

New Jersey Human Papillomavirus (HPV) Vaccination Action Plan

2024 – 2026



**NJ HPV Vaccination
Action Team**

Working to Prevent HPV Cancers

EXECUTIVE SUMMARY

The New Jersey HPV Vaccination Action Team (NJ HPV VAT) is a subgroup of the NJ State Cancer Coalition, which was launched in October of 2023 to help advance the HPV-related objectives and recommended strategies of the NJ Comprehensive Cancer Control Plan 2021-2025 (See Appendix V). The Mission of NJ HPV VAT is to increase HPV vaccination rates to prevent HPV-related disease and cancers through education, coordination, leadership, and advocacy.

The purpose of the NJ HPV Vaccination Plan is to provide a collaborative road map for increasing HPV vaccine uptake across the state to help reduce HPV-related disease and cancers. NJ HPV VAT will build on, amplify, and accelerate existing work.

An estimated 85% of people will be infected with HPV in their lifetime putting people at risk for 6 different HPV-associated cancers including cervical and oropharyngeal cancers. These cancers are largely preventable through HPV vaccination. The HPV vaccine is most effective when administered by age 13. NJ has a statewide completion rate for youth aged 13 of only 27%, which is ranked third lowest in the country behind Florida and Wyoming (NIS-Teen), leaving most teens at risk for future preventable cancers.

Because the NJ Immunization Information System (NJ IIS) only requires providers to enter immunizations into the system for patients up to age 7, stratified and local data are lacking for HPV vaccination in the state. There is also an inability for providers to check IIS records to monitor the HPV vaccination status of most pre/adolescents who change providers or move from other locations in the state.

There are several evidence-based and promising interventions to increase HPV vaccination that have been summarized herein. Over the next two years, NJ HPV VAT will endeavor to partner with stakeholders across NJ to promote those interventions through the following priority strategies (see Appendix III)

1. Promote starting the HPV vaccine at age 9 to increase on-time completion rates.
2. Develop and disseminate a NJ Start at 9 HPV Vaccination Toolkit for providers.
3. Implement at least two provider-focused activities and two public-focused strategies to raise awareness about the HPV problem and what can be done to address it.
4. Partner with at least one health plan to help them educate their members and providers about HPV.
5. Facilitate a change in policy or system improvement to address outstanding statewide barriers identified by pediatric healthcare providers including enhancing the state immunization registry to collect all adolescent vaccination data up through 18 years of age.

NJ HPV VAT will also work to disseminate the following key messages to parents.

- HPV vaccination is cancer prevention.
- The HPV vaccine is safe and effective.
- Start the HPV vaccine series at age 9.

Priority messaging for teens and young adults are:

- HPV vaccination prevents cancer and genital warts.
- The HPV vaccine is safe and effective.
- The sooner the better to receive the HPV vaccine.

An additional message for providers is that NJ has fallen behind and needs to do more to protect kids from HPV cancers.

Data will be collected for all activities conducted to ascertain the achievement of each objective as well as process measures to track whether the interventions were implemented as intended. Results will be reported back at regular NJ HPV VAT meetings. At the end of two years, we will assess any changes in statewide HPV vaccination rates among 13 to 17 years olds using NIS-Teen and 13-year-olds if possible.

PURPOSE

The New Jersey HPV Vaccination Action Team (NJ HPV VAT) is a subgroup of the NJ State Cancer Coalition, which was launched in October of 2023 to help advance the HPV-related objectives and strategies of the NJ Comprehensive Cancer Control Plan (See Appendix V).

NJ HPV VAT's Vision is a New Jersey where all eligible individuals at age 9 and above are vaccinated against high-risk human papillomavirus (HPV) infections to prevent HPV-related disease and cancers.

The Mission of NJ HPV VAT is to increase HPV vaccination rates to prevent HPV-related disease and cancers through education, coordination, leadership, and advocacy.

The purpose of the NJ HPV Vaccination Plan is to provide a collaborative road map for increasing HPV vaccine uptake across the state to help reduce HPV-related disease and cancers. There is already a significant amount of activity occurring in NJ to promote HPV vaccination (see Appendix IV). NJ HPV VAT will build on, amplify, and accelerate that work. We hope that you find this plan helpful to your own efforts and will also join us to make a difference statewide.

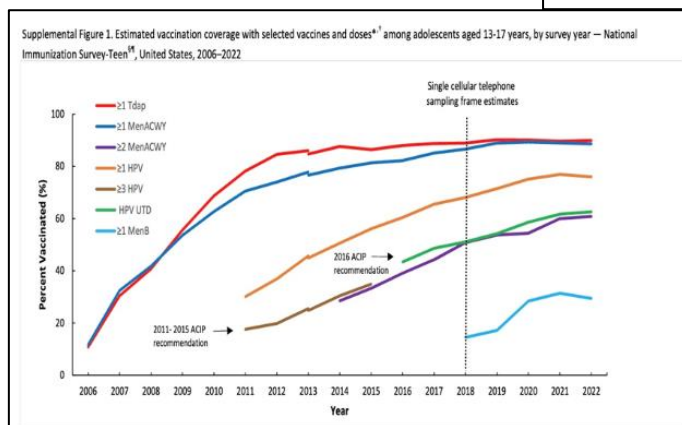
BACKGROUND

Each year, nationwide, there are over 14 million new HPV infections, half of which occur in individuals between the ages of 15 and 24 years. As a result, 37,300 cases of HPV-associated genitourinary and oropharyngeal cancers are diagnosed annually in this country.ⁱ The Centers for Disease Control and Prevention (CDC) reports that about one in 100 sexually active adults in the U.S. has HPV-related genital warts at any given time.ⁱⁱ HPV is transmitted by skin-to-skin contact and does not require bodily fluid contact, making condom-use an inadequate form of prevention.

The [Advisory Committee on Immunization Practices \(ACIP\)](#), a CDC committee, provides guidance regarding the use of vaccines and related agents for control of vaccine-preventable diseases in the civilian population of the United States. In 2006, ACIP recommended the administration of HPV vaccination to protect girls against HPV infection. This recommendation was expanded to include vaccination of boys in 2011. Currently, ACIP recommends the routine administration of the 2-dose nine valent HPV vaccine (Gardasil 9) to children at ages 11 and 12 and it can be started at age 9.^{iv} Recent evidence suggests that it is preferable to begin the series at age 9 to increase the likelihood of on-time series completion.ⁱⁱⁱ Adolescents who receive the first dose of HPV vaccine on or after their 15th birthday should receive 3 doses of vaccine (first dose time 0, second dose at least 1 to 2 months later and the third dose at least 6 months after the initial dose).^{iv} Although the vaccine is most effective when given between ages 9 and 12, “catch-up” vaccination is recommended up to age 26. In 2018, the vaccine was approved by the Food and Drug Administration (FDA) for people between 27 and 45 years of age in the context of shared decision-making between a patient and their provider. For more information on HPV vaccination recommendations from ACIP, go to <https://www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/hpv.html>.

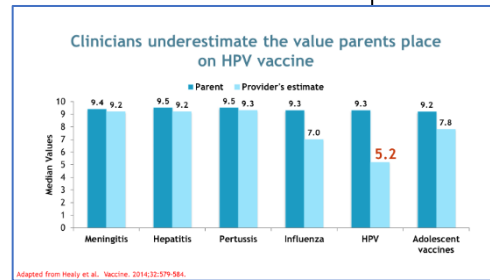
Despite the availability of a safe and effective vaccine to prevent HPV infection and its complications, a large proportion of adolescents have not been immunized against HPV. Nationally, in 2022, approximately 76 percent of adolescents aged 13-17 years initiated the vaccine series, but only about 60% of adolescents received all the recommended doses for series completion.^v While HPV vaccination rates are increasing among both boys and girls, vaccine series completion rates remain far below those of the other adolescent vaccines (Figure 1).^{vi}

Figure 1



There are many barriers to adolescent HPV vaccine uptake. An analysis of the 2017-2021 NIS-Teen data listed the top reasons parents reported not vaccinating their children. Reasons for lack of intent to initiate differed by socioeconomic status. ‘Safety concerns’ emerged as a top reason for the lack of intent to initiate the vaccine series in the higher income group, while the lower income group, reported lack of knowledge, the vaccine not being recommended, and it was not needed/necessary as the leading reasons^{vii}

Figure 2



Providers play a major role in HPV vaccine promotion and administration. Provider delivery of a strong, presumptive vaccine recommendation is among the most cited factor associated with HPV vaccine uptake. Provider communication with parents is key to educating them about the HPV vaccine and overcoming vaccine hesitancy. Providers educating parents can address some of the concerns behind vaccine hesitancy, such as the importance of the vaccine and dispelling myths or misconceptions regarding vaccine safety.

Why are many primary care providers failing to make a strong, effective recommendation for the HPV vaccine? Reasons for this include provider discomfort at the possibility of discussing sex, limited time to answer questions that parents may have, providers overestimating parental HPV vaccine hesitancy, and underestimating the value that parents place on the HPV vaccine compared to other adolescent vaccines such as those that prevent pertussis and meningococcal infections (Figure 2).^{viii}

Vaccine hesitancy appears to be a growing problem which is likely exacerbated by the relative ease of access to vaccine misinformation from the Internet and social media, as demonstrated during the COVID-19 pandemic.^{ix} Some groups may have lower child vaccination rates due to a lack of provider recommendation, distrust of medical institutions, or just general lack of awareness of HPV and the HPV vaccine.^x

HPV-RELATED CANCER CASES IN NJ

Between 2016 and 2019, 6,488 new cases of HPV-Associated cancer occurred among New Jersey residents (NJDOH, 2023). NJ is in the top quartile for states with the highest overall cancer incidence rates in the country (CDC 2020). Focusing on HPV-associated cancers that can be largely prevented through improved HPV vaccine uptake will contribute to reducing NJ’s high cancer incidence rate.

Figure 3

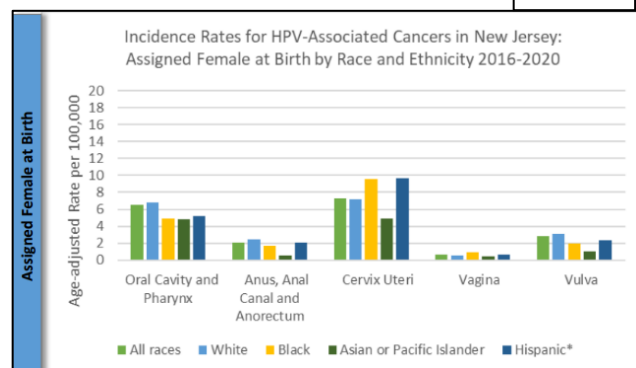
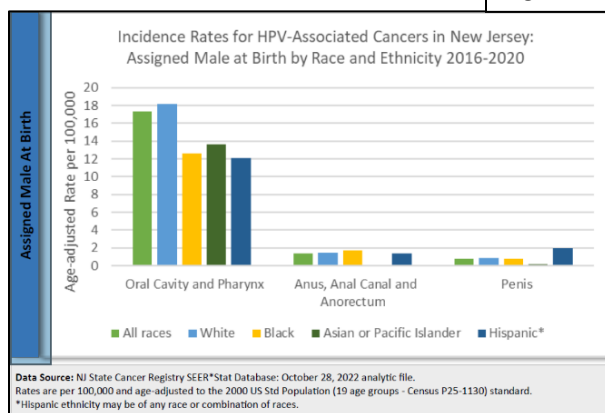


Figure 4



Among females, HPV-associated oral cavity and pharynx cancers show a slightly higher incidence in white individuals, while black and Hispanic individuals show a higher incidence of cervical cancers (Figure 3).

Males, particularly white men, are most likely to get oral cavity and pharynx cancers. However, black individuals have a slightly higher rate of anal cancers. Anal and penile cancers were the highest among Black and Hispanic men, respectively (Figure 4- NJDOH).

HPV VACCINATION COVERAGE RATES IN NEW JERSEY

Since 2011, HPV vaccination rates in New Jersey have shown improvement for adolescents ages 13-17 but have decreased since 2020. An estimated 63.7% of adolescents ages 13-17 had completed the HPV vaccination series in 2022. This indicates that one-third of adolescents are not fully protected against HPV in the state (Appendix II).

Although the upward trend in HPV vaccine series completion among youth between 13 and 17 years of age appears promising, the vaccine is most effective when administered by age 13. NJ has a statewide completion rate by the 13th birthday of only 27%, which is ranked third lowest in the country behind Florida and Wyoming (Figure 5).^{xi}

Because the NJ Immunization Information System (NJIS) only requires providers to enter immunizations into the system for patients up to age 7, stratified and local data are lacking for HPV vaccination in the state. There is also an inability for providers to check NJIS records to monitor the HPV vaccination status of most pre/adolescents who change providers or move from other locations in the state. Providers receiving Vaccine For Children (VFC) doses to offer vaccines to uninsured children are required to enter immunization data in the NJIS until a child turns 18 so these children have more complete immunization records in their teens. Unfortunately, between 2014 and 2021, VFC provider locations in NJ have decreased by 42.9% from 1388 to 792. That figure stands in contrast to the 11.6% decline in VFC provider locations nationally.^{xii}

Given the lack of county level HPV vaccination data in NJ, examining cervical cancer incidence by county may be helpful to target or amplify efforts to increase HPV vaccination. Approximately 90% of cervical cancer cases are caused by high-risk strains of HPV and it is the earliest type of HPV-related cancer to occur after exposure if it is not cleared by the immune system. Some areas of the state have higher incidence rates of cervical cancer. The Northern NJ counties of Passaic and Essex and the Southern NJ Counties of Salem, Cape May, and Cumberland have the highest incidence of cervical cancer in the state (see Appendix II)

Figure 5

Table 4B. Human Papillomavirus Vaccination Coverage (%), Youth by State, US, 2019-2021

	Before 13th Birthday* (2019-2021)		13-17 Years (2021)			
	Overall	Rank	Females		Males	
			Up-to-date*	Rank	Up-to-date*	Rank
United States	37		66	61	63	
Range	24-61	(1=low)	33-87	33-86	33-87	(1=low)
Alabama	45	37	58	67	62	26
Alaska	38	27	61	52	56	8
Arizona	33	12	63	60	62	21
Arkansas	36	19	59	55	57	13
California	57	48	67	71	69	43
Colorado	44	36	69	70	69	44
Connecticut	34	14	67	66	66	35
Delaware	46	40	69	69	69	42
District of Columbia	61	49	81	78	79	51
Florida	24	2	49	49	49	3
Georgia	33	11	67	55	61	17
Hawaii	49	44	69	70	69	45
Idaho	33	13	64	60	62	20
Illinois	38	30	65	60	62	24
Indiana	32	10	62	49	55	7
Iowa	46	39	70	62	66	34
Kansas	41	34	71	58	64	29
Kentucky	36	21	49	65	57	14
Louisiana	48	42	61	67	64	28
Maine	34	15	68	56	62	19
Maryland	46	38	74	70	72	46
Massachusetts	38	29	78	72	75	50
Michigan	35	18	69	61	65	31
Minnesota	48	43	69	62	66	33
Mississippi	#	--	33	33	33	1
Missouri	39	32	63	56	59	16
Montana	29	5	49	56	53	45
Nebraska	31	9	63	61	62	22
Nevada	38	28	55	58	56	10
New Hampshire	35	17	77	68	72	48
New Jersey	27	3	63	47	55	6
New Mexico	37	23	63	53	58	15
New York	35	16	68	61	64	30
North Carolina	48	41	73	63	68	39
North Dakota	49	45	69	76	72	47
Ohio	30	6	69	56	62	24
Oklahoma	#	--	55	58	57	12
Oregon	42	35	63	71	67	37
Pennsylvania	37	22	68	69	69	41
Rhode Island	56	47	80	86	83	52
South Carolina	37	25	61	63	62	23
South Dakota	52	46	78	71	75	49
Tennessee	36	20	64	49	56	11
Texas	27	4	55	48	51	4
Utah	31	8	63	60	61	18
Vermont	38	26	64	69	67	36
Virginia	40	33	73	57	65	32
Washington	39	31	65	70	68	40
West Virginia	31	7	67	46	56	9
Wisconsin	37	24	67	60	63	27
Wyoming	24	1	49	47	48	2
Puerto Rico	--	--	69	66	67	38

*Estimates based on vaccinations received before 13th birthday among 13-year-olds. *According to recommendations; see sources for more information. #Estimates are statistically unstable. Please see Special Notes on page 68.
Sources: TeenVaxView, 2022.⁵⁷ National Immunization Survey-Teen, 2019-2021.
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EVIDENCE-BASED INTERVENTIONS TO INCREASE HPV VACCINATION

INCREASING HPV VACCINATION IN CLINICAL SETTINGS^{xiii}

A *provider recommendation* is among the top reasons that parents choose to vaccinate their children. Studies show that presumptive statements, which are brief statements that assume parents are ready to vaccinate, are more effective in improving HPV vaccination rates than conversing with parents in an open-ended discussion. CDC encourages that providers also use a bundled approach by recommending the HPV vaccine in the “same way, same day” that you recommend other adolescent vaccines (if offering it at age 11). When asked, answer parents’ questions and use motivational techniques to counsel vaccine hesitant parents or patients, stressing the importance of the vaccine in preventing 6

“Your child is due for vaccinations to help protect against meningitis, HPV-related cancers, pertussis, and flu. We’ll give those shots during today’s visit.”

different cancers. See the CDC tip sheet called, “Talking to Parents About HPV Vaccine”^{xiv} and the National HPV Vaccination Roundtable action guide for physicians, physician assistants, and nurse practitioners^{xv} for more information.

Start at age 9. In recent years, many organizations, including the American Academy of Pediatrics, the American Cancer Society, and the National HPV Vaccination Roundtable, began recommending starting the HPV vaccine series at age 9. Starting the series at age 9 reduces the number of immunizations received in a single visit and parents are less likely to opt for only “school-required” vaccines”. Vaccinating for HPV at age 9 increases the likelihood that adolescents will complete the HPV vaccine series by age 13. Studies suggest that adolescents receiving the series before age 13 also have a higher level of protection against HPV cancers than teens who complete the vaccine series later (Figure 6).^{xvi, xvii} Recommending the vaccine at a younger age will also protect more youth before they are exposed to an HPV infection, while reducing the frequency that a parent raises concerns about the vaccine promoting increased sexual activity.^{xviii} Starting the conversation with parents of children when they reach age 9, even if parents do not want to start the vaccine series, may improve on-time HPV vaccination rates because there will be more opportunities to achieve on-time vaccination. For more information about starting at age 9, go to <https://hpvroundtable.org/start-hpv-vaccination-at-age-9> If a provider shifts to recommending Gardasil 9 at age 9, the bundled approach, discussed above, must be modified accordingly to make the strong, presumptive recommendation at the younger age.

Figure 6

HPV vaccine impact - England	
Age of HPV vaccination	Reduction in incidence of cervical cancer
12- 13 years	87%
14-16 years	62%
16-18 years	34%

Falcono M, et al. *Lancet*. 2021; 396:2084-2090

Electronic Medical Record (EMR) Alerts, Provider Prompts, Reminders, and Immunization Information Systems. One of the most important ways for providers to increase vaccination rates in their practices is to use every opportunity to administer vaccinations that are due. When patients come in for any type of medical visit (well-child, sick-child, or chronic care visits), check to see if they are due for vaccinations. Collaborate with your health information technology colleagues, office manager, and fellow providers to establish effective strategies, such as the following interventions.

1. create provider prompts to flag when vaccinations are due or late;
2. establish EMR alerts or reports for all eligible patients and set reminders in your EMR system for the follow up dose (including flags if the follow up dose appointments are missed);
3. develop a system to consistently call and send postcards to patients who are due for vaccinations;
4. review patient reminder and recall systems and consider how to optimize them using text messaging, mail, email, and/or phone calls for missed vaccination visits;
5. Conduct PDSA (Plan, Do, Study Act) cycles to test changes to clinical practice (e.g., start at 9, EMR alerts).

Standing Orders. If your practice endorses standing orders, make sure they are being used. In many cases, patients can receive the vaccination before the provider even enters the room. Provide opportunities for vaccination-only visits or extended hours for vaccinations, especially for second or third doses of the vaccine.

Create and maintain a culture of promoting immunizations. Develop a practice culture where all staff are supportive and vigilant to protect every patient through immunizations. Empower every member of the team to become an HPV vaccine champion, not just clinical staff. A team-based approach is crucial for making effective and lasting system changes.

HPV VACCINATION-RELATED PUBLIC POLICIES

Some policies are associated with higher rates of HPV vaccination where they have been implemented.^{xix} Other policies are promising or simply supportive of the goal of increasing HPV vaccination coverage by making it easier to identify the unvaccinated or increasing access to those who can administer the vaccine. Below is a summary of the relevant HPV-related policies and evidence to date.

- **Requiring all vaccinating providers to enter the immunization records of minors into the state immunization registry** - The consent option chosen by an IIS jurisdiction can affect completeness of the data or population-

level view. Immunization Information Systems in the U.S. included data on 98% of immunizations for children under 6, 86% of immunizations for adolescents from 11-17, and 89% for those 19 and older in 2021, according to the Immunization Registry Association. A landscape analysis by the Association in May 2021 found that higher levels of participation are seen in jurisdictions with implicit consent.^{xx} NJ only has implicit consent (parents or guardians can opt out) to include immunization records in the NJIIS up to age 7.

- Requiring HPV vaccination for school entry - Sex-neutral, restrictive (i.e., difficult to opt out) HPV vaccination requirements for school entry are associated with increased vaccination initiation among adolescents.^{xxi, xxvi}
- Allowing dentists to administer the HPV vaccine to children and adults – In 2018, the American Dental Association adopted a policy encouraging dentists to support and administer HPV vaccines, emphasizing their role in preventive care. Post-pandemic, at least twenty states allow dentists to administer vaccines.^{xxii} The impact of dentists vaccinating children or adults for HPV or other vaccines is not clear, although it would seemingly increase access to vaccines in some areas. More research is needed to determine the efficacy of dentists as immunizers. In 2021, NJ passed [A5512](#), a law enabling dentists to administer an influenza vaccine or a human papillomavirus vaccine to a patient who is 18 years of age or older.
- Allowing Pharmacists to administer the HPV vaccine to children – Pharmacists in NJ are allowed to administer the HPV vaccine, but only to adults. A 2022 systematic review and meta-analysis found that pharmacist involvement as immunizer, advocate, or both roles, has favorable effects on immunization uptake, especially with influenza vaccines in the United States.^{xxiii}
- Enabling minors to consent to the HPV vaccine - Eight states and Washington, DC, currently have policies that permit adolescents to consent to the HPV vaccination. A 2022 analysis showed a significant positive association between adolescents being permitted to consent to HPV vaccination by state laws in their location of residence and increased rates of initiation of the vaccine series.^{xxiv}
- Requiring schools to educate parents and students about HPV vaccination – Laws requiring that schools educate students, or parents of students in a designated grade, about HPV and the HPV vaccine have passed in multiple states including NJ.^{xxv} In 2007, NJ enacted a law requiring that parents or guardians of seventh grade students to receive a DOH-produced fact sheet about HPV from schools. The regulations have been revised since to include an annual mailing for parents or Guardians of students from 7th to 12th grade. On January 1, 2024, California enacted the Cancer Prevention Act, requiring that schools notify parents or guardians of 6th graders about HPV vaccine recommendations. In Texas, the State Board of Education approved new health education standards in 2020 that would require public schools to teach the importance of HPV vaccines beginning in seventh grade. Based on the NJ experience and its low rate of HPV vaccination, a regulatory approach to increasing education about HPV may not lead to significant change without a more robust set of coordinated policies and programs to increase HPV vaccination in healthcare settings.

STRATEGIES TO INCREASE HPV VACCINATION AMONG YOUNG ADULTS/CATCH UP HPV VACCINATION

Although young adults are at greatest risk of HPV infection, most vaccine promotion and intervention efforts have been directed toward 11–12-year-olds. College students represent an ideal audience for “catch-up” HPV vaccination. Studies suggest substantial gaps in participants’ knowledge of their vaccination status. Provider and parental recommendations as well as social influences were shown to significantly impact student vaccination status, emphasizing the importance of incorporating these elements in future interventions, potentially as multi-level strategies. College interventions should address HPV and vaccination knowledge and the importance of provider and parental recommendations.^{xxvi}

ACTION PLAN GUIDING PRINCIPLES:

- Prioritize a focus on vaccinating children between ages 9 and 12 when the HPV vaccine is most effective.
- Promote evidence-based interventions (EBIs) that increase HPV vaccination in priority populations.
- Encourage changes to policies and systems that support and sustain EBIs.
- Collaborate to engage the largest health systems and other large networks that can have the greatest impact.

NEW JERSEY HPV VACCINATION ACTION PLAN

GOALS (from NJ Comprehensive Cancer Control Plan: 2021-2024)

- Increase the proportion of adolescents aged 13-17 years who have initiated the HPV series to 80%.
- Increase the proportion of 13–17-year-olds who are up to date with HPV series to 80%.
- Increase the proportion of adults aged 18 years + with HPV to 80%.

OBJECTIVES (Expanded measurable objectives aligned with the NJ Comprehensive Cancer Control Plan in Appendix V)

- By April 1, 2026, NJ HPV VAT will have recruited at least 30 health organizations to endorse starting the HPV vaccine at age 9 and committed to share a provider letter with their networks.
- By April 1, 2025, NJ HPV VAT will have created and disseminated a start at age 9 tool kit to promote to providers within each supporting organization.
- By April 1, 2026, NJ HPV VAT will have implemented at least 4 activities to promote strategies to increase HPV vaccination (a minimum of 2 focused on providers and 2 focused on the public).
- By April 1, 2025, NJ HPV VAT will begin working with at least one health plan to promote evidence-based strategies by NJ providers and/or education for members to increase HPV vaccination.
- By April 1, 2026, NJ Immunization Surveillance System will meet the national standard for registries to require that provider enter vaccination data up to age 18 for ACIP recommend vaccines.
- By April 1, 2026, NJ HPV VAT will have facilitated a change in policy or system improvement to address current statewide barriers identified by pediatric healthcare providers.

ACTIVITIES – Expanded activities (See logic models Appendix III) that are aligned with Implementation Workgroup activities from the Primary Prevention Workgroup and the State Comprehensive Cancer Plan (Appendix V).

Planned Activities by Objective

NJ Start at 9 (SA9) Campaign	Develop and Disseminate a NJ Start at 9 Toolkit	Maintenance of Certification Course	NJ HPV Health Plan Initiative	Provider Education Project	Reduce Barriers in Clinical Settings
<ul style="list-style-type: none"> • Develop a NJ SA9 PPT. • Create a SA9 call to action email and supporting documents. • Draft a provider letter that will list all supporters. • Meet with decision-makers of key health organizations. • Implement SA9 webinars presenting evidence. • Share key info and current supporters. 	<ul style="list-style-type: none"> • Gather evidence for start at age 9 • Compile SA9 fact sheets. • Consult with experts to identify other tools needed to support the implementation of SA9 (e.g., EMR changes) • Compile NJ specific resources to support SA9 • Assemble kit and draft email to accompany resource. • Identify where the tool kit can live online. 	<ul style="list-style-type: none"> • Education of pediatricians on benefits of starting at age 9 • Review of strategies to increase vaccination rates (standing orders, reminders, etc.) • Sharing of tools to facilitate implementing the strategies in their practice. 	<ul style="list-style-type: none"> • ACS and Clinical Champions meet with health plan Medical Director and/or QI staff to promote HPV QI. • Use a group letter promoting starting at 9 to get plans to adopt an HPV vax standard of care. • Follow up with appropriate materials. 	<ul style="list-style-type: none"> • Education of adolescent care providers (NPA, PAs, RN, medical assistants, front office staff) on benefits of starting at age 9 • Review of strategies to increase vaccination rates (standing orders, reminders, etc.) • Share tools to facilitate implementation 	<ul style="list-style-type: none"> • Convene meetings to examine existing barriers to HPV vaccination. • Advocate for appropriate changes to existing policies and systems to reduce barriers in pediatric care that impact HPV and other vaccination rates.

Use these key messages to promote HPV vaccination with each target audience.

KEY MESSAGES FOR PARENTS/CAREGIVERS

HPV vaccination is cancer prevention – It is recommended by CDC and the American Cancer Society that educators emphasize cancer prevention to lessen the focus by parents and some providers on HPV being a sexually transmitted infection. It is critical that children receive the vaccine before potential exposure and between 9 and 12 when their immune system is most responsive to it.

The HPV vaccine is safe and effective – More than 270 million doses have been administered since its debut in 2006 with the typical, mild vaccination-related effects such as soreness at the site. The U.S. and other countries have a robust system for monitoring and researching any potential issues that arise with vaccines. Meanwhile, countries such as Australia, Sweden, and Scotland that have achieved coverage rates of 80% or more are on track to eliminate cervical and other HPV-related cancers in the near future.

Start the HPV vaccine series at age 9 – Giving children the HPV vaccine at age 9 increases the likelihood that the series will be completed by age 13 to best protect the child from cancer and other HPV-related disease. Many parents prefer to spread out recommended vaccines. Starting the HPV vaccine at age 9 and ending at the 10-year visit will avoid competition with the Tdap and Meningococcal vaccines which are routinely administered at 11 and 12 years of age.

KEY MESSAGES FOR PROVIDERS

NJ has fallen behind and needs to do more to protect kids from HPV cancers – NJ is ranked third lowest state in the country for HPV vaccination completion among youth aged 13. This puts NJ youth at risk for future HPV-related cancers and disease that could be prevented.

HPV vaccination is cancer prevention – Ensure that this is the main message being communicated about the HPV vaccine and that it is a recommended vaccine for all children between 9 and 12 years of age. If catch-up vaccination is required, encourage adolescents and young adults to receive the vaccine as soon as possible to maximize the vaccine's efficacy at preventing cancer.

Start the HPV vaccine series at age 9 – The American Academy of Pediatricians, the American Cancer Society, and the National HPV Vaccination Roundtable recommend this strategy to boost on-time vaccination rates, increase cancers being prevented, and reduce parental associations between the vaccine and a child's sexual debut.

KEY MESSAGES FOR TEENS AND YOUNG ADULTS

HPV vaccination prevents cancer and genital warts – Teens and young adults may be more influenced by present concerns such as their looks or how something could affect their social standing and relationships.^{xxvii}

The HPV vaccine is safe and effective – See above.

The sooner the better to receive the HPV vaccine – If the vaccine is given before age 15 a teen will only need 2 doses, while three doses will be needed after age 15 because there is a weaker immune response. As noted above, long-term efficacy studies suggest better cancer prevention outcomes the earlier the vaccine is received by an adolescent or young adult.

EVALUATION

Data will be collected for all activities conducted to ascertain the achievement of each related objective as well as process measures to track whether the interventions were implemented as intended (e.g., promotional flyer, registration lists). Results will be reported back at regular meetings with VAT leadership and members. At the end of two years, we will assess any changes in statewide HPV vaccination rates among 13 to 17 years olds using NIS-Teen.

NJ HPV VAT INFRASTRUCTURE PLAN - BUILDING FOR SUCCESS

The NJ HPV VAT leadership group agreed that the structure of the NJ HPV Vaccination Action Team would be determined once we analyzed the needs and developed a plan. In other words, form should follow function to address the needs. Evidence suggests a need to work with NJ healthcare leadership, medical associations, and the health systems that influence adolescent provider practice. Meanwhile, knowledge deficits among parents, the spread of misinformation, and a growing mistrust of experts and government have contributed to falling vaccination rates in recent years. Thus, there is a need to engage trusted messengers to educate parents of young children, teens, and young adults about HPV and the vaccine, especially in areas with the lowest HPV vaccine uptake.

NJ HPV VAT Workgroups and roles - The NJ HPV VAT will create 2 task groups to address the major areas in need of intervention. One task group will focus on provider interventions and health system changes while the other will develop and implement activities that address public education. Each group will have a Chair that will develop the agenda and facilitate the meetings. ACS staff will support each group with minutes and coordination.

Funding – Grant opportunities will be pursued, beginning in year one, to support the implementation of the NJ HPV Vaccination Action Plan. Key partners who can reach the intended audiences will be offered the opportunity to lead different components of the plan.

Logo – A new logo has been developed to maintain consistent branding, to increase Team visibility, and ultimately to reach more people with the key messages about HPV and HPV Immunization.

Website – A website will be designed and launched to provide a repository for resources developed by the NJ HPV VAT, and other organizations to convey key messages and share upcoming events.

ACKNOWLEDGEMENTS

The New Jersey Human Papillomavirus Vaccination Action Plan: 2024-2026 was drafted by Michael Seserman, MPH, Associate Director of State Partnerships of the American Cancer Society with guidance and contributions from members of the NJ HPV Vaccination Action Team Leadership group listed below:

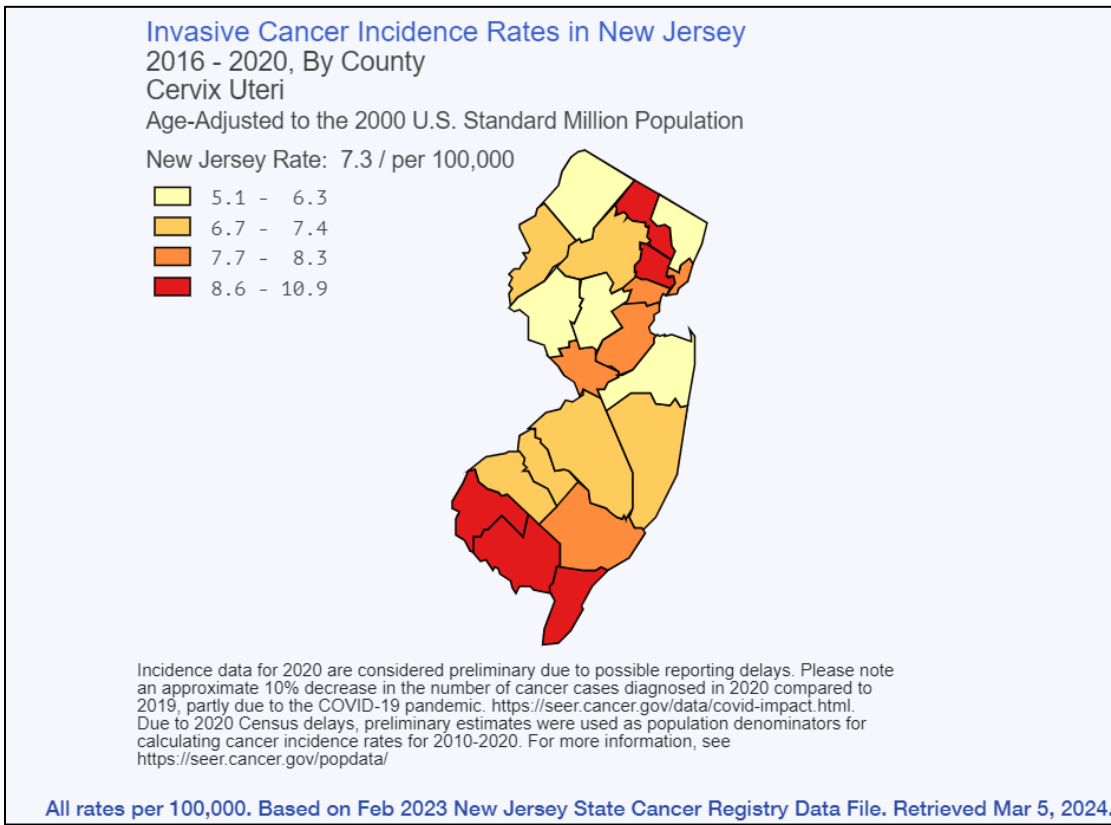
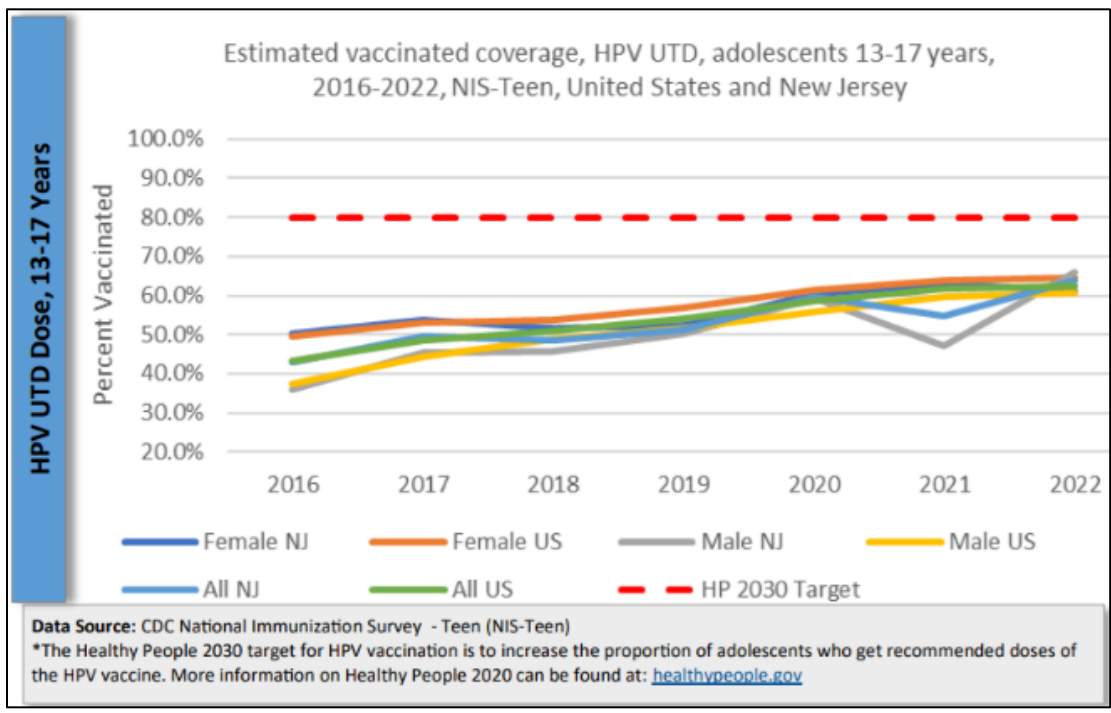
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APPENDICES

Appendix I. Summary of NJ HPV SWOT Analysis

- a. Strengths (Internal)
 - i. Diversity of membership
 - ii. Increased reach
 - iii. Access to data
 - iv. Existing HPV related efforts across states among member partners
 - v. Partners that lobby
- b. Weaknesses (Internal)
 - i. Lack of financial resources
 - ii. Limited staff capacity
 - iii. Limited HPV vaccination data
 - iv. Group just forming/getting started
 - v. Limited engagement
 - vi. Lack of coordination
- c. Opportunities (External)
 - i. Existence of many HPV-related educational resources
 - ii. Increased awareness of HPV vaccine as cancer prevention
 - iii. Can greatly expand reach and impact
 - iv. Opportunity to strengthen HPV related policies
 - v. May be able to engage dentists to educate parents and teens/young adults
- d. Threats (External)
 - i. Misinformation and disinformation about the HPV vaccine and other vaccines
 - ii. Mistrust of government and science
 - iii. Lack of access to vaccine (e.g. low VFC participation)
 - iv. Weak messaging by providers
 - v. Weak policies

Appendix II. NJ HPV-Related Data



Appendix III. Logic Model for NJ HPV VAT Activities

Project/objectives	Inputs	Activities	Outputs	Intermediate Outcomes	Long-Term Outcomes
NJ Start at 9 (SA9) Campaign	<ul style="list-style-type: none"> • Clinical Champions • Evidence • Webinars • Potential website • NJ HPV Vax Data • SA9 PPT • SA9 call to action email • SA9 provider letter listing all supporters. • Survey to track who has endorsed and agreed to promote with providers. • A post survey to determine the reach of the campaign. 	<ul style="list-style-type: none"> • Develop a NJ SA9 PPT. • Create a SA9 call to action email and supporting documents. • Draft a provider letter that will list all supporters. • Meet with decision-makers of key health organizations. • Implement SA9 webinars presenting evidence. • Share pitch email and key information including supporters. 	<ul style="list-style-type: none"> • # of organizations that endorse SA9 • # of health systems that promote SA9 to their providers • # of health systems and practices that adopt SA9 as a written standard of care. • # of health systems and practices that change their EMR to reflect the HPV vaccine is “due” at age 9. 	<ul style="list-style-type: none"> • Increase in % of adolescents receiving the recommended doses of HPV Vaccinations by their 13th birthday. 	<ul style="list-style-type: none"> • Reduction in HPV-related cancers and other HPV-related diseases
Develop and Disseminate a NJ Start at 9 Toolkit	<ul style="list-style-type: none"> • Clinical Champions • Evidence • Webinars • Potential website • NJ HPV Vax Data • 	<ul style="list-style-type: none"> • Gather evidence for start at age 9 • Compile SA9 fact sheets • Consult with experts as needed to identify other tools needed to support the implementation of SA9 (EMR and other changes) • Compile NJ specific resources to support SA9 • Assemble kit and draft promotional email to accompany resource • Identify where the tool kit can sit online. 	<ul style="list-style-type: none"> • # of organizations that endorse SA9 • # of health systems that promote SA9 to their providers • # of health systems and practices that adopt SA9 as a written standard of care. • 3 of health systems + practices that change their EMR to reflect the HPV vaccine is “due” at age 9. • Online downloads of the resource 	<ul style="list-style-type: none"> • Increase in % of adolescents receiving the recommended doses of HPV Vaccinations by their 13th birthday. • 	<ul style="list-style-type: none"> • Reduction in HPV-related cancers and other HPV-related diseases •
NJ HPV Maintenance of Certification Course	<ul style="list-style-type: none"> • Medical specialty admin • Clinical champions • MOC4 • Educational materials • Speaker stipend • Pre/post survey • Data collection tool 	<ul style="list-style-type: none"> • Education of pediatricians on benefits of starting at age 9 • Review of strategies to increase vaccination rates (standing orders, reminders, etc.) • Sharing of tools to facilitate implementing the strategies in their practice 	<ul style="list-style-type: none"> • # of providers that have received HPV Coalition-sponsored training • # of new providers that engage with the Coalition • # of providers that receive CME • # of providers that receive MOC4 credits showing that they have made a sustainable practice change 	<ul style="list-style-type: none"> • Increase in % of adolescents receiving the recommended doses of HPV vaccinations by age 13 	<ul style="list-style-type: none"> • Reduction in HPV-related cancers and other HPV-related diseases

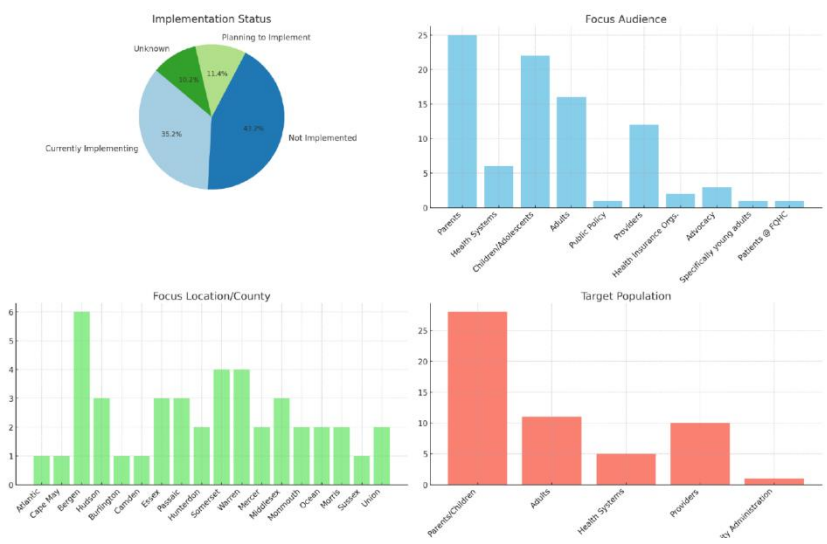
<p>NJ HPV Health Plan Initiative</p>	<ul style="list-style-type: none"> • Clinical Champions • ACS staff • Coalition workgroup • Provider education materials • Travel reimbursement • Plan survey 	<ul style="list-style-type: none"> • ACS and Clinical Champions meet with health plan Medical Director and/or QI staff to promote HPV QI. • Use a group letter promoting starting at 9 to get plans to adopt an HPV vax standard of care. • Follow up with appropriate materials and guidance. 	<ul style="list-style-type: none"> • # of plans that establish a standard of care for starting to vaccinate at age 9 (e.g., reminders, standing orders) • # of plans that send out a provider letter encouraging starting at 9 • Number of plans that engage with HPV VAT to increase HPV vaccination 	<ul style="list-style-type: none"> • Increase in the # of parents and children who receive a provider recommendation for HPV vaccination by age 9 • Increase in % of adolescents receiving recommended doses of HPV vaccinations by age 13 	<ul style="list-style-type: none"> • Reduction in HPV-related cancers and other HPV-related diseases
<p>Provider Education Project</p>	<ul style="list-style-type: none"> • Medical specialty groups • Clinical champions • CEUs/CMEs • Educational materials • Post event survey 	<ul style="list-style-type: none"> • Education of adolescent care providers (NPA, PAs, RN, medical assistants, front office staff) on benefits of starting at age 9 • Review of strategies to increase vaccination rates (standing orders, reminders, etc.) • Sharing of tools to facilitate implementing the strategies in their practice 	<ul style="list-style-type: none"> • # of providers that have received HPV Coalition-sponsored training • # of new providers that engage with the Coalition • # of providers that receive CME/CE 	<ul style="list-style-type: none"> • Increase in % of adolescents receiving the recommended doses of HPV vaccinations by age 13 	<ul style="list-style-type: none"> • Reduction in HPV-related cancers and other HPV-related diseases
<p>Reduce Barriers to HPV Vaccination in Clinical Settings</p>	<ul style="list-style-type: none"> • Medical specialty groups • Clinical champions • VFC • NJDOH • ACS • Other partners 	<ul style="list-style-type: none"> • Convene meetings to examine existing barriers to HPV vaccination. • Advocate for appropriate changes to existing policies and systems to reduce barriers in pediatric care that impact HPV and other vaccination rates. 	<ul style="list-style-type: none"> • # of meetings convened to document barriers. • Medical specialty leaders and members that participate in NJ HPV VAT meetings. • # of State representatives that attend meetings to discuss issues. 	<ul style="list-style-type: none"> • # of providers that participate in the VFC program • Policy or systems changes that may increase vaccinations. • Increase in % of adolescents receiving the recommended doses of HPV vaccinations by age 13. 	<ul style="list-style-type: none"> • Reduction in HPV-related cancers and other HPV-related diseases.

Appendix IV. Summary of New Jersey HPV Environmental Scan Survey

Executive Summary

The New Jersey (NJ) State Cancer Coalition recently launched the NJ HPV Vaccination Action Team (NJ VAT) as part of the Primary Prevention Workgroup. The primary goal of NJ VAT is to achieve the HPV vaccination objectives outlined in the NJ Comprehensive Cancer Control Plan. To develop an effective action plan, the NJ VAT conducted an environmental scan to gather comprehensive information on current efforts to increase HPV vaccination and prevent HPV-related cancers in NJ. The NJ VAT reached out to relevant organizations to learn about their ongoing and planned activities related to HPV vaccination promotion. The NJ VAT distributed a survey designed to take 5-15 minutes to complete, depending on the respondent's level of involvement with HPV vaccination. This survey aims to collect detailed data on the strategies, programs, and initiatives being implemented to enhance HPV vaccination rates in NJ.

This report presents a comprehensive analysis of the survey conducted to understand the current state of HPV vaccination activities in New Jersey. The survey received responses from 88 participants across various types of organizations. The largest group of respondents came from the Local/County Public Health Department with 20 participants. The demographics section below provides an overview of the participating organizations and their geographic distribution across various counties. The report identifies that a significant portion of organizations (35%) are currently implementing HPV-related activities, focusing key audiences such as parents and children with specific focus areas and counties highlighted.



The strategies analysis delves into different approaches aimed at healthcare providers, health systems, and health insurance organizations, as well as those focused on children, parents, and adults. Advocacy strategies are also examined. The report identifies several barriers to effective HPV vaccination implementation, including knowledge and perception issues among parents and adolescents, healthcare provider communication challenges, costs, logistical hurdles, and systemic barriers within health systems.

Collaboration opportunities are explored, listing current and potential partners, along with recommended strategies and activities suggested by survey participants. The report concludes with a set of evidence-based interventions drawn from the Evidence-Based Cancer Control Programs (EBCCP), providing a strategic roadmap for enhancing HPV vaccination efforts in New Jersey.

The environmental scan survey is a crucial step in understanding and enhancing HPV vaccination efforts across NJ. The diverse organizational involvement and identified areas for improvement will inform the NJ VAT's action plan, ultimately contributing to the reduction of HPV-related cancers in the state.

Appendix V.

New Jersey Comprehensive Cancer Control Plan’s HPV Vaccination Objectives and Strategies

The NJ HPV Vaccination Action plan was created from the following state objectives and strategies outlined in the NJ Comprehensive State Cancer Plan, 2021-2025

The recommended implementation activities came out of the State Cancer Coalition’s Primary Prevention Workgroup. An additional strategic planning process took place in the context of the NJ HPV Vaccination Action Team (launched in late 2023 under the Primary Prevention Workgroup) over several months to develop the document and lay out the details in this plan. Planning exercises completed by the team that contributed to the plan included a SWOT Analysis, Statewide Environmental Scan Survey, logic model development, and two by two table intervention prioritization among others.

HPV VACCINATION

Vaccination	Strategies	Workgroup Implementation
1. Increase the proportion of adolescents aged 13-17 years who have initiated the HPV series to 80% .	1. Focus HPV messaging on cancer prevention.	• Deliver/promote HPV cancer prevention messaging to the general public
2. Increase the proportion of 13-17 year olds who are up to date with HPV series to 80% .	2. Educate providers on importance of vaccine recommendations.	• Provide HPV resources to providers, including Call to Action Letter (ACS) promoting immunization at age 9 years
3. Increase the proportion of adults aged 18 years + with HPV to 80% .	3. Increase access to and availability of the HPV vaccine for all eligible populations.	• Develop a campaign/ communication/ tool kit for health systems and other relevant organization (i.e. AAP) to endorse and promote within their network of providers
4. Increase the proportion of infants who receive the birth dose of hepatitis B vaccine to 75% among each annual birth cohort.	4. Support provider participation in the NJ Immunizations Information System to improve surveillance.	• Support improved HPV vaccine reporting to review data from a variety of sources with providers and public health partners.

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