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Cumulative shingles vaccine coverage report to end of March 2019: England

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Key points

- this is the third quarterly shingles report of the fiscal year 2018/19 evaluating cumulative shingles vaccine coverage among those who became 70 or 78 years old between 1 April 2018 and 31 December 2018, assessed at the end of March 2019
- cumulative coverage at the end of March 2019 for cohorts first offered shingles vaccine prior to the fiscal year 2018-19 was highest among 75 year olds (75.7%) and lowest among 76 (46.1%) and 71 (47.4%) year olds
- cumulative vaccine coverage for all earlier routine cohorts (offered at 70 and now aged 72 to 75 years) continues to increase year on year through opportunistic vaccination
- this report also provides cumulative vaccine coverage for those who turned 70 or 78 from 1 April to 30 June 2018 (quarter 1) and from 1 July to 30 September 2018 (quarter 2), and the first estimate of vaccine coverage for those who turned 70 or 78 from 1 October 2018 and 31 December 2018 (quarter 3)
- cumulative vaccine coverage at the end of March 2019 among adults turning 70 and 78 years old during quarters 1, 2 & 3 (between 1 April 2018 and 31 December 2018) is 31.9% for both cohorts
- vaccine coverage for adults turning 70 and 78 years old during quarter 3 (1 October 2018 and 31 December 2018) show 22.2% and 22.8% vaccine coverage, respectively.
- the cumulative vaccine coverage estimate for adults that became eligible for the shingles vaccine during quarter 1 (from 1 April 2018 to 30 June 2018) and evaluated at the end of March 2019 is 38.3% for the 70 year old routine cohort and 38.1% coverage for the 78 year old catch-up cohorts, around 4% higher for both cohorts than when they were evaluated at the end of December 2018
- the cumulative vaccine coverage estimates for adults that became eligible for the shingles vaccine during quarter 2 (from 1 July 2018 to 30 September 2018) and evaluated at the end of March 2019 is 34.4% for the 70 year old routine cohort and 33.9% coverage for the 78 year old catch-up cohorts, more than 5% higher than when evaluated at the end of December 2018
- results from this report are not directly comparable to figures from previous years, which were based on a different methodology and eligibility criteria

Introduction

The shingles vaccination programme began on 1 September 2013. The aim of the programme is to offer routine vaccination to all 70 year olds each year, with a catch-up programme for older cohorts each year until 2020/21 to capture individuals born up to 1 September 1942 (i.e. aged 71 to 79 years on 1 September 2013 at the programme launch). For the first five years, vaccine coverage of the vaccination programme was monitored in England by PHE through monthly cumulative collections via automatic uploads of GP practice-level data using the ImmForm website and regular estimates of coverage published on the [PHE website](#) [1].

From 1 April 2017 the eligibility criteria for receiving shingles vaccine changed so that individuals become eligible on their 70th birthday (routine cohort) or their 78th birthday (catch-up cohort) and remain eligible up to their 80th birthday [2-5].

GPs may continue to offer immunisation to anyone who was eligible for shingles vaccine in the first five years of the programme but has not yet been vaccinated, up until their 80th birthday [2]. This includes people currently aged 71 through to those aged 76 years old with a birthday before 2 September 1942, or 78 to 79 years old [2-5].

As a live viral vaccine, the shingles vaccine is contraindicated for immunosuppressed individuals. It is essential to assess the eligibility of individuals prior to offering the shingles vaccine and ensure that those who can benefit are not excluded. Further information on shingles vaccine eligibility is available in the [“Immunisation against infectious disease” book \(the Green Book\)](#).

To continue to accurately evaluate cumulative vaccine coverage for the routine and catch-up shingles programme delivered in 2018/19, as well as monitor on-going cumulative coverage for all cohorts previously offered vaccine up to the 80th birthday, PHE has changed the monthly specification for the ImmForm data extractions from GP IT systems to quarterly extractions and changed the methodology for the quarterly calculation of vaccine coverage to reflect the new delivery model.

This is the third report using the revised specification and presents the initial herpes zoster (shingles) vaccine coverage data for adults who turned 70 for the routine cohort or 78 for the catch-up cohort between 1 October 2018 and 31 December 2018, evaluated at the end of March 2019 as well as providing cumulative vaccine coverage among adults that turned 70 and 78 years old during quarter 1 (from 1 April 2018 to 30 June 2018) and quarter 2 (1 July 2018 to 30 September 2018) evaluated at the end of March 2019. It is important to note that vaccine coverage for adults who have become eligible under the revised criteria is not directly comparable to previous cumulative vaccine coverage estimates using the former eligibility criteria from the 2017/18, 2016/17, 2015/16, 2014/15 and 2013/14 programmes [6].

Methods

This report presents cumulative vaccine coverage for all adults eligible for the shingles vaccine (ages 70 to 76 and 78 to 80 years old) vaccinated by 23 March 2019. GP practice-level shingles vaccine coverage data are automatically uploaded via participating GP IT suppliers to the ImmForm¹ website on a quarterly basis. These data are then validated and analysed by PHE to check data completeness, identify and query any anomalous results and describe epidemiological trends. This quarterly survey extracted coverage estimates as at 23 March 2019 for each fiscal year birth cohort (1 April to 31 March births) for individuals born between 1 April 1938 and 31 March 1950, i.e. aged 71 years to 80 years (minus future catch-up cohorts born 1 April 1941 to 1 September 1942 inclusive).

Additionally, this report presents cumulative vaccine coverage for adults who turned 70 and 78 years old during quarters 1, 2 and 3 (between 1 April 2018 and 31 December 2018) and vaccinated by 23 March 2019 (Table 1). The third automated quarterly survey measures vaccine coverage as the total number of patients turning 70 or 78 who received the shingles vaccine prior to 23 March 2019 (numerator) as a proportion of the total number of registered patients turning 70 or 78 between 1 April 2018 to 30 June 2018 (quarter 1), 1 July 2018 to 30 September 2018 (quarter 2) and 1 October 2018 to 31 December 2018 (quarter 3) (denominator). The data were collected on 23 March allowing those eligible in quarter 3 between 3 to 6 months (depending on the date of birth) to receive the vaccine (Table 1).

¹ ImmForm is the system used by Public Health England to record vaccine coverage data for some immunisation programmes and to provide vaccine ordering facilities for NHS England.

Table 1. Birth range and collection dates for the routine (70 year olds) and catch-up (78 year olds) cohorts for quarters 1, 2 and 3 of 2018/19

Quarter and age	Eligible birth dates	Duration of eligibility at 23 March 2019
Overall Quarters 1,2 and 3		
70	01/04/1948 – 31/12/1948	3 – 12 months
78	01/04/1940 - 31/12/1940	
Quarter 1		
70	01/04/1948 – 30/06/1948	9-12 months
78	01/04/1940 - 30/06/1940	
Quarter 2		
70	01/07/1948 – 30/09/1948	6-9 months
78	01/07/1940 - 30/09/1940	
Quarter 3		
70	01/10/1948 – 31/12/1948	3-6 months
78	01/10/1940 - 31/12/1940	

Participation and data quality

Cumulative shingles vaccine coverage data for quarter 3 represented a total of 6,724/6910 (97.3%) GP practices.

Results

Cumulative vaccine coverage for fiscal year (April to March) birth cohorts, as at 23 March 2019

- Cumulative vaccine coverage for each earlier routine cohorts (aged 72 to 75) continues to increase each quarter though opportunistic vaccination (Table 2)
- the highest coverage is observed among those turning 75 (75.7%), who were offered the shingles vaccine in the earliest routine cohorts five years ago
- the lowest coverage is observed among the 71, 76 and 79 cohorts. These were not all offered the vaccine due to programmatic issues; 71 year olds because some had already had their 70th birthday before 1 April 2018 when the sufficient supply of the vaccine was available; half of those aged 76 years old will not be eligible for the vaccine until their 78th birthday as part of the final catch-up cohort and 79 year olds half of this cohort would have already had their 78th birthday when sufficient supply of the vaccine was available

Table 2. National cumulative shingles vaccine coverage for adults turning 71 to 76 (routine) and 79 to 80 (catch-up) years old between 1 April 2018 and 31 March 2019 and vaccinated by end March 2019, by NHS Local Team

NHS England Local Team	Routine Cohort						Catch-up cohort	
	Turning 71 year olds*	Turning 72 year olds	Turning 73 year olds	Turning 74 year olds	Turning 75 year olds	Turning 76 year olds**	Turning 79 year olds***	Turning 80 year olds
	Eligible since 2017	Eligible since 2016	Eligible since 2015	Eligible since 2014	Eligible since 2013	Partially eligible since 2013	Eligible since 2017	Eligible since 2016
Midlands and East (Central Midlands)	46.4	55.4	65.5	72.3	76.4	46.5	47.7	55.0
London	44.2	53.4	61.5	67.4	70.9	44.4	45.3	51.6
North (Cheshire and Merseyside)	45.4	57.1	67.2	73.6	76.3	45.9	47.4	57.2
North (Lancashire)	46.7	57.7	68.3	74.2	77.4	46.4	48.8	56.2
Midlands and East (North Midlands)	48.9	58.3	66.9	73.4	76.9	46.7	49.3	57.8
North (Greater Manchester)	45.4	56.5	65.1	71.8	74.8	44.8	47.0	54.7
Midlands and East (East)	46.5	55.7	64.2	71.2	74.3	44.7	47.8	55.0
South East (Kent, Surrey and Sussex)	46.4	57.6	66.2	71.7	75.0	45.6	49.1	57.6
North (Cumbria and North East)	48.2	58.1	68.0	74.0	76.8	46.2	48.9	56.8
Midlands and East (West Midlands)	46.2	56.2	65.3	71.7	75.1	46.1	48.6	55.8
North (Yorkshire and Humber)	50.0	58.1	66.3	73.0	76.4	46.0	49.4	55.9
South West (South West North)	50.6	59.7	68.7	74.4	77.7	46.9	52.5	59.6
South West (South West South)	47.6	56.9	66.1	72.6	75.6	47.1	51.7	58.4
South East (Hampshire, Isle of Wight and Thames Valley)	50.4	60.6	69.3	75.3	79.0	48.3	52.4	61.0
England	47.4	57.1	66.0	72.4	75.7	46.1	48.9	56.4

* Observed coverage is low in the 71 year olds as half (those born 2 September 1947 to 31 March 1948) would have already had their 70th birthday by 1 April 2018 when the sufficient supply of the vaccine was available.

**Observed coverage is low in the 76 year olds as half (those born 1 April 1942 to 1 September 1942) will not become eligible until their 78th birthday in 2020, whereas half (those born 2 September 1942 to 31 March 1943) were offered the vaccine as part of the first routine programme in 2013/14.

*** Observed coverage is low in the 79 year olds as half (those born 2 September 1939 to 31 March 1940) would have already had their 78th birthday by 1 April 2018 when the sufficient supply of the vaccine was available.

No coverage is available for 77 year olds (born 1 April 1941 to 31 March 1942) as they will become eligible for the shingles vaccine on their 78th birthday as part of the catch-up cohort in 2019/20.

Cumulative routine and catch-up coverage – (turned 70/78 October to December 2018, as at 23 March 2019)

- overall 31.9% of adults that turned 70 and 78 during the first three quarters of 2018/19 (from 1 April 2018 to 31 December 2018) were vaccinated by the end of March 2019
- due to changes in the methodology for the calculation of vaccine coverage, the data are not directly comparable to cumulative vaccine coverage estimates from previous years

Routine and catch-up cumulative coverage for quarter 3 – (turned 70/78 1 October to 31 December 2018, as at 23 March 2019)

- 22.2% of adults turning 70 years old during quarter 3 (1 October to 31 December 2018) were vaccinated by the end of March 2019 compared to 28.6% of adults turning 70 years old during quarter 2 and 19.6% of adults turning 70 years old during quarter 1 after the same eligibility interval (Figure)
- 22.8% of adults turning 78 years old during quarter 3 (between 1 October to 31 December 2018) were vaccinated by the end of March 2019, compared to 28.5% of adults turning 78 years old during quarter 2 and 20.5% of adults turning 70 years old during quarter 1 after the same eligibility interval (Figure)
- vaccine coverage for quarter 3 by LT ranged from 20.0% (London and Central Midlands) to 25.3% (Hampshire, Isle of Wight and Thames Valley) for the routine 70 year old cohort and from 20.8% (Greater Manchester) to 25.9% (Lancashire) for the 78 year old catch-up cohort (Table 3); [see data tables](#)

Cumulative routine and catch-up coverage for quarter 2 – (turned 70/78 1 July to 30 September 2018, as at 23 March 2019)

- 34.4% of adults turning 70 years old and 33.9% of adults turning 78 during quarter 2 (between 1 July 2018 and 30 September 2018) were vaccinated by the end of March 2019, an additional 5.9% and 5.4% respectively compared with coverage in these groups at the end of December 2018 (Figure)
- vaccine coverage for quarter 2 by LT ranged from 30.5% (London) to 38.4% (Hampshire, Isle of Wight and Thames Valley) for the routine 70 year old cohort and from 31.1% (Central Midlands) to 38.0% (Hampshire, Isle of Wight and Thames Valley) for the 78 year old catch-up cohort (Table 3); [see data tables](#)

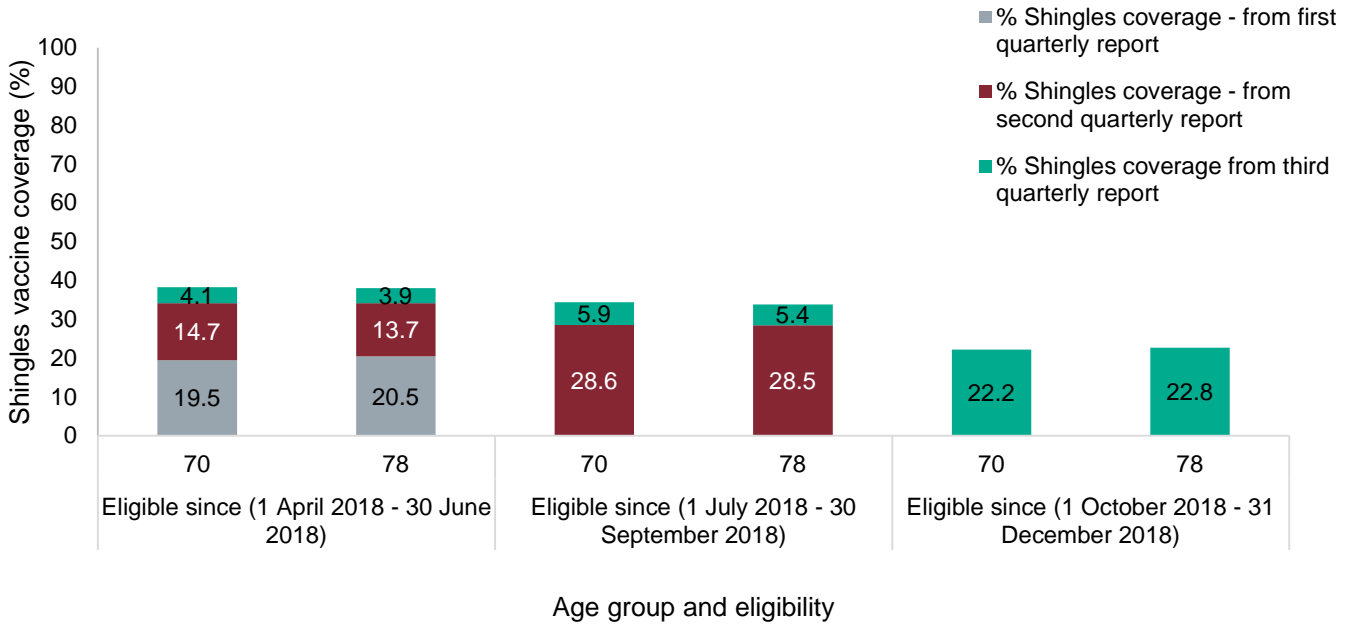
Cumulative routine and catch-up coverage for quarter 1 – (turned 70/78 1 April to 30 June 2018, as at 23 March 2019)

- 38.3% of adults turning 70 years old and 38.1% of adults turning 78 during quarter 1 (between 1 April 2018 and 30 June 2018) were vaccinated by the end of March 2019, an additional 4.1% and 3.9% respectively compared with coverage in these groups at the end of December 2018 (Figure)
- vaccine coverage for quarter 1 by LT ranged from 34.1% (London) to 42.1% (Hampshire, Isle of Wight and Thames Valley) for the routine 70 year old cohort and from 34.0% (London) to 42.2% (Hampshire, Isle of Wight and Thames Valley) for the 78 year old catch-up cohort (Table 3):

Table 3. National cumulative shingles vaccine coverage for adults turning 70 and 78 years old between 1 April 2018 to 30 June 2018 (quarter 1), between 1 July 2018 to 30 September 2018 (quarter 2) and current shingles coverage for adults turning 70 and 78 years old between 1 October 2018 to 31 December 2018 (quarter 3) vaccinated by the end March 2019, by NHS England Local Team

NHS England Local Team	Turning 70 in Quarter 1 (dobs 1/4/48 to 31/6/48)	Turning 70 in Quarter 2 (dobs 1/7/48 to 30/9/48)	Turning 70 in Quarter 3 (dobs 1/10/48 to 31/12/48)	Turning 70 in Quarter 1 (dobs 1/4/40 to 31/6/40)	Turning 70 in Quarter 2 (dobs 1/7/40 to 30/9/40)	Turning 70 in Quarter 3 (dobs 1/10/40 to 31/12/40)
NHS England Midlands and East (Central Midlands)	37.7	32.7	20.0	34.4	31.1	21.8
NHS England (London)	34.1	30.5	20.0	34.0	31.4	21.2
NHS England North (Cheshire and Merseyside)	38.6	33.3	20.2	39.5	33.5	20.9
NHS England North (Lancashire)	40.6	35.6	22.4	39.3	34.7	25.9
NHS England Midlands and East (North Midlands)	40.9	37.1	24.0	39.4	34.7	23.0
NHS England North (Greater Manchester)	34.6	32.4	20.3	36.1	33.3	20.8
NHS England Midlands and East (East)	38.0	34.7	22.7	38.2	33.0	22.2
NHS England South East (Kent, Surrey and Sussex)	36.5	32.6	21.4	36.6	32.3	22.5
NHS England North (Cumbria and North East)	39.4	34.8	21.9	40.2	36.0	22.7
NHS England Midlands and East (West Midlands)	36.3	34.0	22.0	38.0	33.0	21.9
NHS England North (Yorkshire and Humber)	38.9	36.1	24.1	38.8	34.3	23.8
NHS England South West (South West North)	41.7	35.6	24.4	40.7	37.1	25.3
NHS England South West (South West South)	39.3	35.5	22.7	39.5	34.8	22.7
NHS England South East (Hampshire, Isle of Wight and Thames Valley)	42.1	38.4	25.3	42.2	38.0	25.8
England	38.3	34.4	22.2	38.1	33.9	22.8

Figure. National shingles vaccine coverage at end March 2019 for quarter 1 (adults turning 70 and 78 between 1 April 2018 and 30 June 2018), quarter 2 (adults turning 70 and 78 between 1 July 2018 to 30 September 2018) and quarter 3 (adults turning 70 and 78 between 1 October 2018 to 31 December 2018).



Discussion

While it is important to ensure that individuals who become eligible for the shingles vaccine have the opportunity to get vaccinated in the year they become eligible, improving coverage among previously eligible cohort is equally important as these individuals remain at risk and are more likely to develop more severe outcomes. It is therefore reassuring to see that these cohorts are still being vaccinated and that coverage among those who became eligible five years ago is high.

Previous routine and catch-up cohorts remain eligible for vaccination until their 80th birthday, and longer term vaccine coverage data has shown coverage in these cohorts increases in subsequent years (Table 2) [6]. A large difference in cumulative coverage was observed between the 71 and 72 year olds (~10%) and between 79 and 80 year olds (~7.5%) which is in part likely to be associated with the change in eligibility criteria; half of these cohorts would have already had their 70th/78th birthday by 1 April 2018 when sufficient supply of the vaccine became available and may not have been offered the vaccine routinely around their birthday. It is important GPs continue to offer shingles vaccine to all eligible patients, particularly the 71 and 79 year olds who may have missed the vaccine when there was a change in the eligibility criteria, to prevent an increased susceptibility to shingles among these cohorts.

Shingles vaccine coverage estimates for those turning 70 and 78 years old during quarter 3 and vaccinated up to the end of March 2019 is 22.2% and 22.8%, respectively, lower than coverage achieved by those who turned 70 and 78 after the same eligibility interval during quarter 2 and quarter 1.

To date, the highest initial vaccine coverage occurred during quarter 2 for both 70 and 78 year olds. This is most likely due to more adults receiving both the influenza and the shingles vaccine simultaneously during the influenza season which runs from September through to the following January.

Comparing cumulative shingles coverage data for this quarter with estimates from previous years is complex due to the new eligibility criteria and coverage calculation methodology. Additionally, the data collection is now based on the financial year (April to March) rather than from September to August as in all previous shingles coverage publications [6].

Subsequent cumulative quarterly evaluations for quarter 1, 2 and 3 birth cohorts assessed at the end of June 2019 should show increasing coverage as vaccinations received later in their 70th / 78th year are captured.

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