ACCREDO SPECIALTY PHARMACY

EVERNORTH HEALTH SERVICES

Real-world patient safety and experience trends for anti-CD20 home infusion: a 120-week review

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SUMMARY

Our study assesses the real-world safety and patient experience for home infusion admissions for anti-CD20 therapies at our institution.

Real-world factors which impact patient experience for receiving safe and accessible anti-CD20 home infusion include a heterogenous patient base, patient and prescriber preferences, and access to treatment.

Patients in our sample experienced
+ Adverse event rates of 22%, with 9% experiencing infusion related reactions (IRRs) in range with published event rates
+ Grade 1 and 2 IRRs and allergic reactions, managed with <30-minute impact on home visit time
+ Average 1.7 hrs. drive time savings compared to alternate site of care location

INTRODUCTION

Home infusion in multiple sclerosis (MS) is associated with improved patient satisfaction and reduced costs. With increasing utilization of infused MS treatments, our study expands the available real-world home infusion safety data and evaluates avoided barriers to care.

OBJECTIVES

To assess the real-world safety and MS patient experience in a specialty home infusion cohort. Primary outcome was allergic and infusion related reaction (IRR) incidence and severity. Secondary outcomes evaluated pre-medication utilization and compliance, infusion factors, reaction incidence, and patient travel time difference between provider office vs home.

METHODS AND MATERIALS

A retrospective chart review was conducted for home infusion visits for ocrelizumab or ublituximab-XIIY between December 2021 and March 2024. Patients included were 18 to 89 years old. Those failing to meet home infusion admission criteria, cancelled visits, or required to use a third-party provider were excluded. Data included demographics, clinical notes, prescription and infusion order detail. Adverse events (AE) were classified and graded according to NCI Common Terminology Criteria AE version 6.0.[1] Statistical comparisons for continuous variables used two-tailed Welch's t-test. Categorical data used Fisher's exact test.[2] Travel data leveraged Google Maps calculated drive time between patient site of care vs. prescriber's site of care standardized to 8AM (patient time zone).

Study Population	n = 223
% Female (n)	69% (154)
Mean age (yrs.)	46 (± 11)
Total home infusion visits (mean)	520 (2)
Mean home infusion visit time	5.5 hrs.
Ordered infusion time (% infusions)	
2-3.4 hrs.	428 (83%)
3.5+ hrs.	92 (17%)
Mean actual infusion time	3.7 hrs.
Pre-medications prescribed (% infusions)	
3 medications	461 (89%)
1-2 medications	59 (11%)

Table 1. Demographics

RESULTS

Analysis included 223 patients (69% female, 46+/-11 years) receiving 520 home visits; all received ocrelizumab (table1). Total AE incidence was 22% (table 2; n=43, 50 AE). Of these, 48% (24 AE) occurred during or after infusion, including 9% (n=20) incidence of allergy or IRR (figure 1; grade 1 n= 9, grade 2 n=11). No serious AEs occurred. All patients were prescribed pre-medications; 49 visits (9%) reported patient refusal of one or more pre-medications. There was no significant association of AE with premedication regimen type (p=0.30) or refusal (p= 0.28). Compared to uncomplicated visits, AE averaged 0.4 hours longer (p = 0.05), with no difference in infusion time. Among patients with an AE, 17 (34%) did not receive another shipment.

Infusion parameters by AE occurrence	AE (n = 43)	No AE (n = 180)
Infusion visits by outcome	50	470
Mean Visit duration (hrs.)	5.8*	5.4
Premedications ordered		
3 medications	46	415
1-2 medications	4	55
Premedication non-compliance (% infusions)	3 (6%)	46 (10%)
Median ordered infusion time (hrs.)	3.5	3.5
Mean total infusion time (hrs.)	3.7	3.7

** p=0.05, all others not significant compared to no AE*

Table 2. Adverse Event Occurrences

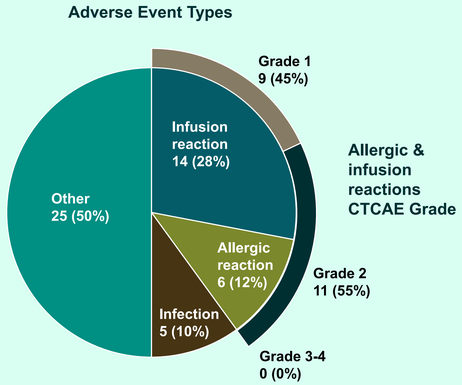

Figure 1. Adverse Event Occurrences

Home infusion avoided an average 1.7 driving hours compared to alternate site infusion (Figure 2).

Group	n	Mean drive time (hr.)
1	40	0.3
2	39	0.6
3	33	0.9
4	37	1.4
5	38	2.2
6	36	5.0
Total	**223**	**1.7**

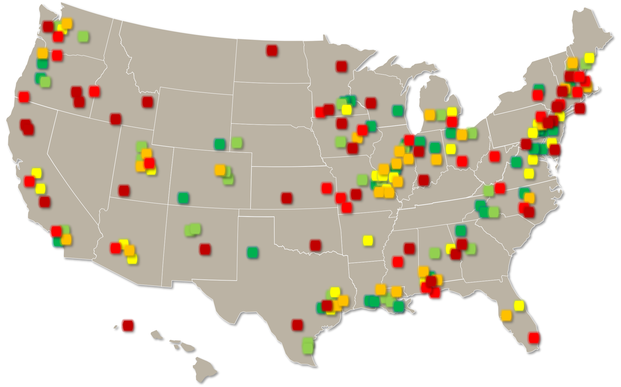

Figure 2. Patient average round trip drive time to alternate site of infusion

DISCUSSION

Patient care goals: Our organization's goals for the delivery of anti-CD20 infusions for MS is to ensure our prescription management and home infusion protocols enable safe medication use, while offering patients and providers a convenient and lower-cost site of care alternative.
Infusion safety: Package insert-reported pooled rates of infusion reactions range 34-40% for ocrelizumab formulations and 48% for ublituximab, primarily during the first few doses.[3,4,5,7] In phase III data for ocrelizumab, IRRs were lower when premedication regimens included an antihistamine and ranged 7-14% for doses 2-4.[8] Our IRR 9% prevalence is in range for maintenance doses, but our analysis may be too small to assess premedication impact at lower event rates.
Improving cost and convenience: Pharmacoeconomic studies of infused MS therapies indicate drug and infusion costs averaged $41,347 lower for home versus hospital outpatient infusion settings for ocrelizumab; however, home infusion made up <10% of claims.[6] Within our study period, home infusion admissions represented 11% of our patient census for anti-CD20 infusions, confirming that home infusion may remain under-utilized among our patient and prescriber base. Reported rates of patient satisfaction with home infusion among MS patients are at or above infusion center rates.[9]

CONCLUSIONS

The incidence of total AE and allergic or IRR AE in MS home infusion visits at our organization were at or below rates reported in the literature for maintenance infusions of ocrelizumab. AE reported were mild; occurrence of an AE did not substantially add to the overall visit care time. On average, patents saved significant travel time through home-based care.

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