

The Impact of Site of Care on Quality and Safety of IVIG

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Abstract

Introduction

Ig therapy is one of the most specialized, complex treatment options available today. It is infused via the intravenous (IV) or subcutaneous (SC) route at the patient's home, an ambulatory infusion center (AIC), a physician's office, or a hospital. It is imperative to analyze the safety, tolerability, and patients' satisfaction with their infusion experience across all sites of practice.

Methods

This exploratory, confidential and deidentified survey of patients receiving Ig was distributed to IgNS patient-subscribers via the Jotform HIPAA-compliant survey tool between May and July 2024. An interim analysis of 308 respondents was conducted.

Results

Using data from the IgNS Patient 360 Survey, we explored the relationships between site of care and quality of care. The relationship between site of care and quality of care was highly significant, such that quality drops by 1.3 points (on an 11-point scale) when patients receive IV immunoglobulin (IVIG) at an infusion center versus at home (β -1.3, t = -5.58, p < .001). The relationship between the site of care and the quality of nursing was significant, such that patients treated at infusion centers report lower nursing quality than those who receive care at home (p < .05). The relationship between Ig location and confidence in nurses' skills and abilities was significant, such that patients express lower confidence in infusion center nurses than those at home (p < .01). Likewise, the relationship between site of care and nurses' perceived knowledge of and skills with infusion pump equipment was significant, such that nurses at infusion centers were perceived as less skilled and knowledgeable than nurses at the home sit of care (p < .05). Patients at infusion centers were significantly less likely to have their vital signs assessed by a nurse versus those receiving care at home (p < .001). Patients at infusion centers were less likely to receive a follow up post-infusion compared with those receiving care at home (p < .001). Overall, patients with neuromuscular diagnoses reported significantly more side effects than patients with PI (p < .01). Premedication did not significantly impact side effect incidence or severity.

Discussion

For the past several decades, the home has been the main site of care for Ig due its convenience and healthcare cost advantages. In recent years, an increasing number of patients have been transitioning to infusion center-based treatment due to payer reimbursement changes. Nurses in the infusion center space usually work with a variety of infused drugs, and do not specialize in any one therapy space, particularly Ig. This gap in education and training is concerning, since Ig infusions require specific types of monitoring and interventions for the myriad adverse reactions that can occur at any time.

Conclusion

Our findings underscore the critical need for standards of practice, resources, training, education, and credentialing of clinicians working in all practice settings, but particularly the infusion center space.

Introduction

Immunoglobulin (Ig) therapy is one of the most specialized, complex treatment options available today. It is infused via the intravenous (IV) or subcutaneous (SC) route at the patient's home, an ambulatory infusion center, a physician's office, or a hospital. It is imperative to analyze the safety, tolerability, and patients' satisfaction with their infusion experience across all sites of practice.

Methods

This exploratory, confidential and deidentified survey of patients receiving Ig was distributed to IgNS patient-subscribers via the Jotform HIPAA-compliant survey tool between May and July 2024. An interim analysis of 308 respondents was conducted to compare the patient infusion experience in the home versus infusion center settings.

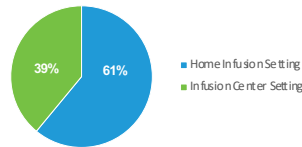
To measure infusion quality, we developed an 11-point scale which included:

- Respondent assessment of RN quality (four-item scale)
- RN recommendation for hydration before Ig treatment
- Respondent confidence in RN's skills and abilities
- RN skill with infusion pumps (three-item scale)
- Respondent satisfaction with Ig treatment
- RN continuity of care (i.e. how many different RNs provide the Ig treatment)
- Frequency with which the RN performs vital sign assessments
- Frequency with which the RN follows up after Ig treatment
- Frequency with which RNs require respondents to remove their own infusion line (for IVIG patients only)
- Frequency with which RNs increase infusion rate to decrease infusion time (for IVIG patients only)

Results

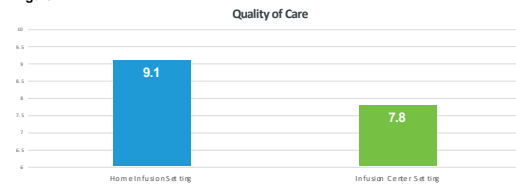
Using data from the IgNS Patient 360 Survey, we explored the relationships between site of care and quality of care. Of the 148 respondents receiving IVIG, 91 (61%) received their infusions in the home setting, and 57 (39%) at an infusion center including ambulatory infusion center, physician office, hospital, specialty pharmacy infusion center, and other. (Figure 1)

Figure 1



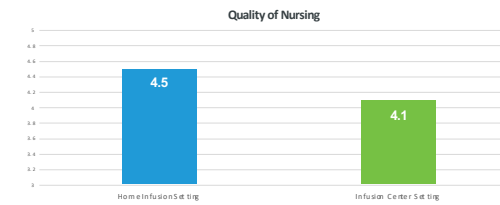
The relationship between site of care quality of care was highly significant, such that quality drops by 1.3 points (on an 11-point scale) when patients receive IV immunoglobulin (IVIG) at an infusion center versus at home (beta -1.3, t = -5.58, p < .001). (Figure 2).

Figure 2



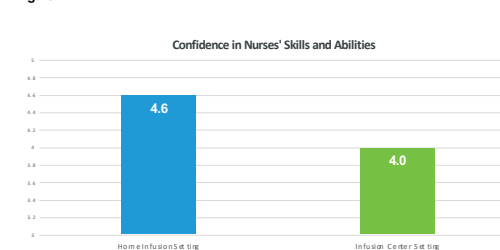
The relationship between the site of care and the quality of nursing was significant, such that patients treated at infusion centers reported lower nursing quality than those who receive care at home (β -0.4, t = -2.20, p < .05). (Figure 3).

Figure 3



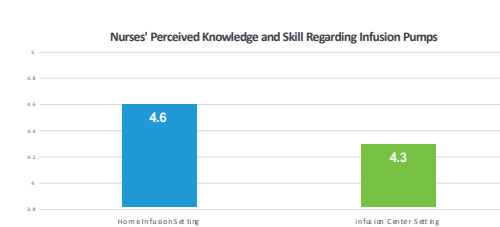
The relationship between the site of care setting and confidence in nurses' skills and abilities was significant, such that patients express lower confidence in infusion center nurses than those at home (β -0.6, t = -3.26, p < .01). (Figure 4).

Figure 4



Likewise, the relationship between site of care and nurses' perceived knowledge and skills of infusion pump equipment was significant, such that nurses at infusion centers were perceived as less skilled and knowledgeable than nurses at the home sit of care (β -0.3, t = -2.18, p < .05). (Figure 5).

Figure 5



Patients at infusion centers were significantly less likely to have their vital signs assessed by their administering nurse versus those receiving care at home (β -0.9, t = -5.92, p < .001). Patients at infusion centers were also less likely to receive a follow-up post-infusion compared with those receiving care at home (β -1.4, t = -5.08, p < .001). (Figures 6 and 7).

Figure 6

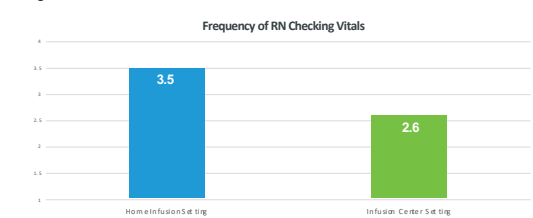
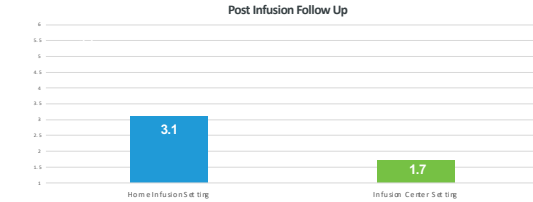


Figure 7



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