

Coventry City Council: Vaccine Superhero Intervention

Evaluation Report

Dr Chloe Ryder
Research Fellow Quantitative and Mixed-Methods
Coventry Health Determinants Research Collaboration (HDRC)

Rayyan Nasser
Programme Officer – Health Protection
Coventry City Council

Table of Contents

Plain English Summary	3
Introduction: Coventry City Council Vaccine Superhero programme	4
Evaluation of the Vaccine Superhero Intervention	6
Evaluation methodology	6
Phase 1: Mixed-Methods evaluation survey.....	6
Phase 2: Quantitative vaccination coverage data	8
The Results.....	9
Phase 1: Mixed-Methods evaluation survey	9
Phase 2: Quantitative vaccination coverage data	15
Vaccine Superhero Intervention: Participating Schools.....	15
Vaccine Superhero Intervention: Comparison between participating and non-participating schools	17
Vaccine Superhero Intervention: Comparison between participating and non-participating schools with the Coventry and West Midlands averages	19
Overall Conclusion, Recommendations and Practical Implications	21

Plain English Summary

The Coventry Vaccine Superhero Programme is a school-based project designed to help increase childhood vaccination rates and improve understanding of vaccines among young people. It was developed by Coventry City Council's Public Health Team in partnership with the NHS School-Aged Immunisation Service. The programme works mainly in primary schools and aims to tackle falling vaccination rates, reduce outbreaks of preventable illnesses, and address inequalities in communities where uptake has been lower. The programme uses fun, interactive learning to teach children about vaccines and how they protect the body. Schools receive a resource pack that includes lesson plans, activities, and materials such as "Giant Microbe" soft toys, which help explain how infections and immunity work. Children take part in activities such as designing their own "vaccine superhero" characters, learning about germs, and sharing messages with their peers.

To evaluate the programme, feedback was collected from schools through a survey, and vaccination data was analysed over several years. The survey results showed that the programme was generally easy for schools to deliver and could be fitted into existing lessons such as science and PSHE. Staff reported that the resources, particularly the soft toys, made it easier to explain complex or sensitive topics. Children responded positively to the programme, with schools reporting high levels of engagement. Staff also felt that pupils developed a better understanding of vaccines and more positive attitudes towards them. Every school that responded to the survey said they would be interested in taking part again, suggesting the programme is well-liked and sustainable.

The data on vaccination rates showed encouraging results. Most schools taking part in the programme saw an increase in uptake over time, with 28 out of 31 schools improving. However, similar improvements were also seen in schools that did not take part, which means it is difficult to say for certain how much of the change was due to the programme alone.

Looking at the wider picture, vaccination uptake has improved across Coventry overall, and the city has seen stronger progress than the West Midlands region, where rates remained more stable. This suggests that local efforts, including this programme, may be contributing to positive changes, even if the exact impact cannot yet be fully measured. The evaluation also identified areas for improvement. Schools would benefit from more support from healthcare professionals, such as school nurses delivering assemblies or speaking to parents. There is also a need for more resources so activities can be used across different classes, and for better alignment with school staff roles to make delivery easier.

Overall, the Vaccine Superhero Programme shows strong promise as a creative and engaging way to improve children's understanding of vaccines and support positive attitudes towards immunisation. While more evidence is needed to confirm its direct impact on vaccination rates, it provides a valuable and practical approach that could be expanded and developed further to support public health goals in Coventry and beyond.

Introduction: Coventry City Council Vaccine Superhero programme

The Coventry Vaccine Superhero Programme is an innovative, school-based health initiative developed by the Coventry City Council Public Health Team in collaboration with the NHS School-Aged Immunisation Service (SAIS). The intervention was piloted in Coventry between June 2024 and June 2025 across Primary and SEND schools, with Public Health actively encouraging new schools to sign up and supporting participation in achieving the milestone badges. Its core mission is to reverse declining local childhood immunisation rates, address regional health inequalities, and lower high pupil and staff absenteeism caused by outbreaks of preventable diseases.

When the programme first held its pre-launch event, 16 local schools officially signed up on the first day, with an additional 5 expressing immediate interest. The project has since seen targeted growth, expanding to the 31 participating primary schools, three of which have successfully achieved the top 'gold status' for their vaccine awareness efforts.

The Strategic Context for a School-Based Intervention

The Coventry Vaccine Superhero Programme was launched to address a critical decline in childhood immunisation rates that threatened public health across the city. For several years, Coventry's vaccination coverage fell significantly below the 95% population threshold recommended by the World Health Organisation (WHO) to maintain herd immunity. Although local uptake reached a brief high of 85.7% during the 2021/2022 period, subsequent years saw a steady, worrying drop. This downward trend left local children increasingly vulnerable to highly contagious, preventable illnesses. This systemic failure to hit the 95% target generated tangible real-world consequences.

West Midlands region suffered a severe surge in vaccine-preventable disease clusters, specifically measles, which thrived in areas with low herd immunity. For Coventry schools, this trend translated into an immediate operational crisis: high levels of infectious illness triggered severe absenteeism among both pupils and teaching staff, fracturing educational continuity and straining the local social infrastructure. The necessity for a creative, grassroots approach became apparent when traditional medical messaging failed to move the needle in specific pockets of the city. Low immunisation numbers were highly concentrated in municipal areas marked by multi-generational deprivation, exceptionally large GP patient lists, and ethnically diverse communities.

These areas faced bespoke challenges, including linguistic translation barriers, dense pockets of misinformation, and systemic mistrust regarding specific vaccine components, such as porcine gelatine used in nasal flu sprays. Public Health intelligence revealed a vital lesson from the pandemic: schools were the most trusted, effective vehicles for local health promotion and catch-up clinics. To bridge the gap, the Coventry City Council Public Health Team shifted away from sterile clinic appointments, designing a primary school campaign to demystify clinical science and actively empower families.

Programme Structure and Activities

The initiative utilises a structured, three-tier award system where participating schools progress through bronze, silver, and gold milestones. These progressive digital badges recognise a school's expanding commitment to health literacy and can be proudly displayed on institutional websites or official correspondence.

Upon formal registration, each educational setting receives a specialised welcome pack loaded with interactive scientific tools. Central to these resources is a "Giant Microbe" plush toy set representing real pathogens like influenza and chickenpox, alongside tactile vaccine vials and antibody models.

The curriculum focuses on creative, evidence-based activities designed to de-stigmatise vaccinations and spark interest in biological sciences. Students engage in:

- **Microbe Investigations:** Exploring germ biology and transmission using the tactile models.
- **Creative Character Design:** Inventing their own fictional "vaccine superhero" characters to visually communicate defence mechanisms.
- **Peer-led Campaigns:** Utilising the student-led School Council to organise handwashing clinics and plan educational activities for peers.
- **Seasonal Alignment:** Leveraging regular winter flu vaccination delivery schedules to maximise real-time learning opportunities.

Evaluation of the Vaccine Superhero Intervention

Evaluation methodology

Phase 1: Mixed-Methods evaluation survey

As part of the Vaccine Superhero Intervention evaluation, a mixed-methods survey was sent out to all participating schools at the end of the intervention. The questionnaire gathered feedback from school staff about their experience delivering the Vaccine Superhero programme. It covered seven main areas:

- Delivery and effort
- Confidence and teaching experience
- Resources and programme materials
- Student engagement and impact
- Vaccination context and uptake
- Sustainability and future participation
- Improvements and adaptation.

Delivery and effort

Within the survey, questions surrounding delivery and effort explored how manageable the intervention was to run for the participating schools. This included exploration of whether preparing and delivering activities required a manageable level of effort, and whether activities were easy to integrate into existing lessons within the school (such as science, PSHE, assemblies). As part of capturing qualitative feedback, there was opportunity for participating schools to describe how sessions were delivered.

Overall, questions surrounding delivery and effort assessed practicality and feasibility of the Vaccine Superhero Intervention in real school settings.

Confidence and teaching experience

Within the survey, participants were asked about their experience and confidence of delivering the Vaccine Superhero intervention. Questions explored confidence in discussing vaccinations and microbes, and whether resources (such as booklets, plush toys) helped to improve confidence in delivering sessions and encouraged engaging communication. Qualitative feedback asked participants to provide information for if there were any challenges in delivery of the intervention.

Generally, questions surrounding confidence and teaching experience helped to identify the training and resource needs and any barriers which future phases of the intervention will need to address.

Resources and Programme Materials

A significant proportion of the evaluation survey focused on evaluating the resources which are provided as part of the Vaccine Superhero Intervention. The survey asked participants

questions surrounding the usefulness of the school information pack, e-bug lesson plans, and giant microbe plush toys. Specific questions were asked surrounding the plush toys, asking participants which plush toys were engaged with the most, and whether toys had helped make the sensitive topics easier to discuss within the intervention sessions. Finally, as part of the resources and programme materials, participants were asked whether the digital badges (bronze, silver, gold) helped motivated participation in the intervention.

Overall, questions surrounding resources and materials helps to determine which materials were the most effective and engaging, allowing for future phases of the intervention to use the information to continue or adapt the resources provided.

Student engagement and impact

Within the evaluation survey, participants were asked questions surrounding student engagement and impact. This included questions on how children responded in the sessions, which year group(s) participated in the sessions, and whether the programme improved links with the SAIS team. Questions also asked participants to reflect on whether pupils became more informed about vaccines, and/or more positive in their attitudes towards vaccinations, asking for any observed changes in knowledge, confidence, or attitudes.

Questions surrounding student engagement and impact evaluates the educational impact of the Vaccine Superhero Intervention along with behavioural outcomes.

Vaccination context and uptake

The mixed-methods survey asked participants questions surrounding the real-world relevance of the Vaccine Superhero Intervention. This included questions surrounding whether vaccination uptake is a concern within their school, and whether any improvements in uptake and/or attitudes have been observed. If improvements were observed, participants were asked to reflect on if they felt that the Vaccine Superhero intervention contributed to those improvements (and in what way).

Sustainability and future participation

Towards the end of the survey, schools were asked about the continuation of the Vaccine Superhero Intervention. This included whether activities from the intervention were continued within the schools usual routine (such as in science, PSHE classes, or assemblies) after the intervention had ended, and whether the school had identified a lasting impact from the intervention.

Asking these questions helps to identify the interventions long-term value, scalability, and sustainable behaviour change for vaccination uptake in correlation with the implementation of the Vaccine Superhero Intervention.

Improvements and adaptation

Finally, open-ended questions were asked surrounding improvements for the future of the Vaccine Superhero Intervention. This included asking questions surrounding what could make the intervention easier to implement, and any additional comments or recommendations.

Participants were also asked to finally consider how the intervention could be adapted for secondary schools and SEND schools.

Responses from this section of the evaluation will help to inform future intervention development.

Summary of the mixed-methods evaluation

Overall, the mixed-methods survey was designed to evaluate the Vaccine Superhero Intervention for:

- Feasibility (ease of delivery and workload),
- Effectiveness (student learning and engagement),
- Resource quality (teaching materials and tools),
- Impact (attitudes and potential vaccination uptake), and
- Sustainability (continued use and future participation).

Phase 2: Quantitative vaccination coverage data

Quantitative data surrounding vaccination coverage was collected and reported independently by the School-Aged Immunisation Service (SAIS) for academic years between 2022/23 and 2025/26 for schools across Coventry. This allows for the quantitative data to compare vaccination coverage for schools participating in the Vaccine Superhero Intervention (n = 31) with schools not participating in the intervention (n = 65). Quantitative data also provides the overall Coventry and West Midlands average for vaccination coverages within the same academic year range.

The Results

Phase 1: Mixed-Methods evaluation survey

Please note: Names of all participating schools will remain confidential throughout all analysis and reporting of results for phase 1 and phase 2.

Participants

There were 5 responses from five different schools (participation rate = 16.17%), with roles of participants including: clerical, pastoral/mental health, senior leadership, learning support, and SENCO functions. This means the feedback came from a mix of operational and educational perspectives rather than one single staff type.

When asked whether they were the right person to register the school and act as the nominated contact, responses were generally positive: three participants rated themselves 4/5, one rated 5/5, and one rated 3/5.

A notable distinction is that one participant stated they were not best placed to manage curriculum delivery because they worked in the school office, suggesting that future rollouts of the intervention may work better when the lead contact is a teaching or curriculum-facing member of staff.

Vaccination uptake from the five schools who completed the mixed-methods evaluation survey can be seen in table 1.

Table 1. Vaccination uptake across academic years from 2022/23 to 2025/26 for all 5 schools who completed the mixed-methods evaluation for the Vaccine Superhero Intervention.

School	Vaccination uptake (%)			
	2022/23	2023/24	2024/25	2025/26
1	45.20	44.46	41.26	53.00
2	49.17	51.40	47.25	58.00
3	39.00	44.80	54.60	61.00
4	49.64	48.46	44.42	53.00
5	44.58	34.82	33.18	41.00

Delivery and effort

On workload, the programme appears broadly manageable: 3 of 5 participants selected ‘**agree**’ and 2 selected ‘**neutral**’ when asked whether preparing for and delivering the activities required a manageable amount of effort.

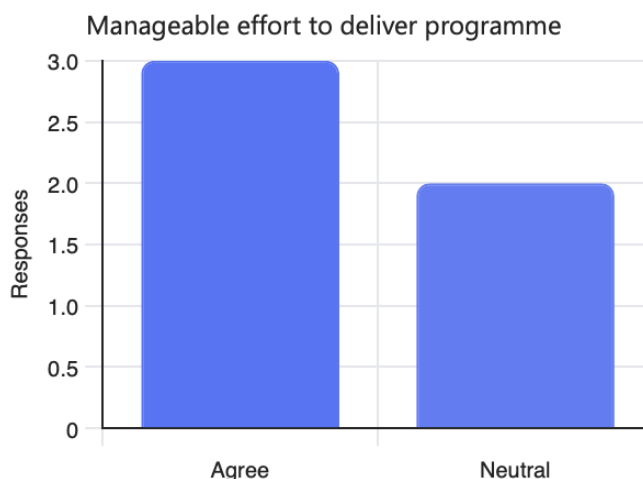


Figure 1. *Responses of participants in relation to effort required to deliver the Vaccine Superhero Intervention.*

Delivery formats of the intervention were identified to be varied and flexible. Participants stated activities were delivered:

- in classrooms,
- across several lessons
- as support to science and PSHE curriculum
- in a class setting
- and in one case with whole-school dedicated time.

On ease of integration, responses were mixed but generally favourable: two participants said it was “**somewhat easy**”, two gave a positive answer “**yes**”, and one said “**no**”. The most explicit barriers mentioned were time, lack of external support for assemblies, and the challenge of having a contact person who was not well placed to coordinate teaching delivery.

Confidence and teaching experience

Confidence was mostly positive for all five participants. Three participants selected ‘**agree**’ to feeling confident discussing vaccinations and microbes with students, one selected ‘**neutral**’, and one response explained that the discussion had been handled by teaching staff rather than the participant personally.

The resources themselves seem to have supported confidence well: three participants responded ‘**agree**’, one responded ‘**strongly agree**’, and one responded ‘**neither agree/disagree**’ for whether the Giant Microbes resources and school booklet encouraged confidence in discussing vaccination.

Overall, this suggests the programme materials were useful for staff confidence, but confidence may depend partly on whether the participant is directly involved in classroom teaching.

Resources and programme materials

The resource feedback is one of the strongest parts of the survey.

School information pack

The school information pack was viewed positively: 3 participants selected '**agree**', 1 selected '**strongly agree**', and 1 selected '**neither agree/disagree**'.

Digital badges

Views on the Bronze/Silver/Gold badges were more mixed - 2 participants agreed they were motivating, 2 selected neutral, and 1 strongly agreed.

Plush toys

The plush toys were especially well received: 4 participants rated them 5/5 for usefulness, and 1 rated them 4/5. All 5 participants said the toys helped make difficult topics more approachable.

“The antibody was really good as a visual aid to help with scientific explanations of the immune system.”

“The students were fully engaged because of the visual plushies.”

“We found the soft toys representing the microorganisms very good, our students engaged with these well, we would love some more.”

Plush toy use frequency varied, including once or twice, monthly, seasonally, and one school using them during multiple curriculum-related moments such as topic launch and PSHE. Participants were asked to select the most engaging plush toys within the intervention and were encouraged to select as many options as they thought appropriate. The findings can be seen in figure 2.

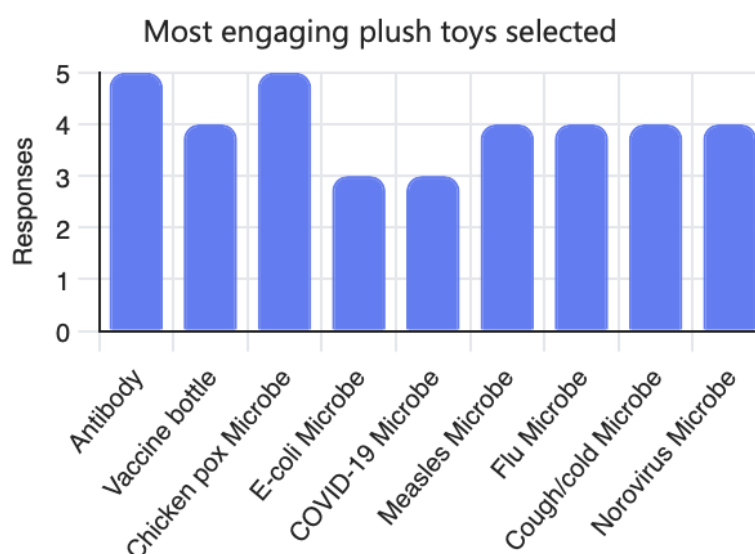


Figure 2. Responses of participants in relation to most engaging plush toys within the Vaccine Superhero Intervention.

E-Bug lesson plans

4 out of 5 participants were positive about the e-Bug lesson plans, with 4 selecting ‘yes’ when asked whether the e-Bug lesson plans were useful. One school said they had their own resources instead so did not require the e-Bug lesson plans as part of the intervention.

Student engagement and impact

Student engaged was consistently positive in the qualitative feedback reported by participants.

“They engaged well, really enjoyed the interaction with the plushes.”

“Children loved the plush toys.”

“Our students engaged well with the plush toys; they really liked them.”

“Really well, as it was aimed at younger children.”

On whether pupils became more informed advocates for vaccination, 4 participants selected ‘agree’, while one said only some students would be able to advocate.

For the link with the School Aged Immunisation Service (SAIS), 3 participants agreed the intervention helped build a more positive connection, whilst 2 were neutral. Comments about learning impact included improved understanding of how vaccines work, better knowledge of how they help our bodies, and pupils enjoying learning through the plush toys.

Vaccination context and uptake

Perceived concern about vaccination uptake was mostly neutral in this small sample. 4 participants selected ‘**neither agree/disagree**’ and 1 selected ‘**agree**’ to the statement that vaccination uptake in their school is a concern.

A couple of participants did report positive signs.

“We had some mild improvement in the uptake of flu vaccines.”

“We did have more of an uptake for flu jabs.”

While others said it was hard to say or they had not noticed clear wider changes.

Therefore, the data suggests some encouraging examples, but the responses do not show a uniform or strongly evidenced pattern of uptake improvement across all schools. The small participant sample size may partially explain these findings - future Vaccine Superhero Intervention evaluation should aim to recruit more participants for the post-intervention evaluation.

Sustainability and future participation

Sustainability and future participation were also another strong feature within the mixed-methods evaluation. All 5 participants stated that their school would be interested in signing up again for future iterations of the Vaccine Superhero Intervention.

There is also evidence of continued use after the intervention:

- One participant stated that the plush toys were still being used in year 5 science and whole-school PSHE, and that the e-Bug resources were still used for lesson planning.
- One participant stated that they still teach about vaccines, although not specifically through the intervention.
- Other responses either said no (n = 2) or were left unanswered within the survey.

Surrounding behavioural outcomes, attitudes and perceived impact, participants reported positive reflections.

“Their [the students] understanding was better of how they work, and how they can help our bodies. General attitude seemed to be more positive.”

“During the sessions they [the students] engaged well. So, I feel their knowledge improved.”

These quotes help to highlight the Vaccine Superhero Intervention improved understanding of vaccines and microbes, encouraged increased discussion among pupils, and helped to support more positive attitudes.

Suggested improvements and adaptation

Within the open-ended questions to collect qualitative feedback for suggested improvements or adaptation for the future of the Vaccine Superhero Intervention.

“More availability of external support with assemblies, or visits during school events with parents.”

“Another set of plushies would be useful so that we can use them in more than one tutor group/class at a time.”

“If nurses were able to do a whole assembly, and then I can do class sessions.”

Specifically, in relation to adaptations so the intervention can be delivered to SEND schools, the following responses were provided by participants.

“Extra models and visual aids would be useful.”

“The resources now would be good for SEND children.”

“The plush toys helped SEND children because they provided a visual for the children to refer to.”

Overall conclusion from phase 1 evaluation

Across this small sample, the strongest findings are that the intervention was well received, the plush toys were especially valuable, student engagement was consistently positive, and every participant said they would be interested in taking part again.

The main areas for improvement appear to be delivery support (especially for assemblies and external input), matching the nominated contact role to curriculum responsibility, and potentially expanding the resource set for wider classroom use.

Phase 2: Quantitative vaccination coverage data

As part of the wider vaccination work, quantitative data surrounding vaccination coverage was collected and reported independently by the School-Aged Immunisation Service (SAIS) for academic years between 2022/23 and 2025/26 for schools across Coventry. This data has been shared with the Coventry City Council Health Protection team and has been used as part of this evaluation with their consent and approval.

Vaccine Superhero Intervention: Participating Schools

Table 2. Vaccination uptake for participating schools of the Vaccine Superhero Intervention.

School	Vaccination uptake (%)				Difference from 2022/23 and 2025/26
	2022/23	2023/24	2024/25	2025/26	
1	40.50	28.03	31.51	45.00	+ 4.50
2	58.45	56.67	49.06	64.00	+ 5.55
3	56.22	57.89	56.48	67.00	+ 10.78
4	33.22	31.49	32.80	44.00	+ 10.78
5	65.20	59.10	51.90	71.00	+ 5.80
6	63.48	67.41	51.91	68.00	+ 4.52
7	56.44	49.09	55.84	57.00	+ 0.56
8	39.00	44.80	54.60	61.00	+ 22.00
9	55.48	68.47	57.34	63.00	+ 7.52
10	28.42	13.66	36.90	49.00	+ 20.58
11	52.69	46.60	40.44	55.00	+ 2.31
12	44.58	34.82	33.18	41.00	- 3.58
13	33.57	20.34	29.46	42.00	+ 8.43
14	61.27	55.90	55.37	61.00	- 0.27
15	49.64	48.46	44.42	53.00	+ 3.36
16	48.92	39.60	32.35	50.00	+ 1.08
17	53.87	52.51	41.40	54.00	+ 0.13
18	37.50	35.78	24.38	38.00	+ 0.50
19	1.92	2.67	11.30	18.00	+ 16.08
20	35.00	40.39	48.79	63.00	+ 28.00
21	48.27	42.38	47.49	61.00	+ 12.73
22	49.17	51.40	47.25	58.00	+ 8.83
23	50.00	43.75	49.52	59.00	+ 9.00
24	22.97	30.54	40.45	45.00	+ 22.03
25	67.62	60.19	69.48	76.00	+ 8.38
26	45.20	44.36	41.26	53.00	+ 7.80
27	35.60	37.74	43.41	52.00	+ 16.40
28	12.60	23.50	20.00	39.00	+ 26.40
29	52.20	57.38	59.10	62.00	+ 9.80
30	46.20	29.45	37.97	46.00	- 0.20
31	47.30	40.95	42.40	53.00	+ 5.70

Table 2 shows vaccination uptake trends across the 31 schools participating in the Vaccine Superhero Intervention between the academic years 2022/23 and 2025/26, along with the overall change across this period.

Overall, the findings indicate a strong positive trend in vaccination uptake among participating schools. Specifically, 28 out of 31 schools (90.32%) experienced an increase in uptake over the period analysed. This suggests that, at a broad level, vaccination coverage improved in the majority of intervention schools.

The magnitude of change varies considerably across schools. Some schools show modest improvements, with increases of around 0–5 percentage points, while others display substantial gains, including increases exceeding 20 percentage points (for example, several schools improved by over 20%, with one reaching an increase of +28.00). This variability highlights that while the overall direction of change is positive, the extent of improvement differs depending on the school context.

A small number of schools did not experience improvement. Three schools showed either a slight decline or minimal change in uptake over the period (i.e., decreases of -3.58 and -0.27, and a near-zero change of -0.20). However, these represent a minority compared to the number of schools with increasing uptake.

In addition to overall change, the data show that uptake often fluctuated across years before improving by 2025/26, suggesting that gains were not always linear. Several schools experienced dips in intermediate years (i.e., 2023/24 or 2024/25) followed by a notable rise in the final year of measurement.

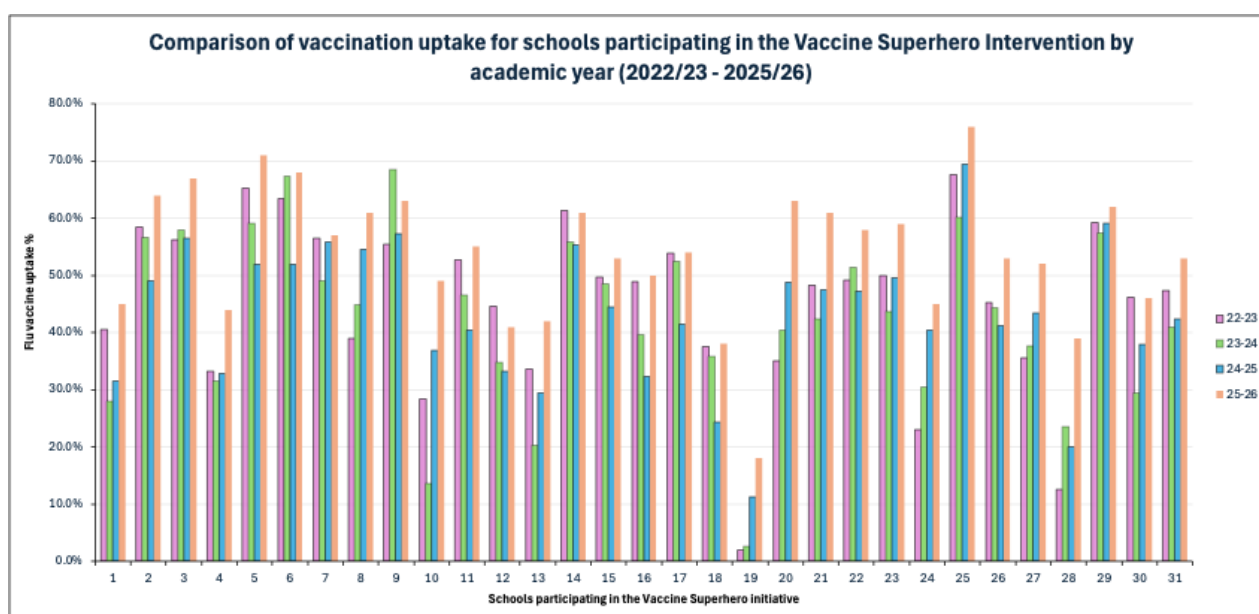


Figure 3. Vaccination uptake for schools participating in the Vaccine Superhero Intervention, comparison of academic years from 2022/23 to 2025/26.

In summary, Table 2 and Figure 3 demonstrates that:

- The majority of participating schools improved vaccination uptake over the study period.
- There is considerable variation in the size of these improvements.
- Only a small minority showed no improvement or slight decline.
- Final-year increases (2025/26) contribute significantly to the overall positive trend.

Taken together, these results suggest that participation in the Vaccine Superhero Intervention is associated with generally improved vaccination uptake across most schools, although the degree of impact differs between settings.

Vaccine Superhero Intervention: Comparison between participating and non-participating schools

Please note: For comparison of averages between participating (n = 31) and non-participating schools (n = 65), there is a difference in group sizes. This will have an impact on the average statistics provided across the academic years.

Table 3. Comparison of average vaccination uptake across academic years of 2022/23 to 2025/26 for participating and non-participating schools.

	Average Vaccination Uptake (%)				Difference from 2022/23 to 2025/26
	2022/23	2023/24	2024/25	2025/26	
Participated in the Vaccine Superhero Intervention	45.14	42.43	43.15	53.80	+ 8.66
Did not participate in the Vaccine Superhero Intervention	45.49	43.40	43.13	54.82	+ 9.33

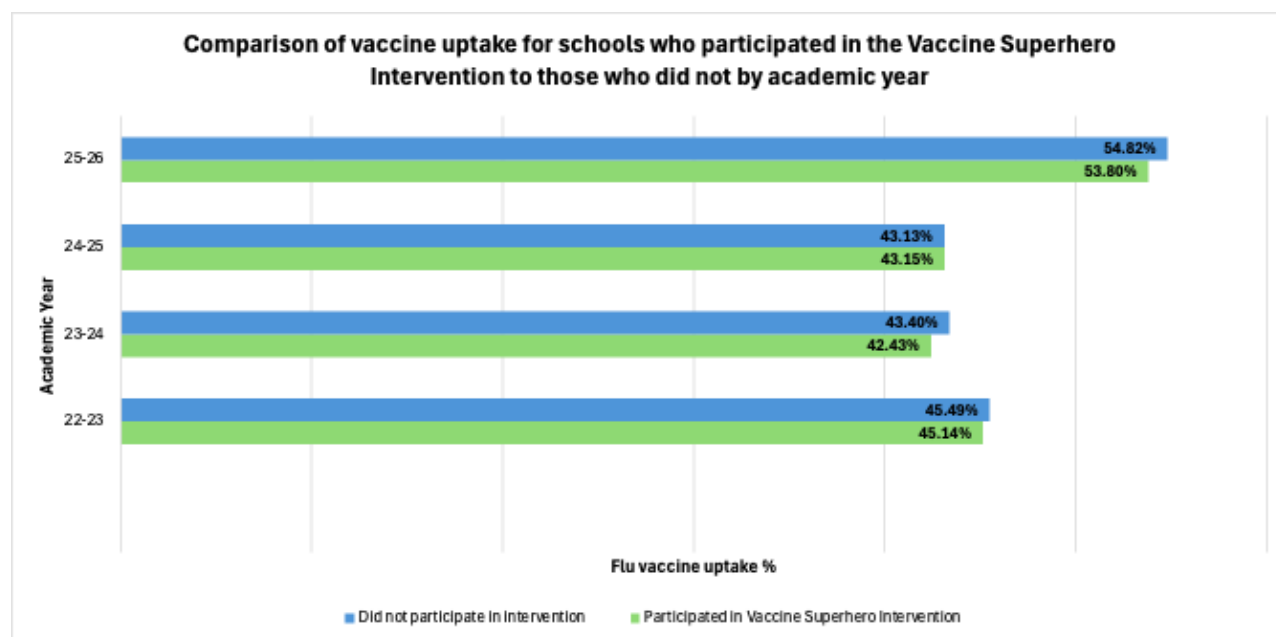


Figure 4. Comparison of vaccination uptake for participating and non-participating schools for academic years from 2022/23 to 2025/26.

Table 3 and Figure 4 compare average vaccination uptake across academic years (2022/23 to 2025/26) between schools that participated in the Vaccine Superhero Intervention and those that did not. Overall, both participating and non-participating schools show an improvement in vaccination uptake over the study period. Participating schools increased from an average of 45.14% in 2022/23 to 53.80% in 2025/26, representing a rise of +8.66 percentage points. Similarly, non-participating schools increased from 45.49% to 54.82%, corresponding to a slightly larger increase of +9.33 percentage points.

Figure 4 visually reinforces these trends, showing that both groups follow a generally similar trajectory over time, with a noticeable increase by 2025/26. However, the pattern of change differs slightly between the groups. Participating schools show a drop in vaccination uptake in 2023/24 before recovering in later years, while non-participating schools maintain more stable levels before increasing.

Despite overall improvements in both groups, the difference in average uptake between participating and non-participating schools remains relatively small by the final year. It is also important to interpret these results cautiously, as the two groups differ in size (31 participating schools versus 65 non-participating schools), which may influence the averages presented.

In summary, the data suggest that vaccination uptake improved across all schools over time, with no clear divergence in average outcomes between intervention and non-intervention groups at the aggregate level.

Vaccine Superhero Intervention: Comparison between participating and non-participating schools with the Coventry and West Midlands averages

Table 4. Comparison of average vaccination uptake across academic years of 2022/23 to 2025/26 for participating and non-participating schools with Coventry and West Midlands averages.

	Average Vaccination Uptake (%)				Difference from 2022/23 to 2025/26
	2022/23	2023/24	2024/25	2025/26	
Participated in the Vaccine Superhero Intervention	45.14	24.43	43.15	53.80	+ 8.66
Did not participate in the Vaccine Superhero Intervention	45.49	43.40	43.13	54.82	+ 9.33
Coventry	47.17	42.78	42.48	54.00	+ 6.83
West Midlands	53.41	52.06	50.99	52.70	- 0.71

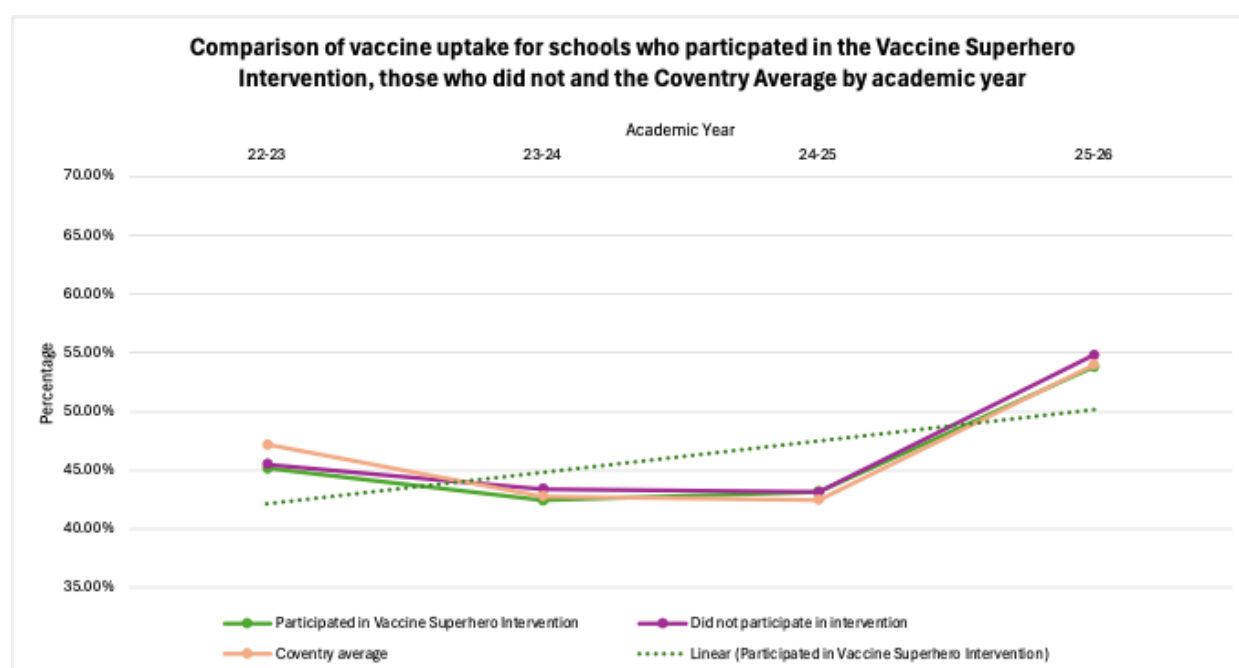


Figure 5. Comparison of vaccination uptake for participating, non-participating schools and the Coventry Average for academic years from 2022/23 to 2025/26.

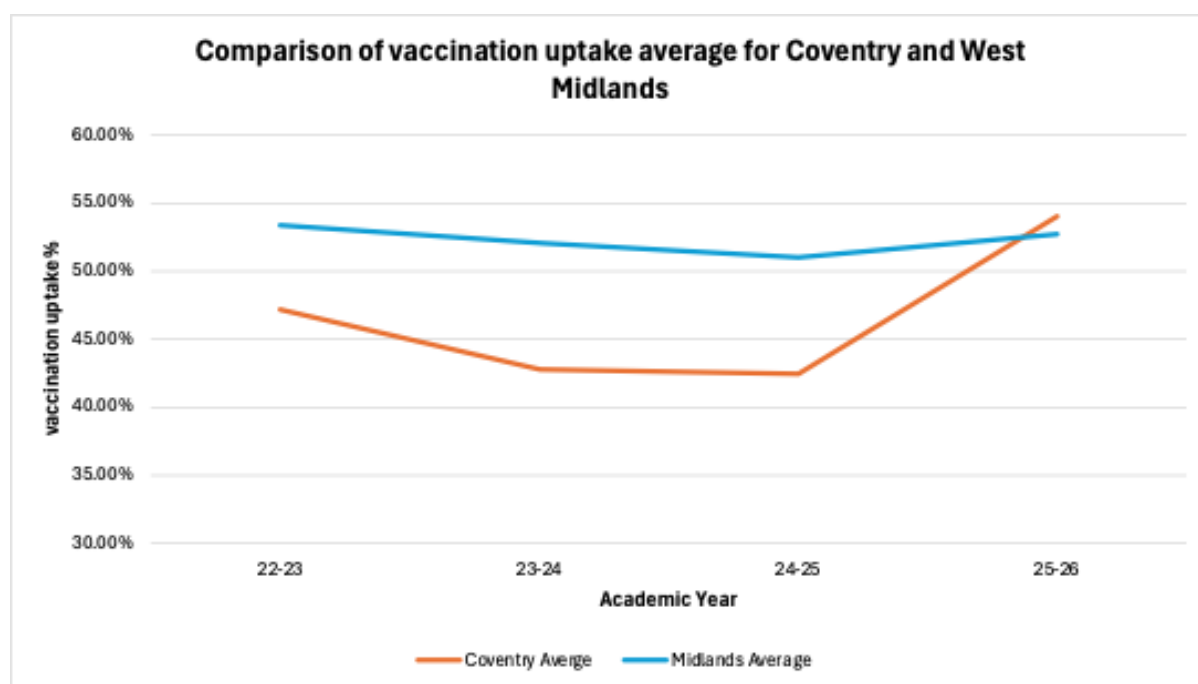


Figure 6. Comparison of the average vaccination uptake Coventry and the West Midlands for academic years from 2022/23 to 2025/26.

Table 4 and Figures 5 and 6 collectively present vaccination uptake trends across participating schools, non-participating schools, Coventry overall, and the West Midlands between the academic years 2022/23 and 2025/26.

Overall, the data show that vaccination uptake improved across most groups over time, particularly within Coventry. Participating schools increased from 45.14% to 53.80% (+8.66 percentage points), while non-participating schools experienced a slightly larger rise from 45.49% to 54.82% (+9.33 percentage points). Coventry as a whole also improved, increasing from 47.17% to 54.00% (+6.83 percentage points). In contrast, the West Midlands average remained broadly stable, with a slight decrease from 53.41% to 52.70% (-0.71 percentage points) over the same period.

Figure 5 illustrates that participating schools, non-participating schools, and the Coventry average follow broadly similar upward trajectories, with a clear increase by 2025/26. However, participating schools show greater fluctuation across intermediate years, including a dip in 2023/24 before recovering, while non-participating schools and the Coventry average display a more stable pattern of gradual improvement. Figure 6 further demonstrates that Coventry's vaccination uptake trend differs from the wider West Midlands, with Coventry showing a more pronounced increase across the study period. While the West Midlands remains relatively stable, Coventry's improvement results in its average uptake moving closer to the regional level by 2025/26, indicating a narrowing gap between local and regional performance.

Taken together, these findings suggest that:

- Vaccination uptake has improved across Coventry regardless of intervention participation,
- Differences between participating and non-participating schools remain small at the aggregate level, and
- Coventry has experienced stronger overall improvement compared with the wider West Midlands, despite starting from a lower baseline.

Overall Conclusion, Recommendations and Practical Implications

The Coventry Vaccine Superhero Programme represents an innovative and well-received school-based public health intervention aimed at addressing declining childhood immunisation uptake and associated health inequalities. Overall, the evaluation demonstrates that the programme is feasible to deliver, highly engaging for pupils, and valued by school staff, with strong potential for sustainability within educational settings.

The mixed-methods findings show that delivery is manageable and adaptable within existing school curriculum, supported by high-quality and engaging resources, particularly the Giant Microbe plush toys, which enhance both staff confidence and pupil understanding of vaccination concepts. Student engagement was consistently positive, with reported improvements in knowledge, confidence, and attitudes towards vaccination, alongside strengthened relationships with the School-Aged Immunisation Service.

Quantitative analysis indicates that vaccination uptake increased in the majority of participating schools, with 28 out of 31 schools showing improvement over the study period. However, similar improvements observed in non-participating schools suggest that broader system-level factors are also influencing uptake across Coventry, and that the intervention's independent effect cannot yet be conclusively isolated. Despite this, Coventry demonstrates a stronger overall upward trend compared to the wider West Midlands, indicating positive local progress.

Taken together, the evidence suggests that while the programme may not yet demonstrate clear population-level causal impact, it is a promising, scalable and sustainable approach to improving vaccine literacy and shaping positive health behaviours, particularly in communities facing structural barriers to immunisation.

Future recommendations

To strengthen impact and support further rollout, the following recommendations are proposed:

1. Strengthen integration with healthcare delivery

- Increase direct involvement of healthcare professionals (e.g. school nurses, immunisation teams) in programme delivery through assemblies, workshops, and parent engagement events.
- Align programme activities more closely with school-based vaccination schedules to reinforce real-time decision-making and uptake.

2. Enhance targeting and equity focus

- Prioritise expansion into areas and schools with persistently low uptake, particularly those facing deprivation, language barriers, or mistrust challenges identified in the programme context.
- Continue adapting materials and delivery for SEND settings, ensuring accessibility and inclusivity.

3. Improve programme delivery model

- Ensure that each school nominates a curriculum-aligned lead (e.g. teacher or PSHE lead) to improve implementation quality and consistency.
- Provide additional delivery support (e.g. structured lesson plans, assembly content, external facilitation) to reduce burden on school staff.

4. Expand and diversify resources

- Increase availability of physical teaching materials (e.g. additional plush toy sets, visual aids) to enable use across multiple classes and year groups.
- Develop age-appropriate adaptations for secondary schools to support programme scalability.

5. Strengthen evaluation and evidence base

- Increase survey participation to improve representativeness and reliability of findings.
- Consider more robust evaluation designs (e.g. matched comparisons, longitudinal tracking, or quasi-experimental approaches) to better assess causal impact.
- Integrate routine monitoring of uptake linked to intervention activity at school level.

Practical implications for Local Authority, ICB and NHS Stakeholders

For Local Authorities

The programme provides a scalable model for school-based health promotion, supporting statutory public health responsibilities and efforts to reduce health inequalities. Investment in education-led prevention strategies can complement traditional clinical approaches, particularly in communities where trust in services may be limited. Embedding the programme within wider Healthy Schools or PSHE frameworks could ensure long-term sustainability and reach.

For Integrated Care Boards (ICBs)

The intervention highlights the value of place-based, partnership approaches between education, public health, and NHS immunisation services. Supporting similar initiatives could help improve vaccine confidence and demand, contributing to system-level immunisation targets. Opportunities exist to integrate the programme within ICB prevention strategies, including outreach work, community engagement, and population health management. The findings suggest that combining clinical delivery with upstream behavioural interventions may be key to achieving sustained improvements in uptake.

Final conclusion

In conclusion, the Vaccine Superhero Programme demonstrates strong promise as a locally embedded, engaging, and sustainable intervention that supports vaccine literacy and positive attitudes among children. While wider system factors influence vaccination uptake, the programme offers a valuable foundation for integrated prevention strategies, and with (targeted refinement) has the potential to play a significant role in improving childhood immunisation outcomes across Coventry and beyond.