Introduction

Targeting teenagers to receive vaccinations and/or vaccination information in school provides an opportunity to reach a broad swath of teens from all walks of life. American teenagers spend nearly 33 hours on average each week in school or in extra-curricular school activities such as sports teams or student organizations. Schools are an opportune place to reach the approximately 52 million children from all cultures, socioeconomic, and age groups who attend each day as well as being a familiar and trusted community environment. Other benefits of targeting teens in schools are: schools may have the space and capacity to host a school-located vaccination clinic, and school nurses are trusted sources of health information for students and their families.

National guidance from the National Vaccine Plan calls for enhancing access to vaccinations in non-healthcare settings, such as schools. The Community Preventive Services Task Force recommends school-located vaccination programs for increasing vaccination rates, and decreasing rates of vaccine-preventable disease and associated morbidity and mortality.

Immunization Programs are involved in a wide range of efforts to reach teens in schools, such as making school coverage reports more accessible, targeting high school athletes, engaging with school-based health centers, and conducting school-located immunization clinics. The activities highlighted here related to targeting teens in school are:

- **Getting Started:** Updating vaccine language on high school sports physical form (Minnesota)
- **Moving Forward:** Helping schools fulfill state recordkeeping and reporting requirements (Alabama)
- **Taking It to the Next Level:** Immunizing students in school-located clinics during school hours (Rhode Island)
How Immunization Programs (IP) Support Targeting Teens in Schools (2016)

<table>
<thead>
<tr>
<th>31</th>
<th>IP engage with the Department of Education to increase HPV vaccination rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>IP provide schools with education and resources about older adolescents (16-18 yrs.)</td>
</tr>
<tr>
<td>27</td>
<td>IP promote school clinics at high schools</td>
</tr>
<tr>
<td>25</td>
<td>IP provide adolescent coverage rates and/or exemption reports to the Department of Education</td>
</tr>
</tbody>
</table>

*Data from 2016 AIM Annual Survey, 62 of 64 Immunization Programs responded to survey

**Resources for Reaching Teens via School-Related Efforts**

Many organizations provide tips and tools for targeting teens in schools, including:

- National Association of School Nurses resources, including letters for parents/guardians with immunization information, a position statement on immunizations, and information on school-located vaccination: 

- National Association of School Nurses toolkit **Fighting the Flu Happens at School**: 
  [http://www.nasn.org/ToolsResources/SeasonalInfluenza](http://www.nasn.org/ToolsResources/SeasonalInfluenza)

- National Education Association toolkit **Advocacy for Vaccines: A Leadership Guide for School Nurses and Allied Health Professionals**:

- American School Health Association resource **Give It a Shot: Toolkit for Nurses and Other Immunization Champions Working with Secondary Schools**:

- Centers for Disease Control and Prevention webpage on flu information for schools: 
  [https://www.cdc.gov/flu/school/index.htm](https://www.cdc.gov/flu/school/index.htm)

- Centers for Disease Control and Prevention webpage on vaccination rates & other information for school administrators and nurses: 
  [https://www.cdc.gov/vaccines/imz-managers/coverage/schoolvaxview/groups/school.html](https://www.cdc.gov/vaccines/imz-managers/coverage/schoolvaxview/groups/school.html)

- Centers for Disease Control and Prevention ‘What Can Partners Bring to the Table’ graphic:

- Voices of Meningitis links specifically for nurses: 
  [http://www.voicesofmeningitis.org/resources-for-nurses.html](http://www.voicesofmeningitis.org/resources-for-nurses.html)

- National Association of County and City Health Officials and Association of State and Territorial Health Officials discussion and key recommendations for promoting school-located vaccination as a societal norm to increase vaccine uptake: 
Overview of activity
The Minnesota Immunization Program worked with the Minnesota State High School League to update language related to vaccines on their standard pre-participation sports physical examination form.

Ages targeted
Students in grades 7-12 who participate in school-based athletic activities.

Background/impetus for the activity
In Minnesota, any student in grades 7-12 participating in school-based sports must have documentation on file with his/her school of a physical examination done within the past three years. The Minnesota State High School League (MSHSL), a voluntary association of public and private schools that supports interscholastic athletic and fine arts programs, provides a standardized form for sport physicals that schools can make available to parents. For the 2015-16 school year, MSHSL-sponsored activities involved 525 member schools and over 300,000 students, a portion of which would be completing the physical form on a 3-year cycle.

The 3-page physical form includes two areas that address immunizations. These sections would typically be completed by a healthcare provider. Updating the immunization sections of the sports physical form was one of many ideas generated by a workgroup of diverse stakeholders, formed through the Minnesota Immunization Practices Advisory Committee (MIPAC), that was focused on ways to improve adolescent immunization rates.

Description of activity
Several years ago, the adolescent immunization coordinator initiated contact with MSHSL’s Medical Director to discuss potential changes to the immunization sections of the form. At the time, the form did not list all of the vaccines recommended for adolescents, and among those listed, it made a distinction between vaccines that were required for school and those that were simply recommended.

To implement changes, the coordinator worked with an MSHSL Associate Director. The language was initially changed to add MCV4 and HPV to the list of vaccines, and was subsequently changed to remove the distinction between recommended and required vaccines.

Role of Immunization Program and other agencies/groups involved
The Minnesota Immunization Program worked with the MSHSL to periodically update the immunization language on the form. The MSHSL reviews and updates the form annually and promotes its use statewide. Language changes must be approved by an MSHSL committee.
Dissemination
The MSHSL promotes use of the form among its member schools. The MSHSL website is public, and non-member schools can use the form as a template.

Intersection with other program activities
Although not the main purpose of this form, school nurses have noted that they use the form as a last resort to collect general vaccination information for students who have not turned in immunization records to school or have data missing in the state’s immunization information system. However, because the form does not record detailed immunization data (i.e., provides checkboxes rather than space to record vaccine administration dates), the forms cannot be used to update students’ immunization records.

Funding
Funding for this activity, which covers the staff time to coordinate with MSHSL, comes out of the Immunization Program’s regular CDC immunization cooperative agreement.

Staffing
The adolescent immunization coordinator is the main Immunization Program staff person involved in this activity, which is incorporated into the coordinator’s regular responsibilities.

Implementation status
The Immunization Program will revisit the form with MSHSL as needed when recommendations change (as they recently have with the HPV recommendation changing from 3 doses to 2 doses).

Successes
- The form now specifically identifies vaccines that are recommended across the adolescent years. Many families will interact with a healthcare provider to get this form completed during the middle and high school years, typically in 7th and 10th grades. It is one more way to bring attention to adolescent immunizations among families and providers.
- This form is also available to parents of homeschooled children who participate in extracurricular sport activities, which helps to raise awareness of immunization requirements among a population that is typically hard to reach with this information.
- Keys to success included creating a mockup of the form to show MSHSL exactly how the Immunization Program wanted the form to change and being persistent with follow-up.

Challenges
- The impact of the form on the immunization status of student athletes cannot be readily gauged. Schools do not have to use the MSHSL form, though according to the school health consultant for the Minnesota Department of Health, it is widely used by schools throughout the state.
School nurses have expressed the concern that the checkbox format may collect less accurate data (i.e., more susceptible to being checked without verification) than if the form asked for actual vaccination dates.

### Other lessons learned/Advice to other programs

- Having a diverse group of stakeholders involved in generating ideas for addressing adolescent immunization can help immunization programs think “outside the box.” Making the change to this form is not something that the Immunization Program would likely have thought of on its own.
- Incremental improvements can be a valuable goal of immunization activities. The form is very dense and hard to read, and there are tight space constraints that limit the extent to which the Immunization Program can request changes. The current form is not ideal, but it is better than it was.
- Other immunization programs could consider requesting that vaccine administered dates be recorded on school physical forms rather than simple checkboxes, if possible.

### Relevant resources

- MSHSL sports physical form:  

### For more information

Contact Denise Dunn, Assistant Section Manager, Vaccine-Preventable Disease Section, at (651) 201-5560 or denise.dunn@state.mn.us.
We engaged local health departments to provide adolescent vaccines during school clinics, which we feel is the most successful, as it directly gets vaccines into the patients.”

— John Joseph, Ohio Immunization Program Manager
Overview of activity
The Alabama Department of Public Health (ADPH) partnered with the Alabama State Department of Education (ALSDE) to give public schools the ability to print valid Certificates of Immunization for their students directly from the state immunization information system (IIS).

Ages targeted
This activity currently covers public school students in grades K-12.

Background/impetus for the activity
Alabama state law requires that every student have on file at his/her school a valid Certificate of Immunization (COI) documenting receipt of vaccines required for school entry (or an exemption form). Schools submit an annual School Entry Survey every fall in which they record for each grade K-12 the number of students with valid, invalid, and missing COIs, as well as exemptions. Based on data from the 2015-2016 School Entry survey, about 5% of all students (in public and private schools) had expired or missing COIs, with a wide range across individual schools. In January 2016, ADPH and ALSDE announced measures to help increase the number of children with valid COIs on file and improve the efficiency of the COI and reporting processes for schools.

Description of activity
ADPH is giving schools more access to the statewide IIS (i.e., Immunization Patients Resources with Integrated Technology, or ImmPRINT) to facilitate these improvements. Changes that ADPH has made include:

- A COI printed directly from ImmPRINT is the only department approved COI form. The COI was typically a paper form that parents submitted to their child’s school. Screenshots or lookalike forms printed from electronic health records (EHRs) had been accepted previously, but are no longer allowable. Provider EHRs must use ImmPRINT, COI web service, or have an HL7 bidirectional interface with ImmPRINT.

- The COI form previously had to be printed on state-supplied, watermarked blue paper. The blue paper requirement is being phased out as inventory is depleted; the forms can now be printed on any regular paper.

- A school nurse access level was already available in ImmPRINT. To use ImmPRINT for generating COIs, a field was added to record a child’s grade level. The COI template was added, with an expiration date that auto-populates with the date of the next required vaccine dose. In addition, a “Not Up to Date” report was added that school nurses can print.

- Nurses at public schools with existing access to ImmPRINT can print COIs directly from ImmPRINT for children who are up to date on their vaccines. School nurses can also print the Vaccine Forecaster and a Patient/Parent Card for students to take home for parent review. They also have the option of entering historical data and were given the ability to report duplicate patients.
For the annual School Entry Survey that schools must submit every fall, ADPH is planning to transition away from collecting these data via an online survey to using data already available in ImmPRINT. For schools to take advantage of this, school nurses must log in to ImmPRINT to enter the school assignment for all of their students, and enter exemption information and historical data if known. This also would reduce double entry with ALSDE’s own system for collecting immunization information; they have agreed to use ImmPRINT as the source of immunization data.

**Role of Immunization Program and other agencies/groups involved**
The ADPH Immunization Program meets regularly with ALSDE’s State Nurse Administrator and two Nurse Managers to discuss and disseminate these changes. ADPH was responsible for making the necessary changes to ImmPRINT. ADPH field staff were trained to train lead school nurses (who are at the school system, city, or county level) on using ImmPRINT, who then are responsible for training individual schools’ nurses.

**Dissemination**
Both the ADPH and ALSDE communicated these changes to city and county superintendents of education. The Immunization Program regularly communicates with ALSDE’s nursing administrators, and they communicate with their local nurses. ADPH has spoken at the annual school nurse conference. ADPH regional field staff lead training for school nurses on using ImmPRINT.

**Intersection with other program activities**
Concurrent with this activity, ADPH worked to communicate with stakeholders that HIPAA allows the exchange of patient information for public health activities, including via ImmPRINT. Also, this work overlaps with ADPH’s efforts to encourage healthcare providers with EHRs to report via an HL7 bidirectional interface.

**Funding**
The work done by the Immunization Program, including changes to their IIS, have been funded through the standard cooperative agreement with CDC.

**Staffing**
The Immunization Program Manager, Registry Branch Manager, and Data Quality and Surveillance Branch Manager interact with the ALSDE nurse administrators. The ADPH’s 25 field staff, who also do VFC and AFIX visits, train local nurses on using ImmPRINT.

**Implementation status**
These changes are a work in progress for public schools. Future expansions are planned to cover K-12 students in private schools, children attending licensed day care facilities, and college-enrolled students.
Successes

- A selling point for school nurses is that they no longer need to communicate repeatedly with parents about bringing in a piece of paper.
- Once fully established, fulfilling annual immunization reporting to ADPH should be much easier for schools.
- The data that school nurses have should more accurately reflect the immunization status of their students, though it is too early to determine the impact on data quality.
- The switch from paper forms to ImmPRINT should provide an easier way for schools to track compliance with new or existing school immunization requirements. For example, middle school students are required to have a Tdap vaccine (6th grade) and a second varicella dose (if older than 13 years). The 2015-2016 School Entry Survey requested that schools record the number of students up to date on tetanus, diphtheria, and pertussis vaccines, which at the time meant reviewing this information on each individual COI.

Challenges

- Communication with ALDSE’s nurse administrators can be challenging. They travel frequently so it can be difficult to maintain regular communication. Also, at times ALDSE may change things based on feedback from nurses in the field without first communicating the issues to ADPH. To improve this process, ADPH feels it should better document their meetings and decisions made (e.g., circulate meeting notes and relevant action items for approval).
- To be able to use ImmPRINT data for the annual School Entry Survey, schools must first set up some things in ImmPRINT (e.g., assign all of their students to the school, enter exemption status and grade), which can be burdensome particularly for larger schools. To reduce the burden, the state can help with ImmPRINT school assignments; schools can give an electronic list of students to ADPH with a few other fields and the state can make assignments electronically for those kids that match on those fields. In recent attempts, ADPH has gotten ~75% match, so those schools have to do manual assignments for only 25% of their students.
- Going forward, a challenge related to private schools is determining who should have ImmPRINT access if they have no medical staff. ADPH will likely restrict access to view and print only (no entering of historical data) if they do not have medical staff.

Other lessons learned/Advice to other programs

- Public schools already had view access to ImmPRINT, so they were already enrolled and familiar with it. Replicating this activity would be more work for immunization programs that first need to bring schools on board with their IIS.
- Starting the discussion at the top – i.e., working with school nurse administrators at the state level – is necessary for these changes to be widely adopted.

Relevant resources

- ImmPRINT COI template: https://aim.site-ym.com/resource/collection/3304CF77-DC9A-4460-870C-4D4168FCD60/ADPH_Approved_COI.pdf

For more information

Contact Cindy Lesinger, Immunization Division Director, ADPH, at (334) 206-2018 or cindy.lesinger@adph.state.al.us
Overview of activity
The Rhode Island Immunization Program runs a program called “Vaccinate Before You Graduate” that offers all routinely recommended and required immunizations at no out-of-pocket cost to students in middle school and high school through onsite clinics at participating schools.

Ages targeted
Middle school through high school-aged students.

Background/impetus for the activity
The Vaccinate Before You Graduate (VBYG) program began in 2001 as a catch-up program for Hepatitis B vaccine for 12th grade students, to ensure that students were fully immunized prior to graduation. The decision was made to offer vaccination clinics during school hours to address the barrier of students missing school and their parents missing work to obtain vaccines.

Description of activity
The Rhode Island Immunization Program contracts with a local mass immunizer, The Wellness Company, to run vaccination clinics inside schools during school hours. The clinics are coordinated with school nurses, which every school employs. Students (with parental consent) are eligible to receive vaccines. The Wellness Company, which is awarded the contract through an RFP process, has been involved since the beginning of the program and has continued to be the vendor best suited to support this work. The Wellness Company staff includes an administrator, program manager, and four registered nurses.

The VBYG program expanded in 2010 to include 9th-12th graders in all private and public schools. In September 2015, the VBYG program further expanded to include middle school students.

The Immunization Program is able to offer all routinely recommended and required vaccines at no out-of-pocket cost because Rhode Island continues to be a universal vaccine state. To offset some of the cost of the VBYG program, The Wellness Company began several years ago to obtain provider status with some of the insurance companies so that it can bill insurers for vaccine administration fees.

Role of Immunization Program and other agencies/groups involved
The Immunization Program establishes a relationship with schools that choose to participate by working with the superintendent, principals, and school nurses to get everyone on board. Then the Wellness Company works directly with the school nurses on every aspect of the school-located clinics. The number and frequency of clinics is determined by the participating schools. Doses administered data from these clinics must be submitted to the state immunization information system, called KidsNet, within 48 hours. The Immunization Program establishes a relationship with schools that choose to participate by working with the superintendent, principals, and school nurses to get everyone on board. Then the Wellness Company works directly with the school nurses on every aspect of the school-located clinics. The number and frequency of clinics is determined by the participating schools. Doses administered data from these clinics must be submitted to the state immunization information system, called KidsNet, within 48 hours. The Immunization Program highlights provide a comprehensive overview of the program, including details about the services offered, the eligibility criteria, and the costs associated with each vaccine. Additionally, the program provides information on how parents can register their children for the program and the processes involved. The Immunization Program highlights also provide a link to the website of The Wellness Company, which offers information about the program and their services. The program is open to all students in grades 9 to 12, and the immunizations offered are those recommended by the Advisory Committee on Immunization Practices (ACIP). The program is available at no cost to the students, making it accessible to all students regardless of their ability to pay. The program has been successful in improving vaccination rates among adolescents in Rhode Island, and it continues to be a valuable resource for ensuring that all students are protected from preventable diseases.
Program has a close relationship with contacts in the Rhode Island Department of Education, though the program is not directly involved with the VBYG program.

**Dissemination**
The Immunization Program supports a communications specialist dedicated solely to the Immunization Program who assists in developing materials that are used for the VBYG program, such as the consent form and a program announcement provided in four languages. The School and Adolescent Services Coordinator regularly communicates with school nurses, principals, superintendents, and school committees, including sending reports of data from the VBYG program (e.g., doses administered data by school). The Immunization Program also has discussed the VBYG program at statewide school nurse conferences and healthcare provider conferences.

**Intersection with other program activities**
Regular provider communications (e.g., VFC site visits) include information about the VBYG program. In a related effort, the Immunization Program holds school-located influenza immunization clinics during the fall that are open to the entire community and are typically held during after school hours. The Wellness Company is the mass immunizer for these clinics as well.

**Funding**
The contract with The Wellness Company is funded through the Immunization Program’s federal Vaccines for Children (VFC) grant. Immunization Program staff time is also covered via regular CDC cooperative agreement funding. The initial expansion to middle schools was funded with PPHF HPV funding.

**Staffing**
The Immunization Program’s School and Adolescent Services Coordinator is responsible for interfacing with The Wellness Company, initiating contacts with schools that would like to participate, and regularly maintaining communication with participating schools about the VBYG program.

**Implementation status**
The VBYG program is ongoing.

**Successes**
- In the 2015-16 school year, 103 of 151 eligible schools participated in the VBYG program with almost 5,000 doses of vaccine administered.
- The VBYG program’s success has been built on frequent communication; Immunization Program staff are in touch with schools and the vendor every day. Transparency is important to keep things running smoothly and to maintain support for the VBYG program.
Challenges

- Some school nurses do not want to participate because of the added burden, which the Immunization Program addresses by providing necessary resources such as running KidsNet reports, creating various templates, etc.

- Some providers have occasionally voiced concerns about students being immunized outside of their primary care offices. To help address this concern, the Immunization Program requires the vendor to report doses administered to KidsNet within 48 hours, communicates about the VBYG program regularly (e.g., during provider site visits, monthly newsletter), and has developed a report in KidsNet that providers can run showing which doses were given by The Wellness Company. Some providers still find it to be a barrier that they have to go in and choose to run the report, so this is still a work in progress. The Immunization Program believes that providers have come to appreciate that the VBYG program is catching up students that likely would not have come to the provider office.

Other lessons learned/Advice to other programs

- The most important thing is to get buy-in right from the top from school officials.

- Most of the first year of the VBYG program was devoted to planning and initial conversations with all levels of school administrators and school nurses.

- For Rhode Island, it is important to use a local vendor so that clinics can be organized on very short notice.

- It is important to get the message across to providers that the Immunization Program is trying to complement the work that providers do, not replace it.

- Incremental expansions of the VBYG program have been a good way to work toward a sustainable model that works well for Rhode Island.

- Vendors need to be able to manage large quantities of vaccines, deal with proper storage and handling, be proficient in the logistics of running clinics, and be able to work well with school staff. It is very helpful if they can bill insurers.

Relevant resources

- Example consent form: https://aim.site-ym.com/resource/collection/03C67FF0-F82E-4917-9D4C-77F1848AC9BA/VBYG%20Consent-%20English.pdf

- Poster advertising program: https://aim.site-ym.com/resource/collection/03C67FF0-F82E-4917-9D4C-77F1848AC9BA/VBYG%20Announcement-%20English.pdf

- Example report of statewide VBYG data: https://aim.site-ym.com/resource/collection/03C67FF0-F82E-4917-9D4C-77F1848AC9BA/Final%202014-15%20VBYG%20State%20Report%20(only%20page1-2).pdf

For more information

Contact Kathy Marceau, School and Adolescent Services Coordinator, Rhode Island Office of Immunization, at (401) 222-4624 or Kathy.Marceau@health.ri.gov.
REFERENCES


