Public Health England

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Impact of physical distancing measures due to COVID-19 pandemic in England on childhood vaccination counts

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Key points

This report reviews aggregated childhood vaccination counts of the first hexavalent vaccinations delivered to infants younger than 6 months and of the first MMR vaccinations delivered to children aged 12 to 18 months updated weekly from The Phoenix Partnership (TPP) GP IT system supplier as the means of assessing the impact of physical distancing measures on vaccination delivery. It indicates that:

- vaccination counts for first dose MMR in children aged 12 to 18 months, and first dose of the hexavalent vaccine (DTaP/IPV/Hib/HepB) in children aged 6 months, fell at the introduction of the physical distancing measures in March 2020 compared to same period in 2019. This was followed by a rise from weeks 16 onwards which has stabilised and is comparable to vaccination counts prior to the COVID-19 pandemic

- the initial decrease in vaccination counts may be associated with COVID-19 messaging about staying home which could have overwhelmed the messaging that the routine immunisation programme was to continue and with GPs rescheduling appointments in the initial weeks to ensure social distancing measures were maintained within GP practices

- the data presented are from one GP IT supplier (TPP) and therefore do not represent data for all of England; therefore this data may not reflect regional and local variation

- as physical distancing measures relax it is important for GPs to continue offering routine immunisations and where required recovery plans should be put in place to account for the initial drop in vaccination counts observed

Introduction

In England, childhood immunisations are offered according to the routine immunisation schedule. Childhood vaccine coverage is routinely assessed in quarterly COVER (Cover of vaccination evaluated rapidly) programme reports for children who reached their first, second, or fifth birthday [1]. In addition to the routine quarterly reports, more timely aggregated GP vaccine coverage data on Hexavalent (Diphtheria, Tetanus, Pertussis (whooping cough), Polio, *Haemophilus influenzae* type b (Hib) and Hepatitis B), Meningococcal group B (MenB), Rotavirus, and MMR (Measles, Mumps and Rubella) vaccines are collected monthly from 6 months onwards via ImmForm[1], for local areas to use for performance management.

On 20 March 2020, physical distancing measures were introduced in England which included school closures, stopping gatherings, non-essential use of public transportation and individuals being advised to work from home [2,3]. Advice from the Joint Committee on Vaccination and Immunisation (JCVI) on routine childhood immunisations stated that children should continue to receive vaccinations according to the national schedule throughout the lockdown [4].

In order to evaluate the early impact of physical distancing measures on the delivery of childhood vaccinations an assessment of aggregated weekly vaccination counts provided by the GP IT supplier The Phoenix Partnership (TPP)[2] for 2020 was compared to 2019 counts. These initially indicated that MMR vaccination counts for children aged 12 to 18 months dropped almost 20% in the first weeks after introduction of physical distancing compared to the same period in 2019. First dose (dose 1) Hexavalent vaccination counts for infants younger than six months gradually declined, though not accentuated by the physical distancing [2]. Vaccination counts then increased in weeks 16 and 17 despite physical distancing measures remaining in place [2].

This routine report will summarise vaccination counts for dose 1 Hexavalent and MMR updated weekly from TPP in 2020 compared to 2019 for the age groups stated above.

[1] ImmForm is the system used by PHE to record vaccine coverage data for some immunisation programmes

[2] TPP supplies SystmOne which is an electronic patient record used by more than 2,600 primary care practices in the UK

Methods

Monitoring weekly vaccination counts

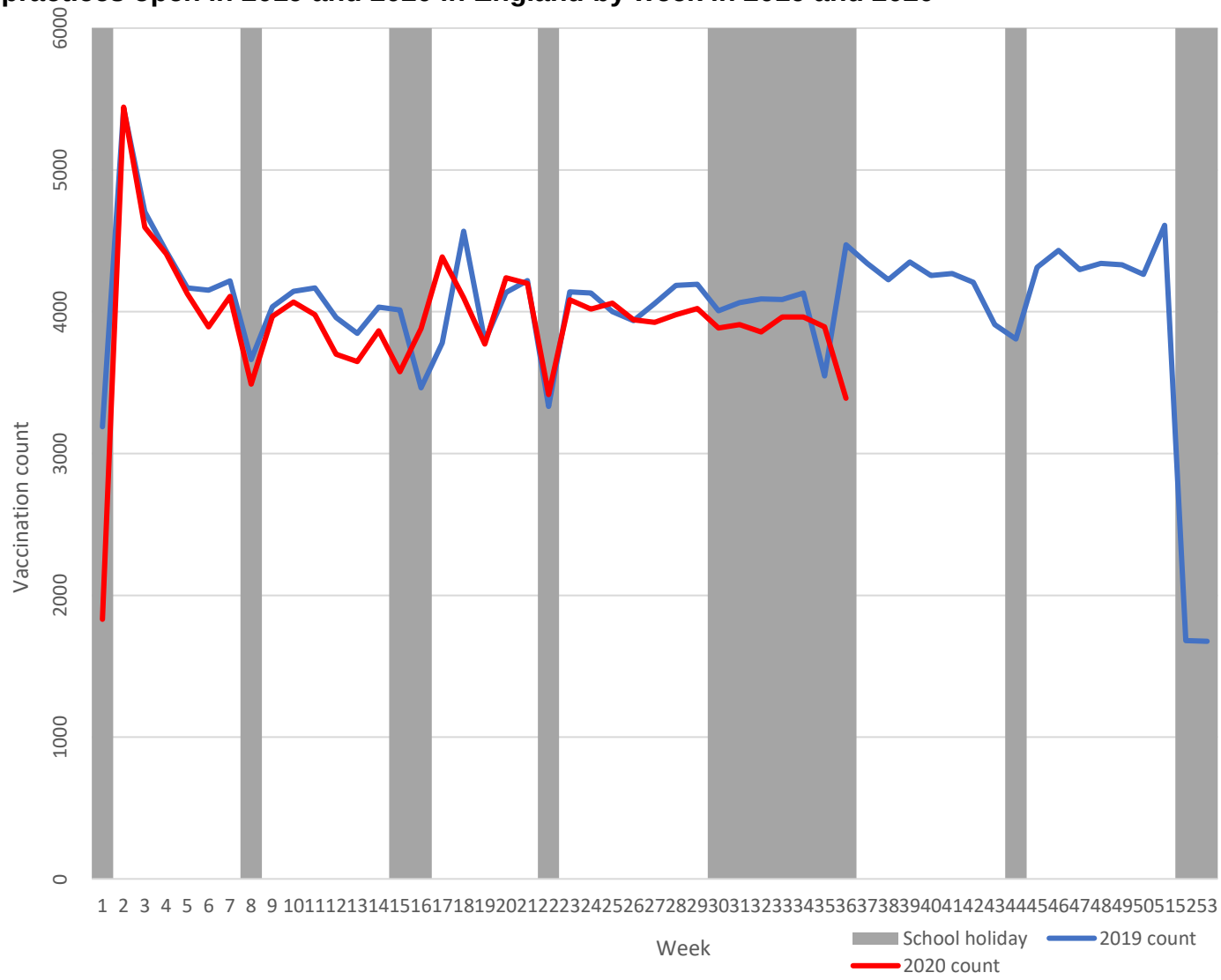
Aggregated weekly counts of the dose 1 Hexavalent delivered to infants 6 months and younger and dose 1 MMR to infants between the ages of 12 and 18 months were provided by TPP for all weeks in 2019 and the first 36 weeks of 2020. Weekly trends in vaccination counts were compared between 2019 and 2020.

Results

Vaccination counts provided by TPP

Vaccination counts from TPP general practices in 203 CCGs that were in operation in 2019 and 2020 were extracted. By week 36, a total of 141,588 Hexavalent vaccination counts were extracted in in 2020 compared to 146,484 in 2019 (-3.3 percent point change) and 142,680 MMR vaccination counts in 2020 compared to 145,906 in 2019 (-2.2 percent point change).

Figure 1: Dose 1 Hexavalent vaccination counts in infants younger than 6 months in TPP practices open in 2019 and 2020 in England by week in 2019 and 2020*

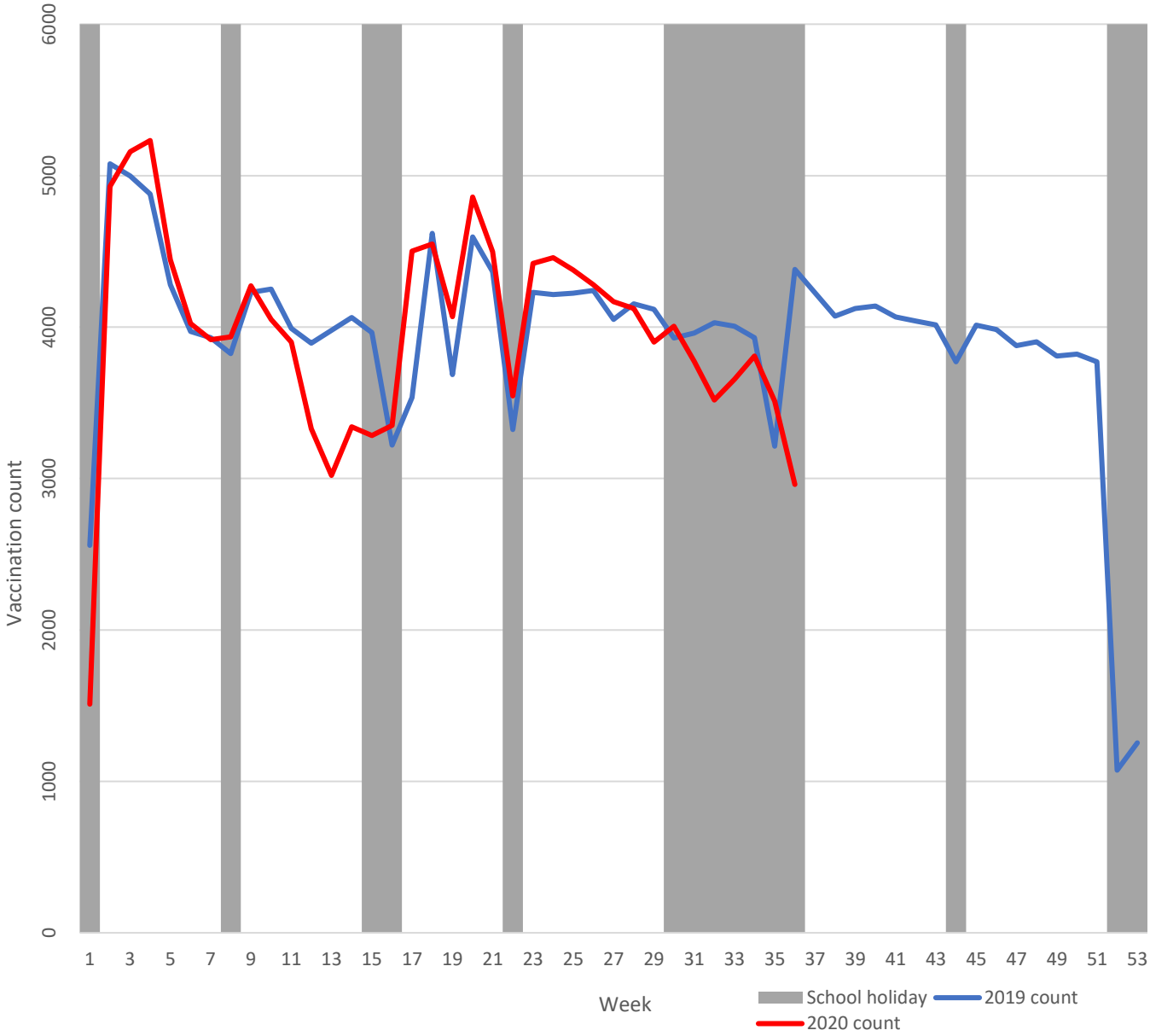


*School holidays for are for the 2020 calendar year. These holidays may vary slightly by year and by local area.

School holidays for the 2019/20 academic year were in weeks 43, 52, 53, 1, 8, 15, 16, 19, 22, 30-36

School holidays for the 2020/21 academic year are in weeks 44, 52, 53, 7, 13, 14, 18, 22, 29-35

Figure 2: MMR 1 vaccination counts in infants ages 12 to 18 months in TPP practices open in 2019 and 2020 in England by week in 2019 and 2020



*School holidays for are for the 2020 calendar year. These holidays may vary slightly by year and by local area

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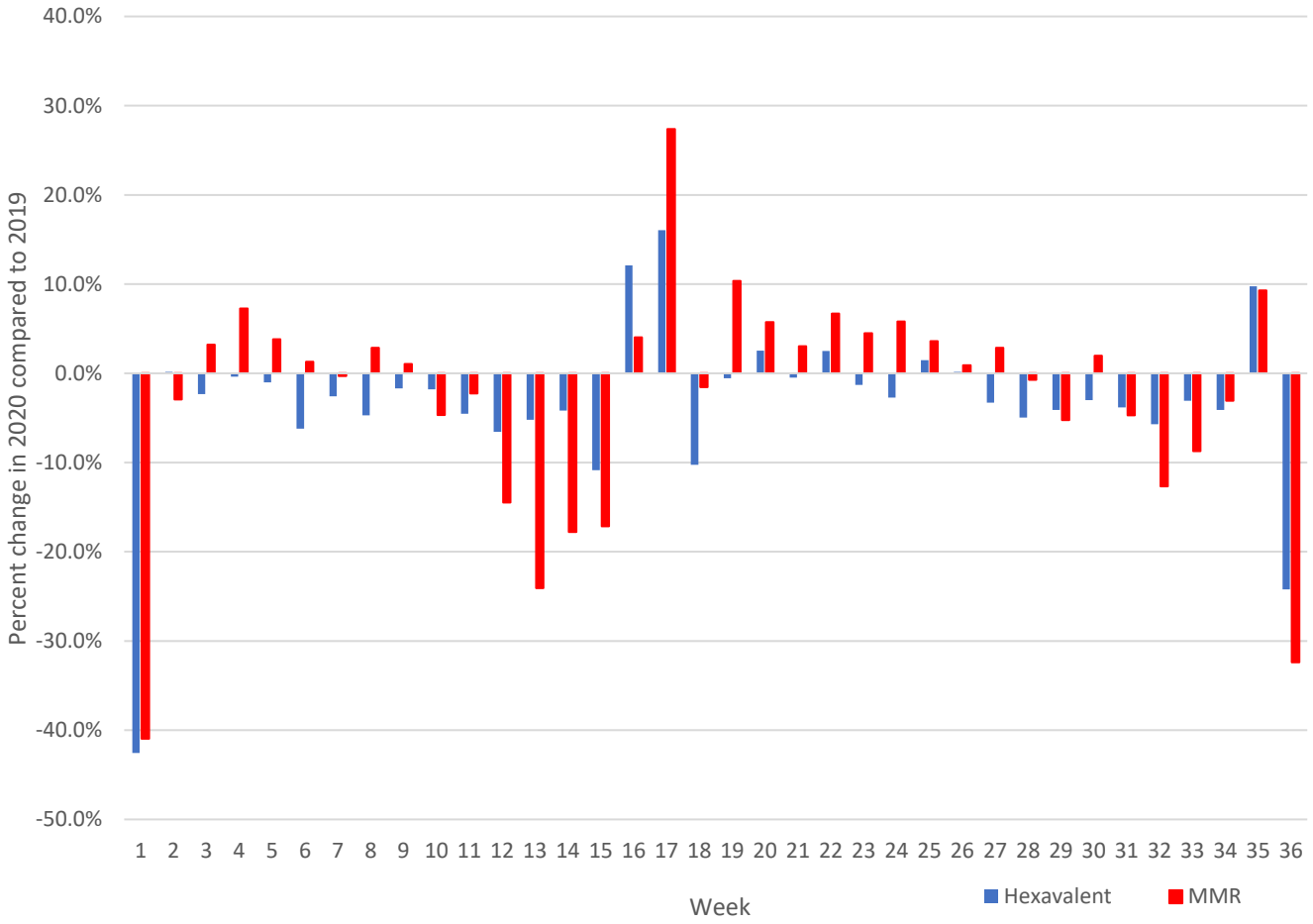
Figure 3: Percent change in dose 1 Hexavalent (in infants under 6 months) and MMR 1 vaccination (in infants ages 12 to 18 months) counts in 2020 compared to 2019, by week in TPP practices open in 2019 and 2020 in England



Discussion

At the introduction of the physical distancing measures in March 2020, vaccination counts for MMR 1 and dose 1 Hexavalent fell compared to 2019. This decrease in vaccination counts may be associated with COVID-19 messaging about staying home initially overwhelming the messaging that the routine immunisation programme was to remain operating as usual [2]. Additionally, anecdotal information indicated that in some areas, to ensuing safe and best practice, GPs had to reschedule appointments in the initial weeks to ensure social distancing within GP practices. Vaccination counts for both vaccines began to rise in weeks 16 and 17 and were comparable to 2019 counts, and to counts in 2020 prior to the COVID-19 pandemic, indicating that the initial drop had recovered. However, the overall vaccination counts for dose 1 Hexavalent and MMR 1 vaccines is slightly lower than the 2019 counts. The drop in vaccination counts may be explained by a slightly smaller cohort or a small decline in coverage [2]. It is also important to note that school holidays and bank holidays occur in different weeks in 2019 and 2020, and therefore can cause weekly differences. The data presented are vaccination counts only from one GP IT supplier (TPP) and coverage estimates cannot be calculated without age-specific denominator data. Additionally, some regions are less represented than others and therefore do not represent data for all of England. These data should be viewed with caution and will not necessarily reflect vaccination count trends at a local level.

Age-specific coverage estimates for hexavalent vaccine from aggregated GP level data collected on the ImmForm platform for infants that turned 8 weeks at or after the time when social distancing measures were set in place (20 March 2020) will be evaluated in the monthly surveys on ImmForm from August 2020 onwards. Likewise, vaccine coverage estimates for MMR collected on the ImmForm for infants turning 12 months old at the time when social distancing measures were set in place will be evaluated in the monthly surveys from September 2020 onwards. National vaccine coverage trends for hexavalent and MMR will be presented in future reports alongside the TPP vaccination counts.

As physical distancing measures relax and the risk of other infectious diseases circulating increases it is of utmost importance that GPs maintain offering routine immunisations, check and recall those who have not received a vaccine and where required recovery plans should be set in place to account for the initial drop in vaccination counts observed at the beginning of the lockdown.

References

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2. McDonald HI, Tessier E, White JM, Woodruff M, Knowles C, Bates C, et al (2020). Early impact of the coronavirus disease (COVID-19) pandemic and physical distancing measures on routine childhood vaccinations in England, January to April 2020. *Eur. Surveill*. **25**(19) (14 May) https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2020.25.19.2000848

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4. JCVI (2020). Statement from JCVI on immunisation prioritisation. https://www.gov.uk/government/publications/jcvi-statement-on-immunisation-prioritisation/statement-from-jcvi-on-immunisation-prioritisation

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