

Patient Perspectives of Pre-Filled Syringe Administration of Subcutaneous Immunoglobulin: A Qualitative Study in the US

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CONCLUSIONS

- Overall, this study demonstrates a clear preference for IgPro20 PFS compared to vials, as well as greater satisfaction, higher ratings of convenience, improved adherence, and positive emotional impacts.
- Participants valued the ready-prepared format, reduced preparation time, fewer required supplies, and the reassurance of receiving the full prescribed dose.
- A small minority of participants expressed a preference for vials, noting the lack of access to the 50 mL IgPro20 PFS. Areas of improvement were identified to further increase satisfaction of patients with the PFS mode of administration.
- Findings from the interviews consistently showed that the IgPro20 PFS is the preferred mode of administration amongst patients with PID. An additional quantitative survey may be beneficial to further explore the results of this qualitative study.

BACKGROUND

- Primary immunodeficiency diseases (PIDs) are a heterogenous group of inherited disorders, characterized by impaired immune function and increased susceptibility to infection and other health conditions. Treatment for PIDs typically involves infusions of immunoglobulin G (IgG), which can be administered intravenously (IVIg) or subcutaneously (SCIG).
- SCIG can be used in two different presentation modes. Vial bottles require preparation and withdrawal using a needle and syringe, while a pre-filled syringe (PFS) is ready-prepared.
- Exploration of patient evidence has been conducted using survey data⁽¹⁻⁶⁾, however this is the first detailed assessment conducted since larger syringe sizes of IgPro20 became widely available for US patients.

OBJECTIVE

- To understand IgPro20 patients' experiences with adherence, satisfaction, convenience, work productivity, and aspects of quality-of-life after switching from vials to PFS, using recall analysis to compare daily routines.

METHODS

- This was a cross-sectional qualitative interview study, which aimed to recruit a total of 24 patients.
- The one-to-one individual interviews were conducted remotely and lasted 60 minutes using a semi-structured interview discussion guide. All interviews were audio-recorded and then transcribed for qualitative analysis using Atlati.
- Quantitative statistical descriptive summaries were prepared for the data obtained from the screener and the sociodemographic/clinical data recorded.

Inclusion criteria

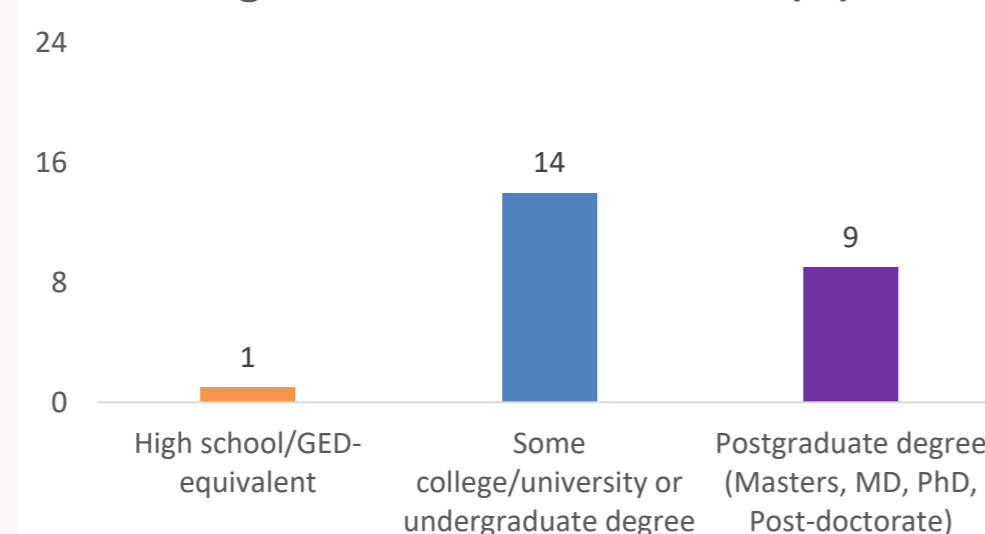
- Is 18 years old or older
- Diagnosed with PID by their doctor.
- Has been using Ig Pro20 PFS for a minimum of three months prior to the study.
- Had been using vials before changing to PFS treatment (either PFS 50 mL naïve or PFS 50 mL experienced).
- Be able to self-administer their PID treatment.
- USA resident.

STUDY SAMPLE

- Details of the overall sample can be seen in Table 1 and Figure 1.

Variable	Overall (N=24)
Age, mean (SD)	54 (14)
Female, n (%)	20 (83)
When diagnosed with PID (years ago), mean (SD)	16 (12)
How long taking IgPro20; >24 months, n (%)	20 (83)
How long taking PFS 50 mL IgPro20; >6 months, n (%)	12 (75)
50 mL Vial IgPro20 per infusion, n (%)	10 (42)
50 mL PFS IgPro20 per infusion, n (%)	9 (38)

Highest level of education, n (%)



RESULTS

Preference and Satisfaction

- The majority of participants (n=20/24, 83%) preferred the PFS, due to:
 - its ready-prepared format (n=10/24, 42%),
 - shorter preparation time for their infusion in comparison to the vials (n=8/24, 33%),
 - not wasting medication and feeling confident in using the full dose (n=9/24, 38%).
- Similarly, the majority of participants (n=20/24, 83%) reported being more satisfied with the PFS compared to the vials for the same reasons.
- Some participants (n=4/24, 17%) expressed a preference for vials over PFS, noting the lack of access to the PFS 50 mL.

“Since I have the pre-filled syringes, I just have to do one instead of four. That makes things a whole lot easier and a whole lot faster.” (ID 24_HZ-50E)

“The pre-filled syringes, just because it's much easier to get the medication out and make sure I get the whole dose.” (ID 4_HZ-50E)

- **Participants mostly preferred (n=20/24, 83%) and were more satisfied (n=20/24, 83%) with the PFS compared to the vials.**
- **Preference and satisfaction were based on the ready-prepared format of the PFS, shorter preparation time, and no residual treatment.**

Adherence

- Two-thirds of participants (n=16/24; 67%) reported never missing or skipping a dose when using IgPro20 PFS, compared with only one-third (n=7/24; 29%) when using vials
- Most commonly, participants missed or skipped a dose when using the vials due to:
 - forgetting (n=5/24, 21%) or
 - traveling and did not take their medication with them (n=5/24, 21%).
- When taking the PFS compared to previously taking the vials, participants were less likely to:
 - forget (n=3/24, 13%) or
 - travel without their medication (n=2/24, 8.3%).
- However, they would miss or skip a dose due to being busy (n=4/24, 17%) or attending an event (n=4/24, 17%).

“I feel like it's easier to be adherent with the pre-filled syringes because it's easier to get the infusion started, which makes me dread it less.” (ID 2_HZ-50E)

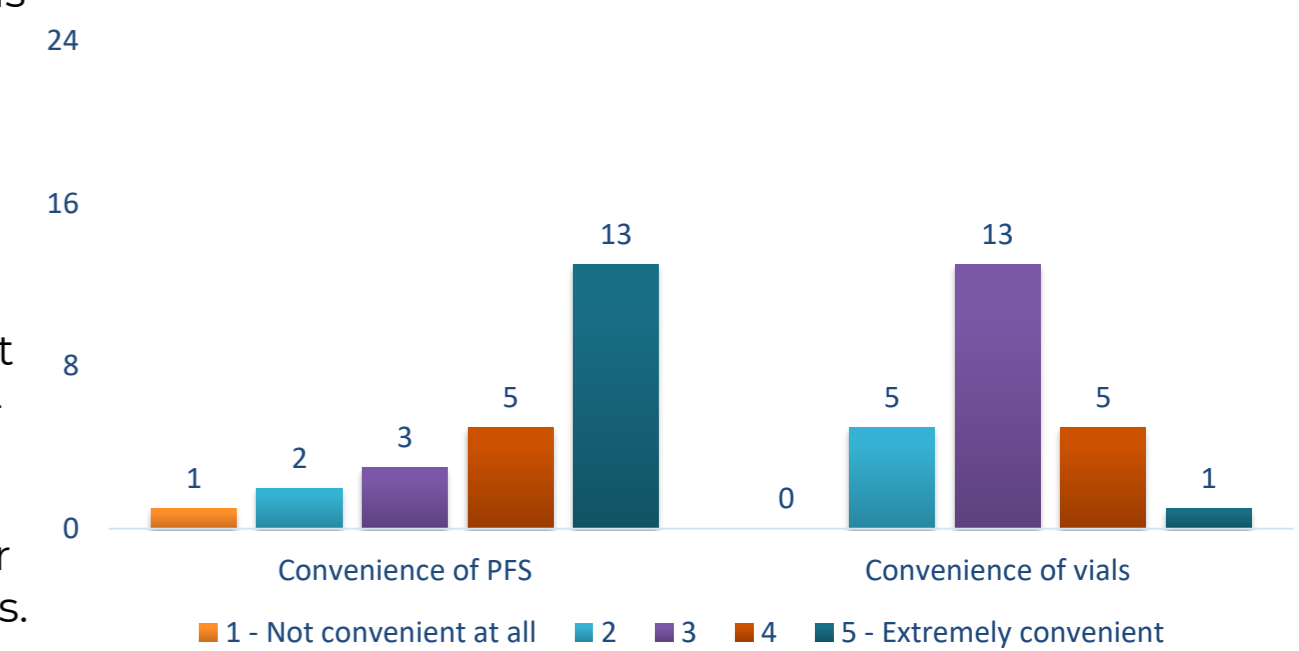
“There were times that I might miss one or be late just because of life circumstances, emergency, family emergency or things like that that it doesn't happen.” (ID 43_HZ-50E)

- **Participants were more likely to never miss or skip a dose (n=16/24, 67%) when using PFS compared to the vials.**
- **Participants were less likely to forget to take their medication, and less likely to travel without their medication when using the PFS compared to the vials.**

Convenience

- Participants rated the PFS and vials on a scale of 1 to 5 (where '1' was 'not convenient at all' and '5' was 'extremely convenient').
- Participants most commonly reported the PFS highly on the convenience scale, rating it as a 4 (n=5/24, 21%) or 5 (n=13/24, 54%) out of 5, compared to vials rated as a 4 (n=5/24, 21%) or 5 (n=1/24, 4.2%) out of 5.
- The mean rating was 4.1 (SD 1.2) for the PFS and 3.1 (SD 0.8) for the vials.

Convenience ratings for the PFS and vials



- **Compared to the vials, more participants rated the convenience of the PFS as a 4 (n=5/24, 21%) or 5 (n=13/24, 54%) out of 5 compared to the vials.**

Quality-of-life impacts

- Participants most commonly reported a positive impact on emotions when changing to the PFS from the vials (n=12/24, 50%), including:
 - less anxiety due to ease of preparing the PFS (n=5/24, 21%),
 - not having any remnants of IgPro20 in the PFS (n=3/24, 13%), and
 - less potential for breakage (n=2/24, 8.3%) due to its plastic packaging.
- Most participants did not see a difference in other quality-of-life impacts, including:
 - daily activities (n=20/24, 83%),
 - social activities (n=21/24, 88%),
 - work or other regular activities (n=20/24, 83%), and
 - pain (n=23/24, 92%).

“But at the beginning, I was very anxious using the vials. And with this, with the pre-filled syringes, there's just no anxiety because you don't have to think about anything.” (ID 5_HZ-50E)

“So, with the pre-filled syringes, I feel like I know what I'm doing and I'm a little bit more confident in using it, too. So, I'm more likely to be able to get it started in a reasonable amount of time, which is also why I'm saving myself those 30 minutes.” (ID 8_HZ-50N)

- **Positive emotional impacts were reported by participants (n=12/24, 50%) when changing to the PFS from the vials.**
- **Most participants did not see a difference in other quality-of-life impacts, including daily activities, social activities, work or other regular activities, and pain.**

REFERENCES: 1. Henderson TS, Mallick R, Romano JM, Scalchunes C. Patient-reported experience on training associated with subcutaneous immunoglobulin (SCIG) therapy self-administration. *Journal of Allergy and Clinical Immunology*. 2018;141(2):AB268.2. Mallick R, Hahn N, Scalchunes C. Immunoglobulin replacement therapy in patients with primary and secondary immunodeficiencies: impact of infusion method on immunoglobulin-specific perceptions of quality of life and treatment satisfaction. *Allergy, Asthma & Clinical Immunology*. 2025;21(1):1-12. 3. Mallick R, Henderson T, Lahue B, Kafai A, Bassett P, Scalchunes C. Subcutaneous immunoglobulin in primary immunodeficiency-impact of training and infusion characteristics on patient-reported outcomes. *Bmc Immunology*. 2020;21:1-15. 4. Mallick R, Jones S, Kanegane H, Agto-Tari D, Rojavin M. Treatment satisfaction with subcutaneous immunoglobulin replacement therapy in patients with primary immunodeficiency: a pooled analysis of six IgPro20 studies. *Journal of Clinical Immunology*. 2018;38:886-97. 5. Mallick R, Solomon G, Bassett P, Zhang X, Patel P, Lepeshkina O. Immunoglobulin replacement therapy in patients with immunodeficiencies: impact of infusion method on patient-reported outcomes. *Allergy, Asthma & Clinical Immunology*. 2022;18(1):110. 6. Mallick R, Solomon G, Bassett P, Zhang X, Patel P, Lepeshkina O. Subcutaneous immunoglobulin replacement therapy in patients with immunodeficiencies-impact of drug packaging and administration method on patient reported outcomes. *BMC Immunology*. 2024;25(1):18.

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