



Pneumococcal Vaccines

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Pneumococcal Vaccines Work Group Chair

Advisory Committee on Immunization Practices

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Pneumococcal Vaccines Work Group

- **ACIP Members**

- Katherine Poehling (Chair)
- Sarah Long

- **Ex Officio Members**

- Jeffrey Kelman (CMS)
- Lucia Lee (FDA)
- Tina Mongeau (FDA)
- Uzo Chukwuma (IHS)
- Mamodikoe Makhene (NIH)

- **CDC Lead**

- Miwako Kobayashi (NCIRD)

- **Liaison Representatives and Consultants**

- Lynn Fisher (AAFP)
- Mark Sawyer (AAP/COID)
- Jason Goldman (ACP)
- David Nace (AGS/AMDA)
- Emily Messerli (AIM)
- Aleksandra Wierzbowski (NASI)
- James McAuley (IDSA)
- William Schaffner (NFID)
- Virginia Caine (NMA)
- Monica Farley (VAMC/Emory)
- Keith Klugman (BMGF)
- Arthur Reingold (UC Berkley)
- Lorry Rubin (CCMC)
- Cynthia Whitney (Emory)
- Richard Zimmerman (U. of Pittsburgh)

Pneumococcal Vaccines Work Group

- **CDC Contributors**

- Adam Cohen (Respiratory Diseases Branch)
- Ryan Gierke (Respiratory Diseases Branch)
- Jennifer Farrar (Respiratory Diseases Branch)
- Pedro Moro (Immunization Safety Office)
- Sarah Schillie (Immunization Services Division)
- Marc Fischer (Arctic Investigations Program)
- Jessica MacNeil (ACIP Secretariat)

- **GRADE/EtR consultants**

- Doug Campos-Outcalt
- Rebecca Morgan

Serotypes Contained in Current and New Pneumococcal Vaccines

	1	3	4	5	6A	6B	7 F	9V	14	18 C	19 A	19 F	23 F	22 F	33 F	8	10 A	11 A	12 F	15 B	2	9N	17 F	20	
PCV13	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	White	White	White	White	White	White	White	White	White	White	White	White
PCV15	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	White	White	White	White	White	White	White	White	White	White
PPSV23	Yellow	Yellow	Yellow	Yellow	White	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange

Current:

- 13-valent pneumococcal conjugate vaccine (PCV13)
- 23-valent pneumococcal polysaccharide vaccine (PPSV23)

New:

- **15-valent pneumococcal conjugate vaccine (PCV15):** includes PCV13 serotypes + **22F** and **33F**

Summary of Current Pneumococcal Vaccine Recommendations in Children

- 1) **PCV13** Routine recommendation
- 2) **PCV13** Catch-up options
- 3) **PCV13** and **PPSV23**, children **24–71 months old** with underlying medical conditions
- 4) **PCV13** and/or **PPSV23**, children **6–18 years old** with underlying medical conditions

PCV13: 13-valent pneumococcal conjugate vaccine, PPSV23: 23-valent pneumococcal polysaccharide vaccine

Summary of Current Pneumococcal Vaccine Recommendations in Children

1) **PCV13** Routine recommendation

- 4-dose PCV13 series at **2, 4, 6, and 12–15** months (3+1 schedule)

2) **PCV13** Catch-up options

- Healthy children through age **59 months**
- Children with **underlying medical conditions** through age **71 months**

PCV13: 13-valent pneumococcal conjugate vaccine, PPSV23: 23-valent pneumococcal polysaccharide vaccine

Summary of Current Pneumococcal Vaccine Recommendations in Children

3) **PCV13** and **PPSV23**, children 24–71 months old with underlying medical conditions

- Complete recommended **PCV13** doses followed by **PPSV23** ≥ 8 weeks later
- Children who are immunocompromised or with sickle cell disease or asplenia
→ 2nd dose of **PPSV23** recommended 5 years after the 1st dose

PCV13: 13-valent pneumococcal conjugate vaccine, PPSV23: 23-valent pneumococcal polysaccharide vaccine

MMWR RR 2010

3) Children aged **24–71 months** with underlying medical conditions

Risk group	Underlying conditions	Complete PCV13 dose	PPSV23	
		Recommended	Recommended	Revaccination 5 years after 1 st dose
Immunocompetent	Chronic heart disease	X	X	
	Chronic lung disease	X	X	
	Diabetes mellitus	X	X	
	Cerebrospinal fluid leaks	X	X	
	Cochlear implants	X	X	
Functional or anatomic asplenia	Sickle cell disease/other hemoglobinopathies	X	X	X
	Congenital or acquired asplenia	X	X	X
Immunocompromised	Congenital or acquired immunodeficiencies	X	X	X
	Chronic renal failure/nephrotic syndrome	X	X	X
	Hematologic malignancy	X	X	X
	Generalized malignancy	X	X	X
	Solid organ transplant	X	X	X

Summary of Current Pneumococcal Vaccine Recommendations in Children

4) **PCV13** and/or **PPSV23**, children 6–18 years old with underlying medical conditions

- One dose of **PPSV23** for children with chronic heart/lung disease, or diabetes
- One dose of **PCV13** (if never received) followed by **PPSV23** ≥ 8 weeks for children with immunocompromising conditions, CSF leak, or cochlear implants
 - For children with immunocompromising condition, give a 2nd dose of PPSV23 ≥ 5 years after the first PPSV23 dose

4) Children aged 6–18 years with underlying medical conditions

Risk group	Underlying conditions	Complete PCV13 dose	PPSV23	
		Recommended	Recommended	Revaccination 5 years after 1 st dose
Immunocompetent	Chronic heart disease		X	
	Chronic lung disease		X	
	Diabetes mellitus		X	
	Cerebrospinal fluid leaks	X	X	
	Cochlear implants	X	X	
Functional or anatomic asplenia	Sickle cell disease/other hemoglobinopathies	X	X	X
	Congenital or acquired asplenia	X	X	X
Immunocompromised	Congenital or acquired immunodeficiencies	X	X	X
	Chronic renal failure/nephrotic syndrome	X	X	X
	Hematologic malignancy	X	X	X
	Generalized malignancy	X	X	X
	Solid organ transplant	X	X	X

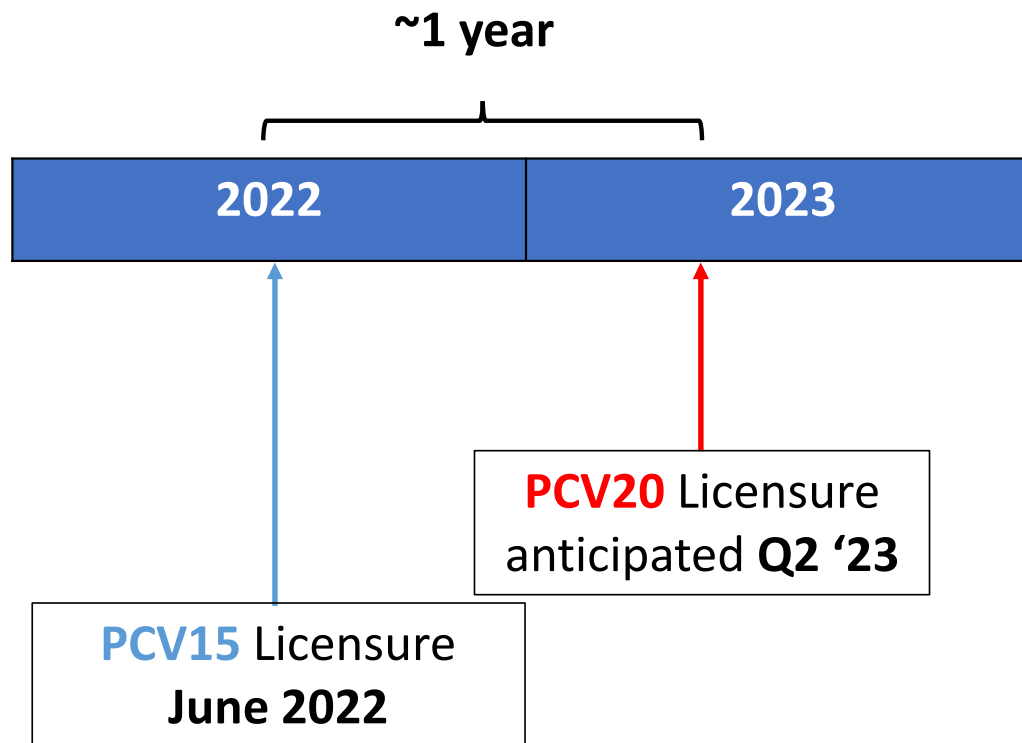
General Principles

- Consider PCV15 use as an option to PCV13 according to currently recommended PCV13 dosing and schedules
- Consider interchangeable use of PCV15 and PCV13
- No changes to PPSV23 recommendations

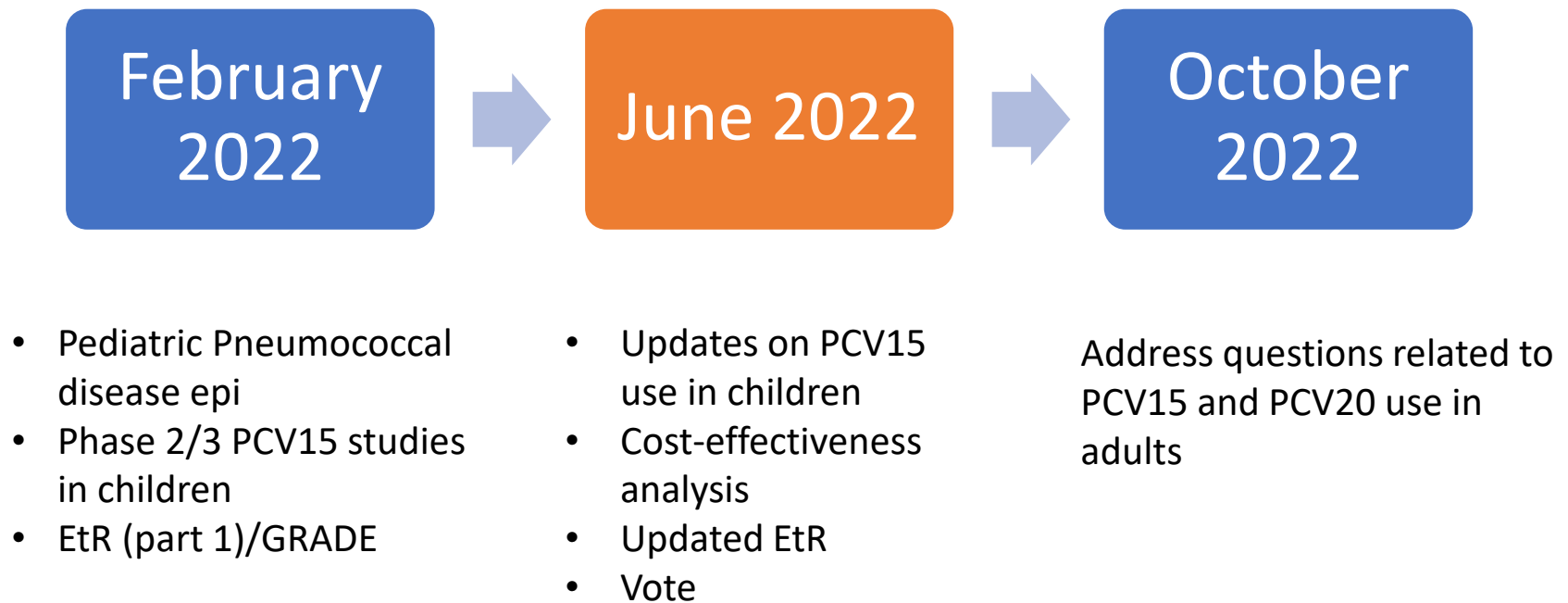
Policy Questions Proposed by the Work Group

- Should PCV15 be routinely recommended for U.S. children **<2 years of age** as an **option for pneumococcal conjugate vaccination** according to currently recommended dosing and schedules?
- Should PCV15 be recommended for U.S. children **2–18 years of age with underlying medical conditions** as an **option for pneumococcal conjugate vaccination** according to currently recommended dosing and schedules?

Anticipated Timeline of PCV20 Licensure in Children



Timeline of ACIP Presentations



Today's Pneumococcal Vaccines Session Outline

Introduction

Dr. Katherine Poehling
(ACIP, WG Chair)

PCV15 Pediatric Clinical Development Program—Update

Dr. Natalie Banniettis (Merck)

Economic Analysis and Public Health Impact of PCV15 Use
in Children

Dr. Andrew Leidner
(CDC/NCIRD)

Summary of Work Group Interpretation on EtR

Dr. Miwako Kobayashi
(CDC/NCIRD)

Proposed Recommendations for PCV15 Use in Children

Dr. Miwako Kobayashi
(CDC/NCIRD)