Chapter 4: Screening and Immunisation

4.1 Child and Young People's Immunisation

Immunisation programmes are considered to be one of the most significant interventions in preventative health care across the globe. Through these programmes immunity to diseases is ensured through the administration of a vaccine. The WHO (World Health Organisation) describes them as follows:

Immunisation is a proven tool for controlling and eliminating life-threatening infectious diseases and is estimated to avert over between 2 and 3 million deaths each year. It is one of the most cost-effective health investments, with proven strategies that make it accessible to even the most hard-to-reach and vulnerable populations. It has clearly defined target groups; it can be delivered effectively through outreach activities; and vaccination does not require any major lifestyle change.

The HPA (Health Protection Agency), recommends that a target of 95% coverage (% of the target population that is vaccinated) for each programme. This amount of coverage needs to occur for 'herd immunity' to be reached – the level required to prevent the spread or outbreak of disease. These programmes are delivered locally through the network of GPs, school nurses, district nurses and specialised clinics. The immunisation programmes can be defined into three main categories: Childhood immunisations, the Human Papilloma Virus (HPV) programme and the Flu/Pneumococcal programmes.

Thurrock's uptake rates for childhood immunisations across the immunisation programmes are measured by COVER (Cover of Vaccination Evaluation Rapidly) data. This data is extracted from the *Child Health* database system, and submitted to the HPA for reporting. The following datasets cover the period of 2010 to 2011:

4.1.1. DTa/HPV/Hib Year 1 uptake by Thurrock GP practice for 2010-2011

The data in figure 4.1 depicts the immunisation rate for children aged one who have completed immunisations for diphtheria, tetanus, polio, pertussis, Haemophilus influenza type b (Hib) – (i.e. all three doses of DTa/IPV/Hib) per GP practice in the Thurrock area from 2010 to 2011.





(Data source: Child Health SystmOne Körner data)

Of the thirty six GP practices depicted, the majority of practices meet or exceed the England average of 93.75% and the East of England average of 94.83%. Only 11 practices fell below the England average of 93.75%. Thurrock GPs uptake average for 2010 to 2011 was 95.4%

4.1.2. MMR Year 2 uptake per GP practice for 2010-2011

The data in figure 4.2 below depicts the immunisation rate for children aged two who have completed immunisation for measles, mumps and rubella (MMR) – (i.e. one dose of MMR) per GP practice in the Thurrock area from 2010 to 2011.



Figure 4.2 MMR Year 2 uptake per GP practice for 2010-2011

(Data source: Child Health SystmOne Körner data)

Of the thirty six GP practices depicted, 12 practices fell below the England average of 88.75% and 15 practices performed below the East of England average of 90.98%. Thurrock GPs uptake average for MMR at age two for 2010 to 2011 was 90.75%

4.1.3. Pneumococcal Year 2 uptake by Thurrock GP practice for 2010-2011

The data in figure 4.3 below depicts the immunisation rate for children aged two who have completed immunisation for pneumococcal infection (i.e. received Pneumococcal booster) (PVC) per GP practice in the Thurrock area from 2010 to 2011.



Figure 4.3. Pneumococcal Year 2 uptake by Thurrock GP practice for 2010-2011

Of the thirty six GP practices depicted, the majority of practices meet or exceed the England average of 88.83% and the East of England average of 89.45%. Only nine practices fell below the England average of 88.83% and 10 below the East of England average of 89.45%. Thurrock GPs' uptake average for 2010 to 2011 was 91.2%.

4.1.4. Hib/MenC Year 2 uptake by Thurrock GP practice for 2010-2011

The data in figure 4.4 below depicts immunisation rate for children aged two who have completed immunisation for Haemophilus influenza type b (Hib), meningitis C (MenC) -(i.e. received Hib/MenC booster) per GP practice in the Thurrock area from 2010 to 2011.

⁽Data source: Child Health SystmOne Körner data)

Figure 4.4 Hib/MenC Year 2 uptake by Thurrock GP practice for 2010-2011



(Data source: Child Health SystmOne Körner data)

Of the thirty six GP practices depicted, the majority of practices meet or exceed the England average of 91.28% and the East of England average of 92.78%. Only 5 practices fell below the England average of 91.28% and 8 below the East of England average of 92.78%. Thurrock GPs' uptake average for 2010 to 2011 was 95.77%.

4.1.5. MMR 1st Booster Year 5 uptake by Thurrock GP practice for 2010-2011

The data in figure 4.5 below depicts immunisation rate for children aged 5 who have completed immunisation for measles, mumps and rubella (MMR booster) (i.e. Two doses of MMR) per GP practice in the Thurrock area from 2010 to 2011.





(Data source: Child Health SystmOne Körner data)

Of the thirty six GP practices depicted, the majority of practices meet or exceed the England average of 83.88% and the East of England average of 84.23%. Only 11 practices fell below the England average of 83.88% and 12 below the East of England average of 84.23%. Thurrock GPs' uptake average for 2010 to 2011 was 85.82%.

4.1.6. Preschool booster Year 5 uptake by Thurrock GP practice for 2010-2011

The data in figure 4.6 below depicts the immunisation rate for children aged five who have completed immunisation for diphtheria, tetanus, polio, pertussis (DTaP/IPV) (i.e. all four doses) per GP practice in the Thurrock area from 2010 to 2011.



Figure 4.6 immunisation rate for children aged 5

Of the thirty six GP practices depicted, the majority of practices meet or exceed the England average of 85.65% and the East of England average of 86.95%. Only 12 practices fell below the England average of 85.65% and 13 below the East of England average of 86.95%. Thurrock GPs uptake average for 2010 to 2011 was 95.77%.

On average Thurrock GPs' immunisation uptake performs above England or the East of England. There are, however, outlier GPs' who's uptake can be improved. Work should be done with these poor performing GPs' to increase the uptake of immunisations.

⁽Data source: Child Health SystmOne Körner data)

4.1.7. HPV dose 3 for female 12-13 years old age group by Thurrock schools 2010-2011



Figure 4.7. Thurrock schools HPV coverage with deprivation scoring for 2010 to 2011 uptake of all three doses for 12 to 13 year old females.

In Figure 4.7 Thurrock schools are ranked in ascending order of uptake for the HPV third dose in the 12 to 13 year old age group. Beacon hill shows a 100% refusal rate but this should be treated as an outlier because there is a cohort of one student. The remaining schools show average of 93% coverage (the median in this example to account for outliers) across Thurrock schools. It must be noted that this cohort will include students who live outside the Thurrock area and commute in for schooling. As this is the only dataset present the results are returned by schools in the area. Declined rates remain low, with a small proportion of patients refusing the HPV vaccination. There are still areas where no recording of having had or refused the vaccination remain and these should be the focus to follow up patients who are not presenting so that they are offered the HPV vaccine in future clinics. Deprivation scoring is present but does not seem to factor in the results present above.

4.2 Older People's Immunisation – Lead: Niall McDougall

Seasonal flu is a very common illness that occurs every year, usually during the winter months (October to April in the UK). The number of people who consult their GP with flulike symptoms varies from year to year, but is usually between 50 and 200 for every 100,000 people. This is in addition to the many people with flu who do not see their GP. In the UK, about 600 people a year die from seasonal flu. This rises to around 13,000 during an epidemic.

(http://www.nhs.uk/conditions/Flu/)

It is therefore essential that those individuals over 65 and those in 'at risk' groups (chronic illness or pregnant) should be immunised as per the Department of Health's guidance. The following datasets depict the percentage uptake for Thurrock GPs for 2010 to 2011:

4.2.1. Flu vaccination uptake for 65 years and older age group by Thurrock GP practice 2010-2011.



Figure 4.8 . Flu vaccination uptake percentage by Thurrock GP practices for the 65 and over cohort for 2010 to 2011

(Data source: ImmForm)

In figure 4.8 the Thurrock practices had an uptake rate for their 65 and over group of 72.3% which is greater than the England rate of 72.8% but just falls short of the East of England average of 73%. Figure 4.8 above shows the variation in practice rates for Thurrock, and the average performance for Thurrock, the East of England and England.

4.2.2. Flu vaccination uptake for At Risk group by Thurrock GP practice 2010-2011



Figure 4.9. Flu vaccination uptake percentage by Thurrock GP practices for the Under 65 at risk only cohort for 2010 to 2011

In figure 4.9 the Thurrock practices had an uptake rate for their 'at risk' group of 48.9% which is greater than the East of England average of 48.3% but falls short of the England average of 50.4%. Figure 4.9 above shows the variation in practice rates for Thurrock, and the average performance for Thurrock, the East of England and England.

To increase uptake, and ensure 'herd immunity' (95% coverage) for immunisations in young people, 65s and over and the 'at risk' groups practices that perform poorly across all the immunisation programmes should be identified and performance management and support provision should be provided to ensure an increase in immunisation uptake. If there are knowledge gaps, training and support should be provided to address those area. The needs of the local population should be accessed and health promotions tailored accordingly.

4.3 Cancer Screening Programmes

Cancer screening programmes run on a national level, with the purpose of reducing the amount of disease in a population through early detection, thus improving the patient outcomes. Though an effective coverage of screening, and good uptake the programmes can reduce the risk to the population.

Three main national programmes run in NHS South West Essex, namely: cervical cancer, breast and bowel cancer screening programmes. The NHS Cancer screening programmes describe the Cervical screening programme as follows:

⁽Data source: ImmForm)

Cervical screening is not a test for cancer. It is a method of preventing cancer by detecting and treating early abnormalities which, if left untreated, could lead to cancer in a woman's cervix (the neck of the womb).

The first stage in cervical screening is taking a sample using liquid based cytology (LBC). A sample of cells is taken from the cervix for analysis. A doctor or nurse inserts an instrument (a speculum) to open the woman's vagina and uses a spatula to sweep around the cervix. Most women consider the procedure to be only mildly uncomfortable.

Early detection and treatment can prevent 75 per cent of cancers developing but like other screening tests, it is not perfect. It may not always detect early cell changes that could lead to cancer.

The programme aims to reduce the number of women who develop invasive cervical cancer (incidence) and the number of women who die from it (mortality). It does this by regularly screening all women at risk so that conditions which might otherwise develop into invasive cancer can be identified and treated.

(http://www.cancerscreening.nhs.uk/cervical/about-cervical-screening.html)

4.3.1. Cervical screening uptake per Thurrock GP practice 2010 – 2011



Figure 4.10 Cervical screening uptake percentage in Thurrock per GP practices.

(EPHRU ~ Essex Public Health Resource Unit)

In figure 4.10 above the percentage of patients having a cervical screen is shown. On average across the Thurrock GPs they perform at a 77.5% uptake. This average uptake for cervical screening however performs below the East of England average at 80.15%. Nine practices performed below 74.9%, fourteen practice performed between 75% and 79.9% and thirteen practices performed above 80%.

4.3.2. Cervical screening trend from 2007-2010 for Thurrock



Figure 4.11 Cervical screening percentage uptake trends from 2008 to 2011 by GP practice.





The data depicted in figure 4.11 and figure 4.12 show the cervical screening uptake trend data from 2008 to 2011. In both graphs the general trend shows a constant increase year on year.

In 2009/2010 Public Health conducted an audit to ensure that the records held by practices and Essex Contractor Services (ECS) regarding women who have had a Total Abdominal Hysterectomy (TAH) were consistent and matched. Those women no longer needed cytology and therefore could be removed from the national cervical screening programme so they are no longer recalled for smear tests. The sharp increase in uptake on the graph shows the results of data cleaning through 2009/2010.

4.3.3. Bowel cancer screening uptake



Figure 4.13 FOBT (Faecal occult blood test) uptake rate by PCTs for 2010-2011

(Data source: Nottingham University Hospitals Trust)

Bowel cancer screening in NHS South West Essex is reported to the East Hub on a quarterly basis. FOBT rates (Faecal occult blood test used to check for colon cancer and other disease) are reported for the PCT (Primary Care Trusts), but not at a more localised level. In figure 4.13 NHS South West Essex performs in 6th place out of 13 of its comparison areas, and shows that whilst the area's uptake is not the poorest performing, improvements can be made to increase uptake through health promotion messages targeting harder to reach groups.

4.3.4. Breast screening uptake rates trend from 2007-2010



Breast screening services are commissioned to the South Essex Breast Screening Service. The data that this service collates does not currently allow a more localised view by area. Therefore the data represented in figure 4.14 demonstrates that screening programmes for breast cancer are increasing in uptake, and therefore a higher level of patients are captured earlier in these screening programmes. Current work should continue, and the programmes should be monitored carefully for performance levels, and that access and availability for those programmes meet the service users' needs.

4.4 Diabetic Retinopathy Screening

Retinopathy is a complication of diabetes affecting the blood vessels of the retina that is known to be the leading cause of blindness in people of working age in the UK. Diabetes causes the tiny blood vessels in the retina to become blocked resulting in inhibited sight. Research has shown that if retinopathy is identified and treated early, through retinal screening, not only can blindness can be prevented in 90% of those at risk but significant savings can be achieved as the lifetime cost of dealing with retinopathy can be up to £237,000 per person.

All patients with diabetes should be offered annual retinal screening as part of the management of their condition. Retinal screening is a quality indicator for GP practices within QOF to ensure all eligible patients have been screened.

Figure 4.15 below shows GP practice achievement of GP Contract Quality Outcomes Framework (QOF) Indicator DM21 (The percentage of patients with diabetes who have a record of retinal screening in the previous 15 months) compared to the Thurrock average achievement of 92%.



Figure 4.15 GP Contract Quality Outcomes Framework

Figure 4.15 above shows there are eleven practices where less than 90% of their eligible population has attended retinal screening.

As part of this quality indicator for retinal screening, a patient may be exception reported i.e. excluded from regular screening if the GP practice has noted the reason on the patient clinical record. There are a number of acceptable reasons why a patient may be exception reported such as they are already being treated for retinal conditions.

Figure 4.16 below shows the achievement of QOF indicator DM21 (The percentage of patients with diabetes who have a record of retinal screening in the previous 15 months), the percentage that were missed and percentage of diabetes patients that were exception reported (i.e. patients recorded with Diabetes but not included in the achievement percentage due to specific criteria). The practices are shown from lowest to highest in the order of overall achievement of DM21.





As can be seen from the graph above, the two practices with the lowest number of patients attending for retinal screening are Sai Medical Centre which is situated in Tilbury and Pear Tree which is situated in South Ockendon. There are two practices that have high exception reporting compared to the other practices in Thurrock which will require further investigation.

In summary the two practices that are under reporting the prevalence of patients with diabetes perform well at referring patients for retinal screening suggesting that once diagnosed the patient is well managed.

4.5 Immunisation and Screening Summary

From the data provided it has been demonstrated that whilst Thurrock is by no means a poor performer there is still room for considerable improvement across the immunisation and screening programmes.

Generally the childhood immunisation programmes perform strongly across the Thurrock area, often exceeding the England and East of England averages. Whilst best practice and performance should be acknowledged, outliers in Thurrock should be identified and then further work can focus on these practices to increase their uptake levels. Current performance management and uptake monitoring should continue to ensure no slippage in performance occurs and performance data should continue to be published to maintain drive and commitment across Thurrock practices.

HPV uptake is strong for the previous year, with schools reporting high uptake of all three doses for the twelve to thirteen year old age group.

Flu uptake in the sixty five and over category performance on target, however there is still work to be done in increasing the uptake in the at risk groups. All efforts should remain to increasing uptake in both categories.

Cervical screening performance is below expectations for Thurrock area, and further work in education and service provision and access is required to increase uptake levels. It must be noted that although performance is low, the general uptake trend for the area has increased year on year for the last three years.

Bowel screening performance is average and like cervical screening would benefit from further investment in increasing uptake through raising awareness of the service offered.

Breast screening shows an increasing trend year on year, but performance remains well below England and the East of England. Further efforts should be directed into analysis of the area and population to identify reasons behind the poor uptake levels.

Diabetic retinopathy screening shows strong performance across most practices, although every effort should be made to increase screening to 100%. Constant monitoring and performance management should continue to ensure the momentum of this programme is not lost.

In summary programmes across immunisation and screening perform strongly, with some areas of weakness. Trends demonstrate an increase in performance levels and continuing current work and action plans should remain. There are areas identified that require a more focused response to performance, which in turn will increase performance in those outliers.