

## IMMUNISATION UPTAKE IN CAMBRIDGESHIRE ACTION PLAN

**Authors:** Colleen Greenwood

**Report:** Cambridgeshire Immunisation Task and Finish Group

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### 1. Introduction

1.1. Following concern about low uptake for some vaccination programmes in Cambridgeshire, Cambridgeshire County Council, Public Health England and NHS England set up a Steering Task and Finish Group. A paper was produced by Dr Karen Lake which outlined the findings of the Immunisation subgroup. Data was presented on Immunisation uptake in Cambridgeshire, specifically for childhood primary vaccinations and the prenatal pertussis programme for pregnant women. The paper described the background, methodology, data findings, key themes identified as barriers to uptakes, and discussion. The paper summarised the findings of the group and makes recommendations. The paper is attached.



Final report Cambs  
immunisation 2016.doc

### 2. Summary of report

2.1. The report showed that Cambridgeshire had a lower uptake than the average in East Anglia, and lower uptakes than statistical neighbouring local authorities. The pre-school booster age 5years was the lowest uptake out of all the childhood immunisations. There was significant variation in uptakes amongst Cambridgeshire practices, some practices were significant outliers.



2.2. Data was gathered from a variety of sources, to identify barriers to uptake and potential solutions, which showed some key themes emerging: Access, parent health beliefs and data quality.

2.3. Possible solutions were discussed and key recommendations are detailed below.

### 3. Key Recommendations

Themes	Recommendations
<b>Improving Access to immunisations</b>	
1.Access	<ol style="list-style-type: none"> <li>1. Ensure CHIS have a robust process/procedure in place to lift suspensions on child immunisation non attendees regularly</li> <li>1. Reduce waiting list, CHRD contact practices with waiting list to arrange increase in clinic capacity</li> <li>2. Practices to consider opportunistic appointments for frequent non attendees,</li> <li>3. Practices to consider holding clinics out of hours</li> <li>4. Local Maternity providers to re consider offering prenatal pertussis vaccination programme</li> <li>5. Practices [that arrange own appointments] to send text reminder to parents before appointment</li> <li>6. CHIS [that arrange appointments] to send text reminders to parents</li> </ol>
<b>Increasing awareness and knowledge of the benefits of vaccinations</b>	
1. Health beliefs and knowledge	8. Local Authority Health Promotion campaign that is sustainable and ongoing
<b>Improving data quality</b>	
5.Data Quality	9. Practices to ensure accurate GP practice list, deduct Ghost patient

	10. Practices to ensure accurate data base of eligible pregnant women
<b>Evaluation</b>	
6. Evaluation and Review post implementation	11. Review immunisation uptakes in 12 months following implementation of key recommendations

#### 4. Action plan

4.1 An action plan was devised from the key recommendations and is attached as appendix 1. This has been updated regularly as a separate document whilst work is ongoing.

#### 5. Progress to date

5.1 To date the following actions have been completed and the outcomes are as follows:

**Suspensions lists.** The current CHIS provider sends two appointment letters to the family for the child to attend for immunisations. If the child DNA's twice the child is suspended and is added to the GP suspension list. The GP practice is sent a list every week of their children suspended for them to chase and ensure the details are correct, the family are still in the area and have not moved and if still registered and active, to encourage an appointment for immunisation. The GP then notifies CHIS if they wish the suspension to be taken off or if the vaccination has been given.

**Reduce waiting lists.** The CHIS was put out to tender last year by NHSE and the tender was won by Provide, a Community Interest Company. Since Provide took over we have been working together to reduce the waiting lists at surgeries within Cambridgeshire. When Provide took over in April there were 2170 children in Cambridge on the waiting list. There are now 1300. We are currently attempting to address long waiting lists in 3 GP surgeries in Cambridgeshire. Provide are actively engaging with surgeries to reduce this waiting list further.



**Work with practices.** The screening and immunisation team identified the bottom performing practices within Cambridgeshire based on uptake of MMR2 and preschool booster. This amounted to 16 practices. All 16 practices were contacted with an individual report highlighting their uptake for the childhood programmes, flu, shingles and pertussis vaccination coverage. This report highlighted their uptake compared to the CCG average (or the England average for the COVER data) and provided a gap analysis, showing how many more patients would be needed to be vaccinated to achieve the set targets.

All practices were asked to engage with the screening and immunisation team to work together to look at improving uptake. Seven practices so far have requested a visit from the Screening and immunisation coordinator to look at their particular issues and possible ways to work around these. To date 3 visits have been carried out. The screening and immunisation team will then put together a document which will outline the challenges faced by the practices and any common themes.

These visits have concentrated on looking at when clinics are held, offering out of hours vaccination clinics and utilising opportunistic vaccination opportunities.

**Working with acute Trusts.** The screening and immunisation manager and coordinator have visited both Heads of Midwifery at the Rosie and Hinchingsbrooke hospitals to discuss offering flu and pertussis vaccination to pregnant women within the maternity units. The Rosie have been making progress on this and have now requested we train their midwives in order for this to happen. They have not yet started this but are actively engaged and we believe this will commence soon. Discussions with Hinchingsbrooke took place before the merger with Peterborough and Stamford Hospitals and that merger has delayed us moving this any further forward. As the vaccination is offered in Peterborough hospital in the antenatal clinic to women attending for their anomaly scan, we have asked for an equitable service to be considered in Hinchingsbrooke Hospital. We are waiting to hear back from the Head of Midwifery for NWAFT regarding this.

**GP & Child Health record services to ensure accurate patient/child contact details.** The new CHIS provider has asked all non SystmOne practices to provide



them with details of all the under 5 children registered with them to ensure demographic details are correct and that all vaccinations given to under 5's are recorded correctly. CHIS are sending weekly suspension lists of children who have DNA'd twice for the GP to check that they are still registered with the practice and have not moved and to inform CHIS if the child has been vaccinated.

**GP's ensure accurate database for pregnant women.** Some of the improvement seen in the uptake of prenatal pertussis has been because of improvements in the data collections. GP surgeries are reminded to ensure that pregnant women are coded correctly and removed from coding for pregnancy if they miscarry or terminate their pregnancy.

## 6. Concluding report

5.1 A review of immunisation uptake will take place once all the actions and key recommendations have been implemented, comparing current uptake to that identified in the initial paper and this report will be presented to the Cambridgeshire and Peterborough Health Protection Steering Group. Work with maternity units to improve knowledge around the prenatal pertussis and pregnant women's flu vaccination programme has been ongoing for over a year and work with individual practices began in mid-2017, so improvements in uptake for the childhood immunisation programme may not be seen until Q4 2017-18. However, improvements in data quality and correction of data should show before this. The current data is presented below in Appendix 2. This shows an improvement being seen already in the uptake of childhood immunisations particularly in MMR1.



**1. Action Plan- Improving Immunisation Uptake in Cambridgeshire- Jan 2017**  
**Updated September 2017**

No.	Recommendation	Action Required	Responsibility (whom – can be either a department, service or person)	Target Date (when by)	Progress/ Comments	Completed (Yes/No)
1	Removing potential barriers for parents/children accessing Immunisation services	<p>1. Ensure Child Health Information System (CHIS) have a robust process/procedure in place to lift suspensions on child immunisations for non-attendees</p> <p>2. Reduce waiting lists- Child health records departments to contact practices with waiting lists to arrange increase in capacity or to contact Screening and</p>	<p>CHIS- Provide</p> <p>CHIS- Provide Susan Frost Screening and Immunisation Coordinator</p>	30 <sup>th</sup> Sept 17	<p>Identified as an SI. Processes put in place to lift suspensions</p> <p><b>CHIS taken over By Provide on 1<sup>st</sup> April 2017. Currently concentrating on routine invitations but waiting lists patients identified and will be actioned in due course CHIS send reminder of</b></p>	<p>Yes - completed</p> <p>Commenced and ongoing</p>



		immunisation team to contact practices			<b><i>waiting times on clinic lists</i></b>	
		3. Practices to consider holding clinics out of school hours	Individual practices Screening and Immunisation team (SIT)	30 <sup>th</sup> Sept 17	<b><i>Local Imms coordinator [SIC] to contact practices directly</i></b>	<b>Commenced, ongoing</b>
		4. Practices to consider opportunistic appointments for non-attendees	Individual practices Screening and Immunisation team	30 <sup>th</sup> Sept 17	<b><i>SIT to identify individual practices with lower uptake and offer supportive visit to encourage practices to adopt initiatives that may improve uptake</i></b>	
		5. Acute Trusts who provide Maternity services to consider offering pertussis vaccinations	NHS England Colleen Greenwood	30 <sup>th</sup> APRIL 2017	<b><i>Rosie and Hinchbrook hospitals visited and HoM's engaged with offering flu and pertussis vaccination. Work ongoing. Rosie hospital have engaged and training of their</i></b>	<b>Commenced ongoing</b>



		6. GP's & CHIS to send text reminders to parents for appt.	GP/CHIS	30 <sup>th</sup> Sept 17	<b>staff is about to commence.</b>  <b>Current CHIS provider changed in April. Waiting for systems to embed before changes can be implemented.</b>	<b>Not yet started</b>
2	Improving Parental Knowledge regarding health beliefs	Sustainable Local Authority Health Promotion campaign	Local authority	31 <sup>st</sup> Dec 2017		<b>NO</b>
3	Improving Data Quality	1. GP & Child Health record services to ensure accurate patient/child contact details  2. GP's to deduct Ghost patient(s)  3. GP's ensure accurate database for pregnant women	GP Practices/CHIS/Health Visitors  GP practices  GP practices	30 <sup>th</sup> SEPT 2017  30 <sup>th</sup> SEPT 2017  30 <sup>th</sup> SEPT 2017	<b>CHIS have sent letters to practices to ask for information to update CHIS records to ensure accurate records held.</b>  <b>Work has begun on this for ImmForm collection for pertussis collection and data much improved</b>	<b>Commenced and ongoing</b>  <b>NO</b>  <b>Commenced and ongoing</b>





Public Health  
England



4	Evaluate & review data following implementation of recommendations	Review Immunisation uptakes after a 12 month period	Screening and Immunisation teams	31 <sup>st</sup> January 2018		NO



COVER data April 2015- March 2017

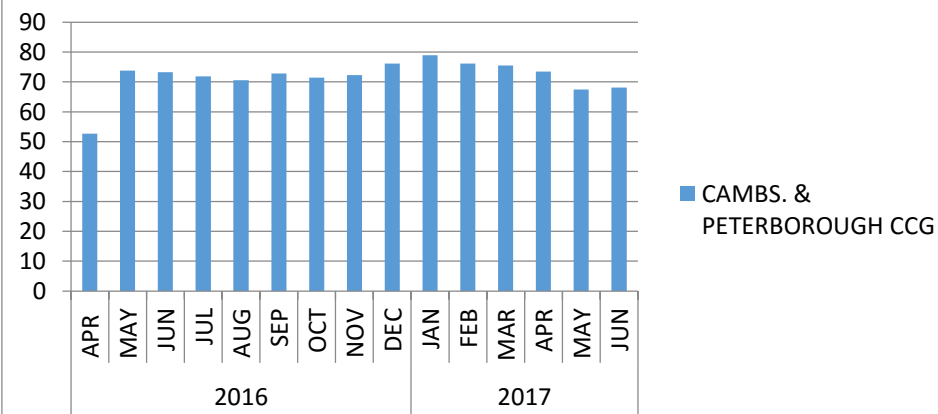
Source: <https://www.gov.uk/government/statistics/cover-of-vaccination-evaluated-rapidly>

Highlighted cells represent highest uptake achieved over 8 quarters.

			COVER Data 2015-16				COVER Data 2016-2017			
Cambridge Local Authority			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Age	Immunisations	Target								
1	DTaP/IPV/Hib	95.00%	93.1	94.7	93.6	94.2	93.8	94.1	94.2	94.2
	Pneumococcal	95.00%	92.9	94.4	93.7	94.6	94.3	94.3	94.3	95.2
	Rotavirus	95.00%			87.1	88.5	87.6	89.5	87.5	89.1
	Meningitis B	95.00%						93.4	93.0	94.6
2	DTaP/IPV/Hib	95.00%	95.6	93.3	93.6	93.5	93.7	95.4	94.8	95.6
	HIB/Meningitis C	95.00%	91.9	89.4	90.2	91.0	89.6	92.0	92.7	93.0
	Pneumococcal	95.00%	91.3	90.0	90.5	90.7	89.9	92.0	92.9	93.0
	MMR Vaccination	95.00%	91.7	89.1	90.2	91.0	89.4	91.6	92.9	92.8
5	DTaP/IPV/Hib	95.00%	94.7	93.8	94.1	93.4	93.1	93.7	93.9	95.0
	DTaP/IPV booster	95.00%	85.7	85.4	86.0	84.5	82.6	82.1	84.1	86.4
	HiB/Men C booster	95.00%	91.3	90.0	90.6	89.5	87.6	88.6	90.2	92.1
	MMR 1 <sup>st</sup> dose	95.00%	92.3	90.9	91.4	93.2	92.4	93.7	93.5	95.2
	MMR 2 <sup>nd</sup> dose	95.00%	89.8	84.7	84.8	84.9	82.7	83.8	85.1	88.8



### Cambridge and Peterborough CCG Prenatal Pertussis uptake



## Appendix 3

### Glossary

CHIS	Child Health Information Service - records child health data on routine health checks and immunisations and sends invitation to attend for routine health checks and immunisations
CHRD	Child Health Records Department
DNA	Did not attend, The acronym is often used as a verb in health discussions e.g. DNA'd
NHSE	NHS England
NWAFT	North West Anglia Foundation Trust. Formed by the merger of the previous Peterborough and Stamford Trust and Hinchingsbrooke Hospital
PHE	Public Health England
SystemOne	A clinical computer system supplied by TPP (The Phoenix Partnership) that includes many modules including GP and child health systems

## **Appendix 2: A report of an intervention project to increase Influenza**

### **Vaccination uptake among pregnant women in Cambridgeshire in the 2016/17 'Flu season**

#### **Introduction**

In 2016, the Cambridgeshire Health Committee made funds available to Public Health to improve vaccination uptake.

In consultation with NHSE and PHE, it was agreed that the local authority would focus on flu vaccination uptake in pregnant women. The agreed intervention was a personalised GP invitation from practices to pregnant women on their list and a follow up call, over one flu season (1 September 2016 to 31 January 2017) to improve the uptake of influenza vaccination in pregnant women. The project aimed at achieving three outcomes:-

1. To increase 2016 / 2017 influenza vaccination uptake in pregnant women by at least 15% compared to 2015/16
2. To increase odds for 2016 / 2017 influenza vaccination uptake in pregnant women
3. To achieve at least the same uptake as the highest performing statistical neighbour [local authority]<sup>1</sup>.

Financial reimbursement, calculated using on 31st January 2016 Immform data, was determined to be £2 per pregnant woman registered for practices in Group 2 and £4 per pregnant woman registered for practices in Group 3. The additional reimbursement for Group 3 was to cover resources required to make the follow up call. Cambridgeshire County Council expressed the right to reduce reimbursement for this project if there was more than 10% increase in the target population in 2016 / 17. However, the council committed to paying minimum of £1.50 per pregnant woman for Group 2 practices and £3 per pregnant woman registered for Group 3 practices. Additionally each participating practice was offered a one-off £100 to cover set up

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<sup>1</sup> The statistical neighbours for Cambridgeshire in order of proximity are Oxfordshire, Warwickshire, Gloucestershire, Leicestershire, Suffolk, Worcestershire, Buckinghamshire, Hampshire, Northamptonshire, Somerset, Staffordshire, Essex, North Yorkshire, Hertfordshire and West Sussex.

costs. Theoretically, a total sum of £16,000 was allocated, however, only around £6000 was claimed by the practices.

There were 7,231 pregnant women in the 75 practices (4, 131 in control group and 3,094 in one of the two intervention groups). This report provides an evaluation of the project.

## **Background**

Influenza infection in pregnant women can lead to serious complications for the mother and unborn infant. Influenza infection can lead to still birth, to the baby being small for gestational age, and in some cases even maternal and infant death. In Cambridgeshire, in 2015-2016 only 33.1% of pregnant women had the influenza vaccine.

## **Method**

All GP practices in Cambridgeshire (76 practices) were invited to participate in the project via NHS gateway. Based on other areas of public health initiatives, participation response was expected from 35%-40% of the practices invited. The practices self selected to one of the three groups below:-

Group 1) the practice undertook their routine intervention (control). Routine intervention was defined as their current practice and varied between practices ranging from an email / letter on the practice letterhead, to promotion of flu vaccine through leaflets and posters, and opportunistic or planned flu clinics.

Group 2) the practice sent personalised invitations by e mail, text message or letter, with a link to the Department of Health leaflet '*Pregnancy: How to help protect you and your baby*' included in the electronic communication and a hard copy of the leaflet enclosed with the letters (intervention); .

Group 3) the practice sent personalised invitations by e mail, text message or letter, with a link to the Department of Health leaflet and the practice nurse made a follow up contact by phone to the pregnant women (intervention).

A twofold analysis carried out at population level was 1) basic comparison of the odds of uptake between groups to test for association between intervention and uptake and 2) comparison of uptake before and after the intervention for each practice in the three groups to test the effectiveness of intervention on influenza vaccination uptake.

### **Evaluation**

Although the national target of 55% was not achieved, the project satisfactorily achieved the three objectives set out at the start. The intervention increased influenza vaccination uptake in pregnant women in 2016 / 2017 by more than 15% in intervention groups, improved the odds of uptake, and also achieved the highest uptake amongst statistical neighbours.

Results show very strong evidence that the odds of receiving the vaccine is 1.5 times higher among patients of practices delivering a personalised e-mail, text or letter followed up with a phone call compared with patients of practices delivering only their routine intervention.

The third objective of this intervention study was to achieve at least the same uptake as the highest performing statistical neighbour [local authority]. With just 33.1% uptake, Cambridgeshire was one of the lowest, if not the lowest performing local authority for uptake of influenza vaccination amongst pregnant women in the year 2015/2016.

The table below provides comparative figures for flu vaccination uptake by pregnant women in general practice for a number of local authority areas (statistical neighbours for Cambridgeshire) for the past two vaccination seasons. This comparison of the provisional data at local authority level shows an increase in uptake of flu vaccination amongst pregnant women in Cambridgeshire of 15.4% from 2015-16 uptake. The



data shows Cambridgeshire had the highest increase in the proportion of uptake between 2015/16 and 2016/17. The next highest increase amongst statistical neighbours is 6.8% in West Sussex.

Local Authority	2016/17	2015/16	change	Increase / decrease
Cambridgeshire	48.5	33.1	15.4	↑
Oxfordshire	52.7	49.6	3.1	↑
Warwickshire	49.4	46.0	3.4	↑
Gloucestershire	46.7	43.9	2.8	↑
Leicestershire	48.3	47.2	1.1	↑
Suffolk	52.3	47.2	5.1	↑
Worcestershire	47.2	45.6	1.6	↑
Buckinghamshire	45.0	43.0	2.0	↑
Hampshire	50.1	47.6	2.5	↑
Northamptonshire	39.5	37.4	2.1	↑
Somerset	43.8	42.5	1.3	↑
Staffordshire	48.7	44.0	4.7	↑
Essex	40.4	37.9	2.5	↑
North Yorkshire	54.0	49.4	4.6	↑
Hertfordshire	49.0	44.9	5.9	↑
West Sussex	46.2	40.8	6.8	↑
Peterborough (for information, not used for analysis in project)	39.1	28.1	11	↑

## Conclusion

If the intervention of endorsed letter or message and phone call is shown to be effective in improving influenza vaccine uptake, it can be a low cost strategy to improve the low vaccination uptake among pregnant women, which can be easily adopted in GP settings. This would also prove a cost-effective intervention, as increased influenza vaccination uptake would prevent unnecessary influenza-related



hospitalisation, excess morbidity and mortality among pregnant women and young infants. A superficial calculation from this study shows that 160 more women were vaccinated in Group 3 than was expected. The total spend for this group (theoretically, as many practices did not claim reimbursement) is £3,732 ( $933 * £4$ ), which means around £23 per extra individual vaccinated.

Due to time constraints this was not run as a Randomised Controlled Trial (RCT) and therefore, whilst interpreting results one should be mindful of selection bias. The findings cannot establish that the increase in uptake of vaccination was solely an effect of the personalised invitation letter and follow up call