 Unplanned Care Admissions

Out of the five Tilbury GP practices, Dr Suntharalingham had the highest rate of emergency admissions, with a Directly Standardised Rate (DSR) of 10,550.79 per 100,000. Dr Ramachandran had the lowest rate of emergency admissions (7,641.67 per 100,000). The mean for Thurrock was 8,237.8. Figure 87



Source: Medeanalytics

When analysing the reasons why Tilbury patients were admitted to hospital in 2014/15, the most common cause was pneumonia (59 admissions) followed by sepsis (47 admissions) and respiratory infections in individuals with COPD (43 admissions).



#### Figure 88 Top 10 Primary Diagnoses for unplanned care admissions

Source: Medeanalytics
# 10.5 Summary – Secondary Care

In 2014/15 there were 17,854 outpatient attendances by Tilbury patients. The most common specialities were Trauma and Orthopaedics, Ophthalmology, Gynaecology and Paediatrics. 71.42% of outpatient attendances were recorded with a priority code of 'routine'. This provides potential scope to deliver some of these services within an enhanced integrated healthy living centre setting more locally.

Despite having the lowest access to cars in Thurrock, three of the five practice populations had an A&E attendance rate above the Thurrock mean. In total there were 6,627 A&E attendances from patients registered to the five GP practices in Tilbury. Of those half of all patients attended A&E from Tilbury needed no significant investigation or treatment and 85% were classified into the three least clinically serious HRG categories. This suggests huge potential to reduce avoidable A&E attendances.

By far the most common diagnosis of patients attending A&E where no investigation or treatment was required, was that no diagnosis of illness was made or that the diagnosis 'was not classifiable'. Where a positive diagnosis was made within this cohort, soft tissue inflammation, gastro-intestinal issues, and sprains/ligament/muscle/tendon injuries were common.

Common investigations performed on patients coded into the three least clinically serious categories included urinalysis, electrocardiograms, haematology and x-rays. When considering diagnoses made for all A&E attendances from Tilbury, the four most common were gastro-intestinal, respiratory, cardiac conditions and urological conditions.

Out of the five GP practices in Tilbury, three had a directly standardised rate of unplanned care admissions greater than the Thurrock mean, two statistically significantly greater. The most common reasons were respiratory problems including pneumonia, COPD and asthma, sepsis, lower abdominal pain and urinary tract infections.

# 11. SOCIAL CARE

# 11.1 Children's Services

Residents at Tilbury can access health visiting services at Tilbury Health Centre and Chad well St. Mary Clinics which are run weekly besides home visits.

Tilbury has one children's centre – Tilbury Children's Centre which is run by the Local Authority. 4 children run two children's centres in East Tilbury and Chad well St. Mary. All 3 centres have very similar priority groups:

- Teenage parents/pregnant teenagers (primarily for Tilbury CC)
- Children living in workless households
- Children in lone parent families
- Children eligible for the 2 year old entitlement
- Children who are subject of a CP plan or who are Children in Need
- BME families (primarily Chadwell and East Tilbury)
- Children in households where domestic violence has or may occur (primarily Chadwell)
- Those living in the 20% most deprived LSOAs

Key health priorities for these Children's Centres include increasing the prevalence of mothers who breastfeed at 6-8 weeks and reducing the prevalence of obesity in children aged 4-5 years. The Children's Centre buildings are also used by a number of other agencies including: NHS, Job Centre Plus, YMCA, TACC, Citizens Advice Bureau, MIND, Social Care, Women's Aid and other 3<sup>rd</sup> sector organisations.



## 11.2 Adult Social Care

In 2014-15, 767 adult social care service packages were provided to 241 residents of Tilbury St Chads and Tilbury Riverside and Thurrock Park wards. The packages provided to Tilbury residents made up 8.84% of the total number of packages provided in Thurrock.

#### 11.2.1 Primary Support Reason

The most common primary support reason for accessing support packages in Tilbury was *Physical Support* – *Personal Care Support*, which accounted for 65.2% of packages. The next most common primary support reasons were *Physical Support* – *Access and Mobility Only* (16.2%) and *Support with Memory and Cognition* (8.0%). In Thurrock as a whole there were a wider range of primary support reasons – *Physical Support* – *Personal Care Support* was still the most common reason but accounted for a lower proportion of packages (52.9%). The next most common primary support reasons for Thurrock were *Physical Support* – *Access and Mobility Support* (12.4%).



Figure 89 Primary support reason for accessing Thurrock Council ASC packages, Tilbury and Thurrock, 2014/15

#### Source: Thurrock Council

It should be noted that 0.97% of primary support reasons for Thurrock were for reasons not used in Tilbury (Sensory Support – Support for Dual Impairment, Sensory Support – Support for Visual Impairment, Social Support – Substance Misuse Support and Social Support – Support to Carer).

#### 11.2.2 Service Type and Package

The majority of services accessed by Tilbury and Thurrock residents were Community Based – 72.5% of Tilbury and 81.9% of Thurrock packages fell into this category. A higher proportion of Tilbury packages related to Residential Services (21.3%) than the Thurrock average (13.8%). This may suggest that the need for more high intensity social care support is greater in Tilbury than Thurrock as a whole, and this would fit with the overall picture of higher levels of morbidity in Tilbury than Thurrock.

#### Figure 90: Social Care Service Type Accessed



Source: Thurrock Council

The most common service packages accessed by Tilbury residents were *Internal Single Handed Homecare* (13.8%), *Homecare Standard Single Handed* (13.7%) and *Residential (Single Room)* (8.1%). Translating this into numbers, 211 service packages were provided to 80 residents in Tilbury for *Internal Single Handed Homecare* or *Homecare Standard Single Handed* packages in 2014/15.



#### Figure 91: Ten most common ASC packages provided in Tilbury

Source: Thurrock Council

#### 11.2.2 How can the new Tilbury Integrated Healthy Living Centre help?

The key focus for adult social care is to support people to live as independently as possible and ultimately to reduce emergency admissions to hospital for conditions which could be effectively prevented or managed elsewhere. The data above tells us that residents of Tilbury are already accessing a higher proportion of residential packages than the Thurrock average, with three of the top ten service packages relating to residential service packages. Whilst the overall numbers of Tilbury residents accessing support may be fairly small, this highlights that their needs might be fairly complex. It would be beneficial if the new Tilbury Integrated Healthy Living Centre could incorporate some social care and community services, partly due to the need for Tilbury residents to access services close to home, and partly to promote a joined-up approach to supporting health and wellbeing. By co-locating health and social care professionals, it should reduce duplication and increase communication and collaboration, with the shared aim to support Tilbury residents to live independently for longer.

# PART 3: WHAT SHOULD AN INTEGRATED HEALTHY LIVING CENTRE IN TILBURY CONTAIN?

# 12. SUMMARY OF THE NEEDS OF TILBURY

From Part 1 and Part 2 of this report we have identified the following needs

Tilbury has a relatively young population compared to both Thurrock and England. It's population is also predicted to grow significantly over the next 20 years due to a mixture of high birth rate and planned regeneration and new housing development.

Tilbury is an area with some of the highest levels of deprivation in England, and as such has a high level of health needs. Life expectancy is lower than the average for Thurrock and England for both Males and Females and levels of premature mortality (<75) are high; particularly for circulatory disease, Coronary Heart Disease and Cancer.

People in Tilbury are more likely than in other areas of Thurrock to live in over-crowded housing, claim benefits and have a low income. Children achieve a lower level of school readiness than both England and Thurrock, and Tilbury has the highest rate of teenage pregnancy in Thurrock and a rate significantly greater than England's. These last two factors combine to risk perpetuating health inequalities from generation to generation. Access to cars is amongst the lowest in Thurrock, suggesting the need to provide services locally where possible.

Health damaging lifestyle behaviours in Tilbury or significantly worse than many other areas of Thurrock and of England. Prevalence of smoking is extremely high and the current commissioned stop smoking service is having very little impact on reducing it. Prevalence of both adult and child obesity is also significantly greater than England's and amongst the highest in Thurrock.

Poor mental health is a theme that runs throughout this report and is a particular issue for too many people 8.11% (or 1 in 12) of the adult population having been diagnosed and treated for depression, although the actually prevalence of depression within the community is likely to be significantly greater as many people are reluctant to seek help. Prevalence of more serious mental illness including schizophrenia, bi-polar disorder and other psychotic illnesses is amongst the highest in Thurrock. Despite high levels of diagnosis, referrals to the talking therapies service IAPT are low.

Prevalence of other long term conditions is high in Tilbury compared to both England and Thurrock. A greater percentage of Tilbury residents have been diagnosed with high blood pressure, diabetes, asthma, kidney disease, cardio-vascular disease, COPD and heart failure than in Thurrock and England. Despite this high level of need, tertiary prevention programmes provided by GP surgeries (designed to provide clinical management to patients with long term conditions in order to keep them well) are highly variable in quality and in many cases, too few patients are managed successfully. Referral rates of patients with diabetes and respiratory conditions to community based clinical management programmes provided by NELFT are poor.

There is a crisis in Primary Care in Tilbury with levels of under-doctoring and nursing that are amongst the worst in England. This is undoubtedly perpetuating the 'inverse care law' referred to the Foreword of this report; the population with the greatest health need is receiving some of the worst access to and quality of primary care. We estimate that almost 13 additional FTE GPs and 2 additional FTE practice nurses are needed to be employed locally to meet the needs of the population at present.

There is significant variation in the services that different practice populations can access from their surgery. In 2014/15, cervical screening and childhood immunisations were only offered at one of the five practices. This is entirely unacceptable. Despite the high rates of teenage conceptions, no practice is offering an integrated sexual health service to patients.

With the exception of one practice, rates of access to the Primary Care Out-of-Hours Service were greater than for Thurrock as a whole. Rates of access to the minor injuries unit at Orsett are also greater than the Thurrock mean. This may be a reflection of the inadequate numbers of FTE GPs and nurses currently employed in Tilbury.

Poor provision of Primary Care appears to be resulting at least partly in high levels of A&E attendances. Despite having the lowest access to cars in Thurrock, three of the five practice populations had an A&E attendance rate above the Thurrock mean. In total there were 6,627 A&E attendances from patients registered to the five GP practices in Tilbury. Of those half of all patients attended A&E from Tilbury needed no significant investigation or treatment and 85% were classified into the three least clinically serious HRG categories. This suggests huge potential to reduce avoidable A&E attendances as many of the clinical investigations and treatments could be provided locally.

By far the most common diagnosis of patients attending A&E where no investigation or treatment was required, was that no diagnosis of illness was made or that the diagnosis 'was not classifiable'. Where a positive diagnosis was made within this cohort, soft tissue inflammation, gastro-intestinal issues, and sprains/ligament/muscle/tendon injuries were common. Common investigations performed on patients coded into the three least clinically serious categories included urinalysis, electrocardiograms, haematology and x-rays.

The key focus for adult social care is to support people to live as independently as possible and ultimately to reduce emergency admissions to hospital for conditions which could be effectively prevented or managed elsewhere. The data above tells us that residents of Tilbury are already accessing a higher proportion of residential packages than the Thurrock average, with three of the top ten service packages relating to residential service packages. Whilst the overall numbers of Tilbury residents accessing support may be fairly small, this highlights that their needs might be fairly complex

# 13. RECOMMENDATIONS FOR SERVICES TO BE INCLUDED IN THE TILBURY INTEGRATED HEALTHY LIVING CENTRE

Based on the needs summarised in the last section and throughout this report, table X provides a 'blue print' of recommended services that commissioners should consider ensuring are provided/co-located within any new facility.

# 13.1 Wider Determinants of Health

Service Description	Brief Rationale	Section of report where evidence of need for this service is presented
A benefits, housing, debt advice service	These are all particular issues facing the current population and key drivers of stress and depression. Social issues such as these have been estimated to account for up to 15% of all GP appointment time, even though they have no underlying clinical cause.	4.1.1, 4.2, 4.3.1
Employment advice and job skill based training programmes	Unemployment in Tilbury is high. Having a job is probably the single most health protective factor and moving people from benefits and into work was shown in recent research by Professor Michael Marmot to have a greater impact in reducing health inequalities than any other intervention.	4.3,
Children's services with a focus on parenting and the 0 to 5.	Children in Tilbury are less 'school ready' than elsewhere in Thurrock or England. Addressing this will have a positive impact on reducing the perpetuation of health inequalities. Move of responsibility for commissioning 0-5 services to Thurrock Council provides an opportunity to review the current model and integrate with other services such as the Children's Centre	4.4
Flexible space for use by the community and voluntary sector including co- location of the Tilbury 'hub'	Good health and wellbeing is much more than the absence of disease or disability but encompasses social health and community resilience. Loneliness and isolation are key drivers of poor mental and physical health and wellbeing. By providing a range of flexible rooms that can be used by community groups, community resilience can be strengthened and wellbeing increased.	Section 4
Drop in surgery for the Tilbury Local Area Coordinator	Local Area Coordinators are designed to connect lonely and vulnerable individuals with the social capital and community assets within their community. They have proved highly successful and popular amongst the communities where they work and could sign post service users/patients to a range of services that will improve their health and wellbeing.	Section 4

13.2 Lifestyles		
Service Description	Brief Rationale	Section of report where evidence of need for this service is presented
Holistic, integrated lifestyle modification services	Smoking prevalence in Thurrock is extremely high and current commissioned services are having virtually no impact on reducing it. Prevalence of obesity is also extremely high. Research previously conducted locally has suggested that 'one size does not fit all' with regard to helping our population improve their lifestyles. A new, flexible and non-judgemental approach is required that encompasses a wide range of different formal and informal community based activities to promote physical activity that appeal to as many different sections of the community. Services are also required to assist people to improve diet, increase cooking skills and offers a range of types of support to help people quit smoking. Front line health, social care and third sector staff and volunteers should be trained to proactively identify and refer patients with poor lifestyles into services that are right for them.	Section 5
An integrated sexual health service	Access to high quality sexual health and contraceptive services have been shown to be one of the most important interventions to reduce teenage pregnancy. There are currently no provision of this kind in Tilbury.	Section 5
IAPT/Mental health counselling service	Depression prevalence is high and yet access to talking therapies has traditionally been low, perhaps as a result of no local service provision.	Section 8

# 13.3 Primary Care

Given the information on the current primary care workforce in Tilbury, to provide a primary care workforce that is adequate to meet the demands and needs of the population will be challenging. By the time the facility is built (2018/19) we estimate that the registered population size will be around 22,262. With the current infrastructure and processes this would mean that we would need 16.63 GPs<sup>1</sup>. There are currently only three permanently employed WTE GPs in the area. We either face the challenge of employing a further 13.63 WTE GPs or find innovative ways of re-distributing a GPs current workload in order that the gap between what is needed and what is currently available is bridged.

Ensuring that we have adequate primary care would be expected to have an impact on the areas use of A&E reducing the CCGs costs in this department.

In October 2015 the Primary Care Foundation and NHS alliance published "Making Time in General Practice <sup>ii</sup>. This report looks at a number of ways that we can free up GP time, leaving them with more time to do the

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<sup>&</sup>lt;sup>1</sup> Estimated by the Public Health Intelligence team – contact Maria Payne for more details

job that they were trained to do and perhaps go some of the way to bridging the gap between the number of GPs that are required and what we can provide. Solutions can be split into two broad categories:

- 1) Introducing alternative staff (clinical and/or administrative) to take over some of the work load
- 2) Introducing an environment to reduce the bureaucratic burden on GPs. This includes information systems, communications etc.... While we think that this is important we feel that it is outside the scope of this report and we will look at it separately and make further recommendations.

There is much work to be done nationally on both of these but here we concentrate on what is in Primary care and the CCGs gift to achieve.

#### 13.3.1 Staffing alternatives

Figure 92 shows the administrative (red) and clinical (blue) staff that could surround GPs in the primary care to reduce the number of required GPs and maximise GP time spent on clinical issues. Below we look at the remit of each of these roles individually and then apply some assumptions to model what effect some of them would have on the number of GPs required to effectively serve the Tilbury population.

It is important to note here that the staff considered not only reduce the caseload of a GP but also add value and aim to target some of the needs of the population identified in section 9.

#### Figure 93 Primary Care Staff Mix Model

Staffing to reduce the number of GPs required to serve the Tilbury population and maximise the amount of GP time spent dealing with clinical issues.



#### 13.3.1 The Primary Care Receptionist

In this model the receptionist(s) is key to success. They need to be highly trained individuals who can make a judgement on the best clinician/professional that a patient needs to see. And they need to get this right most of the time to avoid duplicating appointments.

#### 13.3.2 The GP Assistant / Clinical Personal Assistant

This is a band 4 administrative worker trained to support GPs by processing letters coming into the practice. They use a clearly defined and agreed workflow, to carry out delegated work where it is safe to do so, leaving GPs to deal only with letters requiring medical input or oversight. Other actions can involve entering read codes and other data onto the GP system; booking a follow up appointment with a patient; booking follow-up blood tests with patients; or following DNA processes for patients who missed appointments. The GP or other clinicians then have no need to see these letters.

A pilot scheme in Brighton and Hove estimated that this role required around 3 hours of administrative work per 5,000 registered patients and saved each GP in a practice 40 minutes of time per day. Translated into GP appointments for Tilbury, with 16 required GPs this would free up 66 10 minute appointment slots. The role is heavily dependent on well-defined processes and workflow, requires training for administrative staff, and a lead GP to provide governance and audit.

The added value of this role is that communications at the practice can be dealt with in a more timely and organised manner. Patients requiring follow-up will be contacted more swiftly, patient records should be more up to date when a health professional does see a patient, and a reduction in the number of times a patient has to make contact with or see anyone at the practice.

#### 13.3.3 The Primary Care Pharmacist

While GPs are in short supply, nationally there is an over-supply of pharmacists. The RCGP and RPS describe pharmacists as a "hidden army"<sup>iii</sup>

The "Making Time in General Practice" report suggests that around 5.5% of GP appointments nationally could be taken care of by a pharmacist or self-care. A pharmacist is able to diagnose and treat minor ailments (see information above on minor ailments scheme).<sup>iv</sup>

This role is not necessarily about including a pharmacy on site, as we can see (above) there are already a number of pharmacies in Tilbury, it is about making use of a pharmacists clinical skills to help patients and the over-stretched GP workforce.

"Having a pharmacist a part of the team could make a huge difference both to patients and clinical colleagues. Practice pharmacists can consult with and treat patients directly, relieving GPs of casework and enabling them to focus their skills where they are most needed, for example on diagnosing and treating patients with complex conditions. As part of the multidisciplinary team, practice pharmacists can advise other professionals about medicines, resolve problems with prescriptions and reduce prescribing errors. They can work with GPs to resolve day-to-day medicine issues and with practice teams to provide advice on medicines to care homes, as well as visiting patients in their own homes when needed." In the modelling work below we consider the role only in terms of reducing a GPs workload in way of a minor ailments clinic, however with further additional capacity the role could also help to improve the quality of care:

- Medicines Reconciliation
- Medication Review (polypharmacy / QOF etc.)
- Prescription management (average GP 200 repeat prescriptions per week)
- Prescription safety / concordance
- Chronic disease management (respiratory, cardiovascular and diabetes clinics)

We recommend that the use of practice pharmacists is considered separately in a wider context. An additional pharmacist could be employed using savings generated from the staffing changes.

#### 13.3.4 The Nurse Practitioner

The role of the Nurse Practitioner is already well documented and understood. The "Making Time in General Practice" report suggests that 6.5% of GP appointments nationally could be seen by a nurse practitioner. The impact that this would have on GP requirements in Tilbury is modelled below. The role would also mean that those patients with more complex clinical needs, who need to see a GP, will get to do so in a much more timely manner.

#### 13.3.5 Wellbeing worker

These members of the team act as a care navigator, peer coach, health trainer or befriender. This role could be handled expanding the current Thurrock Local Area Coordinator role.

The "Making Time in General Practice" report suggests that 4% of GP appointments nationally could be handled by a wellbeing worker. Because a wellbeing worker would be considerably cheaper than a GP to handle these "non-clinical" issues it would be possible for them to spend more time with patients on these issues.

#### 13.3.6 Physio-therapist

MSK patients make up to 30% of a GPs caseload <sup>v</sup>. There is a complex referral pathway from this point, typically with a GP referring to a consultant who then either refers to physio-therapist or decides to perform surgery.

At Windermere Health Centre, in the Lake District, a physiotherapist joined the practice team to assess, diagnose and triage MSK patients. During the first three months, 168 GP appointments were freed up and the translation of orthopaedic referral to operation rate increased to 99%. Additionally, the number of steroid injections delivered in the centre rose because the physiotherapist could also do this, generating income for the practice.

In Betsi Cadwaladr, north Wales, two physiotherapists worked across four practices and in the first six months, saw 1525 patients who would normally have seen the GP. Only 23 of these patients required any input from the GP and there was a 12% reduction in secondary care referrals. In addition to freeing up GP time, the reduction in referrals for MSK activity in Tilbury would equate to around 4100 per year. Fewer patients would also have a need to travel to see consultants at the hospital.

Two systematic reviews of physiotherapy showed that patient costs were lower for primary care clinics than conventional outpatient clinics (Hensher, 1998; Roberts and Stevens, 1997). Overall cost per patient was also lower for primary care clinics than conventional outpatient clinics, but savings were partially offset by increased demand in primary care.

#### 13.3.7 Physician Assistant

There is much debate about this role in GP practice, it is not a well-researched or defined role and training schemes / courses vary in their emphasis. Drenan et al (2014) published a review of the research around the role along with an observational study comparing 6 practices which employed PAs to 6 that did not. Evidence showed that the role is acceptable to patients and that they tended to see patients with same day booked appointments, and worked at the younger end of the population compared to GPs. No difference was found in rates at which patients returned to surgery within 14 days between patients seeing a GP or a PA. The PA tended to spend longer with a patient but the cost per consultation was £6.22 lower.<sup>vi</sup>

Caveats:

- Little thought given to regulation or prescribing rights of role
- Some evidence that higher level of supervision needed
- No research comparing PA and nurse practitioner (possible overlap)
- Short supply so finding may be as difficult as finding a GP, however new places on courses in 2015 announced.
- Registration issues?

The "making time in general practice report" suggests that a PA could see around 40 patients per day.

#### 13.3.8 Paramedic

A newer role is the practice-attached paramedic or emergency care practitioner. This role is now being tested in a number of the Multispecialty Community Provider vanguards, including Kent and Derbyshire. In Whitstable, Kent, a paramedic team is now based in a GP practice. They have their own vehicle with onboard diagnostics and access to electronic patient records. When patients call the surgeries at 8am requesting home visits, GPs screen the calls and refer the most urgent to the paramedics who can make a visit quickly. The less urgent wait until a GP can visit later in the day. In the first five weeks of the pilot in sprint 2015, paramedics were able to see, treat and complete two thirds of patients referred to them. The volume of 999 calls was down 10% over the period.

There is currently not enough evidence to consider this in our calculations but we could re-visit this at a later date.

#### 13.3.9 Promoting Self-Care and Management

Promoting self-care, particularly for patients with long term conditions is a key and often over-looked element of Primary Care and chronic disease management. Condition specific support groups and education programmes that assist patients to develop a better understanding of their condition and lives and cope with symptoms have been shown to improve clinical outcomes and reduce stress. For example programmes that assist patients to develop an understanding of their condition and lives and cope with their symptoms when delivered with both education and practitioner review have been found to reduce hospitalisations in patients with asthma by up to 50% and reduced hospital admissions in patients with COPD by between 13% and 36% depending on disease severity. Such programmes should be provided as part of the Primary Care offer. Use of existing third sector support groups should be maximised.

# 13.3.10 Modelling the impact of including additional staff in the Tilbury Primary Care Model – A scenario modelling exercise.

The model incorporates various pieces of information from above to calculate what is the maximum WTE numbers of each staffing group (where possible) that could be included based on the estimated population for 2018/19. This is then translated into appointments saved and WTE GPs saved. The recommended number of GPs is re-calculated based on the number of other professionals introduced. Costs and Savings are also considered.

An excel spreadsheet accompanies and allows the assumptions on length of consultation, total daily consultation time available, and the % of a GPs workload that could potentially be handled by each professional group.

GP		
WTE GP time with patients	410.4	minutes
length of GP appointment	10	minutes
Pharmacist		
WTE time with patients	410.4	minutes
length of appointments	10	minutes
% GP caseload	5.50%	
Nurse practitioner		
WTE time with patients	410.4	minutes
length of appointments	10	minutes
% GP caseload	6.50%	
Wellbeing worker		
WTE time with patients	410.4	minutes
length of appointments	30	minutes
% GP caseload	4.00%	
Physio-therapist	-	
WTE time with patients	410.4	minutes
length of 1st appointments	15	minutes
% GP caseload	20%	
nhycician assistant	_	
number apts per day	40	
GP assistant		
2019 registered pop	22262 22262	
hrs needed per week	13.3572	
Increase in GP time per GP per day	40	minutes
Receptionist		
Number of patients in total per day	857.5448	
length per phone call / conversation	3	mins
length of time able to take apts	410.4	mins

#### Table 14: Starting Assumptions for discussion

#### Table 15: staffing suggestion – model output for 2019

		GP	
		appointments	WTE GPs
	Role	free'd per day	free'd
6.3	receptionist		
0.9	practice pharmacist	37.5	0.9
1.1	nurse practitioner	44.4	1.1
2.0	Wellbeing worker	27.3	0.7
5.0	Physio-therapist	136.5	3.3
1.0	physician assistant	40.0	1.0
0.4	GP assistant	4.0	0.1
9.6	GPs		
5	Nurses		
Total reduction in GP appointments		289.7	
Total reduction in WTE GPS required	(compared to 16.63)		7.1

Based on the assumptions above the Tilbury practice could include, 0.9 wte practice pharmacist, 1.1 WTE nurse practitioner, 2 WTE wellbeing workers, 5 WTE Physio- therapists, 1 wte Physician's assistant, 0.4 wte GP assistant and 9.6 WTE GPs compared to the original estimated 16.6 required WTE GPs we now only need 7.1. We estimate that for patients to be directed to the correct professional a total of 6.3 WTE receptionists should be employed.

#### 13.3.11 Future-proofing primary care

The outputs in Table 15 are based on a population size of Tilbury of 21,408. This is the projected population (see Demography section) plus 437 people to live in the 165 new homes that already have planning.

As discussed the council has an aspiration to build an additional 1,000 new homes. We estimate that this will result in a further 2,650 people living in Tilbury. Tables x and x below therefore give workforce requirements based on population projections plus 2,650 for 2025 and 2030.

		GP	
		appointments	WTE GPs
	Role	free'd per day	free'd
7.5	receptionist		
1.1	practice pharmacist	44.0	1.1
1.3	nurse practitioner	52.0	1.3
2.3	Wellbeing worker	32.0	0.8
5.8	Physio-therapist	160.0	3.9
1.0	physician assistant	40.0	1.0
0.4	GP assistant	4.0	0.1
11.4	GPs		
6.33	Nurses		
Total reduction in GP appointments		332.0	
Total reduction in WTE GPS required	(compared to 16.63)		8.1

	a				
Table 16:	Staffing	Suggestion -	– Model	Output for 2025	

Table 17		Suggestion	- Model	Output for 2030
TADIE TI	. stanniy	Juggestion		Output 101 2030

		GP	
		appointments	WTE GPs
	Role	free'd per day	free'd
7.8	receptionist		
1.1	practice pharmacist	45.7	1.1
1.3	nurse practitioner	54.0	1.3
2.4	Wellbeing worker	33.3	0.8
6.1	Physio-therapist	166.3	4.1
1.0	physician assistant	40.0	1.0
0.4	GP assistant	4.0	0.1
11.9	GPs		
6.58325	Nurses		
Total reduction in GP appointments		343.3	
Total reduction in WTE GPS required	(compared to 16.63)		8.4

## 13.4 Minor Ailments Clinic

National research indicates that 18% of GP workload is accounted for by minor ailments alone (PAGB, 2009) which is around one hour per day per GP. Whilst nearly 9 out of 10 people often treat minor ailments themselves, the research by PAGB indicates that people often abandon self-care to seek advice within 4-7 days, and this is usually from a GP, who would usually just give a prescription. Treatment of minor ailments costs £2 billion per year to the NHS. The top 10 minor ailments (which incidentally account for 75% of all minor ailments seen) are:

- 1) Back pain
- 2) Dermatitis
- 3) Heartburn and indigestion
- 4) Nasal congestion
- 5) Constipation
- 6) Migraine
- 7) Cough
- 8) Ache
- 9) Sprains and strains
- 10) Headache

The same report defines some characteristics for self-treaters and those who visit their GP/nurse for advice. Self-treaters are more likely to be: Those who visit their GP/nurse are more likely o

Female Higher earners Older Consumers White British Prescription Payers Full time workers Those who visit their GP/nurse are more likely o be: In Wales Lower earners Prescription-exempt

Have children

When pharmacists were asked how much of their working day was spent advising on minor ailments, 59% felt that they were spending approximately the right amount of time, but 34% felt that they were spending too little time on this; inferring that they felt they should have more of their time dedicated to this. Based on this research, the direction for the future should encourage patients to self-care where appropriate, but where intervention is required, to utilise pharmacy in the first instance. GP's and nurses should also feel confident in signposting patients to pharmacists. By co-locating a pharmacy within the new healthy living centre in Tilbury, there is a greater opportunity for trust to develop between GPs, nurses and pharmacists, and therefore the greater likelihood for improved patient outcomes.

Additionally, those who are low-earners, prescription exempt or with Children could be actively encouraged to seek advice from a pharmacist rather than a GP if the co-located pharmacy could run and publicise a minor ailments scheme. This means that they can supply medicines for certain conditions on the NHS (either with standard prescription charge or for free for those who are exempt). (See Enfield flier Appendix 3).

In Enfield the scheme sees and treats around 600 patients per month.

Research by Baqir *et al* (2011) investigated what the costs to run a minor ailment scheme were and the potential savings it could generate. Based on a sample of 396 patients who accessed the scheme, they found:

- The cost to run the minor ailment scheme was £1,346 based on a professional fee of £3.40 per patient.
- If the scheme had not been in place, 58% would have accessed their GP, 0.5% would have accessed A&E, 0.25% would have accessed a health visitor, and 41.1% would have purchased over the counter medicine or done nothing.
- Using the following costs (£36 per GP appointment, £111 per A&E attendance, £11.70 per health visitor appointment and a £2.63 cost for provision of medicine), the authors calculated that the cost saving to the NHS was £6,739.01 for those 396 patients, equating to £17.02 per patient.<sup>vii</sup>

Given that we have already made provision above for a practice pharmacist to be included in the facility the professional fee would not be applicable to our situation. Additionally we have already accounted for the pharmacist to see 5.5% of GP appointments some of which may currently be using A&E inappropriately due to the lack of availability of GP appointments.

Should demand become high for the service and there is evidence that it is resulting in reduced demand on A&E then we could consider this in the existing pharmacies around Tilbury. However at this stage we would recommend against doing this to avoid creating a supply led demand for the service.

NHS Thurrock CCG currently do not commission the Minor Ailments Scheme in any pharmacy in the borough. Consideration could be made for other areas.

# 13.5 Long Term Conditions Clinics

Prevalence of long term conditions in Tilbury is high and clinical management variable and in many cases poor. (see section 7) A long term conditions clinic is an innovative approach to the way practices care for patients with long term conditions (Asthma, Diabetes, Stroke, Hypertension, COPD, CHD). Patients would be recalled to have their conditions and medications reviewed in a more efficient way. Patients would not need to make repeat visits to see the doctor and practice nurse because they would all work together.

Pro-actively re-calling patients for review gives the practice more control on how they do it logistically. Options could include:

- Call patients as a certain trigger point hits (6 months, 12 months, certain number of repeat prescriptions)
- Have days where the clinic is dedicated to a specific long term condition, giving the option to include an external specialist if needed (e.g. diabetes nurse from elsewhere in Thurrock)
- Call all patients with multiple conditions and see them about all conditions at the same time

The stow health medical centre operated a Long Term Conditions clinic and they have found that reviewing patients in this way represents about 30% of the workload of the entire practice and they are achieving the following objectives:

- allow patients more time with the doctor/nurse team for help and advice on the management of their condition
- give patients more control over the management of their condition
- reduce the need for patients to make multiple visits to the practice to see the nurse and the doctor
- provide a more "joined-up" approach to the care of patients with more than one LTMC
- better allocation of the practice resources so that we have more time for the important stuff like providing good quality health advice for all of our patients<sup>viii</sup>

Given that the quality of care that is currently offered to patients with Long Term Conditions in Tilbury is poor, referral rates to the community teams are variable and where good the outcomes (QOF) still appear to be poor, we strongly suggest that the new centre does include Long Term Condition Clinics. These clinics should aim to identify patients with disease who are not diagnosed and ensure that those who are diagnosed receive best quality evidence based care as per Nice guidelines and QOF. There is strong evidence that since the introduction of QOF emergency admissions for ambulatory care LTCs have fallen. We should expect to see similar in Tilbury populations.

The clinic should plan to be reviewing and supporting patients in the region of the following number. It should be noted that some patients will have co-morbidities and that this list is not exclusive; there may be other conditions (e.g. MSK) that we have not estimated here:

	Projection for 2019	Projection for 2025	Projection for 2030
Population	21408	25334	26333
COPD	501	593	616
Diabetes	1529	1809	1880
Hypertension	4542	5375	5587
Stroke	395	467	485
AF	357	422	439
CHD	647	766	796
HF	205	242	6
Mental Health Conditions	216	255	19
Dementia	83	99	22
Depression	1761	2084	40
Asthma	1211	1433	25

## 13.6 Diagnostics

#### 13.6.1 Blood Test facility

Although there are current blood testing clinics that run from Tilbury Health Centre via a ticketing system, it does still not appear to meet demand. Whilst implementation of the ticketing system 6 months ago has resulted in dramatic reductions in queues (some previous sessions had nearly 100 people queuing and resulting in a very overcrowded waiting room), the Health Centre still turns away approximately 10 people each session and also have concerns that many people begin to queue from around 8am. Activity figures from the CCG indicate that both Tilbury sessions have been completely full to capacity for the last month, as has the session in East Tilbury. This, plus the 1,232 A&E attendances in 2014/15 for Haematology and the 346 outpatient attendances for *Other Diagnostic Blood Tests* indicates a need for more streamlined phlebotomy services in this area. The CCG are working with BTUH to consolidate the clinic venues and offer longer hours and set days rather than an hour or two here and there, and due to the demand in Tilbury, it is recommended that Tilbury is considered as a venue for longer blood test clinics.

#### 13.6.2 Other potential diagnostics

Information in section 10.3.2 suggest that providing other diagnostic services more locally would reduce A&E attendances. X-ray imaging, ultra-sound, ECGs and urinalysis are recommended.

# 13.7 Outpatient Clinics

In 2014/15 there were 17,854 outpatient attendances by Tilbury patients. The most common specialities were Trauma and Orthopaedics, Ophthalmology, Gynaecology and Paediatrics. 71.42% of out patient attendances were recorded with a priority code of 'routine'. This provides potential scope to deliver some of these services within an enhanced integrated healthy living centre setting more locally.

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# Appendix 2 – Assumptions for Stroke model

1. Insert yo	ur aspiratio	ons for all (	GP practice	s in here		
% of Underlying	prevalent pop	ulation you wi	sh to find for			
	YR 1	YR 2	YR 3	YR 4	YR 5	
CHD	80.00%	85.00%	90.00%	95.00%	95.00%	
Hypertension	75.00%	85.00%	90.000%	95.00%	95.00%	
AF	100.00%	100.00%	100.00%	100.00%	100.00%	
Achirad OOE out	comos					
Aspired QOF Out			VR 3(default:			
			half way			
			hetween VR1			
	YR1	YR2	and YR5)	YR 4	YR 5 (default: v	vorst perfo
BP 4	89.85	91.06	92.28	93.49	94.70	%
BP 5	79.43	80.75	82.07	83.38	84.70	%
CHD 6	90.33	91.27	92.22	93.16	94.10	%
CHD 9	90.93	92.30	93.67	95.03	96.40	%
Stroke 6	88.83	91.12	93.42	95.71	98.00	%
Stroke 12	92.4	92.70	93.00	93.30	93.60	%
Cost of a Stroke	Non-elective a	dmission				
	£3,644		admission	£2,672.00		
			ambulance	£737.00		
			a&e	£235		
Social care assur	nptions		(default = aver	age cost in SW E	ssex)	
% stroke						
admissions						
result in social						
care package	33.00%					
Average cost of						
a social care						
package	£18,000					
% self funded	55.00%					
	50.000/					
1st year savings	50.00%		( + - 4 F 0 /	······································		
2nd yr savings	85.00%		(default: 15% v	vill die yr 2)		
and we are callings	72.250/		(defeult anoth	ar 1 E0/ will dia)		
Sru year savings	72.25%		(derault anoth	er 15% will die)		
Ath yoar cavings	61 /10/		(dofault anoth	or 15% will dia		
The sear savings	01.41%			ci 1370 will ule)		
5th year savings	52 20%		(default anoth	er 15% will die)		
Sur year surings	52.20/0			c. 13/5 will ulc)		

# Appendix 3 – Enfield minor ailments scheme, patient leaflet



<sup>&</sup>lt;sup>1</sup> M J Harisson, M Dusheiko, M Sutton, H, Gravelle, T Doran, M Roland; Effect of a national primary care pay for performance scheme on emergency hospital admissions for ambulatory care sensitive conditions: controlled longitudinal study, BMJ 2014; 349:g6423

<sup>vi</sup> Drenan VM et al. Investigating the contribution of physician assistants to primary care England: a mixed-methods study. Health Services Delivery Research, Southampton(UK): NIHR Journals Library, 2014, May.
 <sup>vii</sup> Source: Baqir et al (2011): <u>http://jpubhealth.oxfordjournals.org/content/33/4/551.long#T2</u>)

<sup>&</sup>lt;sup>ii</sup> Primary Care Foundation and NHS Alliance, Making Time in General Practice, October 2015

<sup>&</sup>lt;sup>iii</sup> www.rcgp.org.uk/news/2015/march/pharmacists-set-to-work-in-gp-surgeries.aspx

<sup>&</sup>lt;sup>iv</sup> Primary Care Foundation and NHS Alliance, Making Time in General Practice, October 2015 <sup>v</sup> <u>http://www.gponline.com/viewpoint-physiotherapists-help-relieve-pressure-primary-</u> <u>care/article/1367428?utm\_source=Member+services&utm\_campaign=1c2e3f5a52-</u>

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viii <u>http://stowhealth.com/ltc.php</u>