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### **Impact of Specialty Pharmacy Services on Pneumococcal Vaccination Rates in a Large Inflammatory Bowel Disease Population**

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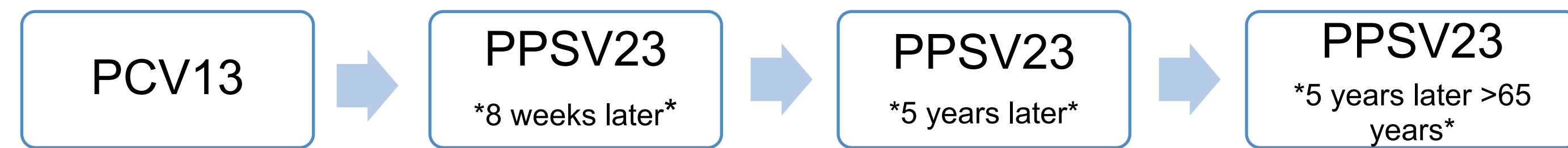


# Impact of Specialty Pharmacy Services on Pneumococcal Vaccination Rates in a Large Inflammatory Bowel Disease Population

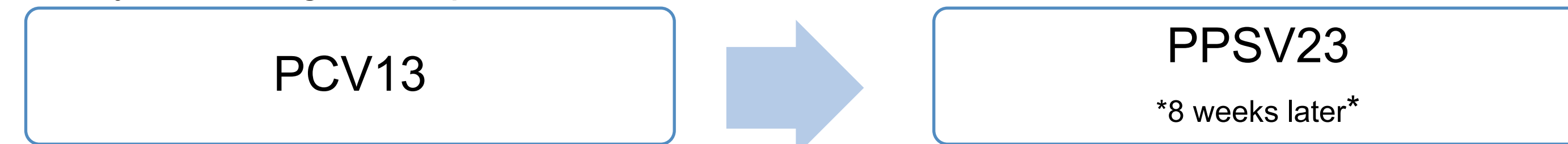
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## BACKGROUND

- Inflammatory bowel disease (IBD) is a chronic condition involving inflammation and ulcers within the gastrointestinal tract; moderate to severe IBD typically requires biologic therapy for treatment, resulting in immunosuppression.<sup>1</sup>
- The Centers for Disease Control and Prevention (CDC) recommends pneumococcal (PNA) vaccination for adults 19-64 years old who have certain chronic medical conditions and are immunocompromised, as well as all adults 65 years or older.<sup>1,2</sup>
- The CDC vaccination timeline is shown below for immunocompromised patients aged 19-64 years<sup>2</sup>:



- The CDC vaccination timeline is shown below for immunocompromised patients greater than 65 years of age if no prior PNA vaccine<sup>2</sup>:



- According to the CDC, rate of vaccination was 23.3% in adults aged 19-64 years at increased risk of PNA and 69% among adults > 65 years in 2018.<sup>3</sup>
- Although recommended for immunosuppressed patients, PNA vaccination rates in IBD patients are less than the general at-risk population.<sup>1,3</sup>
- Evidence shows specialty pharmacy services improve medication adherence, appropriate medication use, and patient engagement; pharmacists at Parkview Health assist with disease state management with self-injectable biologic therapies. This comprehensive medication education includes recommending appropriate vaccines for all patients opted into pharmacy services.<sup>4,5</sup>

## OBJECTIVE

- The purpose of this study is to assess the impact of clinical specialty pharmacy services and education on compliance with vaccine recommendations in subjects with IBD.

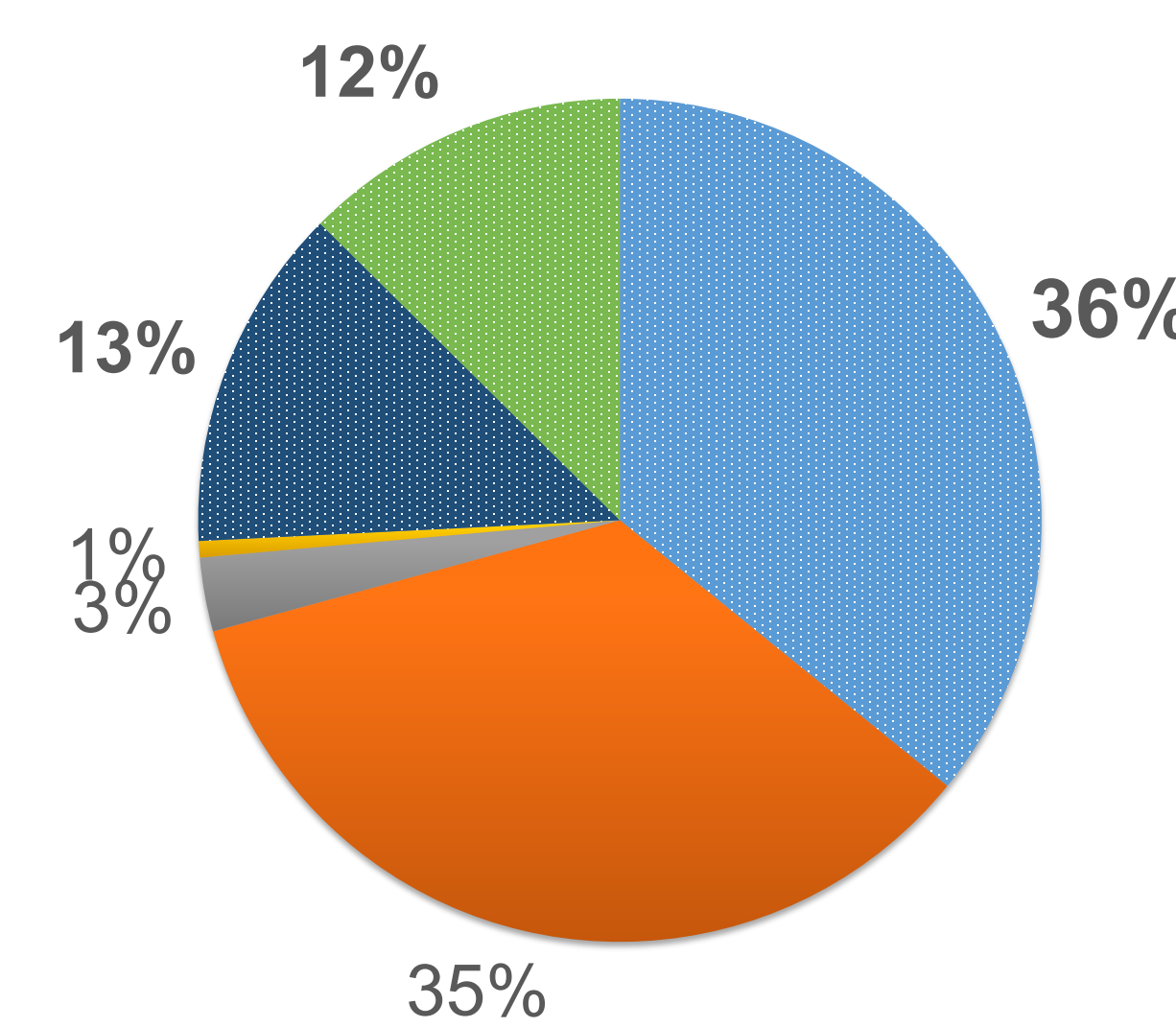
## METHODS

- The following study is a retrospective analysis of subjects with IBD managed by specialty providers at Parkview Physicians Group Gastroenterology Clinic between April 1, 2020 and May 31, 2022.
- Subjects were included if they had a diagnosis of Crohn's disease or ulcerative colitis and were prescribed monoclonal antibody therapy; biosimilars were included.
- Subjects were separated into a pharmacist-care group or a control group, managed exclusively by their IBD specialist; this is considered standard of care.
- The pharmacist-care group included patients actively receiving adalimumab, golimumab, certolizumab pegol, or ustekinumab; these patients received vaccine recommendations from a Parkview specialty pharmacist.
- The control group, or provider group, included patients actively receiving infliximab or vedolizumab.
- The primary endpoint consisted of PNA vaccination rate comparison between the pharmacist-managed group and the control group.
  - Subjects were split into the following categories based on their vaccination status: PCV13 only, PPSV23 only, both (PCV13 and PPSV23), none, other, and unknown; subjects were considered vaccinated if they fell into one of the first three categories.
- Secondary endpoints included evaluation of differences between the two groups in vaccination rates based on visit type, IBD specialist, and age.
- Covid vaccination compliance rates were compared as an additional secondary endpoint.
  - Subjects were included in the vaccinated group if they received at least one dose of a Covid-19 vaccine.

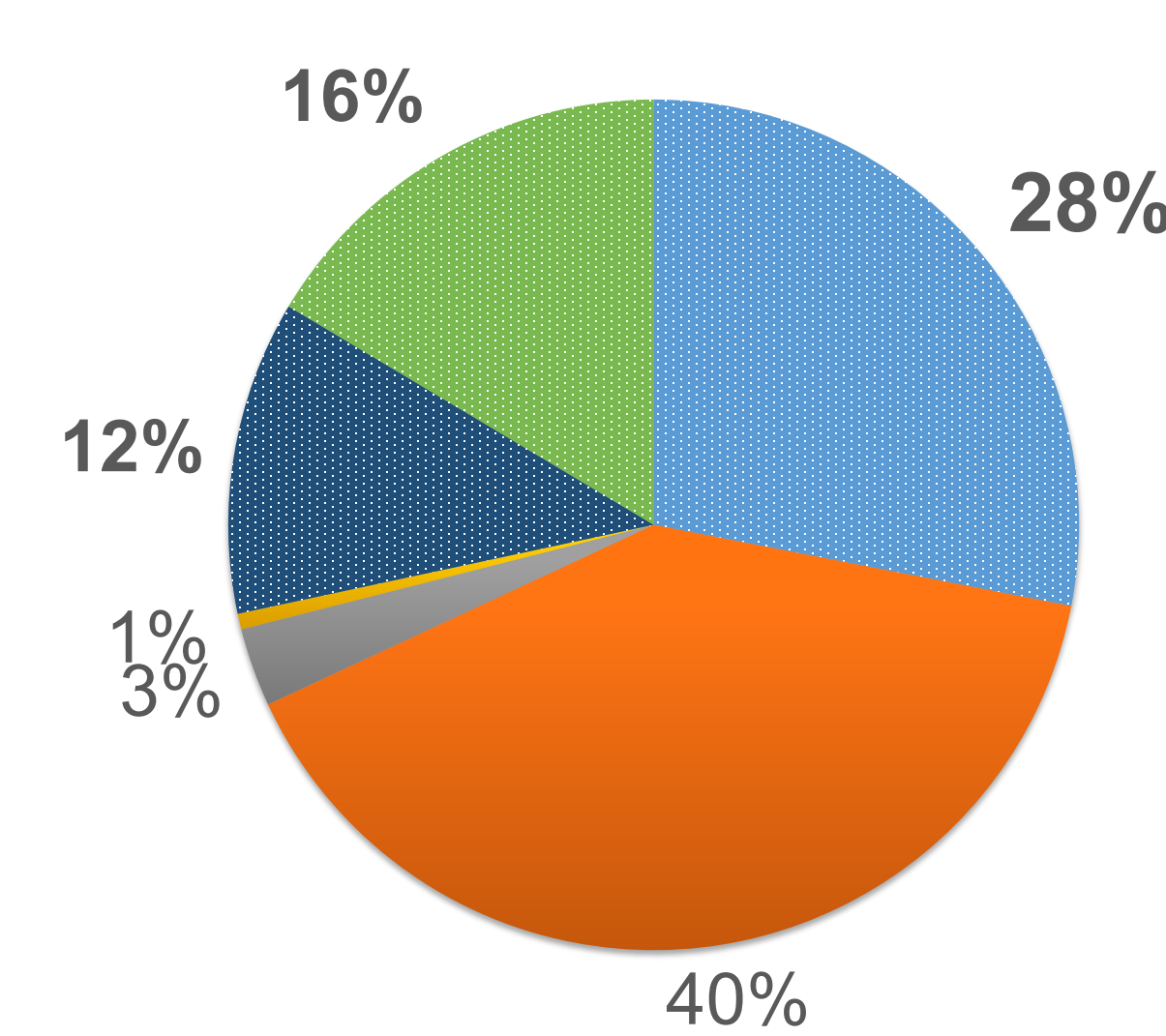
## RESULTS

Baseline Characteristics		Pharmacist n=318	Provider n=335
Mean Age, year		47.3	49.5
Gender	Male	149	154
	Female	169	181
Race	Asian	3	1
	Black or African American	20	17
	Hispanic or Latino	3	4
	Native Hawaiian or Other Pacific Islander	0	0
	Other Asian	1	0
	Patient Declined	5	2
	Unknown	0	1
	White or Caucasian	286	310
Diagnosis	Crohn's Disease	228	175
	Ulcerative Colitis	87	158
	Indeterminant	3	2
Insurance	Commercial	208	173
	Government	107	153
	No Coverage Assigned	3	9

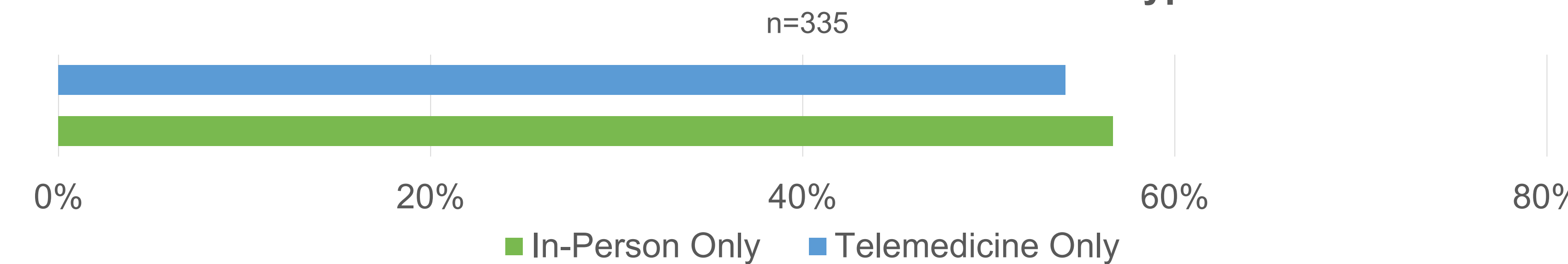
Pharmacist PNA Vaccination Rates



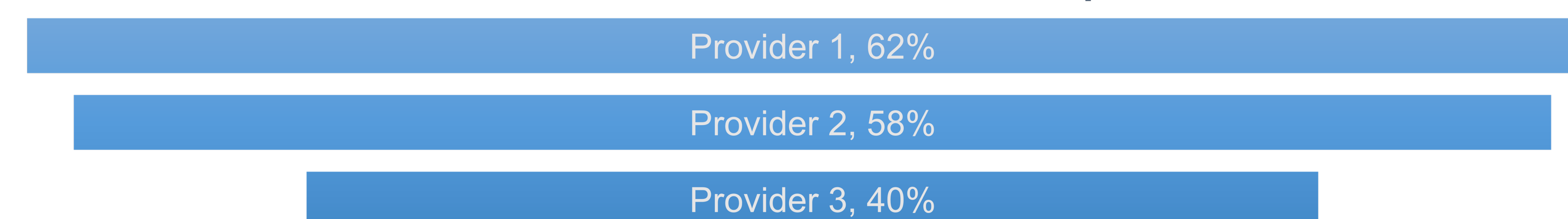
Provider PNA Vaccination Rates



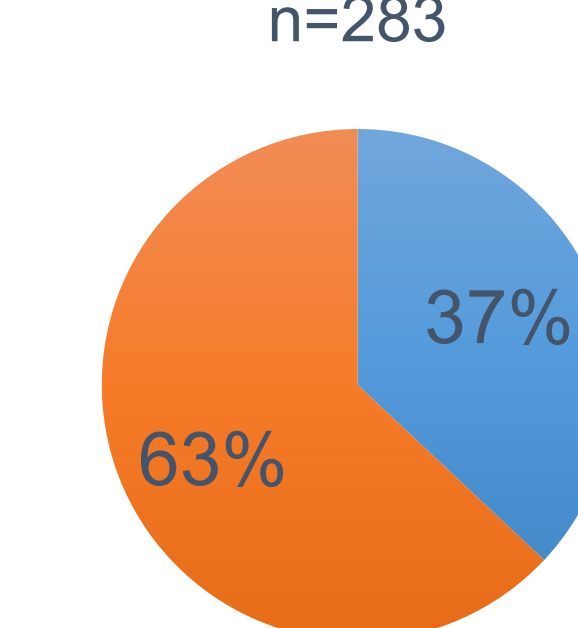
PNA Vaccination Rates based on Visit Type



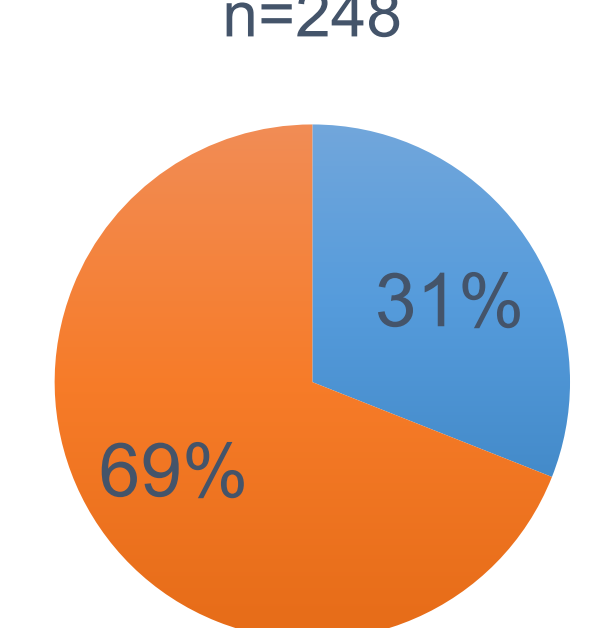
PNA Vaccination Rates between IBD Specialists



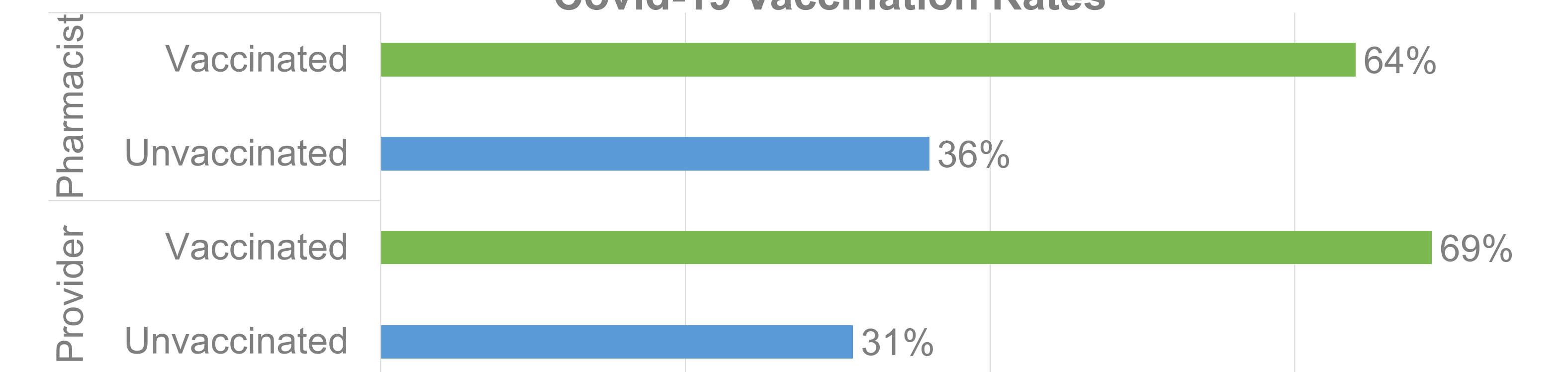
Pharmacist PNA Vaccination Rates (ages 18-64)



Provider PNA Vaccination Rates (ages 18-64)



Covid-19 Vaccination Rates



## DISCUSSION & CONCLUSIONS

- The pharmacist-care group was more likely to be vaccinated against PNA; the biggest difference was noted among patients who received PCV13 and PPSV23, further completing the recommended regimen.
- During this study, visits were conducted via telemedicine or face-to-face due to the Covid-19 pandemic, with fifty-nine percent of subjects engaging in both visit types. Vaccination rates were not impacted between those seen solely in-person versus virtually, which supports the continued use of a hybrid model.
- Vaccination rates do differ among specialists; reasons for this may include varying rates of vaccine hesitancy, education provided, or provider/pharmacist interaction (Provider 3 works primarily remote).
- Both study groups had higher rates of vaccination among patients less than sixty-five years old when compared to national rates, with the pharmacist-group exhibiting greater benefit.<sup>3</sup>
- Covid-19 vaccination rates were consistent with state-wide vaccination rates.<sup>6</sup>
- Limitations consist of the following: inability to categorize "other" vaccines, lack of up-to-date vaccination assessment, and impact of other care team members on vaccination rates.
- With PCV20 becoming the primary PNA vaccine, it is anticipated that vaccination rates will increase among all age groups due to a less complex vaccine regimen and continued pharmacist education within the clinic.

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**Disclosure**  
All authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.