

Infectious disease and human immunodeficiency virus (HIV)

Headlines

Tuberculosis (TB) remains one of the biggest infectious disease challenges for Kirklees. The number of new cases continues to rise. These are often in more deprived communities. Action is needed on both preventing TB occurring and to increase the number of affected people completing the long course of treatment, so drug resistant TB does not appear.

Vaccine preventable diseases such as meningococcal disease, mumps and measles continued to occur, so uptake of immunisation needs to be as high as possible.

Blood borne viruses. Acute hepatitis B infections are often associated with high risk behaviours or travel abroad, so there is much scope for prevention including targeting immunisation at high risk groups.

Gastrointestinal infections, mainly viral, continued to rise in Kirklees placing a significant burden on schools, care homes and hospitals.

Human immunodeficiency virus (HIV). The total number of people known to be living with HIV in Kirklees was 260 in 2009 and the number of new cases is rising. The groups most at risk nationally are men who have sex with men and heterosexual black Africans. Transmission is increasing in people having heterosexual sex. One in 3 people are diagnosed late when presenting with symptoms, reducing their chance of survival.

Why is this issue important?

Infections spread between people, from animals to people or vice versa. This is via air, contaminated foods, bodily fluids especially saliva, mucus and blood as well as sexual contact.

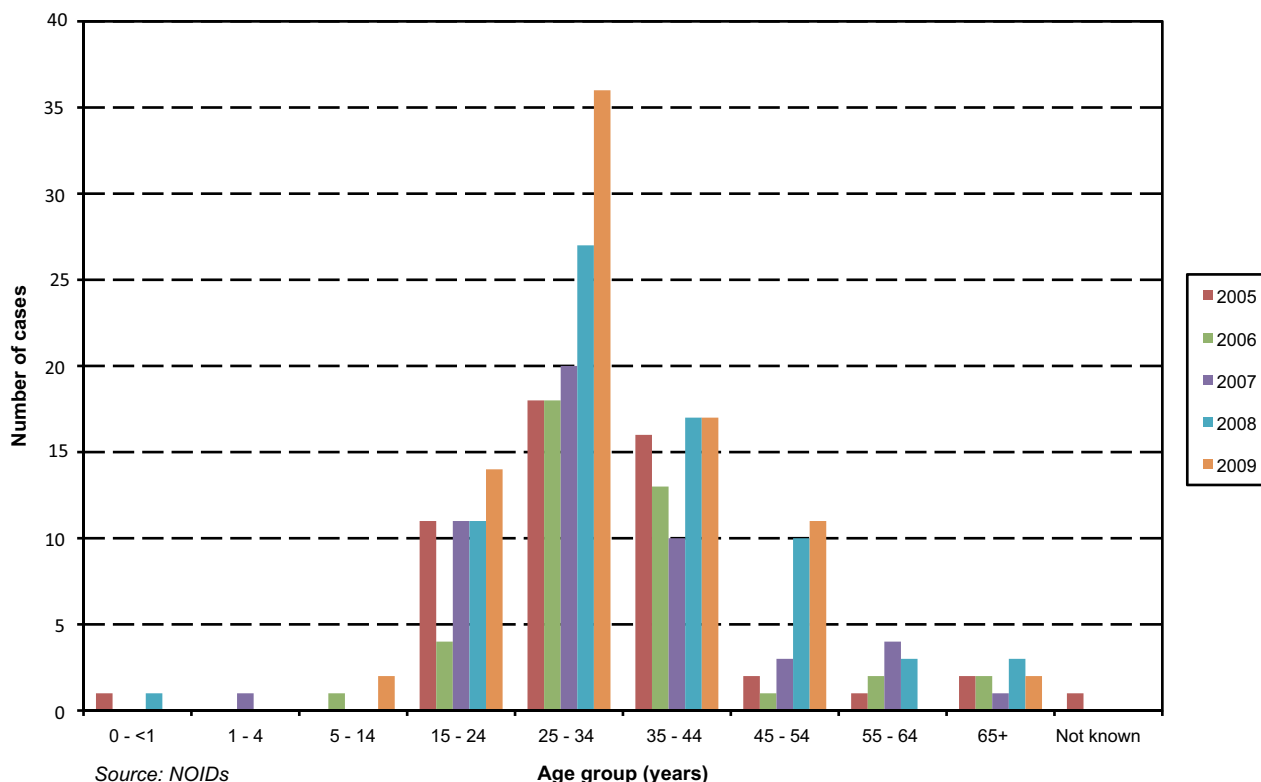
Immunisation is recognised as the most cost effective method of preventing infectious diseases. Immunisations use dead or inactivated organisms or purified products derived from them.

Food poisoning and gastrointestinal infections

For many years locally and nationally, the most frequently notified infections under the Public Health (Control of diseases) Act 1984 were suspected food poisoning.

Campylobacter remains the infection causing most food poisoning cases. In 98% of cases the source is unknown. Salmonella acquired abroad accounts for 42% of cases identified on return from overseas.

Notifications of viral hepatitis (B and C) in Kirklees by age group, 2004-2009



Viruses (most commonly norovirus), remain the most commonly notified cause of gastrointestinal infections, especially as a major cause of outbreaks in institutions, particularly, care homes and hospitals. The number of outbreaks rose in 2009, especially in hospitals, less so in care homes.

Hepatitis

New cases of hepatitis B and C continued to rise, reflecting increased testing. Small numbers of acute hepatitis B infection were linked to travel to high risk countries and engaging in high risk behaviour. This was especially in those aged 25-34.

Human immunodeficiency virus (HIV)

HIV remains one of the most important infections in the UK, causing serious long term ill health and death. Sexual activity is the main route of transmission of the virus. In Kirklees, 260 people were accessing HIV treatment in 2009, 2 in 3 were male. The most common route of transmission was via heterosexual sex (54%) overtaking transmission via men having sex with men (39%)¹. 48% of cases were white and 42% were black African, a change over recent years reflecting increasing migrant population's resident in Kirklees¹.

Nationally, recipients of blood products accounted for 4% of cases, injecting drugs 1% of cases. Local antenatal HIV testing provided positive diagnosis for 0.1% of women². HIV largely affects working age adults so has a significant economic impact on individuals and families. Treatment and care have high costs of approx £500,000 over an individual's lifetime.

In Kirklees the number of new HIV cases diagnosed each year is variable, but increased from 24 cases in 2007 to 39 cases in 2008. Modern treatments now greatly improve survival especially if diagnosed early¹. Early diagnosis is critical for not only early treatment but preventing the spread to others. New cases often do not display any symptoms. However, among existing cases there are a significant number of people living with an advanced stage of disease who require support with day-to-day living. Nationally, more than 1 in 4 people with HIV are unaware that they are infected and around half of new cases are diagnosed too late^{3(p20)}. Similar to nationally, 30% of people living with HIV in Kirklees are diagnosed late which impacts on their health and shortens their lifespan.

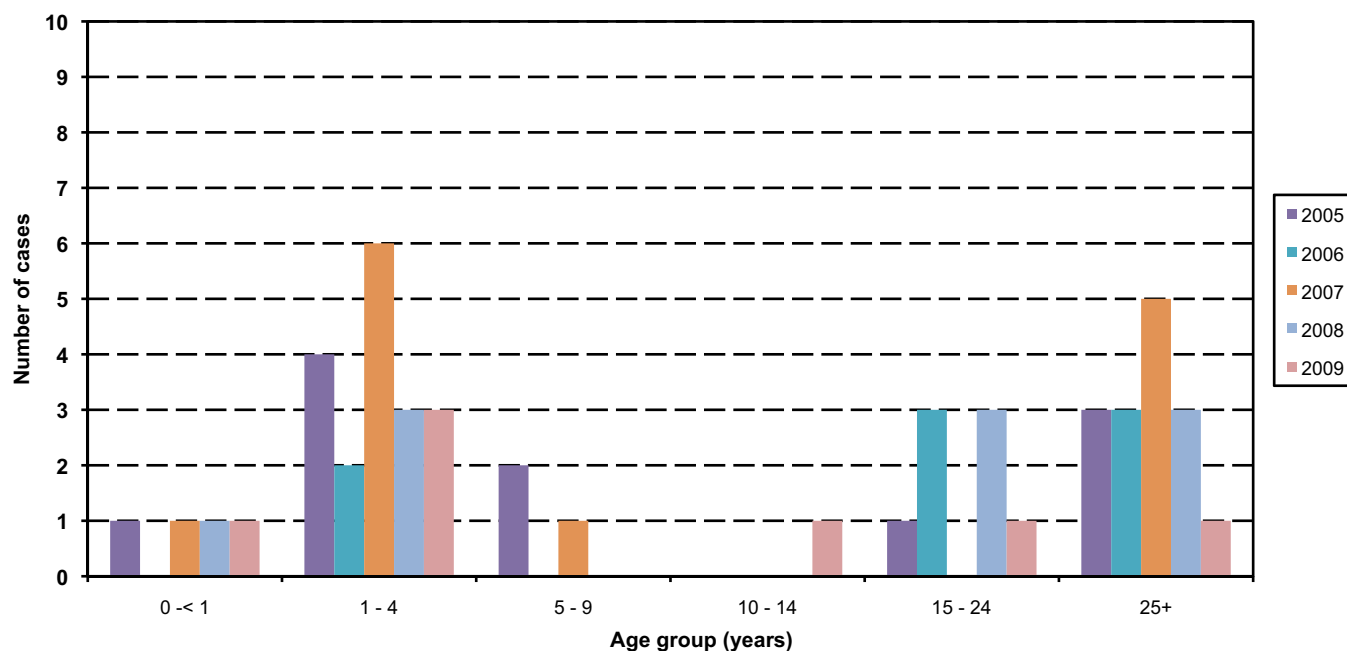
When working with people having HIV and men who have sex with men, issues such as hate crime, social isolation and the impact on mental health needs must be considered.

Other notifiable diseases

Meningococcal disease

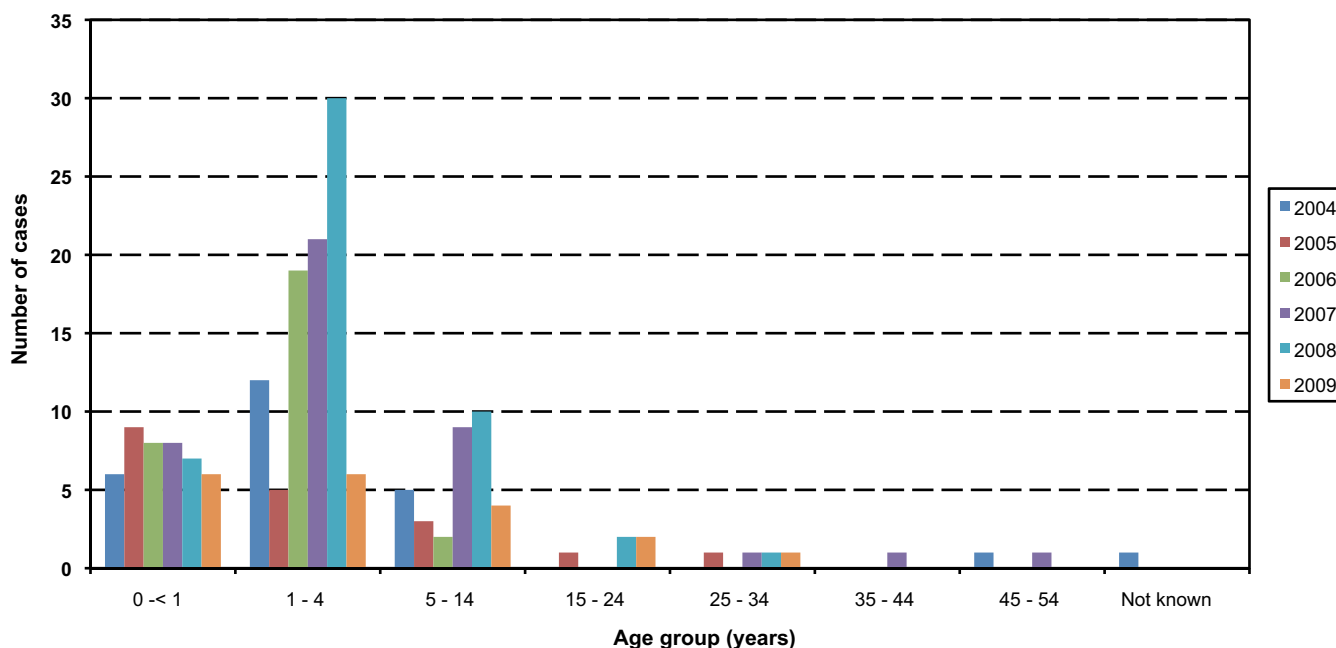
The introduction of meningococcus group C immunisation in 1999 led to a marked decline in cases occurring in the UK.

New cases of meningococcal disease in Kirklees by age group, 2004-2009



Source: Regional Enhanced Meningococcal Disease Surveillance Database, HPA Yorkshire and the Humber

Measles notifications in Kirklees by age group, 2004-2009



Source: NOIDs

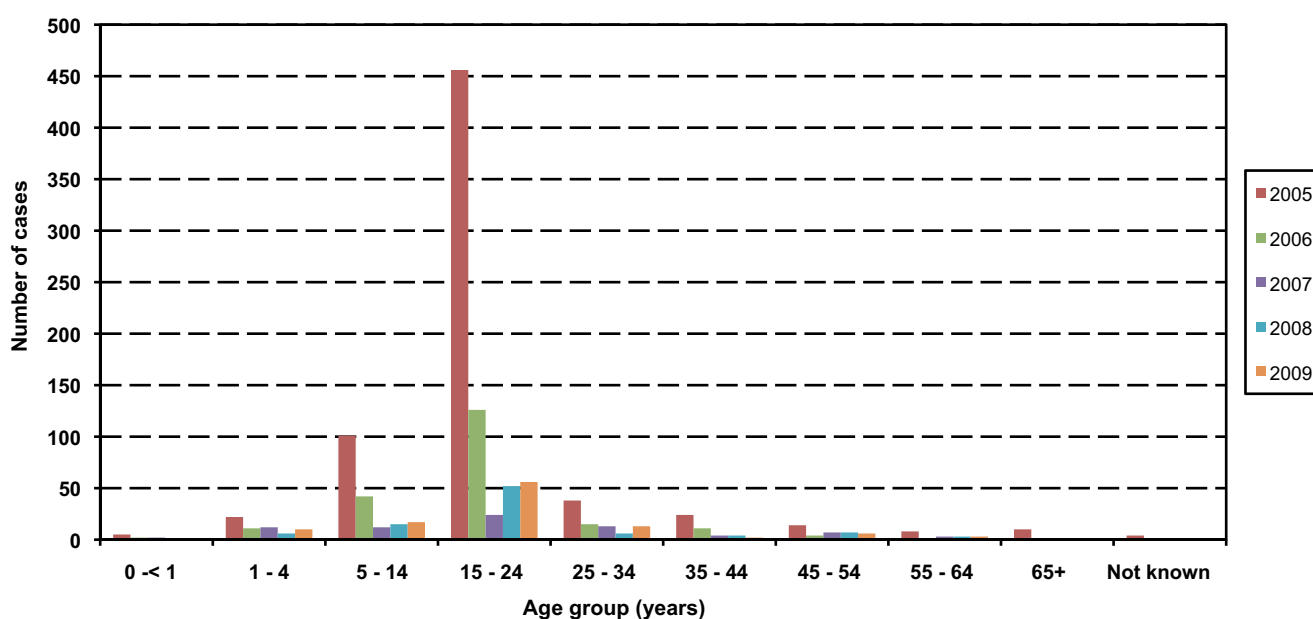
Measles

Notifications of suspected measles cases have risen especially in those aged under five. Most notified cases are reported to be unimmunised, so the immunisation levels must remain as high as possible.

Mumps

Cases of mumps still occur in teenagers and young adults although the number of cases has dropped sharply. Outbreaks and clusters continued to occur in local further education colleges and universities. Maintaining high levels of immunisation are therefore essential, especially in young people who may have missed their childhood immunisation.

Mumps notifications in Kirklees by age group, 2004-2009

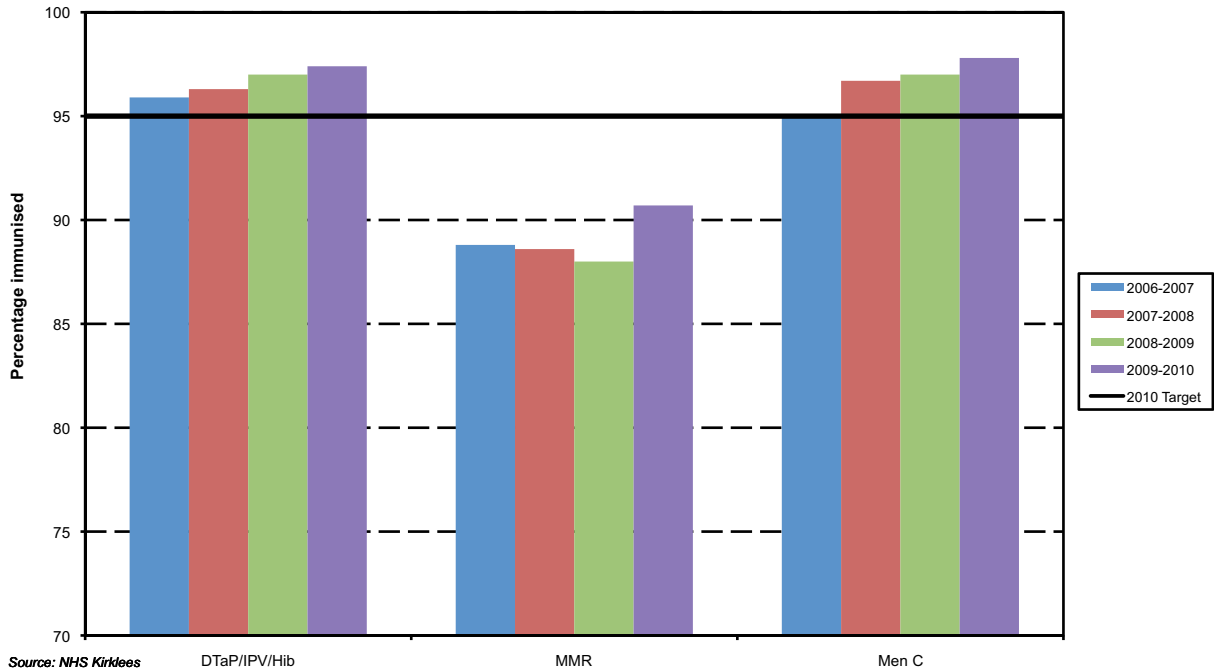


Source: NOIDs

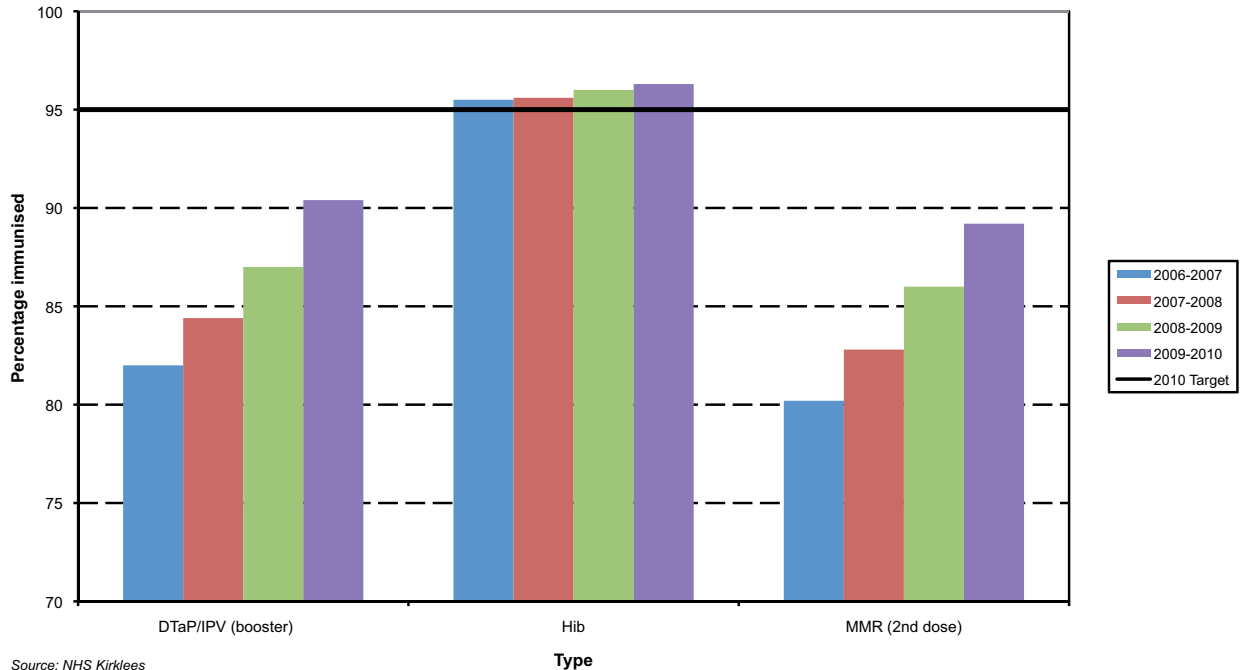
Immunisations

Uptake for all routine childhood immunisations has increased locally, reflecting the considerable efforts of all concerned. However, uptake of MMR in Kirklees is still lower than the target of the World Health Organisation which is 95%. All children should have received two doses of MMR vaccine before they leave school.

Immunisation coverage at 2 years for children in Kirklees, 2006-2010



Immunisation coverage at 5 years for children in Kirklees, 2006-2010



The behaviours of individuals and the choices they make can affect how prone they are to contracting infectious diseases. Parents/individuals declining immunisation increase their risk of acquiring specific infectious diseases as well as passing on to others, also unimmunised. Individuals travelling without the relevant immunisation to areas of the world where certain infectious disease rates remain high, increase the risk of infection to themselves and the wider community on their return.

Seasonal flu immunisation

Seasonal flu immunisation is offered to all those aged 65 years and over, people with certain long term conditions, and frontline healthcare and social care workers. Each year the World Health Organisation decides which seasonal flu vaccine to produce to protect against influenza viruses circulating. In 2010/2011 Influenza A (H1N1) and Influenza B affected mainly those aged 1-14 and 15-44 years.

Uptake of seasonal flu immunisation in Kirklees from 1 September 2010 to 28 February 2011 was 70% in those aged 65 years and over, 49% in those aged under 65 years in clinical at risk groups. It is important that these groups receive the seasonal flu immunisation each year.

Pandemic H1N1 immunisation programme 2009-10, 2010-11

This programme targeted those individuals most at risk of complications and healthcare workers who were more at risk due to their work. The immunisation protected themselves, their families and their patients.

In Kirklees an uptake of 34% in patients in the clinical risk groups including pregnant women in all ages was achieved, and an uptake of 17% in healthy children aged under five years in 2009. The uptake for frontline healthcare workers in NHS Kirklees in 2009-10 was 54%.

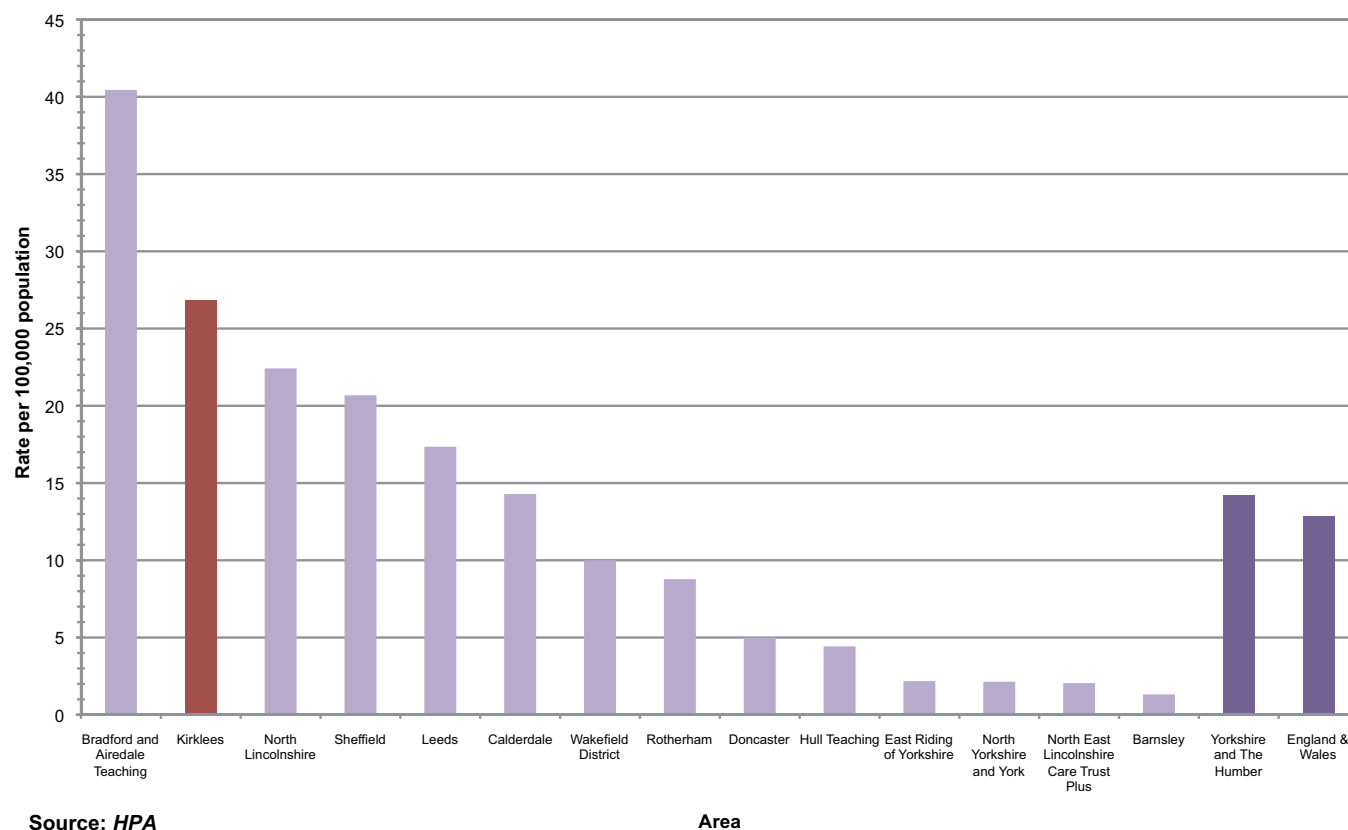
Tuberculosis (TB)

TB rates are rising in Kirklees, which had the second highest rate in the region⁴. The rate of increase in Kirklees is higher than regionally. TB is strongly associated with deprivation, homelessness and unstable lifestyles, including drug and alcohol misuse.

Locally:

- Of people with TB, 40% were UK born, which is higher than the regional or national rate (25% and 33% respectively)⁴.
- In 2009 most cases were of Pakistani origin (50%), followed by white origin (19%) and Indian ethnic origin (12%)⁵.
- TB locally is a disease of young adults, especially those aged 15-34 years. The rate of new cases per 1,000 population, in the 15-24 year age group was 0.28 in 2004 rising to 0.45 in 2009. In those aged 25-34 the rate of new cases in 2004 was 0.26 rising to 0.4 in 2009. In those aged over 65 years the rate of new cases rose from 0.24 in 2004 to 0.30 in 2009⁶.
- The average rate of new cases of TB per year was 100 between 2007 and 2009.
- 82% of cases successfully completed treatment in 2009; compared to the national target of 85%.
- A number of cases in Kirklees were lost to follow up, died, or remained on treatment; indicating a proportion of individuals are failing to complete treatment. These individual cases could potentially infect members of the community.

Tuberculosis rates for PCTs, Yorkshire & Humber, England & Wales, 2009



Source: HPA

Area

Source: HPA Enhanced Tuberculosis Surveillance, Dec 2010

Which groups are most affected by infections?

Locally, HIV mainly affects African and UK white men who have sex with men. Hepatitis mainly occurs in the Pakistani population. The immigrant Pakistani population would not be covered by the national universal immunisation programme which includes hepatitis. The focus is to encourage testing for early diagnosis and treatment, and to raise awareness to avoid behaviours that contribute to transmission. Antenatal screening and immunisation of vulnerable babies in preventing onward transmission remains of vital importance.

Whilst the TB burden in Kirklees is mostly Pakistani and migrants from countries with high rates, they do not arrive 'infectious'; they develop disease and become infectious many years after arrival (more than 60% have been resident in the UK for more than five years before developing TB³). Transmission continues to occur in the UK born population. The aim is to improve the detection and early preventative treatment of those at risk of developing TB and to raise awareness in the UK white population to encourage early diagnosis and treatment.

Where is this causing greatest concern?

TB cases are not evenly spread across Kirklees, some groups and localities bear a heavier burden of TB than others. TB cases in the last decade have been concentrated in Dewsbury, Batley and central Huddersfield⁴.

What could commissioners and service planners consider?

- HIV services must be accessible, acceptable and responsive in particular, to the needs of men who have sex with men and African migrant groups, recognising the internal diversity of these groups.
- Continued information and education for the public to avoid high risk behaviours and increased understanding of the importance of travel vaccination.
- Promote the uptake of MMR immunisation at every opportunity in older children and young adults who may have missed the childhood immunisation programme.
- Widen the availability of testing to more community based settings in order to reduce late diagnoses of HIV.
- Continued education about TB in the communities most at risk of infection. TB services must improve their ability to detect and effectively treat TB in populations at increased risk. Knowledge of the symptoms of infectious diseases such as TB is important for early diagnosis and effective treatment, and is necessary to control infection in the population. Targeting screening services to those most at risk will also help control many infectious diseases. TB control programmes must work in collaboration with services to address these associated factors.
- The increase of food poisoning is one of the more controllable factors. Good basic food hygiene practices both in the home and commercially would reduce the number of cases of food poisoning within Kirklees.

References

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2. SOPHID Report 2003-2007 West Yorkshire Health Protection Unit. Health Protection Agency. Leena Inamdar and Stuart Wilson. March 2009.
3. Department of Health. Our Health and Wellbeing Today. 2010.
4. A report from the HPA Enhanced TB Surveillance, in Yorkshire and The Humber, Health Protection Agency, December 2010.
5. HPA Enhanced TB Surveillance, 2010.
6. HPA Enhanced TB Surveillance 2010, ONS data mid-year population 2007.