

# Progress in Developing Adult Immunization Composite Measures



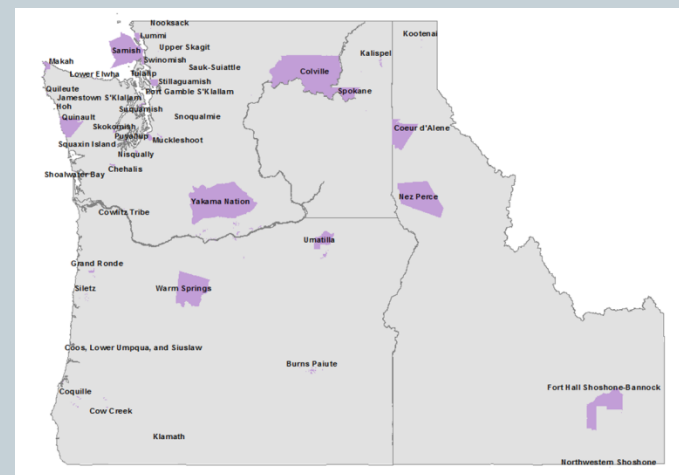
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# Northwest Tribal Epidemiology Center

- Established in 1996, housed within the Northwest Portland Area Indian Health Board
- Collaborates with 43 member tribes to provide health-related research, surveillance, training, and technical assistance to improve the quality of life for Northwest AI/AN
- All activities supported by tribal resolutions, and reviewed by the Portland Area IHS Institutional Review Board



# NW Tribal Epidemiology Center Adult Immunization Composite Measure Project Team



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*Tribal Epi-Center Director*



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*IDEA NW Project Director*



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*Project Biostatistician*



**Monika Trimble**  
*Project Specialist*

# Beyond Influenza and Pneumococcal vaccine

- The adult immunization schedule has grown more complex with the recent introduction of several new vaccines
- 2012 National Adult Influenza and Immunization Summit recommended a study to assess the feasibility of implementing adult immunization composite measures to include all recommended adult vaccines
- The IHS and VA worked together to develop Phase I of the Adult Immunization Composite Measure project
- The current project, “Phase II”, was designed to evaluate the measure under real-world conditions



# Why a Composite Measure?

- Provides a broad perspective on the system of vaccination at a facility
  - Rather than a campaign to increase coverage with one vaccine, encourages a systematic approach for all vaccines
- Multiple measures make it challenging to implement broad-based immunization quality improvement activities
- “Composite measures can enhance measurement to extend beyond tracking performance on separate measures and can provide a potentially deeper view of the reliability of the care system”

*Institute of Medicine, Performance Measurement: Accelerating Improvement, Washington, DC: National Academies Press; 2006*



# Vaccines Included

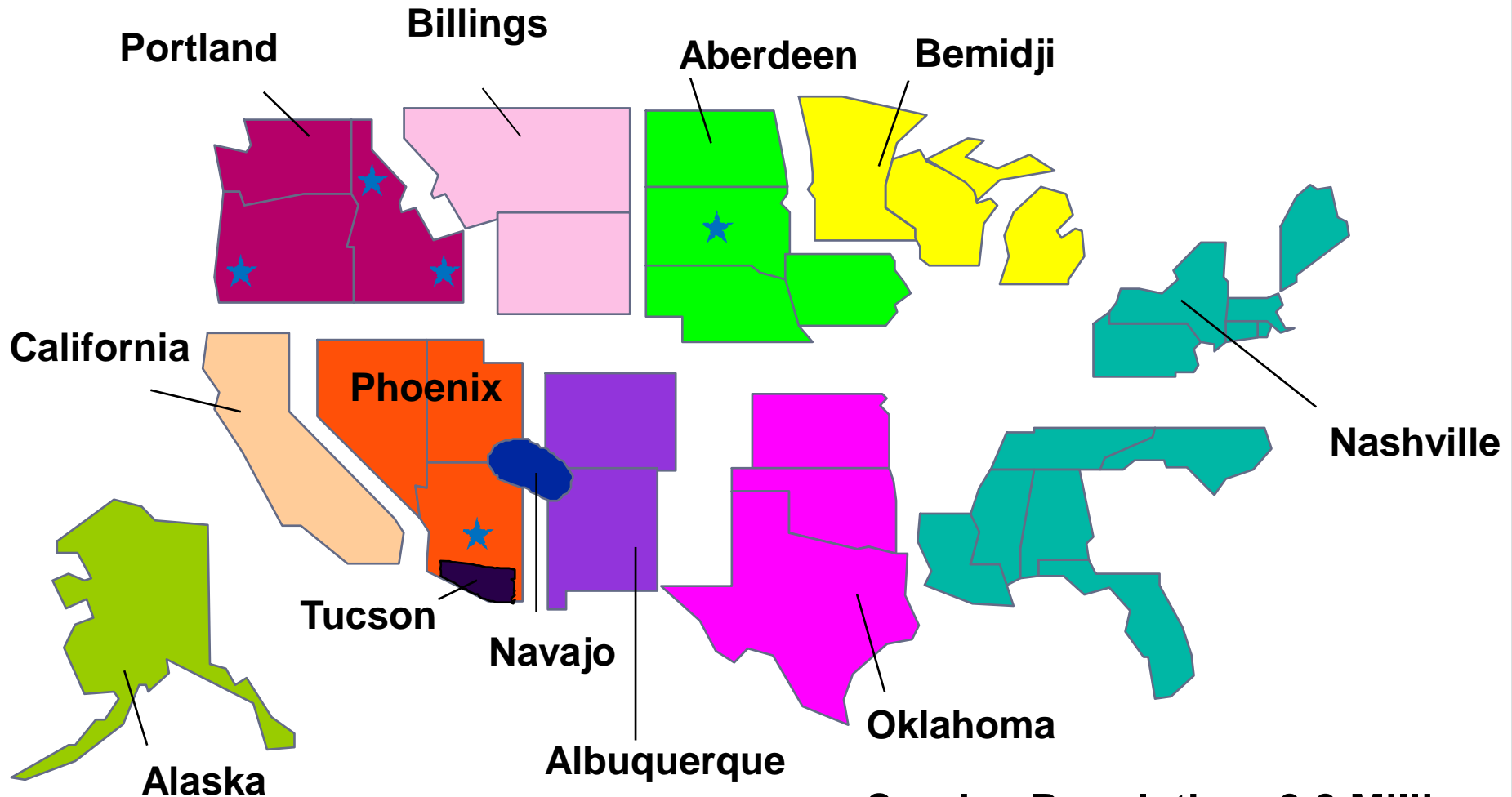
Age Group	Vaccines Included	Optional
19 – 59 years	Tdap ever; Tdap <u>or</u> Td within 10 years (Tdap/Td)	Influenza
60 – 64	Tdap/Td; Zoster	Influenza
≥ 65	Tdap/Td; Zoster; Pneumococcal polysaccharide-23 (PPSV-23) <u>or</u> pneumococcal conjugate (PCV-13)	Influenza

## Guiding Principals:

1. Focus on routine, age-based vaccine recommendations
2. Keep it simple



# Indian Health Service

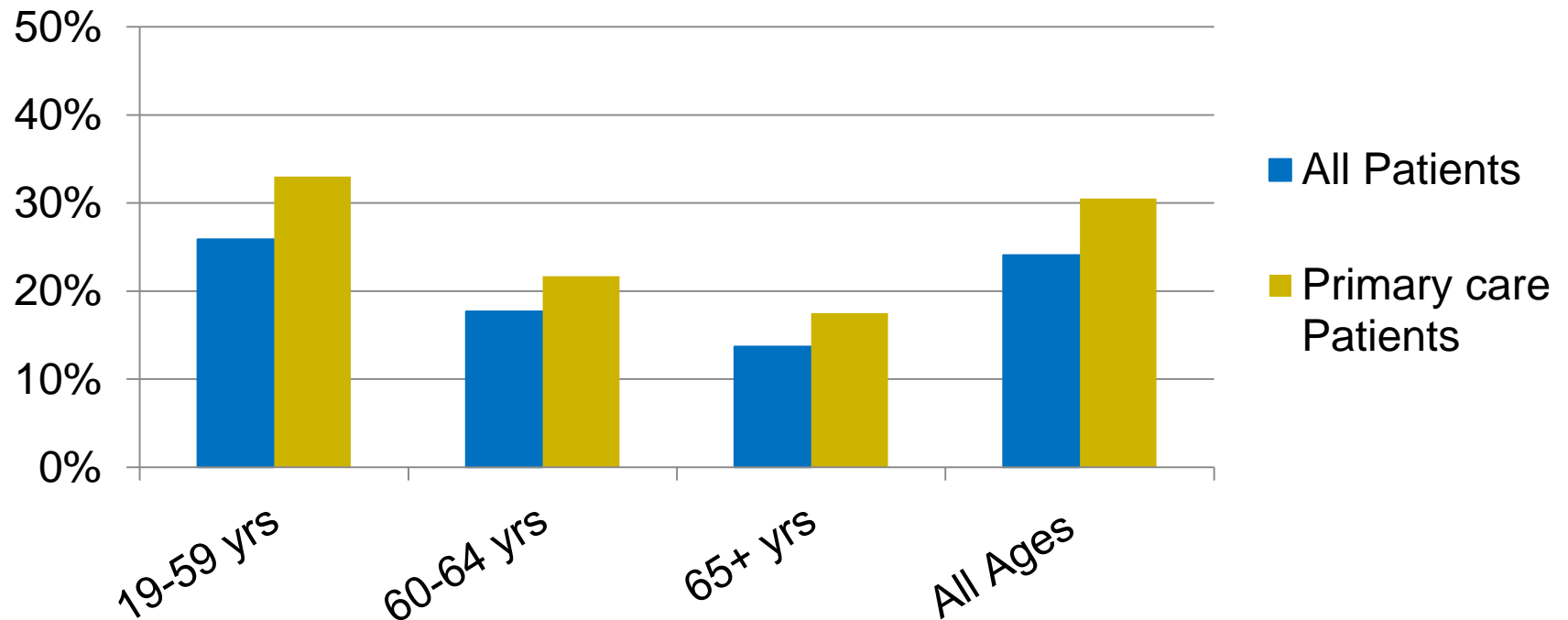


**Service Population: 2.2 Million**



# Phase I Results

## Composite Immunization Measure



Coverage among Primary Care patients was higher in all age groups





# Phase II Objectives

- Assess the feasibility of implementing Adult Immunization Composite Measurement across IHS under different conditions
  - Ambulatory Care settings
  - Tribal settings using non-IHS Electronic Medical record systems
  - Hospital setting
- Evaluate the utility of the Adult Immunization Composite Measure for quality Improvement



# Phase II Deliverables

- Compile and review baseline data
- Introduce short-term quality improvement activities
- Monitor adult immunization coverage by reviewing immunization data on a monthly basis
- Evaluate measure through site visits and staff interviews
- Convene a final stakeholder's meeting
- Provide feedback in a final report describing the pilot projects' findings

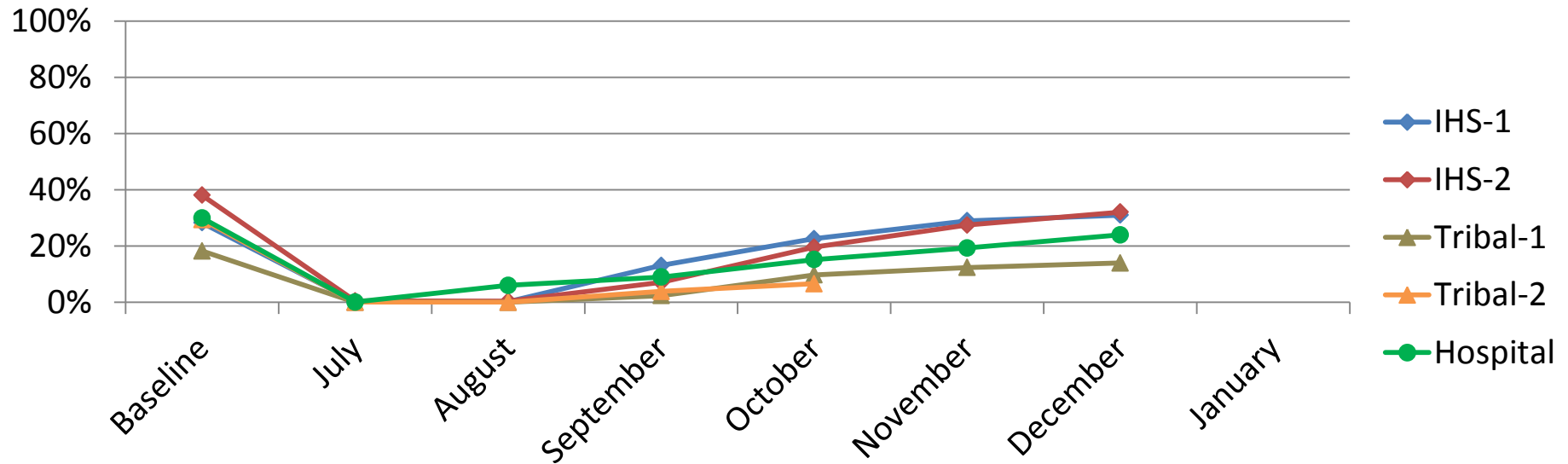


# Phase II Results

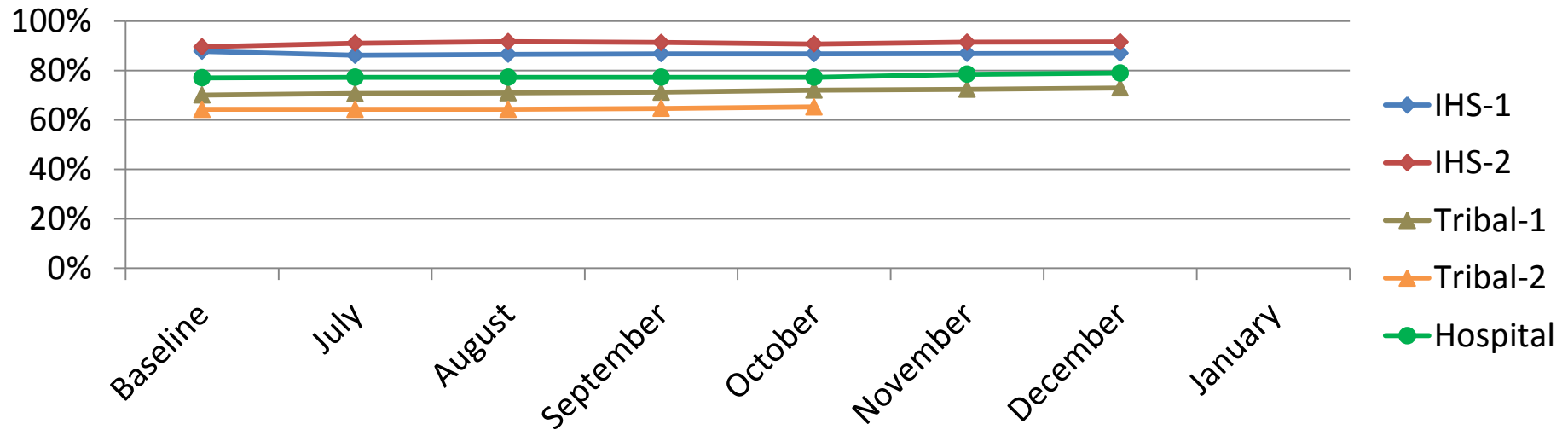
- Recruited 5 sites from 3 IHS Areas to participate:
  - 2 IHS Ambulatory Clinics
  - 2 Tribal Ambulatory Clinics using *Next Gen* EHR
  - 1 IHS Hospital
- Monthly project webinars
- Sites submitted data monthly
- Site Visits to assess current status of project, interview staff regarding overall perceptions, successes and challenges
- Stakeholder's meeting in Portland Feb. 10-11



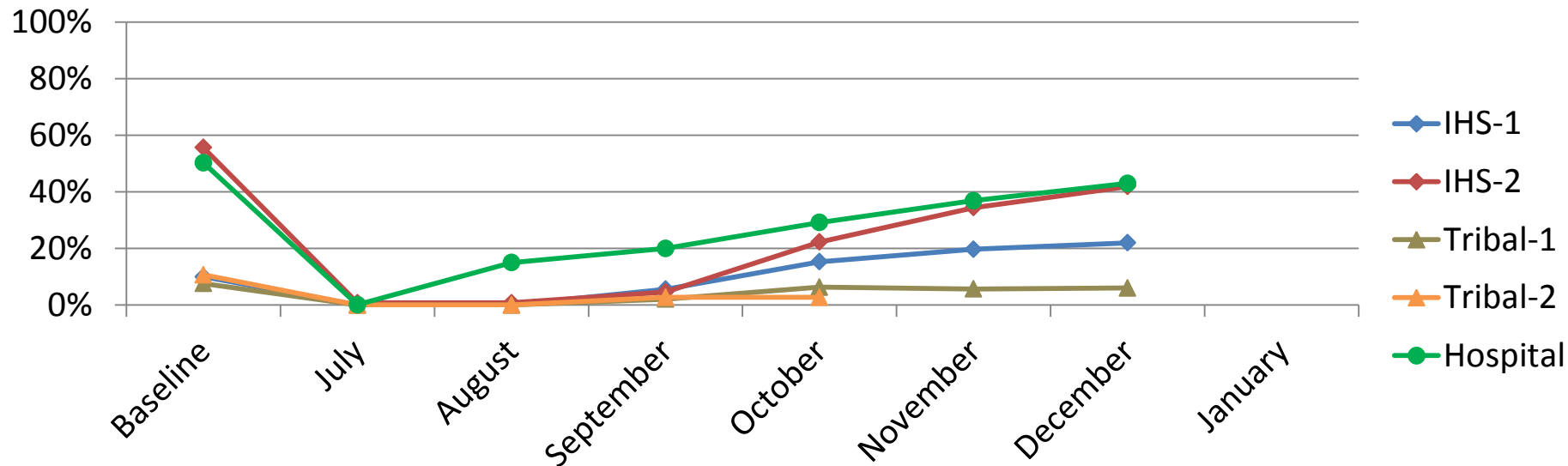
### 19-59 Years (Td/Tdap, Flu)



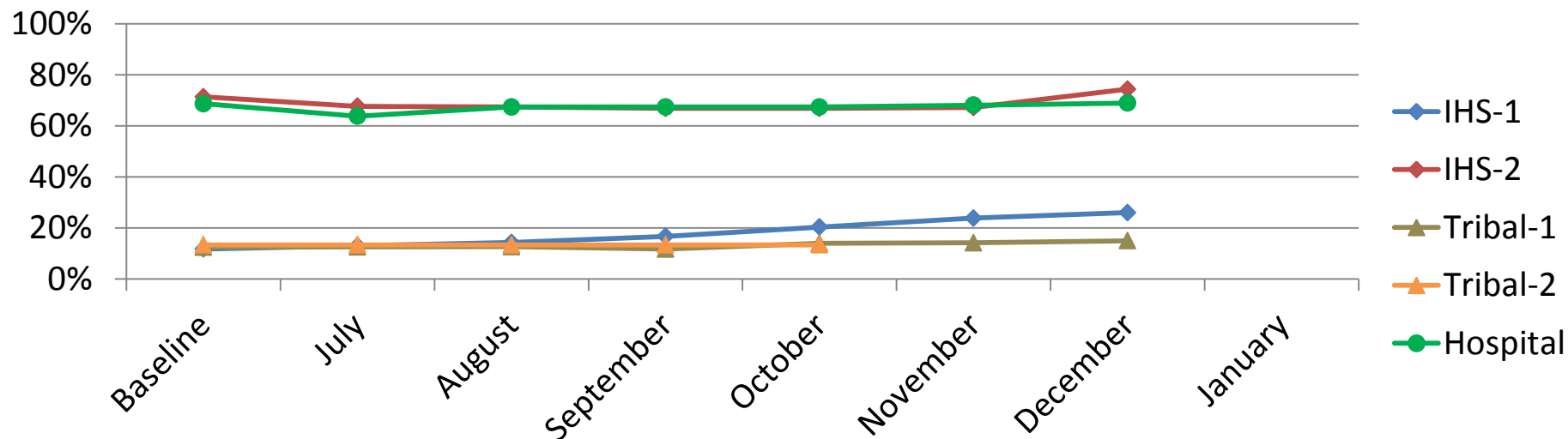
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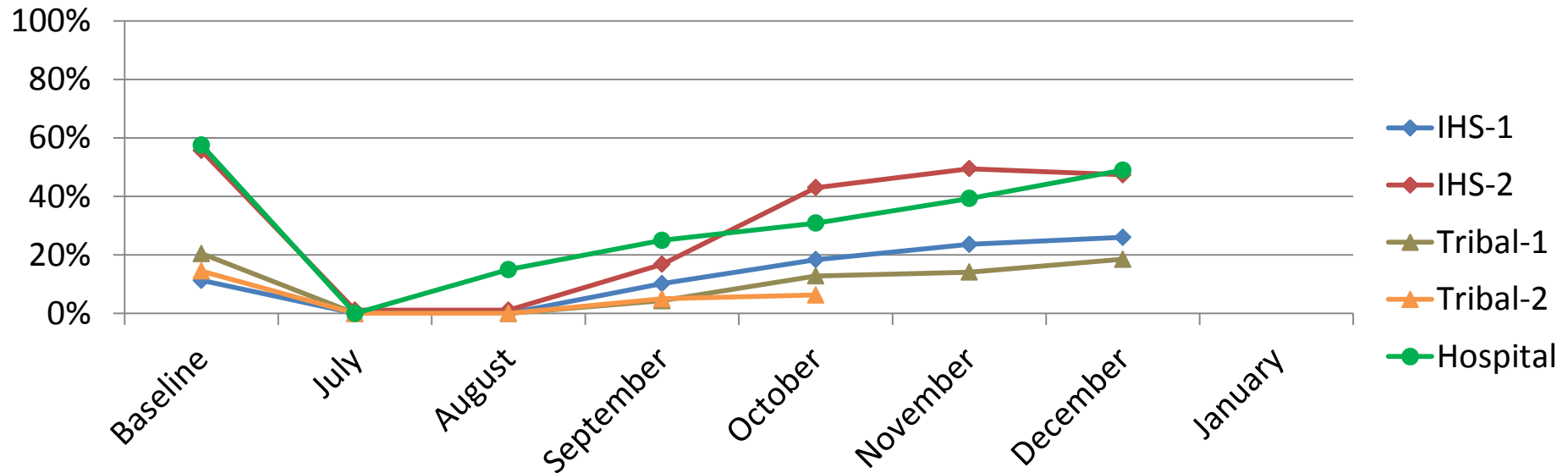
### 60-64 Years (Td/Tdap, Zoster, Flu)



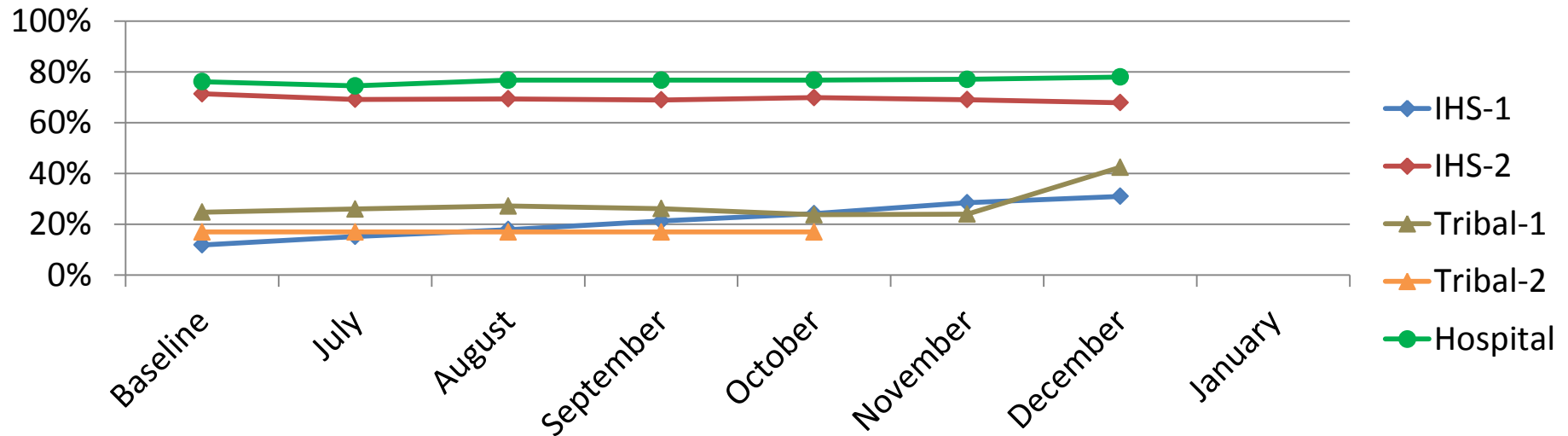
### 60-64 Years (Td/Tdap, Zoster)



## 65 Years and older (Td/Tdap, Zoster, PPSV-23, Flu)



## 65 Years and older (Td/Tdap, Zoster, PPSV-23)



# Example of Specific Antigen Improvement

60-64	Baseline	July	August	September	October	November	December
Td/Tdap, Zoster, Flu	10%	0%	0%	6%	15%	20%	22%
Td/Tdap, Zoster	12%	13%	14%	17%	20%	24%	26%
Td/Tdap	86%	89%	89%	90%	90%	91%	91%
<b>Zoster</b>	<b>12.3%</b>	<b>14%</b>	<b>15%</b>	<b>17%</b>	<b>21%</b>	<b>24%</b>	<b>26%</b>
Flu	58%	0%	0%	24%	46%	52%	53%

65+	Baseline	July	August	September	October	November	December
Td/Tdap, Zoster, Pneumovax, Flu	11%	0%	0%	10%	18%	24%	26%
Td/Tdap, Zoster, Pneumovax	12%	15%	18%	21%	24%	29%	31%
Td/Tdap	87%	85%	85%	86%	87%	87%	88%
<b>Zoster</b>	<b>13%</b>	<b>17%</b>	<b>19%</b>	<b>23%</b>	<b>26%</b>	<b>30%</b>	<b>34%</b>
Pneumovax	86%	83%	84%	85%	85%	86%	86%
Flu	68%	1%	1%	27%	50%	59%	61%



# Site Feedback

- The regular, monthly monitoring helped teams focus on improving immunizations systematically
- Teams worked to optimize EHR reminders, identified individuals to learn how to run report
- Teams also defined roles for team members with regard to encouraging adult immunizations:
  - Nurses and Medical Assistants were primarily responsible for reviewing EHR reminders, initiating discussions with patients
  - Providers act as “back-up”- they counsel patients who are hesitant, provide staff education and generally let the nurses and MAs operate with a high level of autonomy





# Challenges

- Only able to recruit 1 hospital given time constraints and (unfortunately) IRB considerations
- Zoster vaccine proved to be the rate-limiting antigen, especially for smaller sites
  - Cost
  - Storage and handling
- Data collection from non-IHS EHR sites proved difficult



# Next Steps

- Complete site-specific reports and final project report
- Make recommendation to IHS to replace current GPRA measure (PPSV-23 for adults 65 and older and Influenza for adults 18 and older) with the Adult Composite Measure
- Advocate for additional financial support for zoster vaccine (NPAIHB)
- Continue to enhance data collection from non-IHS EHR
  - NPAIHB staff training with Next Gen
  - Review other data mining and reporting software





## Acknowledgments

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Our IHS and Tribal Site  
Partners!



# Thank You!