

Introduction

1. The Health and Social Care Act 2012 created a new set of responsibilities for the delivery of public health services. In England, although the local leadership for improving and protecting the public's health sits with local government, the reforms provided specific roles for the National Health Service England (NHS England) and Public Health England (PHE) for the commissioning and system leadership of the national screening and immunisation programmes.
2. NHS England commission these services while specialist public health staff employed by PHE are embedded in NHS England public health commissioning teams to provide accountability and leadership for the commissioning of the programmes and to provide system leadership.
3. The section 7a agreement between the Department of Health (DH) and NHS England sets out the public health functions to be exercised by NHS England, and the partnership agreement between the NHS England and PHE.

Flu vaccination

4. Under the section 7a agreement, in 2016/17 NHS England was responsible for the commissioning of flu vaccination for the following groups:
 - all those aged 65 years or older;
 - all those aged six months or older in a clinical risk group as set out in the Green Book;
 - pregnant women;
 - children aged 2 to 7 years;
 - people living in long-stay residential care homes or other long-stay care facilities;
 - carers
5. Performance data for the first four groups are outlined below. Data are not readily available to support effective performance monitoring for the last two groups, principally due to the lack of any 'register' to enable identification of a denominator.

Those aged 65 and over

6. The World Health Organization (WHO) target for flu vaccination uptake in the 65 years and over age group is 75%. Over the last ten years, rates in England have been close to but slightly below this level. Whilst the principal focus of the national programme in England is the extension of the programme to children, it is essential to continue to strive to achieve the WHO ambition for uptake in those aged 65 and over.
7. This year (2016/17) in Stockton, uptake in those aged 65 and over was 72.1%, which is higher than the England rate (70.4%). While uptake in Stockton remains below the WHO target, this year saw a modest increase in uptake compared to 2015/16 (71.6%).
8. Flu vaccination for those aged 65 and over in 2016/17 was available through general practice and community pharmacies across Stockton.

Patients aged 2 to under 65 years in a defined clinical risk group

9. Individuals with certain conditions are at particular risk of becoming very unwell from flu and flu-related illness. The table shows how the relative risk varies considerably between the different groups, and highlights the need to increase uptake in those at highest risk of flu-related death.

Risk category	Age-adjusted relative risk of flu related death	Vaccine uptake 2014/15	Vaccine uptake 2015/16	Uptake ambition for 2016/17
Chronic liver disease	48.2	43.9%	42.5%	At least 55% in all of the groups, and maintaining higher rates where those have already been achieved.
Immunosuppression	47.3	55.4%	52.9%	
Chronic neurological disease	40.4	50.4%	49.0%	
Chronic renal disease	18.5	55.6%	53.5%	
Chronic heart disease	10.7	50.1%	48.6%	
Chronic respiratory disease	7.4	49.2%	47.4%	
Diabetes	5.8	68.1%	65.5%	
Pregnant women	7.0	44.1%	42.3%	
All at-risk	11.3	50.3%	45.1%	

10. In 2016/17 there was an overall uptake rate of 50.2% in Stockton for patients in clinical risk groups. This was slightly below the national ambition of 55% but markedly higher than both this year's England average (48.7%) and the rate achieved in Stockton in 2015/16 (42.5%).

11. Unpublished data show that there is marked variation in uptake rates among the different clinical risk groups. For example, rates are highest and above the 55% ambition in patients with diabetes and chronic kidney disease, while those with immunosuppression and chronic liver disease have some of the lowest uptake rates, despite having the highest risk of mortality from flu. While variation in uptake rates partly reflects smaller numbers of patients in some clinical risk groups, it is also partly due to the frequency and type of contact patients in different risk groups have with health services likely has an impact.
12. This information can be used to guide where we focus improvement activity going forward. For example, the most effective way for an individual to be immunised is where they already meet a health care professional. For some clinical risk groups this will be in secondary care settings, where developing a pilot for delivery of vaccination in that setting could be considered.
13. Flu vaccination for adults in clinical risk groups in 2016/17 was available through general practice and community pharmacies across Stockton. For those aged under 18, vaccination was available only via general practice.

Pregnant women

14. Pregnant women and their babies are at an increased risk from the complications of flu. Flu is the most frequent single cause of death in pregnancy. For this reason, all women who are or become pregnant during flu season are eligible for flu vaccination, regardless of stage of pregnancy.
15. In Stockton during 2016/17, an uptake rate of 47.7% was achieved, which exceeded both the England figure of 44.8% and the rate achieved in Stockton last year (45.1%), though fell short of reaching the ambition (55%).
16. Flu vaccination for pregnant women in 2016/17 was available through general practice and community pharmacies across Stockton.

2 year olds

17. Vaccinating children each year means that they are protected and that there is reduced transmission across all age groups, lessening levels of flu across the population.
18. An uptake ambition of 40-65% has been set for the childhood flu programme, based on evidence of vaccination rates required to interrupt transmission in the community. In Stockton, a rate of 45.4% was achieved in 2016/17, well within the targeted range and markedly higher than both the England average (38.9%) and the rate achieved in Stockton in 2015/16 (42.2%).
19. Flu vaccination for 2 year olds in 2016/17 was provided through general practice.

3 year olds

20. An uptake rate of 52.6% was achieved in 3 year olds across Stockton in 2016/17. This is well within the ambition range of 40-65% and is markedly higher than both the England average (41.5%) and the rate achieved in Stockton last year (45.9%).
21. Flu vaccination for 3 year olds in 2016/17 was provided through general practice.

4 year olds

22. The uptake rate achieved across Stockton for 4 year olds in 2016/17 (37.2%) fell short of the ambition range of 40-65%, with little improvement on 2015/16 rates (36.3%).
23. Poor levels of uptake in 4 year olds have been observed consistently across the country since the programme started, with the national uptake rate for 2016/17 resting at just 33.9%.
24. Flu vaccination for 4 year olds in 2016/17 was provided through general practice. From 2017/18, vaccination of 4 year olds will move to a school based model, which should be expected to result in a significant increase in rates.

Primary school aged children

25. In 2016/17, all children of appropriate age for school years 1, 2 and 3 were offered vaccination in the school setting (where children were educated out of school, vaccination was offered by the provider at a community clinic).
26. As in previous years, uptake rates in Stockton have been well within the ambition range of 40-65%. For 2016/17 the rates were as follows:
 - Year 1 56.1% (National 57.6%)
 - Year 2 54.4% (National 55.3%)
 - Year 3 53.8% (National 53.3%)

Health and social care workers

27. In addition to those groups for which NHS England has direct commissioning responsibility, local teams have an oversight role relating to vaccination of health and social care workers. It should be noted however that responsibility for providing vaccination to these staff groups rests with the employing organisation and is not funded through section 7a.
28. Data for healthcare workers in secondary care show that in 2016/17, uptake among staff at North Tees and Hartlepool NHS Foundation Trust was 58.6% which, whilst still well below the target of 75%, was a marked improvement against the previous year's uptake for the trust of 43.4%. Nationally, uptake this year was 63.0%.
29. Across the country, there has been a considerable increase in vaccination rates of healthcare workers in secondary care. It is likely that much of this increase is

attributable to a CQUIN incentive offered to trusts by CCGs. CQUIN thresholds and payments were arranged directly between CCGs and provider trusts, independent of NHS England locally.

30. There are very limited published data relating to healthcare workers in primary care, though the screening and immunisation team do monitor raw data which cannot be shared.
31. There are no data available to NHS England or PHE on vaccination rates for social care workers, though some local authorities collect their own data on funded voucher schemes, or similar.

Improvement activity

32. Throughout the 2016/17 flu season, the Screening & Immunisation Team have provided place-based reports to the local A&E delivery boards across Cumbria and north east. These groups focus on winter pressures in health services and bring together commissioners and providers to improve system resilience. As this was the first year of reporting, there will be a review of this process to identify any scope for improvement for the 2017/18 flu season.
33. The Seasonal flu and adult immunisation programme board has recently held a development session to review vaccination outcomes for Cumbria and north east and to identify priorities and possible interventions for 2017/18. The output from this event is currently being processed and will culminate in the production of a strategic action plan identifying actions for programme board members and wider partners across health and social care.

Pneumococcal vaccination

34. Under the section 7a agreement, NHS England is responsible for commissioning pneumococcal vaccination for three groups, defined below:
 - Routine childhood vaccination using pneumococcal conjugate vaccine which protects against 13 serotypes of *Streptococcus pneumoniae* (PCV13)
 - A selective programme offered to those in defined clinical risk groups
 - Routine vaccination of adults aged 65 and over using pneumococcal polysaccharide vaccine which protects against 23 serotypes (PPV23)

Childhood programme

35. The childhood programme (PCV13) is highly effective and has led to considerable reductions in invasive pneumococcal disease (IPD) caused by the serotypes included in the vaccine. This has been in the form of direct protection to the recipient of the vaccine and indirect protection to the wider population through reduced carriage.
36. Coverage rates for PCV13 are high, in the latest quarter for which data are available (Q2 2016-17), in Stockton 95.9% of children had received their first dose of PCV by 12 months and 94.6% had received their booster dose by 24 months of age. These rates are markedly higher than the England averages (93.1% and 91.4%, respectively) and exceed or are very close to the WHO recommendation of 95%.

Adult programme

37. There is less certainty surrounding the efficacy of PPV23 in reducing incidence of IPD in patients aged 65 and over, though there is evidence of individual level protection against the serotypes covered by the vaccine. Studies are ongoing to further assess PPV23 effectiveness, and duration of any protection.
38. Data on coverage of PPV23 in those aged 65 and over is published annually, with the latest available covering the year to 31 March 2016. These data show that, in Stockton, coverage among those aged 65 and over was 73.1%, compared to 70.1% nationally. The data additionally showed that many of those eligible for vaccination do not receive the vaccine in the first year that they become eligible but do so in subsequent years. As such, coverage increases in older age groups, with 85.4% of those aged 75 and over having been vaccinated in Stockton (compared to 82.1% nationally).
39. There are no published data on uptake of pneumococcal vaccination in clinical risk groups.

Improvement activity

40. It is important that high rates of vaccination are maintained in the childhood programme and this is routinely monitored by the Screening & Immunisation Team and the 0-19 immunisation Programme Board.
41. Flu season presents an opportunity to review pneumococcal vaccination status in clinical risk groups and those aged 65 and over, and providers are reminded to consider proactive checking of status and offer of vaccine at the same time as flu vaccination.

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