Disclosure: Session L4

In compliance with continuing education requirements, all presenters must disclose any financial or other associations with the manufacturers of commercial products, suppliers of commercial services, or commercial supporters as well as any use of unlabeled product(s) or product(s) under investigational use.

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Planning committee discussed conflict of interest with each presenter to ensure there is no bias.

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CDC did not accept commercial support for this continuing education activity.
**Workshop L4 Presentations**

1: Overview of 2 HPV vaccination evaluations (Suchita A. Patel)

2: Description of 55 immunization programs’ 2016 AFIX activities and policies (Stephen McGruder)

3: HPV-related activities conducted by 55 immunization programs’ as part of their 2016 AFIX program (Tosin Ariyo)

4: Description of HPV vaccination activities in 6 Pacific Island jurisdictions, 2016–2018 (Helen Fisun)
Workshop L, Presentation #1:

Overview of two evaluations to improve HPV vaccination rates, 2016-2019

Presenter: Suchita A. Patel, DO, MPH
Medical Officer

May 17, 2018
National Immunization Conference, 2018
Co-Authors

Helen Fisun, MPH, Contractor, Synergy America, Inc.
Stephen McGruder, MPH, Contractor, IHRC, Inc.
Tosin Ariyo, DrPH, MPH
Hanan Awwad, MS
Mimi (Maribeth) Eckert, MPH
Ashley Tippins, MPH
Chelsey Kamson, MPH, Contractor, Metas Solutions
Fan Zhang, PhD, MPH
Acknowledgements

- IPE Immunization Program Advisory Group (~40 staff from 20 programs):
  - Chicago, Connecticut, Florida, Hawaii, Indiana, Iowa, Massachusetts, Michigan, Mississippi, Nebraska, New York City, North Carolina, Ohio, Oklahoma, Oregon, Rhode Island, South Carolina, Vermont, Virginia, Wyoming

- CDC staff (current and previous)
  - Odile Ferroussier-Davis, Elizabeth Vogt, Charnetta Williams, Chelsey Kamson, Adam Bjork, Tara Vogt
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Presentation Outline

• Overview of evaluations
• Evaluation #1 Overview
  ▪ AFIX Program Overview
  ▪ Objectives and Data sources
• Evaluation #2 Overview
Overview of Evaluations

- 64 immunization programs (50 states, 6 cities, and 8 islands/territories) are required to conduct program evaluation part of the funding they receive from CDC
  - Referred to as the Immunization Program Evaluation (IPE) Requirement

- CDC-led and standardized across participating programs

- Timeline: July 2016 – June 2019

- Focus on improving Human papillomavirus vaccination (HPV) vaccination rates
Evaluation Framework

CDC’s Framework for Program Evaluation*

- Engage stakeholders
- Describe the Program
- Justify conclusions
- Focus the evaluation design
- Gather credible evidence
- Ensure use and share lessons learned

STANDARDS
- Utility
- Feasibility
- Propriety
- Accuracy

*http://www.cdc.gov/eval/framework/
Evaluation #1: Overview

- 55 immunization programs are participating

- **Focus:** Understand the impact of CDC’s Assessment, Feedback, Incentives, and eXchange (AFIX) program on HPV vaccination rates among Vaccines For Children Program (VFC) providers
  - Evaluate selected AFIX activities, processes, and outcomes

- AFIX is an evidence-based, continuous quality improvement (QI) program targeting VFC provider offices to improve childhood and adolescent vaccination rates
  - Launched in 1995; endorsed by the Advisory Committee on Immunization Practices (ACIP) in 2011
Evaluation #1: AFIX Program Overview (1/2)

- **Assessment:** Generate childhood and/or adolescent vaccination coverage data reports including missed opportunities for selected VFC providers
  - Generated via Immunization Information Systems (IIS) (i.e., registry) and/or CoCASA

- **Feedback:** Share and discuss coverage reports via site visits using CDC’s AFIX Site Visit Questionnaire to evaluate existing immunization services and select QI strategies

- **Incentives:** Recognize achievements of provider offices in varying ways

- **eXchange:** Conduct follow-up with providers to monitor their progress and offer support and assistance

*Comprehensive Clinic Assessment Software Application (CoCASA) is an AFIX tool for assessing immunization coverage and practices.*
Evaluation #1: AFIX Program Overview (2/2)

- CDC provides guidance to programs via the CDC AFIX Policies and Procedures Guide
- Programs develop their own policies and procedures incorporating CDC’s recommendations
- Programs report site visit and coverage data into CDC’s AFIX Online system
- AFIX site visits:
  - Are paired with VFC visits (referred to as Combined VFC/AFIX visits)
  - Conducted by staff referred to as AFIX reviewers; usually in-person for Feedback
Evaluation #1: Primary Objectives

Describe:

1. How programs implement AFIX, with a focus on HPV vaccination.
2. Programs’ AFIX staff’s training, attitudes, beliefs, and behaviors related to AFIX.
3. VFC provider staff’s attitudes, understanding, and perception of the AFIX process.
4. Impact of evaluation activities and results
Evaluation #1: Primary sources of data

1. Program survey to determine AFIx activities and policies; conducted, January–March 2017
2. Interviews of program staff and provider staff, August 2017–January 2018
3. Survey of programs’ AFIx staff’s training, attitudes, beliefs, and behaviors related to AFIx, May–June 2018
4. Survey of provider staff’s attitudes, understanding, and perception of the AFIx process, Summer 2018
5. Program survey to gather impact, barriers, and facilitators, Winter 2018
Evaluation #2: Overview

• 6 Pacific Island immunization programs are participating
  ▪ American Samoa (AS)
  ▪ Commonwealth of Northern Mariana Islands (CNMI)
  ▪ Guam
  ▪ Federated States of Micronesia (FSM)
  ▪ Palau
  ▪ Republic of Marshall Islands (RMI)

• **Focus:** Understand the impact of HPV vaccination activities including school vaccination campaigns
  ▪ Evaluate selected HPV vaccination activities

• Stay tuned for Presentation #4!
Thank you!

For more information, please email the Immunization Program Evaluation Team at IPE@cdc.gov.

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.
Workshop L, Presentation #2:

Description of 55 immunization programs’ 2016 AFIX activities and policies

Presenter: Stephen McGruder, MPH, Contractor, IHRC, Inc.

Co-authors:
Helen Fisun, MPH, Contractor, Synergy America, Inc.
Hanan Awwad, MS
Tosin Ariyo, DrPH, MPH
Fan Zhang, PhD, MPH
Suchita A. Patel, DO, MPH

May 17, 2018
National Immunization Conference, 2018
National Center for Immunization & Respiratory Diseases
Immunization Services Division
Acknowledgements

• Chelsey Kamson, MPH, Contractor, Metas Solutions
• Tara Vogt, PhD, MPH
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Presentation Outline

• Survey Purpose & Methods

• Selected Results
  ▪ AFIIX staff
  ▪ AFIIX site visits
  ▪ AFIIX resources
  ▪ Assessment and Feedback
  ▪ Incentives and eXchange

• Summary
Survey: Purpose & Methods

- Purpose: Describe 55 immunization programs’ 2016 AFIX policies and activities including those related to HPV vaccination

- Methods: Each program completed a web-survey fielded for 6 weeks (January–March 2017)

- Results: Frequencies; analyzed text responses and developed themes
Results: AFIX Staff
Program Staff who conduct AFIX activities, 2016 (N=55)

Total: 1,045
Median: 8 / program
Range: 1-198 / program

Employed by:

- Immunization Program: 540 (52%)
- Local DOH/jurisdictions: 498 (47%)
- Other: 7 (1%)

Activities conducted:

- 746 (71%) conduct AFIX activities including site visits
- 299 (29%) conduct AFIX activities excluding site visits
Number of programs that had ≥1 AFIX site visit reviewer* who was a physician, nurse, or had other clinical backgrounds, 2016 (N=55)

- Nurse: 40 (73%)
- Physician: 3 (5%)
- Other clinical background: 20 (36%)

* AFIX reviewers conduct sites and other activities
### Number of programs that had AFIX Coordinators/Managers, 2016 (N=55)

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No AFIX Coordinator</td>
<td>7</td>
<td>13%</td>
</tr>
<tr>
<td>Full-time AFIX Coordinator</td>
<td>36</td>
<td>65%</td>
</tr>
<tr>
<td>Part time AFIX Coordinator</td>
<td>12</td>
<td>22%</td>
</tr>
</tbody>
</table>

~50% were in position for ≤ 2 years
Results: AFI X visits
Number (%) of programs that conducted one or more Combined VFC/AFIX and/or AFIX-Only visits*, 2016 (N=55)

- Only Combined VFC/AFIX visits: 11 (20%)
- Only AFIX-Only visits: 19 (35%)
- Both Combined VFC/AFIX and AFIX-Only visits: 25 (45%)

* CDC recommends that programs conduct VFC and AFIX visits separately.
Reason(s) programs conducted Combined VFC/AFIX visits, 2016 (n=36)
Select all that apply

- Saves time: 32
- Saves money: 30
- Same staff who conduct both activities: 30
- Simplifies the scheduling of visits: 30
- Preferred by provider offices: 25
- Preferred by site visit reviewers: 22
- Not enough staff to conduct separate visits: 20
- Combined visits more or equally effective in improving coverage than separate visits: 13
- Other reasons: 5

Number of Programs

0 4 8 12 16 20 24 28 32 36
Reason(s) programs did NOT conduct Combined VFC/AFIX visits, 2016 (n=19)
Select all that apply

<table>
<thead>
<tr>
<th>Reason</th>
<th>Number of Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDC encourages awardees to conduct separate visits</td>
<td>17</td>
</tr>
<tr>
<td>Separate visits are equally or more effective</td>
<td>16</td>
</tr>
<tr>
<td>Easier to focus visits on one program area (AFIX or VFC)</td>
<td>15</td>
</tr>
<tr>
<td>Simplifies scheduling of visits with providers</td>
<td>9</td>
</tr>
<tr>
<td>Preferred by site visit reviewers</td>
<td>8</td>
</tr>
<tr>
<td>Preferred by provider offices</td>
<td>7</td>
</tr>
<tr>
<td>Saves time</td>
<td>2</td>
</tr>
<tr>
<td>Other reasons</td>
<td>2</td>
</tr>
<tr>
<td>Saves money</td>
<td>1</td>
</tr>
</tbody>
</table>
Programs’ guidance to AFIX reviewers about the order in which the AFIX and VFC portions are conducted during combined VFC/AFIX visits, 2016 (n=36)

Select all that apply

- Up to reviewer’s discretion: 19
- Conduct AFIX after the VFC portion: 6
- Conduct AFIX prior to the VFC portion: 10
- Depends on provider office’s preference: 13
- Guidance not provided: 2
- Other: 2

Number of Programs: 0, 4, 8, 12, 16, 20, 24, 28, 32, 36
Results: AFIX Resources – Use and Needs
List of CDC’s AFIX resources, 2016

• Tips for Communication with Physicians
• Suggestions to Improve Immunization Practice Guide
• AFIX Site Visit Checklist
• Quality Improvement Action Plan
• Quality Improvement Action Steps
• eXchange of Information Plan
• AFIX Childhood Report Card
• AFIX Adolescent Report Card
• AFIX Policies and Procedure Guide
• AFIX Overview
• Online Tool Aggregate Management Reports
• Online Tool Provider Data Reports (non-aggregate)
Programs’ feedback about CDC’s AFIX resources, 2016 (N=55)

- Tips for Communication with Physicians
- Suggestions to Improve Immunization Practice
- AFIX Site Visit Checklist
- Quality Improvement Action Plan
- Quality Improvement Action Steps
- eXchange of Information Plan
- AFIX Childhood Report Card
- AFIX Adolescent Report Card
- AFIX Policies and Procedure Guide
- AFIX Overview
- Online Tool Aggregate Management Reports
- Online Tool Provider Data Reports (non-aggregate)

21 (38%) did NOT have suggested updates to these resources.

20 (36%) of programs modified/adapted these resources. (e.g., QI Action Plan)

≥ 20% requested the one or more of CDC’s resources be updated to better meet their needs. (e.g. Adolescent Report Card)
Programs’ feedback about other AFIX resources, 2016 (N=55)

- 43 (78%) developed their own AFIX materials for use by reviewers.

- 15 (27%) used materials developed by other programs or partners such as Immunization Action Coalition, American Cancer Society, and American Academy of Pediatrics.

- 40 (73%) of programs felt that additional tools and materials would be beneficial for their programs.
Results: Assessment and Feedback
Programs’ guidance for reviewers about sending the AFIX Site Visit Questionnaire to provider offices before an AFIX feedback session, 2016 (N=55)

- Yes, required: 12 (22%)
- Yes, recommended: 15 (27%)
- No specific guidance: 28 (51%)

CDC’s 2016 AFIX Policies & Procedures Guide: The questionnaire may be mailed to providers prior to the site visit OR filled out during the visit.
Reasons programs sent the Site Visit Questionnaire before the site visit, 2016 (N=27)

- Foster communication between the AFIX reviewer and provider
- Allows provider to prepare for the visit
- Allows site visit reviewer to prepare materials and resources
- Reduces visit time
- Allows reviewer and/or provider time to review QI strategies to determine those that may be most feasible
Programs’ guidance to reviewers about sending coverage rate reports before site visits, 2016 (N=55)

- Yes, required to send before visit: 7 (13%)
- Yes, recommended to send before visit: 5 (9%)
- No specific guidance: 43 (78%)

CDC’s 2016 AFIX Policies & Procedures Guide: No guidance about this activity.
Is your program able to periodically share office-level coverage rates with VFC providers outside of AFIX activities?
2016 (N=55)

- Yes: 23 (42%)
- No: 32 (58%)
Do your program’s VFC Providers have the ability to use the IIS to run their own coverage reports? 2016 (N=55)

- Yes: 34 (62%)
- No: 21 (38%)
Programs’ guidance to reviewers about which provider staff should attend AFIX Feedback sessions, 2016 (N=55)

- 76% required one or more physician
- 64% required office managers
- 64% required vaccine administrators
- 31% required schedulers

CDC’s 2016 AFIX Policies & Procedures Guide: Programs should request that the feedback session be attended by all staff that has decision-making authority and/or immunization-related work responsibilities (for example, physicians, physician assistants, nurses, scheduling staff, QI staff.)
What is your program’s guidance regarding which QI strategies on the Site Visit Questionnaire are discussed during the AFIX visit? 2016 (N=55)

- 18 (33%) Reviewer expected to discuss all QI strategies
- 17 (31%) Reviewer only discusses QI strategies that practice does not conduct
- 15 (27%) Strategies discussed at the reviewers discretion
- 5 (9%) Other

CDC’s 2016 AFIX Policies & Procedures Guide: All QI strategies in the questionnaire should be defined and explained.
Results: Incentives and eXchange
Does your program provide incentives to provider offices as part of the AFIX process? 2016 (N=55)

- Yes: 40 (73%)
- No: 15 (27%)

2 offer CE/CME
Programs’ guidance for reviewers about which method(s) are acceptable for conducting the eXchange/Initial Follow-up session, 2016 (N=55)

Select all that apply

- Phone: 49 programs
- Face to Face: 40 programs
- E-mail: 34 programs
- Webinar: 10 programs
- Fax: 9 programs
- Other: 2 programs
Reasons programs prefer specific methods for conducting eXchange, 2016 (N=55)

• Phone or email are easier because they save time (e.g., due to distance), save resources, greater flexibility and/or efficient (n=24)

• In-person interactions are better for more immediate feedback (n=15)

• Method depends on provider and/or reviewer availability/preference (n=7)
Summary

• ~50% of staff who conducted AFIx activities were employed by local health departments / jurisdictions

• Time, cost, staffing, and provider considerations were top reasons why programs conducted Combined VFC/AFIX visits

• CDC’s AFIx resources are used by many programs and also developed their own; programs also expressed a need for additional or updated resources

• Variability in the guidance programs provide to their AFIx reviewers and alignment with CDC’s AFIx policies
Thank you!

For more information, please email the Immunization Program Evaluation Team at IPE@cdc.gov.

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.
Workshop L, Presentation #3:

HPV-Related Activities Conducted By 55 Immunization Programs’ as Part of the 2016 AFIX Program

Tosin Ariyo, DrPH, MPH, CDC Evaluation Fellow

Co-authors:
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Hanan Awwad, MS
Stephen McGruder, MPH, Contractor, IHRC, Inc.
Fan Zhang, PhD, MPH
Suchita A. Patel, DO, MPH

May 17, 2018
National Immunization Conference, 2018
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Acknowledgements

- Chelsey Kamson, MPH, Contractor, Metas Solutions
- Tara Vogt, PhD, MPH
Presentation Outline

- Survey Purpose & Methods
- Selected Results
  - AFIX visits and HPV-related activities
  - HPV-related resources
- Summary
Survey: Purpose & Methods

- **Purpose:** Describe 55 immunization programs’ 2016 AFIx policies and activities including those related to HPV vaccination

- **Methods:** Each program completed a web-survey fielded for 6 weeks (January–March 2017)

- **Results:** Frequencies; analyzed text responses and developed themes
Results: AFIX Visits and HPV-Related Activities
Number (%) of AFIX visits* conducted, by vaccines assessed, 2016

<table>
<thead>
<tr>
<th>Vaccine Assessment</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both Childhood &amp; Adolescent</td>
<td>6,475</td>
<td>52%</td>
</tr>
<tr>
<td>Childhood</td>
<td>3,684</td>
<td>30%</td>
</tr>
<tr>
<td>Adolescent</td>
<td>2,176</td>
<td>18%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>12,335</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Data Source: AFIX Online data from 12/2016; Does not include CA, HI, KY, OR
Reasons programs conducted AFIX visits focused only on adolescent vaccines, 2016 (n=47)

- Inadequate number of child-aged patients in provider office: 31 (66%)
- Increase HPV immunization rates: 11 (24%)
- Meet award requirement: 4 (9%)
Criteria programs used to determine which VFC provider offices received an AFIX visit, 2016 (N=55)

<table>
<thead>
<tr>
<th>Criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patients</td>
</tr>
<tr>
<td>Time since previous AFIX Visit</td>
</tr>
<tr>
<td>Vaccination coverage for any non-HPV vaccines</td>
</tr>
<tr>
<td>Provider due for VFC visit (for combined VFC/AFIX)</td>
</tr>
<tr>
<td>HPV vaccination coverage</td>
</tr>
<tr>
<td>Staff changes in provider offices</td>
</tr>
<tr>
<td>Visit all providers annually</td>
</tr>
<tr>
<td>Geographical location of office</td>
</tr>
<tr>
<td>Population served by provider</td>
</tr>
<tr>
<td>Provider interested in visit</td>
</tr>
<tr>
<td>Number of records available in IIS</td>
</tr>
<tr>
<td>Selection of random sample of providers</td>
</tr>
</tbody>
</table>

*Responses are “Check all that apply”*
### Top 5 criteria used to determine which VFC provider offices received an AFIX visit, 2016 (N=55)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Number of Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patients</td>
<td>36</td>
</tr>
<tr>
<td>Time since previous AFIX Visit</td>
<td>31</td>
</tr>
<tr>
<td>Vaccination coverage for any non-HPV vaccines</td>
<td>27</td>
</tr>
<tr>
<td>Provider due for VFC visit (for combined VFC/AFIX)</td>
<td>26</td>
</tr>
<tr>
<td>HPV vaccination coverage</td>
<td>17</td>
</tr>
<tr>
<td>Staff changes in provider offices</td>
<td>13</td>
</tr>
<tr>
<td>Visit all providers annually</td>
<td>11</td>
</tr>
<tr>
<td>Geographical location of office</td>
<td>11</td>
</tr>
<tr>
<td>Population served by provider</td>
<td>8</td>
</tr>
<tr>
<td>Provider interested in visit</td>
<td>6</td>
</tr>
<tr>
<td>Number of records available in IIS</td>
<td>4</td>
</tr>
<tr>
<td>Selection of random sample of providers</td>
<td>3</td>
</tr>
</tbody>
</table>

*Responses are “Check all that apply”*
The top 5 criteria used to determine which VFC provider offices received an AFIX visit, 2016 (N=55):

- Number of patients
- Time since previous AFIX visit
- Vaccination coverage for any non-HPV vaccines
- Provider due for VFC visit (for combined VFC/AFIX)
- HPV vaccination coverage

*Responses are “Check all that apply”*
**Most Important Criterion used to determine which VFC provider offices received an AFIJX visit, 2016 (N=55)**

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time since previous AFIJX visit</td>
<td>11</td>
<td>20%</td>
</tr>
<tr>
<td>Provider due for a VFC visit</td>
<td>11</td>
<td>20%</td>
</tr>
<tr>
<td>Number of patients in assessment cohort</td>
<td>7</td>
<td>13%</td>
</tr>
<tr>
<td>Vaccination coverage level (excluding HPV)</td>
<td>6</td>
<td>11%</td>
</tr>
<tr>
<td>Other criteria</td>
<td>6</td>
<td>11%</td>
</tr>
</tbody>
</table>
Number (%) of programs conducting activities (Non-QI Strategies) focused on improving HPV vaccination coverage during AFIx Visits, 2016 (N=55)

- 38 (69%)
Activities (Non-QI Strategies) focused on improving HPV vaccination coverage during AFIx visits, 2016 (n=38)

- Emphasize strong HPV vaccine recommendation: 19 (35%)
- Share HPV Resources for providers and/or parents: 18 (33%)
- Run HPV vaccine rates and assessment reports (COCASA, IIS): 6 (11%)
- Conduct HPV education session: 5 (9%)

*Programs may be presented in multiple categories*
Results: HPV-Related AFIIX Resources
What HPV-related coverage reports and documents were discussed with provider offices during AFIX Visits? 2016 (N=55)

- Two (2) programs used non-coverage HPV documents
  
  Examples:
  - Program-developed HPV toolkit and resources
  - HPV resource list document

- Six (6) programs used HPV vaccination reports
  
  Examples:
  - HPV reports from CoCASA
  - HPV reports and single antigen reports
  - Adolescent summary report including HPV report
What HPV-related coverage reports and documents were provided in hard copy to provider staff? 2016 (N=55)

• Eight (8) programs had guidance to provide HPV-related reports or documents

Examples:
  • Program-specific HPV Cancer & Prevention Profile
  • HPV ‘You Are the Key’
  • HPV brochures, posters/Handouts
What HPV-related reports/documents were discussed during the eXchange? 2016 (N=55)

• Four (4) programs discussed HPV vaccination reports

Examples:
  • HPV ordering reports
  • HPV missing immunization list
Tools and materials needed by programs, 2016 (n=40)

- **Best practices/Training materials**: 24 (44%)
- **Materials to show the impact, incentives and benefits of the AFIX Program**: 9 (16%)
- **Guidance on stakeholder engagement for HPV**: 4 (7%)
- **AFIX Toolkit materials specific to HPV for providers**: 3 (5%)
Summary

- Less than one-third of programs used HPV vaccination coverage as one of their criteria to select which VFC providers were visited

- About two-thirds of programs are conducting additional activities to improve HPV vaccine coverage as part of the AFIX visit

- Few programs are discussing and/or disseminating HPV-Related documents and resources
Thank you!

For more information, please email the Immunization Program Evaluation Team at IPE@cdc.gov.

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.
Workshop L, Presentation #4:

Description of HPV vaccination activities in 6 Pacific Island jurisdictions, 2016–2018

Presenter: Helen Fisun, MPH
Contractor, Synergy America, Inc.

Co-Authors:
Mimi (Maribeth) Eckert, MPH
Ashley Tippins, MPH
Suchita A. Patel, DO, MPH

May 17, 2018
National Immunization Conference, 2018
DISCLAIMER:

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Participating Islands

- American Samoa (AS)
- Commonwealth of Northern Mariana Islands (CNMI)
- Guam
- Federated States of Micronesia (FSM)
- Palau
- Republic of Marshall Islands (RMI)
Evaluation Purpose

- Gain understanding about how the Pacific Island Immunization Programs provide HPV vaccinations
- Encourage information sharing between the island states and share collected data findings with island programs for potential policy change
Methods

- **Survey #1: HPV-related vaccination activities**
  - Administered September – October 2016
  - Phone calls conducted January 2017
  - Completed by Program Managers and relevant staff

- **Survey #2: HPV coverage data and school vaccination campaigns**
  - Launched January 2018
  - Preliminary data submitted Feb 2018 (Final in June 2018*)
  - Phone calls conducted March 2018
  - Completed by Program Managers and relevant staff

*Data from the 2018 school campaigns for the 6 Pacific Islands states will be received at the completion of 2017-2018 school year (i.e. June 2018)*
Island Context (1/2)

Service Delivery

• Majority of vaccines are administered in the public health setting by Department of Health (DOH)/Ministry of Health (MOH) nurses

• Vaccines are shipped to Immunization Program depots and then distributed to providers based on need

• All islands conduct immunization outreach campaigns to ensure vaccines are made available to the population living in remote locations and/or outer islands
Island Context (2/2)

- **Geography**
  - 4 out of the 6 Pacific Islands have populations living on outer islands
  - Outreach to outer islands happens on a quarterly basis as most outer islands do not have capacity to store vaccines

- **Staffing**
  - Limited number of clinical staff; public health emergencies (e.g. Zika, Dengue, Chikungunya, drought) impact the number of nurses available to conduct vaccinations
Results:
Vaccine Administration, Availability and Recall Strategies
**Who is routinely recommended to receive HPV vaccination? 2017–2018**

<table>
<thead>
<tr>
<th>Program</th>
<th>Sex and Ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS</td>
<td>Females and Males: 11–14 years</td>
</tr>
<tr>
<td>CNMI</td>
<td>Females and Males: 11–18 years</td>
</tr>
<tr>
<td>Guam</td>
<td>Females and Males: 9–18 years</td>
</tr>
<tr>
<td>FSM‡</td>
<td>Females only: 11–12 years</td>
</tr>
<tr>
<td>Palau‡*</td>
<td>Females only: 9–11 years</td>
</tr>
<tr>
<td>RMI‡</td>
<td>Females only: 11–12 years</td>
</tr>
</tbody>
</table>

‡FSM, Palau and RMI do not receive VFC funding and therefore are not obligated to follow VFC program requirements; *Palau piloted HPV vaccinations to males in one school
### Where is HPV vaccine administered / available? 2017–2018

<table>
<thead>
<tr>
<th>Program</th>
<th>Schools</th>
<th>Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AS</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>CNMI</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Guam</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>FSM‡</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Palau‡</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>RMI‡</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

‡Do not receive VFC funding
### Grades and Sex targeted by HPV School vaccination campaigns, School year 2017–2018

<table>
<thead>
<tr>
<th>Program</th>
<th>Grades</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS</td>
<td>6th grade</td>
<td>Male and female</td>
</tr>
<tr>
<td>CNMI</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Guam</td>
<td>4th – 12th grades</td>
<td>Male and female</td>
</tr>
<tr>
<td>FSM</td>
<td>5th grade</td>
<td>Female</td>
</tr>
<tr>
<td>Palau</td>
<td>5th grade</td>
<td>Female; pilot conducted for males in one school</td>
</tr>
<tr>
<td>RMI</td>
<td>6th grade</td>
<td>Female</td>
</tr>
<tr>
<td>Program</td>
<td>Total number of schools in the jurisdiction</td>
<td>Number of schools targeted for HPV vaccination campaign</td>
</tr>
<tr>
<td>---------</td>
<td>------------------------------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>AS</td>
<td>Data pending</td>
<td>Data pending</td>
</tr>
<tr>
<td>CNMI</td>
<td>37 (22 public; 15 private)</td>
<td>N/A</td>
</tr>
<tr>
<td>Guam</td>
<td>41 (public)</td>
<td>14 (public)</td>
</tr>
<tr>
<td>FSM</td>
<td>132 (119 public; 13 private)</td>
<td>132 (119 public; 13 private)</td>
</tr>
<tr>
<td>Palau</td>
<td>19 (17 public; 2 private)</td>
<td>16 (14 public; 2 private)*</td>
</tr>
<tr>
<td>RMI</td>
<td>96 (81 public; 15 private)</td>
<td>94 (81 public; 13 private)</td>
</tr>
</tbody>
</table>

*For Palau, one school was not eligible for vaccinations because there were no 5th grade girls at the school for SY 2017-2018*
Reasons not all schools were targeted for HPV vaccination campaigns, School year 2017–2018

- Private schools were not targeted due to lack of time and resources
- Some private schools are not participating in school campaigns due to religious beliefs
- Memorandum of Understanding (MOU) exists between Public Health and the Department of Education (DOE)
  - Only public schools can be targeted
  - Support and willingness to conduct school HPV vaccinations varies across the principals and school nurses
- Logistical and geographic challenges to reaching schools
Process for obtaining consent for school HPV vaccination campaigns*, School year 2017–2018

Consent is needed for HPV vaccine (n=5)

Immunization Group prepares consent forms (n=5)

Consent forms are sent to the DOE (n=5)

Cancer Group prepares consent forms** (n=1)

Consent forms are distributed to parents during PTA meetings (n=1)

Consent forms are distributed to students for a parent/guardian signature (n=4)

Students bring back signed consent forms to the school (n=5)

Students with signed consent receive the HPV vaccine (n=5)

*Island jurisdictions report challenges in receiving signed consent forms; **For one island jurisdiction, both the Immunization group and the Cancer group prepare consent forms; ***One programs has one jurisdiction with an opt-out consent policy at some schools
Number of sites where HPV vaccine is available, 2017–2018 (provisional)*

<table>
<thead>
<tr>
<th>Program</th>
<th>Total number of public and private sites</th>
<th>Number of private and public sites that carry the HPV vaccine</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public sites</td>
<td>Private sites</td>
</tr>
<tr>
<td>AS</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>CNMI</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Guam</td>
<td>3</td>
<td>33</td>
</tr>
<tr>
<td>FSM</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Palau</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>RMI</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

*Counts are being updated; **Vaccines are not available at the public site due to lack of storage and handling capabilities; ***Vaccines are shipped to Immunization Program depots and then distributed to providers based on need
What strategies are used to track HPV vaccinations for individual patients? (select all that apply)

- Conduct reminder/recall through a paper based system (4 programs)
- Conduct reminder/recall using the IIS (2 programs)
- Conduct recall in schools (3 programs)
- Conduct recall via house-to-house visits (2 programs)
- Conduct AFIX visits (1 program)

*All 6 Pacific Islands reported tracking HPV vaccinations for individual patients*
Results: Barriers
Programs’ perceptions of the main barriers to providing HPV vaccinations to 11-12 year olds (select all that apply)

<table>
<thead>
<tr>
<th>Main Barriers for Girls (n=6)</th>
<th>Main Barriers for Boys (n=3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of sufficient staffing (n=3)</td>
<td>Lack of sufficient staffing (n=2)</td>
</tr>
<tr>
<td>Parental belief that their daughters are too young for the vaccine (n=2)</td>
<td>Parental belief that their teens are too young for the vaccine (n=1)</td>
</tr>
<tr>
<td>Cost of vaccine for parents (n=2)</td>
<td>Cost of vaccine for parents (n=1)</td>
</tr>
<tr>
<td>Lack of/limited parent/guardian awareness about the HPV vaccine (n=4)</td>
<td>Lack of/limited parent/guardian awareness about the HPV vaccine (n=1)</td>
</tr>
<tr>
<td>Cost of vaccine for Immunization Program (n=3)</td>
<td>HPV infection is believed to only be associated with females (n=1)</td>
</tr>
<tr>
<td>Geographic location (n=2)</td>
<td></td>
</tr>
</tbody>
</table>
Summary (1/2)

- Routine HPV vaccine administrations:
  - Schools (n=5)
  - Public sites (n=5)
  - Private sites (n=2)
  - Females and Males (n=3)
  - Females Only (n=3)

- Majority of awardees conduct reminder/recall (n=6)
  - Manually (n=4)
  - IIS (n=2)
Summary (2/2)

- FSM, Palau and RMI do not receive VFC funding and, therefore, have limited funds to vaccinate males against HPV
- Receiving consent forms
  - Without signed consent, there is a missed opportunity to vaccinate students during the school immunization campaign
- Parental vaccine hesitancy
- Lack of sufficient staffing
- Lack of education about the HPV vaccine
- Challenges providing vaccines to remote areas/outer islands
- Religious beliefs
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- Stephen McGruder, MPH, Contractor, IHRC, Inc.
- Tara Vogt, PhD, MPH
Thank you!

For more information, please email the Immunization Program Evaluation Team at IPE@cdc.gov.

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.