

## Briefing Paper in Response to Childhood Immunisation Uptake During COVID-19

To: Health Committee

Meeting Date: 11<sup>th</sup> March 2021

From: Director of Public Health

Electoral division(s): All

Key decision: No

Purpose: This report provides an update on:

- System response to promoting childhood immunisation uptake during the current Coronavirus pandemic
- What the data is telling us about how the Coronavirus pandemic has impacted childhood immunisation uptake, including the winter flu vaccination

Recommendation: The committee is asked to note and comment on the actions undertaken to date in responding to the impact of the ongoing Coronavirus pandemic on childhood immunisation uptake.

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## 1. Background

- 1.1. Immunisation is one of the safest and most effective ways of providing protection against disease as, following vaccination, people are far less likely to catch the disease if there are cases in the community. Beyond the individual level, vaccination has numerous benefits for society. If a proper immunisation schedule is implemented in a population, even those who are not vaccinated such as new-born babies, elderly people and those who are too sick to receive vaccination, can benefit from this *herd protection*<sup>1</sup>.
- 1.2. It is widely acknowledged that vaccination programmes have an enormous positive economic impact. Though vaccines require funding, they lead to long-term savings through reduction in health costs and avoidance of loss of productivity from the workforce.
- 1.3. The ability to reliably measure vaccine coverage plays an essential role in evaluating the success of a vaccination programme, identifying susceptible populations for further interventions, and informing future vaccine policy decisions.
- 1.4. Children in the UK are vaccinated against a number of infectious diseases through the NHS-funded childhood vaccination programme which protects children from: diphtheria, haemophilus influenza type B (Hib), Human Papilloma Virus (HPV), influenza, measles, meningococcus (ACWY and B), mumps, pertussis (whooping cough), pneumococcus, polio, rotavirus, rubella and tetanus.<sup>2</sup> In addition, children at-risk also receive the BCG vaccination against tuberculosis and hepatitis B vaccine.
- 1.5. The aim of the universal childhood vaccination programmes is to achieve 95% uptake, although the target uptake in the Public Health Outcomes Framework is 90%.
- 1.6. The Local Authority does not directly commission childhood vaccination programmes although is responsible for promoting uptake. Infant/early childhood vaccinations are provided through Primary Care, and the school-based immunisations are provided by community services commissioned by NHS England.
- 1.7. The Healthy Child Programme (HCP) commissioned by Public Health have the promotion of childhood vaccinations as a core part of their service specification.

## 2. Context

- 2.1 Concerns have been raised that the Coronavirus pandemic may have caused significant reduction in childhood vaccinations uptake. It is thought that parental anxiety relating to attending a surgery or clinic setting, along with perceived access and delivery disruptions may be a barrier for parents getting their child vaccinated. There are also concerns that

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<sup>1</sup> <https://www.abpi.org.uk/new-medicines/vaccines/economic-and-social-impact-of-vaccines/>

<sup>2</sup>

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/899423/PHE\\_Complete\\_Immunisation\\_Schedule\\_Jun2020\\_05.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/899423/PHE_Complete_Immunisation_Schedule_Jun2020_05.pdf)

parents will not know whether a fever in their child following immunisation is due to their immunisation or to COVID-19.

- 2.2 The UK Government's guidance throughout the pandemic is that the childhood vaccination schedule should continue during this time<sup>3</sup>. The World Health Organisation (WHO) have warned that disruption to vaccination programmes during a pandemic can result in an increase in vaccine preventable diseases, stressing the importance of immunising children<sup>4</sup>.

### 3. Infant and Early Childhood Immunisations

- 3.1 A previous paper to Health Committee on 17<sup>th</sup> September 2020 summarised the 2020/21 Q1 data (April-June 2020) and this paper provides an update.
- 3.2 The latest publicly available data is from Q2 2020/21 (July - September 2020)<sup>[1]</sup>. Please note that this is a provisional data set.

**Table 1 - Vaccination coverage at 12 months (July - September 2020, children born Jul to Sept 2019)**

Area	DTaP/IPV/Hib 3doses (%)	PCV 2doses (%)	Rotavirus (%)	MenB (%)
Cambridgeshire	95.3%	95.3%	92.5%	94.7%
Peterborough	88%	89.1%	87.6%	88.9%
East of England	93.2%	94%	92%	93.8%
England	92.1%	92.4%	90.4%	92.5%

**Table 2 - Vaccination coverage at 24 months (July - September 2020, children born July - Sept 2018)**

Area	DTaP/IPV/Hib 3doses (%)	PCV 2doses (%)	Hib/MenC booster (%)	MMR1st dose (%)	MenB booster (%)
Cambridgeshire	96.1%	94.2%	94.2%	94.1%	93.4%
Peterborough	93.1%	88.6%	89.5%	89.3%	88.3%
East of England	94.3%	92.8%	93.1%	92.7%	91.5%
England	93.9%	90.6%	90.8%	90.7%	89.5%

**Table 3 - Vaccination coverage at 5 years (July - September 2020, children born July - Sept 2015)**

Area	DTaP/IPV/Hib 3doses (%)	MMR 1st dose (%)	MMR 2nd dose (%)	DTaP/IPV booster (%)	Hib/MenC (%)
Cambridgeshire	96.5%	96.2%	91.4%	90.5%	92.9%
Peterborough	94.1%	92.2%	83.6%	82.4%	89.1%
East of England	96.4%	95.7%	90.3%	89.4%	93.2%
England	95.6%	94.4%	86.7%	85.4%	92.7%

**Key:**

DTaP/IPV/Hib/HepB or hexavalent vaccine - combined diphtheria, tetanus, acellular pertussis, injectable polio, Haemophilus influenzae type b, hepatitis B vaccine  
 PCV - pneumococcal conjugate vaccine, MenB - Meningococcal B vaccine  
 MMR- combined measles, mumps and rubella vaccine

<sup>[1]</sup> [Cover of vaccination evaluated rapidly \(COVER\) programme 2020 to 2021: quarterly data - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/cover-of-vaccination-evaluated-rapidly-cover-programme-2020-to-2021-quarterly-data)

<sup>3</sup> <https://www.gov.uk/government/publications/vaccine-update-issue-306-march-2020>

<sup>4</sup> <https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/technical-guidance/2020/guidance-on-routine-immunization-services-during-covid-19-pandemic-in-the-who-european-region,-20-march-2020>

- 3.3 Whilst there are caveats with this data in so far it is has not gone through the quality assurance and validation process and therefore has been published provisionally, early indications into coverage during the first part of the Covid-19 pandemic suggests that uptake has remained stable and comparable to previous quarters, lending itself to the conclusion that this has not impacted by any disruption as a result of the pandemic. The data has in fact suggested that there has been marginal improvements in terms of early childhood vaccination coverage in Cambridgeshire during this period, with coverage rates continuing to exceed the average for both the East of England and England.
- 3.4 Updated guidance for primary care produced on the 11<sup>th</sup> January 2021 continues to stress the importance of continuing to deliver the childhood vaccinations, new baby checks and postal checks. These are placed in the Green 'High Priority' category that are services that GP's should 'Aim to continue regardless of the prevalence of COVID-19 for the duration of the pandemic.'<sup>5</sup> The local CCG have also reported that childhood vaccinations have continued to be offered by primary care across the county during this period.

## 4. School Aged Children

- 4.1 When the lockdown started in March 2020 all CSAIS (Community and School Aged immunisation service) programmes were paused, and the teams were re-deployed to help pre-school and baby immunisations in primary care, and BCGs for acute trusts. From May half term this work stopped, and the priority turned to catching up on outstanding school immunisations.
- 4.2 From June 2020 a variety of community clinics were held each day, including during the school holidays, and weekends. In September the service was able to go back into secondary schools and the priority was delivering the outstanding Meningococcal Vaccine (Men ACWY) and teenage booster vaccinations (Td/IPV- Tetanus, Polio, Diphtheria). This continued using all available staff (including bank staff), until the start of the flu programme (advice from NHS England was to prioritise flu vaccination due to the more immediate risks associated with winter flu).
- 4.3 In January 2021, the service had planned to prioritise outstanding Men ACWY and teenage boosters, before commencing on other programmes. However, due to the current lockdown these school-based sessions were unable to start. Instead, daily community clinics have been held in each area with the priority being on outstanding Men ACWY, teenage boosters, and 1st dose Human Papilloma Virus Vaccine (HPV) from 2020.
- 4.4 As can be seen in Table 4, priority has been given to the eldest children as the service continues to take every opportunity to catch up on school vaccination clinics that have needed to be cancelled. When more is known about full school re-opening a full catch up plan will be developed.

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<sup>5</sup> [RCGP BMA-COVID workload prioritisation 5112020.ashx](#)

**Table 4 – Cambridgeshire school-aged vaccination update January 2021**

HPV dose 1 - Girls				HPV dose 1- Boys		
School year	HPV1	Cohort	%	HPV1	Cohort	%
8	63	3143	<b>2.0%</b>	95	3315	<b>2.9%</b>
9	2515	2880	<b>87.3%</b>	2412	3179	<b>75.9%</b>
10	2937	2937	<b>100.0%</b>			
Total	5515	8960	<b>61.6%</b>	2507	6494	<b>38.6%</b>
HPV dose 2– Girls				HPV dose 2– Boys		
School year	HPV2	Cohort	%	HPV2	Cohort	%
9	16	2880	<b>0.6%</b>	20	3179	<b>0.6%</b>
10	2676	2933	<b>91.2%</b>			
Total	2692	5813	<b>46.3%</b>			
Men ACWY - boys and girls				Td/IPV - boys and girls		
School year	MenACWY	Cohort	%	TdIPV	Cohort	%
9	44	6059	<b>0.7%</b>	107	6059	<b>1.8%</b>
10	4289	6095	<b>70.4%</b>	4312	6095	<b>70.7%</b>
Total	4333	12154	<b>35.7%</b>	4419	12154	<b>36.4%</b>

Key: HPV: Human Papilloma Virus; MenACWY: Meningococcal vaccine; Td/IPV: Tetanus, Diphtheria, Polio vaccine

## 5. Seasonal Flu Vaccination Programme

- 5.1 The cohort of children eligible for the seasonal flu vaccination was extended this year to include year 7 children in addition to all primary school children (from reception to year 6). This meant that the number of children across Cambridgeshire eligible for the vaccine grew by over seven thousand, and delivery sessions needed to be put in in the county's secondary schools on top of the usual primary school sessions.
- 5.2 Despite these challenges, coupled with covid-related disruptions in some year groups, the CSAIS team were able to vaccinate a significantly higher percentage of children than in the previous year (details in table 2 below).

**Table 5 – School aged Influenza vaccination take up- 2020/21 and 2019/20**

Cambridgeshire	Full cohort	Completed	%
<b>Flu Season 2020/21</b>	61,248	45,183	73.8%
<b>Flu Season 2019/20</b>	53,681	34,608	64.5%

- 5.3 Flu vaccination for children aged 2 and 3 years of age is delivered via primary care. The below table gives the interim data for this cohort which has currently not gone through the quality assurance and validation process. However, this provisional data does show a rise in vaccination rates for both 2 and 3 year old's during this vaccination year compared to take up rates in 2019/20.

Table 6 – Interim report for 2 and 3 year old flu vaccinations

East of England- Flu Vaccination for 2 and 3 year olds	Aged 2		Aged 3	
	% 20/21	% 19/20	% 20/21	% 19/20
2020/21, month Dec-20 extract date (28/01/2021)				
England	54.1	37	56.5	36.9
East of England	57.4	43.8	60.4	42.7
NHS CAMBRIDGESHIRE AND PETERBOROUGH CCG	57.5	43.1	59.7	43.3

## 6. Evidence Review on Improving Childhood Immunisation Uptake

### 6.1a Trusted sources of information

- Research suggests only about 1-2% of parents refuse all vaccinations, and parents/carers generally have confidence in national immunisation programmes<sup>2,3</sup>
- Attitudes to vaccines are largely positive; 91% of parents agree that vaccines are important for their children’s health<sup>4</sup>
- Regarding anti-vaccine groups/social media – the Royal College of Paediatrics and Child Health (RCPCH) states that there is no compelling evidence to suggest anti-vaccine groups/social media have had a major impact on parent/carer confidence<sup>3</sup>. However, a study published by the Royal Society for Public Health found that two in five parents (41%) report being exposed to negative messages about vaccines on social media. This increased to as many as one in two (50%) among parents with children under five years of age<sup>4</sup>. It is often the case that there are more negative messages around vaccinations on social media compared to positive messages. This is a potential concern as frequent repetition of negative messages can be mistaken as the truth, a phenomenon known as the ‘Illusory Truth Effect’<sup>5</sup>. Studies investigating the impact of these negative messages on social media have found that these messages receive more attention, longer viewing time and spread more rapidly compared to positive messages<sup>13,14</sup>
- Whilst there is a concern over the impact of social media; parents **identify scientific experts (94%) and doctors/nurses (92%) as valued sources of information.**<sup>4</sup>
- **Health professionals and the NHS were seen as the most trusted source of advice on immunisation** (90% agreed/strongly agreed with each) in a 2018 study published in the British Journal of General Practice (BJGP)<sup>2</sup>
- Hence, **health professionals are key in communicating information about vaccination, with their trusted advice being key factors in a parent/carer decision to vaccinate.**
- **This high level of trust is important in ensuring high uptake of vaccinations**<sup>4</sup>

### 6.1b How could we use this evidence to improve uptake?

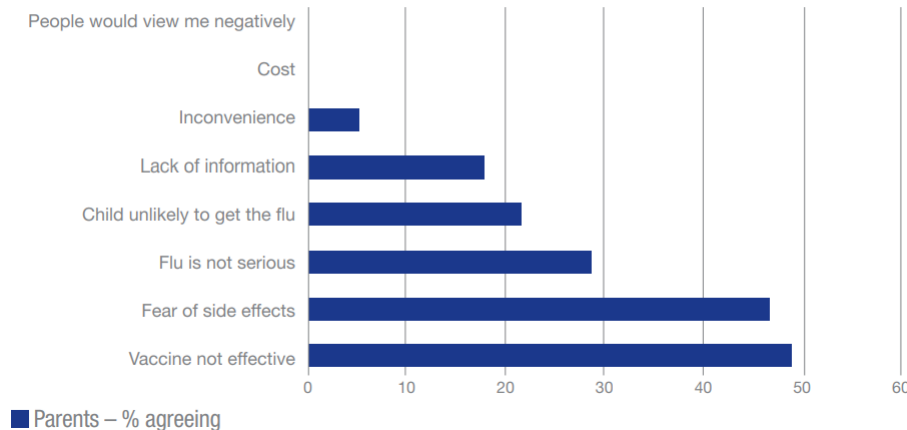
- **Tackling negative misconceptions:** promote positive social media messages to provide accurate and factual information from trusted sources. Social media platforms should be encouraged to take responsibility with efforts to limit misinformation online.<sup>4</sup>
  - *Example: Egg allergy is NOT a contraindication to MMR vaccination*<sup>6</sup>
- Education on vaccines in schools (PSHE curriculum).<sup>4</sup>
- The high level of trust placed in health professionals should play a vital role in ensuring the uptake of vaccinations.
- Encouraging trusted professionals to **opportunistically advise about vaccination** – Making Every Contact Count (MECC)<sup>7</sup>. Repetition, repetition, repetition!
  - Take every opportunity to enquire about vaccination history, counsel on the importance of vaccination, direct to immunisation services for routine or catch-up immunisations, identifying those children/young people at risk of low vaccine uptake.
- Where possible, offering vaccinations during consultations opportunistically.
- Immunisation eLearning - from eLearning for Healthcare.<sup>8</sup>
- GPs- 'Vaccines in Practice' eLearning (developed by the RCPCH aiming to develop trainees' skills in communicating the benefits of vaccination).<sup>9</sup>
- Early points of contact to start the discussion e.g. midwife contacts (*include childhood immunisation discussion as part of the postnatal discharge conversation*)/health visitor/school nurse.
- National Childbirth Trust (NCT) had 95,662 parents attending in 2018. NCT courses do not mention vaccination, *could this be incorporated?*
- A targeted approach is required to reach ethnic minorities/areas of social deprivation as we know the vaccination rates are lower within these groups.

## 6.2a Barriers to childhood vaccinations

- **Fear of side effects of vaccines** is often the primary reason for choosing not to vaccinate (except the nasal flu vaccination – most common reason is doubt over effectiveness).<sup>4</sup>
- Childhood influenza vaccination:
  - Main barriers to uptake are **perceptions of effectiveness and safety**.
  - This is not completely unfounded as effectiveness does vary year on year. In 2017/18, the overall end-of-season vaccine effectiveness for all ages was only 15%. For 2-17 year olds receiving the vaccine in 2017/18, the effectiveness was much higher - estimated at 90.3% against H1N1, and 60.8% against influenza B50
  - Lowest uptakes of flu vaccines in children are in the most deprived areas or areas with larger minority ethnic populations. This could be a target for improving immunisation rates.<sup>12</sup>

## Graph 1 – reasons for not vaccinating child against flu<sup>4</sup>

Reasons for not vaccinating child against flu



- Difficulty travelling to the clinic (location of clinics) – 19% in survey.<sup>4</sup>
- Difficulty arranging childcare for other children during the vaccination appointment (29% in survey) – *Child's birth order is inversely related to vaccination status.*<sup>11</sup>
- Not receiving reminders about appointments (17% in survey).
- Lack of time (e.g. parents who have returned to work).
- Timing and availability of appointments (access to appointments is especially important when tackling inequalities in uptake e.g. related to socioeconomic status/ethnicity (46-49% in survey<sup>4</sup>).

### 6.2b How can we use this evidence to improve vaccination uptake?

- Clarity on side effects and what to expect early on in the discussion surrounding vaccinations.
- Social media messages targeting information around side effects (as we know this is often the primary reason why parents decide not to vaccinate).
- Presenting flu data on effectiveness and targeting deprived areas or areas with larger minority ethnic populations.
- Practical steps taken by healthcare providers to facilitate vaccination can influence vaccine uptake:
  - Multiple locations; high street pop-ups; utilising the wider public health workforce<sup>4</sup>; choice of timed appointment vs drop in sessions; weekend appointments.
  - Reminders – telephone call/text message
    - Call-recall systems have been shown to increase uptake of vaccines and form an essential part of immunisation programmes<sup>9</sup>
  - Targeted approach - *identifying locations/populations with low vaccination rates*
    - ? Home visits to vaccinate?
    - Personalised approach – telephone call



## 7. Ongoing Promotion of Immunisation

- 7.1 The Healthy Child Programme has continued to promote messages via social media on the importance of immunisations and these are reiterated during mandated contacts. They have amended their caseload database recording system to include a 'quick access' function to enable staff to rapidly view immunisations history prior to a contact - it is anticipated that this will help support MECC (making every contact count) across all contacts.
- 7.2 Public Health officers worked with colleagues in the CSAIS team and the local authority communications team to promote the importance of giving parental consent for vaccinations. This campaign, alongside other local and national messages, were shared widely across the Best Start in Life partnership.

## 8. Alignment with Corporate Priorities

### 8.1 A good quality of life for everyone

The report above sets out the implications for this priority in sections 1 and 2.

### 8.2 Thriving places for people to live

There are no significant implications for this priority.

### 8.3 The best start for Cambridgeshire's children

The report above sets out the implications for this priority in sections 1, 2 and 4

### 8.4 Net zero carbon emissions for Cambridgeshire by 2050

There are no significant implications for this priority.

## 9. Significant Implications

### 9.1 Resource Implications

There are no significant implications within this category.

### 9.2 Procurement/Contractual/Council Contract Procedure Rules Implications

There are no significant implications within this category.

### 9.3 Statutory, Legal and Risk Implications

There are no significant implications within this category.

#### 9.4 Equality and Diversity Implications

Section 6 sets out details of significant implications identified by officers.

#### 9.5 Engagement and Communications Implications

Section 6 set out details of significant implications identified by officers

#### 9.6 Localism and Local Member Involvement

There are no significant implications within this category.

#### 9.7 Public Health Implications

The report above sets out details of significant implications in sections 1 and 2

### 10. Source Documents

#### 10.1 Source documents:

[UK Government guidance relation to vaccinations during Covid-19 March 2020](#)

[Quarter 4 2019/2020 COVER programme data – Health Protection Report](#)

[Quarter 4 2019/2020 COVER programme data – Government Vaccination Coverage Statistics](#)

## References

1. Quality Watch, "Vaccination coverage for children and mothers," 2018. [Online]. Available: <http://www.qualitywatch.org.uk/indicator/population-vaccination-coverage> [Accessed 09 02 2021]
2. Letley, L. & Yarwood, J. 2018. Changing attitudes to childhood immunisations in English parents, *British Journal of General Practice*.
3. Royal College of Paediatrics and Child Health (2020) *State of Child Health*. London: RCPCH. [Available at: [stateofchildhealth.rcpch.ac.uk](http://stateofchildhealth.rcpch.ac.uk)]
4. Royal Society for Public Health. 2019. Moving the needle: Promoting vaccination uptake across the life course. Royal Society for Public Health.
5. L. Fazio, N. Brashier, B. Payne and E. Marsh, "Knowledge Does Not Protect Against Illusory Truth," *Journal of Experimental Psychology: General*, vol. 144, no. 5, pp. 993- 1002, 2015
6. Public Health England. 2019. Measles: the green book, chapter 21. Available from: GOV.UK.
7. NHS, "An Implementation Guide and Toolkit for Making Every Contact Count," NHS, East Midlands, 2014.
8. Health Education England. E-Learning for Healthcare: Immunisation. Available online: [e-LFH.ORG](http://e-LFH.ORG).
9. Royal College of Paediatrics and Child Health. Vaccines in practice – online learning. Available from: RCPCH.
10. Forster, A.S. et al. 2016. A qualitative systematic review of factors influencing parents' vaccination decision-making in the United Kingdom. *SSM – Population Health*.
11. Public Health England, "Tailoring immunisation programmes: Charedi community, North London," PHE publications, London, 2018.
12. Public Health England, "Seasonal influenza vaccine uptake in children of primary school age: Winter season 2017 to 2018," PHE Publications, London, 2018
13. J. Katsyri, T. Kinnunen, K. Kusumoto, P. Oittinen and N. Ravaja, "Negativity bias in media multitasking: The effects of negative social media messages on attention to television news broadcasts," *PLoS One*, vol. 11, no. 5, 2016.
14. S. Tsugawa and H. Ohsaki, "Negative messages spread rapidly and widely on social media," *ACM*, pp. 151-160, 2015.