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Implementation and Standardization of Telehealth Visits in a Specialty Pharmacy setting

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Background

- Telemedicine is utilized by various healthcare providers to improve healthcare services and patient outcomes¹.
- A systematic review by J.D. Niznik et al found most telemedicine interventions resulted in a net positive impact on patient outcomes with the most common method being telephonic communication².
- In some cases, visual interactions are necessary to demonstrate administration techniques for certain drug delivery devices, such as inhalers and injectables^{3,4}.
- A small cohort study by A Bynum et al demonstrated significantly improved metered-dose inhalation technique in adolescents with asthma following tele-pharmacy video conferencing³.
- This health system specialty pharmacy services a high volume of patients spanning across the United States and serves patients with complex disease states (e.g. inflammatory bowel disease, rheumatoid arthritis, human immunodeficiency virus, multiple sclerosis, etc.).
- Therapeutic options for these complex disease states often require self-injectable medications. Thus, appropriate patient education and injection training is important for disease management.
- Limited data exists on the impact of video conferencing services in the specialty pharmacy setting.
- **Purpose:** This study will aim to provide insight into pharmacist impact on patient's initial injection training through secure video conferencing visits.

Objectives

Primary Outcome

- Evaluate patient satisfaction with virtual visit injection training.

Secondary Outcomes

- Evaluate virtual education acceptance and completion rates (i.e. telephone, video conferencing, declined consultation).
- Evaluate pharmacist satisfaction with video conferencing service.
- Determine impact of video conferencing service on patient education and medication training.

Methods

Project Design

- Prior to implementing this service, pharmacists underwent telehealth training. Readiness and competency were assessed prior to and after training.
- During telephonic *New Patient Consults*, pharmacists were tasked to identify eligible candidates using an inclusion and exclusion criteria.
- Virtual patient education was conducted through secure video conferencing (Zoom®).
- Patients and pharmacists had the physical device (e.g injectable medication, device demo) in-hand during the appointment.
- Patient appointment reminders, links, and satisfaction survey with service were communicated using HIPAA-compliant text messaging platform (Twistle®) after appointment completion.

Inclusion Criteria

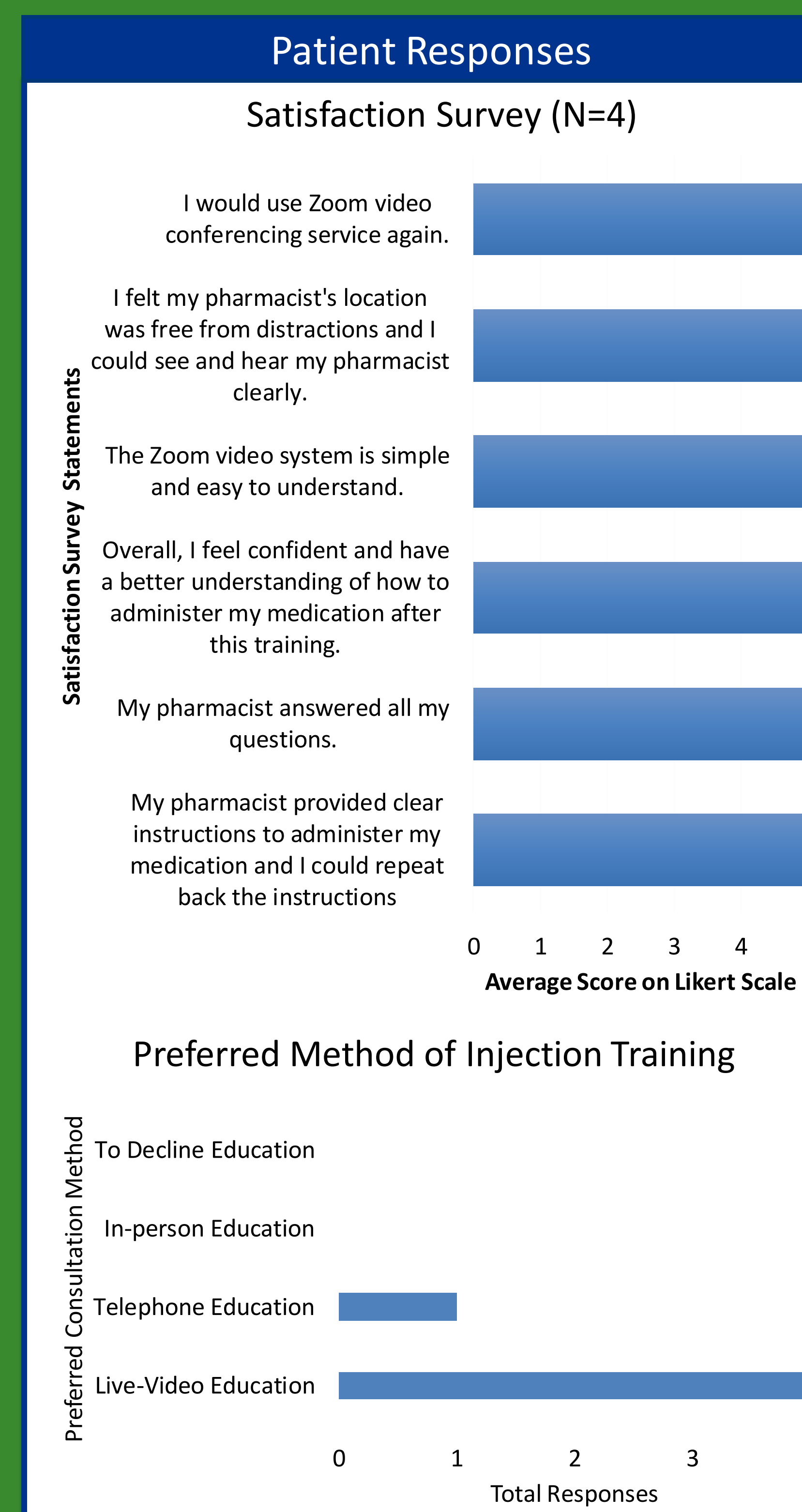
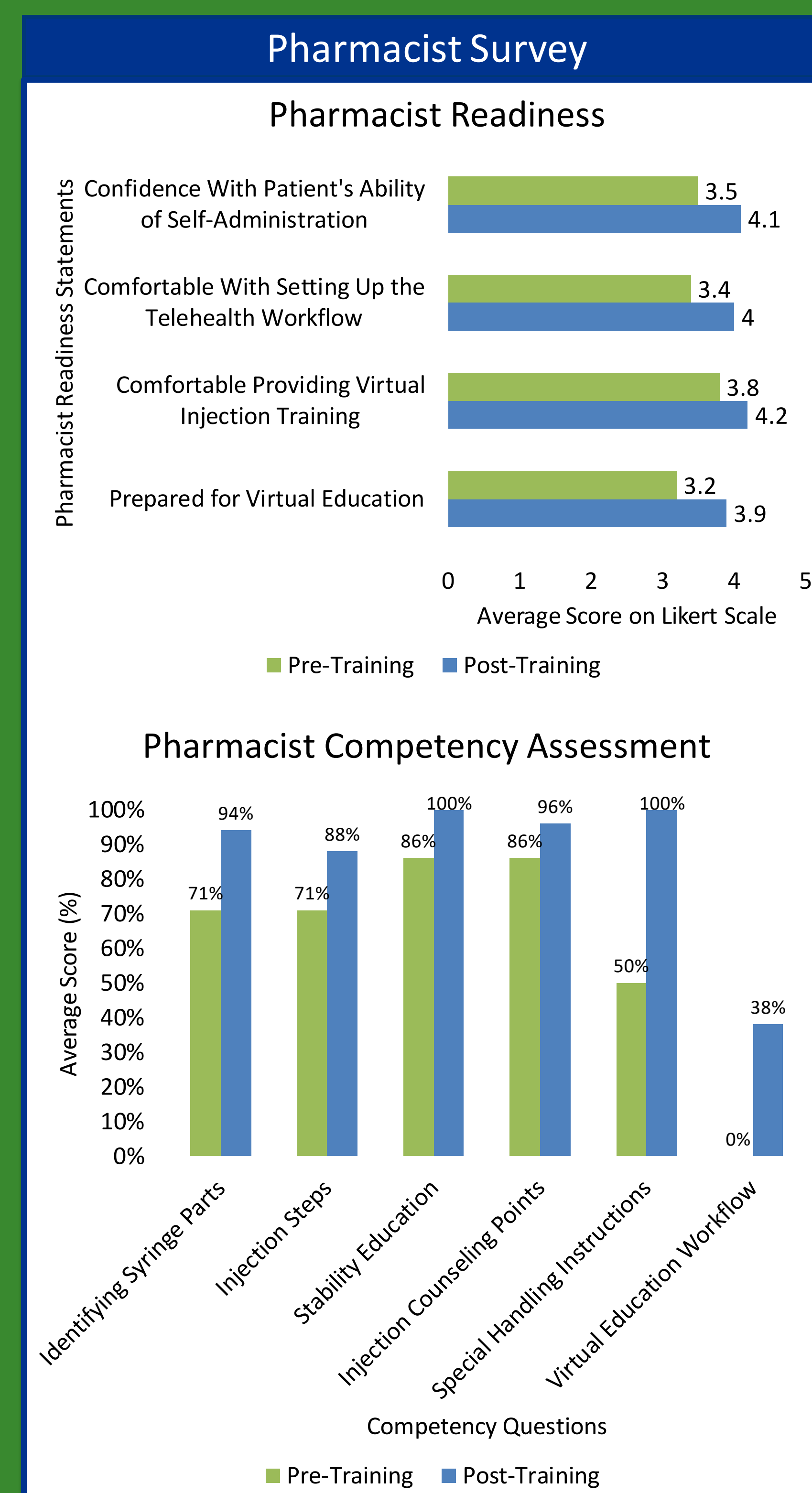
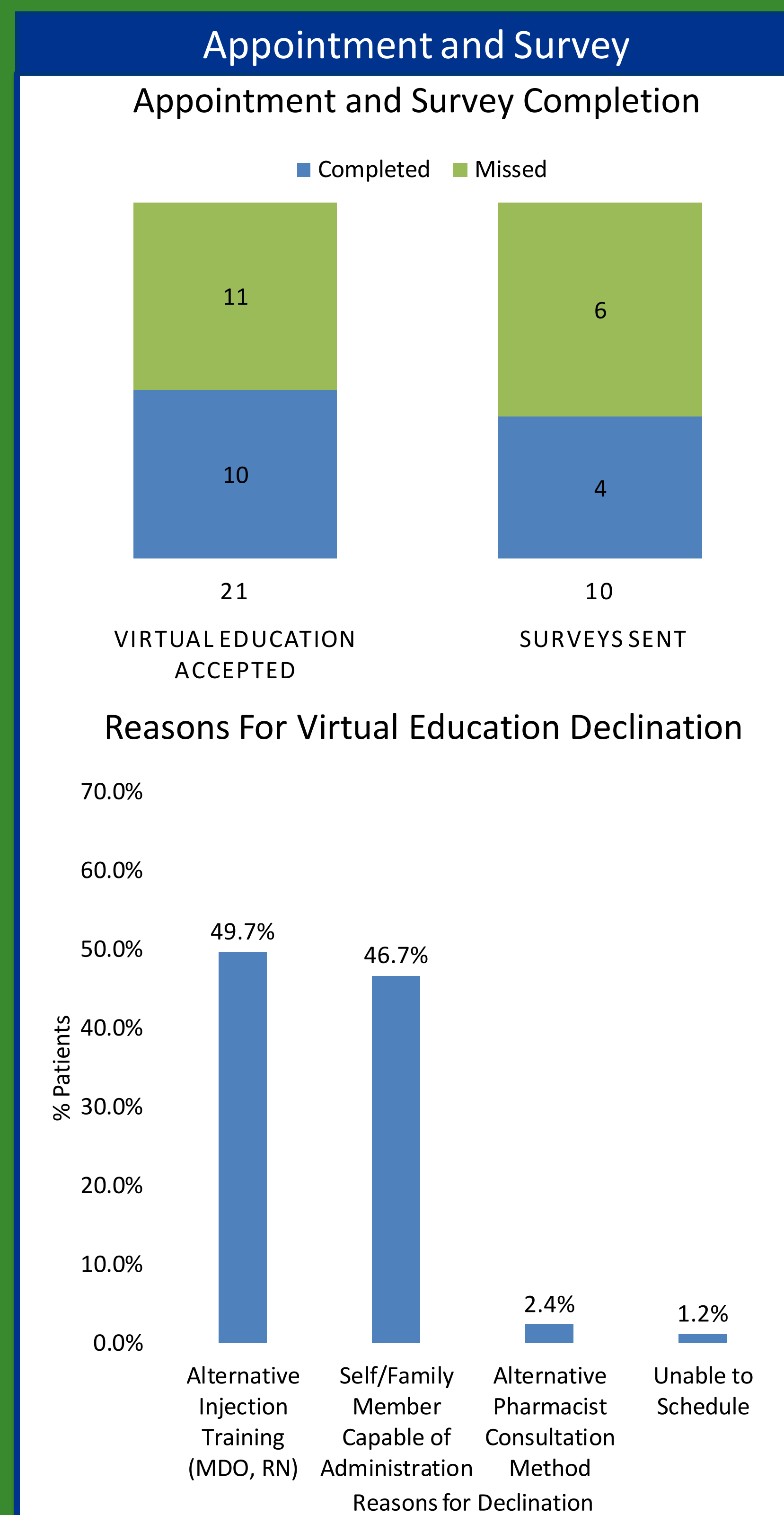
- Patients brand new to self-injectable medication(s)
- Patient had an electronic device with video-conferencing capabilities

Exclusion Criteria

- Patients unable to provide consent
- Patients requiring language translation services
- Patients who were hearing or visually impaired
- Patients who were cognitively impaired

Patient Demographics	
	N = 188
Encounter	12/20/2022 – 3/17/2023
Median age – y (range)	45.6 (1 – 81)
Age < 18	15
Age 18 – 64	154
Age ≥ 65	19
Males – n (%)	70 (37.2%)
Indication	
Psoriasis	45
Psoriatic arthritis*	24
Rheumatoid arthritis*	22
Severe persistent asthma	14
Atopic dermatitis	11
Crohn's disease	10
Febrile Neutropenia	8
Nasal polyps	8
Osteoporosis	8
Hidradenitis suppurativa	6
Idiopathic urticaria	5
Ankylosing spondylitis	5
Eosinophilic esophagitis	4
Ulcerative colitis	3
Growth hormone deficiency	3
Other	13

* One patient with both rheumatoid and psoriatic arthritis



Results & Discussion

Results

Pharmacist Assessment	
Pharmacist Readiness Survey – Likert Scale 1-5	
Pre-training average score	3.5
Post-training average score	4.1
Pharmacist Competency Assessment	
Pre-training average score	61.0%
Post-training average score	86.0%

Appointment and Survey Completion

- Chart review was performed on 436 patients from December 20, 2022 to March 17, 2023. The final analysis excluded 248 patients.

Declined appointment	167/188
Reasons for declination	
Provider office training or manufacturer resource nurse appointment	49.7%
Had a medically trained family member or capable of administration	46.7%
Alternative consultation method (i.e. telephone conversation)	2.4%
Unable to schedule appointment	1.2%
Scheduled a virtual appointment	21/188
Appointment completion	47.6%
Reasons for missed appointments	
Lost to follow up	36.3%
Appointment cancellation	18.2%
Technical difficulties	18.2%
Unknown	18.2%
Alternative method desired	9.1%
Satisfaction survey completion	40.0%
Average score on Likert scale	5
Preferred Future Consultation Method	
Telephone Education*	1
Live-Video Education	4

*One patient chose telephone and live-video education

Discussion

- All patients who completed the survey after the appointment were 100% satisfied with virtual training and confident with self-injection.
- Patients who had prior arrangements for in-person injection training declined the virtual appointment.
- Most patients that missed their appointment were lost to follow-up.
- Pharmacists were more confident in providing injection training and setting up the telehealth workflow at the end of the training session.
- If injection training was needed in the future, patients would prefer live-video education.
- This specialty pharmacy virtual visit service demonstrates the value of virtual injection training in patients brand new to self-injections who are lacking in-person resources.

Limitations

- Clear pharmacist documentation of declination or exclusion from initial injection was inconsistent. This may have led to inappropriate exclusion from offering initial injection training.
- It may be challenging to determine if these outcomes can be properly extrapolated to a larger population, given the small sample size.

Going Forward

- Continue offering virtual visit injection training service to patients new to specialty self-injectable medication(s)
- Expand virtual visit injection training service to patients new to non-specialty self-injectable medication(s)

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