Measles and mumps infections remain at high levels and this continues to pose a major threat to the health of children in Cheshire East.

High quality immunisation within primary care needs to be maintained to ensure the current 95% uptake at age 2 continues to increase. This requires a robust system for following up those children who fail to attend.

Second dose uptake (normally given at 3 years and 4 months) needs to increase from 90% to 95% in order to achieve herd immunity in pre-school children.

Within the Cheshire, Warrington and Wirral area, Public Health England (PHE) are planning catch up immunisation in secondary schools which have 30 or more children currently unvaccinated, to offer MMR as part of the national catch up programme.

Despite the current improved uptake rates it will be years before herd immunity is achieved within the local primary school aged population, unless additional actions are taken to identify unvaccinated children and immunise them with MMR.

Historically low MMR immunisation rates in Cheshire East mean that around 10% of children currently aged 10 to 16 years have never been vaccinated (no previous MMR doses). These children are wholly susceptible to measles. This means around 3500 children are at risk and about 2000 will need to be vaccinated to reach 95% uptake and reduce the risk of outbreaks.

People entering the Borough with measles may cause the virus to transmit among these children, leading to localised outbreaks of measles.

Recent national outbreaks of measles have affected children aged between 10 and 16 years of age. Locally our lowest ever uptake was less than 80% for 2nd dose at age 5 in 2005/06 and those children are now 13 years old. Up to 15% of younger teenagers in some age groups may still be under immunised and they should continue to be offered MMR.
MMR safety scares arose following the publication of an article in 1998 which described post-vaccination disorders affecting 12 children. In 2003 and later years, the investigative journalist Brian Deer discovered that the clinical histories of all 12 children had been falsified by Dr Wakefield. This led to a hearing by the General Medical Council in May 2010, who removed Dr Wakefield from the medical register.

95% uptake is the threshold required to achieve herd immunity. Locally this is close to being achieved regularly for the first dose, however second dose rates are still at only 90% by age 5. Following the loss of herd immunity locally there have been three sizeable outbreaks of measles in Cheshire East in recent years. The largest outbreak occurred between October 2008 and February 2009, when there were 119 cases of measles across the Borough (including 36 cases in Crewe, 31 in Sandbach and 24 in Middlewich). The second smaller outbreak affected children in Handforth, Wilmslow and Alderley Edge during July and August 2010, when there were 18 cases of measles. The third affected children in the Nantwich and Middlewich area between September and November 2012 with at least 18 cases of measles, a number of whom were admitted to Leighton hospital.

**Evidence of what works**
- A single dose of MMR provides long-lasting protection against measles infection in about 90% of people vaccinated. The second dose is used to stimulate protection in those individuals who do not respond to the first dose.
- In Cheshire East, the first dose of MMR is offered to children aged 54 weeks and the second dose at 3 years and 4 months. Although uptake of MMR has recently increased among very young children, around 10% (3,500) of children aged 10 to 16 years still require two doses of MMR vaccine (separated by a minimum interval of one month).

**Asset Map**
- Any child or young person who has missed MMR vaccination can receive it from their general practice.
- Interrupting measles transmission requires sustained vaccination coverage above 95% using two doses of MMR.
- The conditions for interrupting measles transmission are favourable as humans are the only reservoir for the measles virus, the vaccine is safe, inexpensive and produces life-long immunity in at least 98% of recipients, confirmatory tests are available, all infected people develop symptoms, and there are no chronic carriers of measles infection.

**Suggested actions**
- All nurseries and primary schools should be encouraged to actively promote MMR immunisation and to review each child’s immunisation status on entry.
- Improve the surveillance of measles infection and monitoring of MMR uptake within Cheshire East.
- Work with Public Health England to promote MMR vaccination to all age groups of children, including through the school teenage vaccination programme.

**National MMR catch up campaign**
- In April 2013 a national MMR catch up campaign was announced following the significant outbreak of measles in South Wales and other local outbreaks in England.
- There were nearly 600 confirmed cases of measles in England between January and March, mostly in the North East and North West of England.
- Approximately 20% of these cases were associated with schools outbreaks.
- The peak age group is in 10-16 year olds, an apparent shift compared to previous years when mainly younger children were affected.
- Young people born between 1997 and 2003 are under vaccinated with either none or only one dose of MMR.
- GP practices need to identify children aged 10 to 16 who have not received MMR vaccination, or only one dose, and proactively contact their families to offer vaccination.
- The aim is to have 95% of young people aged 10 to 16 with at least 1 dose of MMR by 30th September 2013.

Uptake data is collected on a quarterly basis and both this and annual uptake data is published by Public Health England.
The catch up campaign within schools being implemented by PHE will target those schools with 30 or more pupils who have no recorded MMR vaccination. The percentage who are unvaccinated in those schools varies between 4.8% and 12.1%.

Due to the variation in the total numbers of pupils, there are a number of schools with quite high rates of unimmunised pupils (around 10%) who are not being included in the schools catch up campaign.

This table also shows that a number of schools have a significant percentage of children who have only one recorded dose of MMR vaccine. These children are continue to remain vulnerable to measles, mumps and rubella infections, unless they accept catch up vaccination from their GP surgery.

For a number of years the school health service has offered MMR catch up to pupils in Year 10 alongside the teenage tetanus, diphtheria and polio vaccination (Td/IPV). In 2013/14 an adolescent booster dose of MenC vaccine is to be introduced and given at the same time as the Td/IPV vaccine. This makes offering MMR catch up more complex, due to the potential of some children requiring 3 vaccines.