NATIONAL HOME INFUSION FOUNDATION

MARCH / APRIL • 2021

NHIF Research Supplement

Discharge Reasons of Patients Receiving Home-Based Outpatient Parenteral Antimicrobial Therapy

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A Home Infusion Program for Administration of Bamlanivimab in High-Risk Settings

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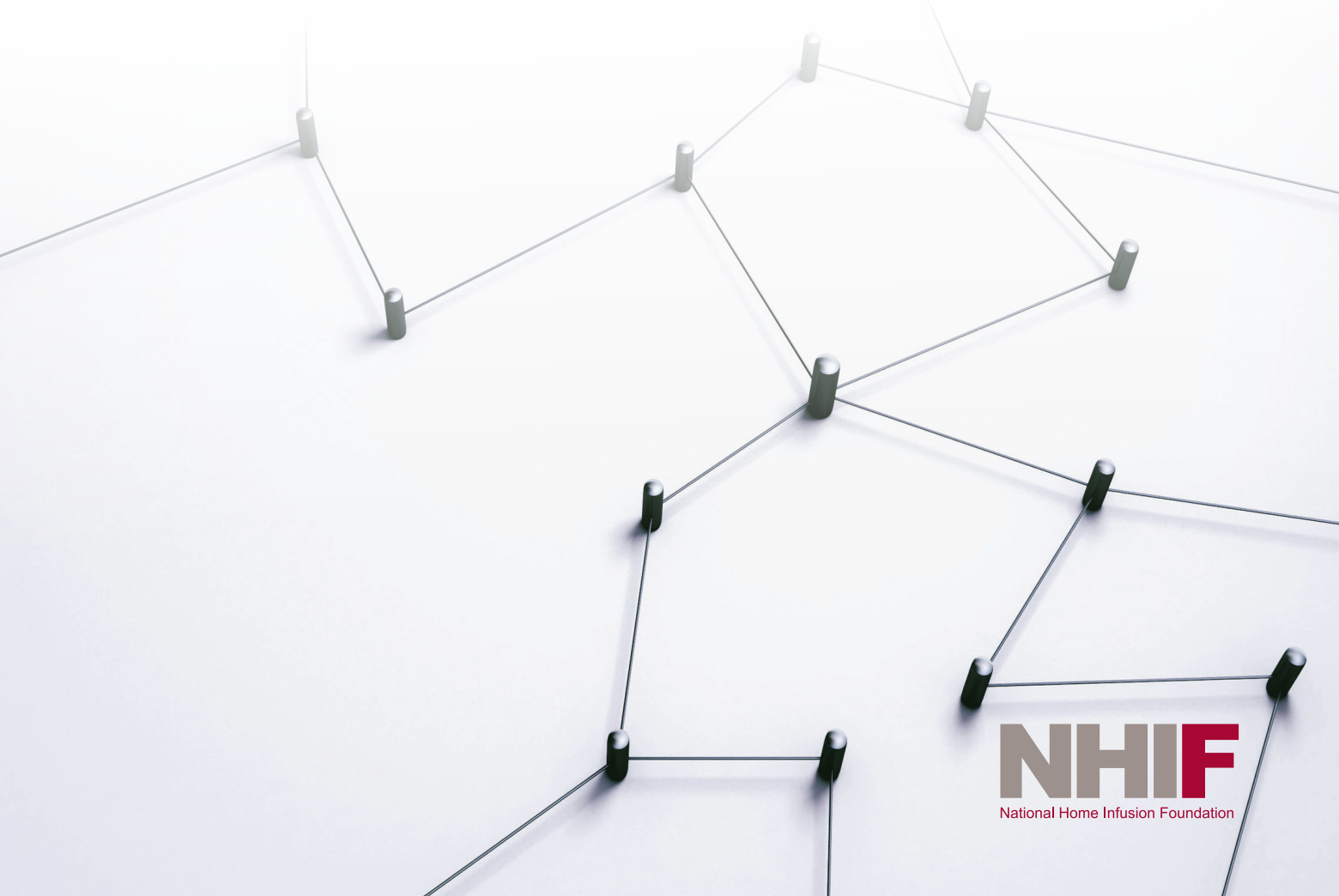

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This publication is a product of the National Home Infusion Foundation and is published by the National Home Infusion Association, 1600 Duke Street, Suite #410, Alexandria, Virginia 2213.

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ABSTRACT

Background

The use of home-based outpatient parenteral antimicrobial therapy (OPAT) in the United States is well established. Previous studies conducted by the National Home Infusion Foundation (NHIF) estimate that approximately 1.4 million patients receive home-based OPAT each year from home infusion pharmacies.[1] In 2016, the NHIF introduced standardized categories and definitions for common discharge reasons as a means of establishing a basis for collecting and comparing uniform outcome data across multiple providers. In 2020, as part of a national benchmarking program, a metric was developed to collect data describing why patients receiving OPAT are discharged from their home infusion service.

Purpose

The purpose of this study was to describe why patients receiving OPAT are discharged from their home infusion service and describe the characteristics of patients who receive OPAT services from home infusion pharmacies.

Methods

The first step was to determine the common home infusion discharge reasons and their definitions. A task force of professionals with experience in home infusion including physicians, pharmacists, nurses, and quality improvement specialists was established. After a review of the literature and discussion, the task force identified 9 common discharge reasons that would be further defined for use in industry data collection programs. Definitions for each variable were written and included in the Data Entry Guide which was given to each provider location that participated in the program. Home infusion pharmacies were invited to participate, of which 17 enrolled and submitted their discharge data. The data was analyzed using IBM SPSS. Frequency and percentages were determined for all demographic data while cross tabulation analysis was used to gain an in-depth understanding of the data.

Results

Data was received for 2,106 patients who were discharged from a home infusion service between July and December 2020 after receiving OPAT. The study found that 1,911 (90.84%) patients achieved a discharge reason of "therapy complete," which was defined as completing the prescribed course of therapy after demonstrating the expected level of clinical improvement. The second most common reason for discharge was due to unplanned hospitalization at 3.75% (n=79) of patients. Providers reported that few patients were discharged for access device related reasons (n=19, 0.90%) or adverse drug reactions (n=13, 0.62%). Cross tabulation analysis showed that all age groups achieved a threshold of 90% for therapy complete with the exception of 20–34-year-olds (88.81%). The 0-17 age group also had the highest percentage of "access device related," reason for discharge (5.13%).

Discussion

Large scale research on home-based OPAT provided by home infusion pharmacies has not been conducted or reported. Developing standard definitions for the reasons OPAT patients are discharged from home infusion services made it possible to collect and report data from multiple providers. This data informs prescribers and other stakeholders about the success rates of patients using home-based OPAT. This study demonstrates that patients rarely stop therapy early due to adverse events and most (90.84%) patients served by home infusion pharmacies complete their OPAT treatment at home as prescribed.

Background

The use of home-based outpatient parenteral antimicrobial therapy (OPAT) in the United States is well established. A study of infectious disease physicians found that 81% treated at least one patient with OPAT during an average month.[2] Different models exist for the provision of OPAT, including home, physician office-based, skilled facility, and hospital outpatient departments. A survey of 221 home infusion providers conducted by the National Home Infusion Foundation (NHIF) in 2019 revealed that approximately 1.4 million patients annually receive home-based OPAT services from home infusion pharmacies.[1] Patients are most often referred for home-based

OPAT after admission to the hospital and upon consultation with an infectious disease physician. No detailed studies have been published about the success rates of patients who receive home-based OPAT from home infusion pharmacies. Most home infusion providers have data pertaining to adverse drug reactions (ADR), unplanned hospitalizations, and other reasons for discharge from services. Unfortunately, this data has not been collected industry-wide until the development of the NHIF benchmarking program. By collecting data from numerous provider locations, the sample size of patient data is increased which assists with the validity and generalizability of the results.

In 2016, the National Home Infusion Foundation (NHIF) introduced standardized categories and definitions for patient outcome events as a means of establishing a basis for collecting and comparing uniform data across multiple providers. In 2020, as part of the NHIF national benchmarking program, a metric was developed to collect data describing why patients are discharged from their home infusion service. Home-based OPAT patients were included in this project. While the metric does not capture every adverse event or unplanned hospitalization that may occur in patients receiving home-based OPAT, the study team believes the reason for discharge provides valuable information about success rates with the home-based model of care.

In 2020, a program was launched to collect and analyze discharge data for most home infusion patient therapy types. This initiative was based on the need for data that would describe why patients are discharged from their home infusion service and the association with the patient's therapy type. Patients receiving OPAT comprised 72.82% of the total sample (n=2,899) of patient data collected. For OPAT patients, the reason for discharge should be the completion of therapy, which was applied when the physician determined the patient no longer needed therapy as a result of achieving a sufficient clinical response and/or met the goals of the individualized plan of care. It is common knowledge that whenever prescription medication is administered there is a possibility of an adverse drug reaction, unplanned hospitalization, or an insufficient response from the medication, all of which may be a reason for discharge from a home infusion service.

Additionally, not all patients are good candidates for home infusion and may be better served in another site of care. This situation is captured by the definition for "change in eligibility" and refers to factors, such as lack of caregiver support, unsafe home environment, and other circumstances that may influence the patient's ability to receive, afford, or manage OPAT at home. One goal of this project was to determine the percent of OPAT patients that were discharged because they completed their therapy. Furthermore, if "therapy completed" was not the reason, data disclosed the other reasons for discharge.

Purpose

The purpose of this study was to learn why patients receiving home-based OPAT are discharged from service and describe the characteristics of patients that receive OPAT services from home infusion pharmacies.

Methodology

The first step in the study process was to determine the home infusion discharge variables and their definitions. A task force of professionals with experience in home infusion including physicians, pharmacists, nurses and quality improvement specialists was established. After much discussion and a review of the literature, it was determined that the discharge variables listed in Table 1 capture most of the reasons why patients stop therapy and would be included in the project. Definitions for each variable were written and included in the Data Entry Guide which was given to each provider location that participated in the program.[3] An Excel® data collection form was developed for the participating provider locations that included the listed variables along with patient age, therapy type, and type of

TABLE 1
Discharge Reasons and their Definitions

Discharge Reason	Definition
Therapy complete	Applies when a physician discontinues the home infusion therapy because the patient has achieved sufficient clinical improvement and/or met the goals in the plan of care.
Patient expired	Patient expired
Unplanned hospitalization	When a patient requires an unplanned, inpatient admission to an acute care facility for any reason. Maybe further classified as "related or un-related" to the home infusion therapy.
Change in home infusion eligibility	Includes, but is not limited to unsafe home environment, no available caregiver, affordability, patient choice, unable to comply with treatment.
Insufficient response/ complication	Applies when the patient stops treatment due to an exacerbation of disease or non-response to therapy.
Adverse drug reaction (ADR)	An undesirable response, other than a known side-effect, that compromises efficacy, and / or causes toxicity.
Access device related	When one of the following access device events (migration, dislodgment, occlusion, phlebitis, skin integrity impairment, infection, damage, breakage, or thrombosis) results in the discontinuation of therapy.
Changed infusion provider	Refers to situations where the current provider is unable to meet the patient's needs
Other	All reasons that cannot be otherwise classified.

access device. This form assisted the provider location with data entry, reduced the number of data entry errors, and eased the data merge process.

Home infusion provider locations were invited to participate in the program of which 17 enrolled and submitted their discharge data using the NHIF selected study variables, Data Entry Guide, and Data Collection Form. Through the generosity and efforts of the provider locations, the NHIF research team was able to describe patient age, therapy types, access devices, and the reasons why home infusion patients are discharged from service. From the results "Status at Discharge" benchmark metrics were also determined.

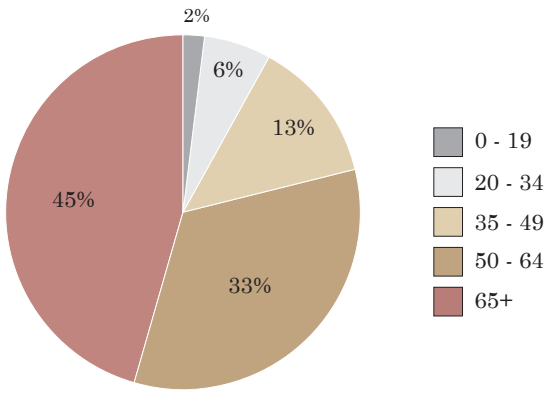
The data was analyzed using IBM SPSS, a statistical analysis software platform. To allow for additional analysis, patient age was recoded into 5 categories. As a result, data could be cross tabulated with the discharge variables. Frequency and percentages were determined for all demographic data while cross tabulation analysis was used to gain an enhanced understanding of the "Status at Discharge" data, specifically, if there was a significant difference among the age groups when comparing the reasons for discharge from home infusion.

Results

After the de-identified data was submitted to NHIF by home infusion pharmacy locations, it was checked for errors and to confirm that "Reason for Discharge" was included. Data sets that did not include this data were deleted. If any demographic data was missing, the discharge reason was still included in the final analysis which included data from 2,899 patients who were discharged from a home infusion service July through December 2020. Patients receiving home-based OPAT comprised 72.82% (n=2,106) of the sample and were analyzed separately from the aggregate data for this report.

IMAGE 1

Patient Age Category of Home-based OPAT Patients



Patient Age Distribution

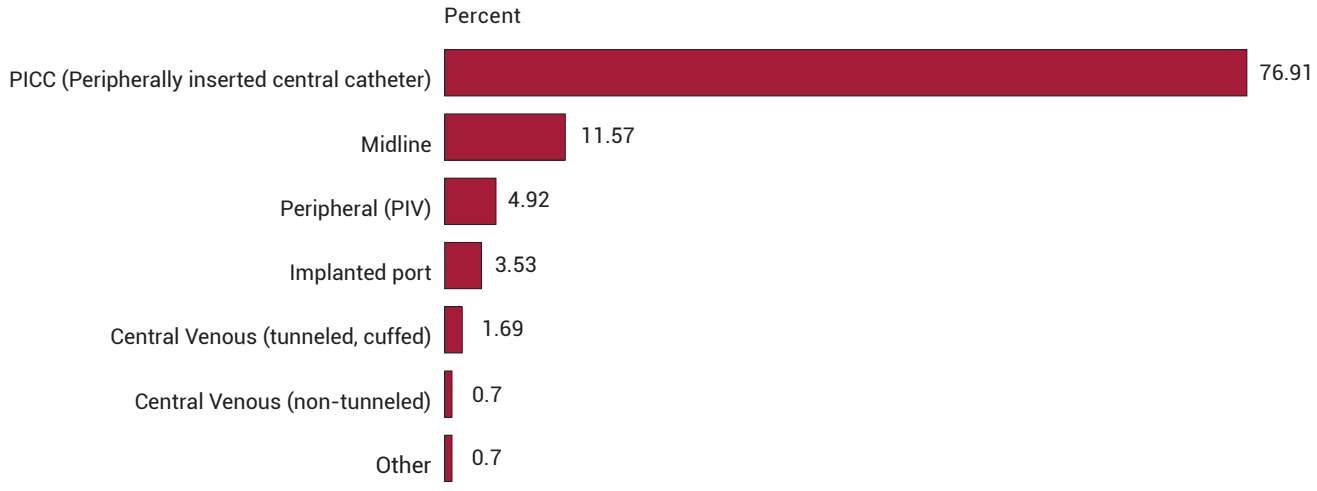
Analysis of the data submitted by provider locations indicates that the mean age for patients receiving home-based OPAT was 60.87 (SD=16.86) with a range of 1 to 103 years of age. When patient age is grouped into 5 categories, the largest percentage of patients are in the 65+ age group (45.06%) followed by the 50-64 (33.48%) age group, as shown in Image 1.

Vascular Access Device Types

Many factors dictate the type of vascular access device that is used in the home infusion setting including therapy or treatment regimen, anticipated duration of therapy, vascular characteristics, patient age, co-morbidities, history of infusion therapy, and patient preference.[4] Among patients receiving home-based OPAT, peripherally inserted central catheters (PICC) accounted for 76.91% of the access devices used, followed by midlines (11.57%), and peripheral IVs (4.92%) (Image 2).

IMAGE 2

Vascular Access Devices Used by Home-based OPAT Patients



Reason for Discharge in Home-Based OPAT Patients

Of the 2,106 patients who received home-based OPAT, 90.84% (n=1,913) were discharged with a reason of "therapy completed" (see Table 2). Patients discharged due to having an unplanned hospitalization was 3.75% (n=79), which may or may not have been related to the OPAT therapy. Only 13 (0.62%) were discharged after having an adverse drug reaction, and discharge for an access-device related event was also rare with only 19 (0.90%) patients. Other reasons for discharge include change in eligibility, changed infusion provider, patient expired, and insufficient response/ complication. Some (0.85%) patient's reason for discharge was listed as "other" with the provider location having the ability to write-in the actual reason. When analyzed, the "other" reasons fit into one of 4 categories with most (n=14, .66%) being, "change to oral therapy." As shown in Image 3, the remaining 3 categories were discharged by MD (reason unknown) (n=2, .09%), patient changed therapy (n=1, .05%), and therapy start delayed per MD (n=1, .05%).

When "Status at Discharge" is cross tabulated by "Age Group" it is interesting to note the differences in the percentage of patients who completed their therapy (Table 3). All patient age groups except of the 20 - 34 group achieved a 90% threshold for "therapy completed." Patients over the age of 50 were more likely to be discharged due to an unplanned hospitalization, and the youngest age group (0 – 19 years) had the highest percentage of "access device related" as the reason for discharge from home infusion.

Chi-square analysis (p = .053) indicated that a significant difference does not exist between the age groups and reason for discharge. These results were due to most patients, no matter the age group, completing their therapy.

TABLE 2

Reason for Discharge in Home-based OPAT Patients (n=2,106)

	Frequency	Percent
Therapy completed	1,913	90.84
Unplanned hospitalization	79	3.75
Change in eligiblity	24	1.14
Access device related	19	0.90
Changed infusion provider	18	0.85
Other	18	0.85
Patient expired	16	0.76
Adverse drug reaction	13	0.62
Insufficient response/ complication	6	0.28
TOTAL	2,106	100.00

Discussion

This initiative investigated why home-based OPAT patients are discharged from service with the goal of establishing benchmarks for individual providers to use in evaluating their practice. Currently, no other research of this type has been conducted or reported for home-based OPAT patients receiving therapy from home infusion pharmacies. The data confirms that over 90% of home-based OPAT patients completed their therapy. This is evidence that the current practices for caring for patients receiving home-based OPAT are effective in preventing and managing adverse drug reactions and access device events.

IMAGE 3

Reason for Discharge in Home-Based OPAT Patients

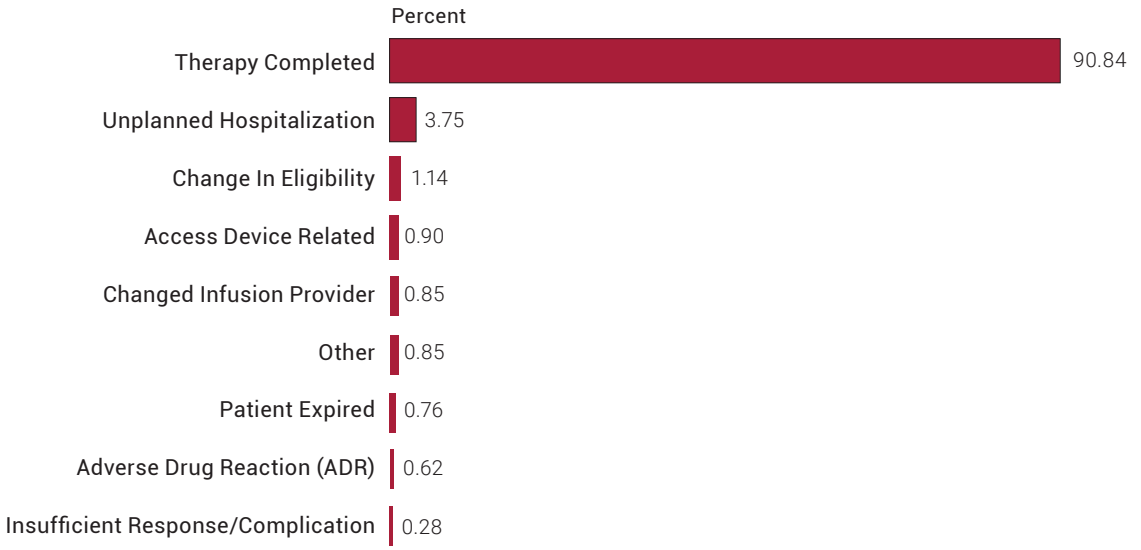


TABLE 3

Cross Tabulation: OPAT Patient Status at Discharge by Age Group (Percent) (n = 2,106)

	0 - 19	20 - 34	35 - 49	50 - 64	65+	Total
Therapy complete	92.31	88.81	93.91	90.50	90.41	**90.84**
Patient expired			0.36	0.71	1.05	**0.76**
Unplanned hospitalization	2.56	2.99	1.79	4.11	4.21	**3.75**
Change in eligibility		1.49	0.72	0.99	1.37	**1.14**
Insufficient response / complication			0.36	0.14	0.42	**0.28**
Adverse drug reaction		1.49	0.72	0.43	0.63	**0.62**
Access device related	5.13	1.49	0.72	1.42	0.32	**0.90**
Changed infusion provider			0.36	0.85	1.16	**0.85**
Other		3.73	1.08	0.85	0.42	**0.85**
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

There was not a significant difference (p= .053) between the age groups and status at discharge.

Common with most studies, methodological improvements can be made. While the intention of this study was to not include hospice patients, some were part of the study sample. This might explain the number (n=16, 0.76%) of patients that expired. Future Data Entry Guides will emphasize that hospice patients are not to be included in the provider location data set. The primary limitation of this study was the relatively small number of provider locations contributing data. Future studies will include a larger sample of provider locations. In addition to positively impacting the generalizability of the results, it will also allow for more detailed data analysis.

Conclusion

Home-based OPAT patients receiving care from home infusion pharmacies rarely require early discharge due to an unplanned hospitalization, problems with the access device, or adverse drug events. While several studies have confirmed the high rates of patient satisfaction with various aspects of home infusion, this study provides further evidence of the effectiveness of the services provided by infusion pharmacies working under the direction of physicians to provide OPAT at home.[5,6]

Disclosures

NHIF is a 501(c)(3) non-profit organization that aims to advance the home and specialty infusion field and to support the enhancement of patient care and patient outcomes through leadership, research, and education. This project was funded through contributions to NHIF.

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The National Home Infusion Foundation is most grateful to these companies for their support.

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Note: This report has been revised since its pre-publication on the NHIA website to include additional data collected through February 28, 2021

INTRODUCTION

Individuals residing in long-term care (LTC) settings represent a disproportionate number of the deaths due to COVID-19.[1] On November 9, 2020, Eli Lilly and Company received an emergency use authorization (EUA) for bamlanivimab, which has been shown to reduce hospitalizations in patients with mild to moderate COVID-19.[2] When administered within 10 days of symptom onset, bamlanivimab represents an important intervention, capable of reducing the burden on hospital systems and health care workers that have been pushed to capacity by the pandemic.

Home infusion clinicians have expertise with the coordination and administration of monoclonal antibodies in the home setting, thus several home infusion providers expressed a willingness to the National Home Infusion Association (NHIA) about providing bamlanivimab to eligible patients. Despite this interest, barriers to carrying out infusions in the home setting quickly emerged. NHIA responded to these difficulties by engaging with the Office of the Assistant Secretary for Preparedness and Response (ASPR) within the Department of Health and Human Services (HHS) about the challenges home infusion providers were facing. Over the course of several discussions with ASPR it was determined that home infusion providers could immediately support the pandemic response by improving access to bamlanivimab in certain high-risk settings. With ASPR's support to provide direct allocations of bamlanivimab to home infusion pharmacies, NHIA agreed to facilitate a program to connect home infusion providers with LTC facilities. The program is now part of HHS's Special Projects for Equitable and Efficient Distribution (SPEED).[3] Allocations to home infusion pharmacies through the SPEED program were limited for use in high-risk settings, such as LTC facilities. Allocations of bamlanivimab for home infusion were not included in the program due to the rate of payment being below the costs to provide the service.

Program Summary

NHIA launched the program on December 14, 2020. NHIA's role was to conduct outreach to the home infusion provider community about the program, verify applicant credentials, coordinate the allocation process with ASPR, and collect outcome data. Enrolled locations were responsible for promotion of the program to facilities in their service areas, assessment of patient eligibility per the EUA, provision of drug and supplies for administration, coordination of nursing, and billing Medicare or commercial payers for administrations. For patients with Medicare or Medicare Advantage as a primary payer, the home infusion provider was paid $309 per infusion. For patients with commercial insurance, the home infusion provider was required to negotiate a payment rate directly with the payer source.

The process was initiated by inviting interested home infusion companies to complete a short online survey that was created by NHIA. Upon verification of licensure and accreditation status, initial allocations were made based on the number of LTC facilities within the pharmacy catchment area. 172 individual pharmacy locations representing 36 organizations were enrolled in the program, and at least 1 provider was identified in all but 4 states (AK, ND, SD, WY). The first infusion took place 9 days after launch on December 23, 2020. Through February 28, 2021, 3,429 doses of bamlanivimab were allocated, and 426 administered to individuals residing in 88 different LTC facilities.

NHIA provided ongoing support to program participants by holding weekly office hours to share updates and answer questions, developing standardized physician order templates, and posting enrollment and program information on a dedicated page hosted on the NHIA website. Contact information and geo-mapping of locations was made publicly available to assist LTC facilities and physicians with identifying home infusion providers in their area.

Patient and Location Demographics

NHIA requested locations submit data about the geographic location, the type of facility, patient demographics, and clinical outcomes for bamlanivimab infusions. Age and gender information was collected for 269 patients. The mean age of patients receiving bamlanivimab from NHIA SPEED locations was 81.02 (SD=12.55), ranging from 41 to 101 years. Females outnumbered males 66.79% (n=179) to 33.21% (n=89). Ethnicity was reported for 145 patients revealing most (n=136)

were non-Hispanic, white (93.79%) while 6 (4.14%) were African American/black, and 3 (2.07%) were Hispanic/Latino.

Residents of skilled nursing facilities received 288 (67.61%) doses, while residents of assisted living facilities received 122 (28.63%). In late January, the program was expanded to include other settings such as correctional facilities, dialysis centers, and federally qualified health care centers. To date, 16 (3.76%) doses have been provided in these settings. NHIA analyzed the population size of the cities where bamlanivimab doses were provided. Of the 58 cities where doses were administered, 27 (45.76%) had a population of less than 25,000.

TABLE 1

Population size of cities where bamlanivimab was administered.

Population Size	Count	Percent
250,001+	4	6.78
100,001- 250,000	8	13.56
25,001 -100,000	20	33.90
10,001 - 25,000	12	20.34
<10,000	15	25.42
TOTAL CITIES	59	100.00

*Source for census information: https://www.census.gov/en.html

Clinical Outcomes

Home infusion providers are accustomed to responding quickly to new referrals. In most cases, a home infusion provider can initiate care within 48 hours of being notified of a patient need for service. Since efficacy of bamlanivimab improves with early administration, the response time for bamlanivimab was measured in terms of the number of days between onset of initial symptoms and the day of infusion, rather than from the time of referral to infusion. Data was received for 124 patients revealing a mean of 4.45 days (SD=2.54) between first symptoms and infusion.

Outcome data from the NHIA SPEED program is consistent with other reports in that bamlanivimab is seemingly well tolerated. All but 13 of the bamlanivimab doses provided were administered over 1 hour. 13 doses had a 27-minute infusion rate. For the 269 bamlanivimab infusions for which adverse event data was submitted, no side effects were reported for 252 (93.68%) (see Table 2). One patient experienced severe hypotension and discontinued treatment before the infusion was completed. A fluid bolus was subsequently administered, and the patient fully recovered. A total of 17 (6.32%) patients reported at least 1 adverse event, all of them mild with the exception of the previously mentioned case. Locations were asked to follow up with the facility 7 days after the infusion to determine the outcome of treatment. Of the 120 patients for which 7-day follow up data was submitted; 1 hospitalization and 2 deaths were reported. Both deceased patients were 86 years of age and had multiple co-morbidities.

TABLE 2

Reported Adverse Effects

Events Description	Frequency	Percent
None	252	93.68
Hypotension	4	1.12
Fever	4	1.12
Headache	2	.74
Other	1	.37
Chills	1	.37
Diarrhea	1	.37
Flushing	1	.37
Fatigue	1	.37
Nausea	1	.37
Pruritis	1	.37
TOTAL	269	100.0

*This was a free response question.

Discussion

Encouraging utilization of COVID-19 antibody treatments has proven challenging, confounded by limiting initial distribution of product to hospitals, minimal evidence supporting efficacy from clinical trials, and the complex logistics associated with providing these therapies in community settings. For these reasons and others, only a fraction of the product allocated has made it to patients. The utilization of allocated product through the NHIA SPEED program was consistent with national averages. Low utilization in some areas was attributed to overlap with vaccine launch in skilled facilities, and the lack of general education about prescribing and using monoclonal antibodies by LTC personnel. Despite these challenges, the study team was pleased with the level of participation, and specifically with utilization rates in less populated areas.

This program adds to other real-world evidence indicating bamlanivimab has a favorable adverse event profile and improves clinical outcomes in high-risk patients. As the need for bamlanivimab becomes less urgent in long-term care settings, demand for access among patients residing in the community at-large is expected to increase. NHIA continues to advocate for higher reimbursement when COVID-19 treatments are provided to patients at home.

Conclusions

The NHIA SPEED program succeeded in engaging home infusion providers willing to provide bamlanivimab in high-risk settings and established an efficient system for allocating product. Prior to launching this program, few home infusion providers had been successful obtaining allocations of COVID-19 monoclonal antibodies from their state public health departments. The program also served as an important opportunity for home infusion clinicians to gain experience with the product, increasing confidence in the safety of bamlanivimab as a candidate for home administration.

Disclosures

NHIA has no disclosures or conflicts of interest to report and was not compensated for this project.

Acknowledgments

NHIA wishes to thank the home infusion providers participating in the SPEED program for their ongoing commitment and service to their communities. NHIA also thanks Captain David Wong, M.D., and the team at ASPR for their partnership in developing this program.

About NHIA

NHIA represents companies that provide infusion therapy to home-based patients as well as companies that manufacture and supply infusion and specialty pharmacy products. For additional information about this report contact **Connie.Sullivan@nhia.org**. For more information about NHIA visit www.nhia.org.

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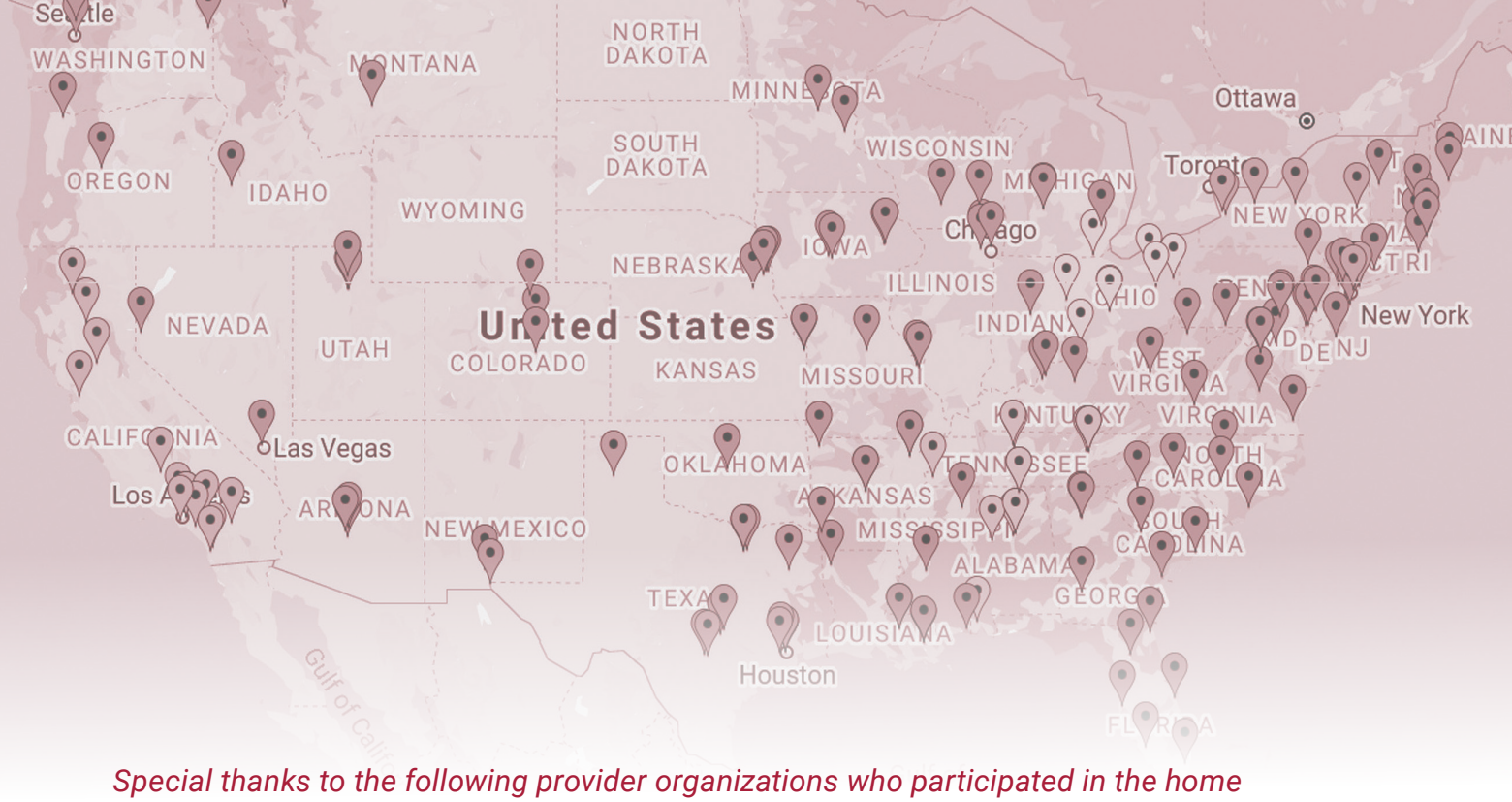

Special thanks to the following provider organizations who participated in the home infusion program for administration of bamlanivimab in high-risk settings and shared the patient outcomes and other data used in the creation of this report.

Align Vital Care
Amber Specialty
Amerimed Infusion Pharmacy
Amerita
ARJ Infusion Services, Inc.
Big Sky IV Care
Burnham's Vital Care
CAIS Inc.
CarePro Home Infusion
ContinuumRx
Community Pharmacy Services
Complete Infusion Care
Cure Stat RX Home Infusion & Specialty Pharmacy
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Poudre Infusion
Premier Infusion Care
Pruit Pharmacy Services
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Red River Pharmacy of Little Rock-Vital Care
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Regioncare Home Infusion
Rivers Edge Pharmacy
Saint Mary's Mercy Health Home Infusion
Soleo Health
Thomas Jefferson University
Upstate Home Care
UW Health Care Direct
Vital Care of Las Cruces
Wellspan Infusion

NHIF Research and Benchmarking Programs

The National Home Infusion Foundation (NHIF) is committed to creating research programs that will foster quality improvement and generate confidence and investment in the home and specialty infusion profession. Following is an overview of these activities.

Project	Description	Status	Metrics
Home Infusion Patient Satisfaction	Measures and benchmarks patient satisfaction with home infusion services	• Actively enrolling • Published benchmarks: 2019, 2020	• Benchmarks for 7 composite scores • Question responses (participants) • Cross tabulations with therapy, patient age, active/discharge status (participants)
A Comparison of Home Infusion Patient Satisfaction Telehealth Visits Versus Home Visits	Determines if there is a significant difference in home and specialty infusion patient satisfaction for patients receiving traditional home health care and telehealth.	Actively enrolling	• Comparison of overall satisfaction with industry benchmarks • Comparison of satisfaction with patient instructions to industry benchmarks
Status at Discharge	Improves understanding of the reasons patients are discharged from home infusion and suite-based infusion services and examines the results for various patient populations and therapies.	• Pilot Complete • Actively Enrolling • Reporting Frequency: Quarterly	• Benchmarks for Therapy Completed (ABX, Chemo, Other non-biologic) • Benchmarks for Discharged for Unplanned Hospitalization (All Therapies) • Benchmarks for Discharged for Adverse Drug Reactions (All Therapies) • Access device utilization • Patient demographics
30-Day Hospital Readmission (HRA)	Improves understanding of the frequency and reason for re-hospitalization within the first 30 days of home infusion therapy for 2 types of patients: parenteral nutrition (PN) and inotropic.	• Pilot Complete • Actively Enrolling • Reporting Frequency: Quarterly	• 30-day, all-cause rate of patient hospital readmission • 30-day rate of patient hospital readmission related to home infusion
Home Infusion Pharmacist Professional Services	Describes and quantifies professional pharmacist services for common home infusion therapies.	• Actively enrolling • Publish Date: TBD	• Time spent per task • Time spent onboarding v. ongoing management • Dispensing vs. total time • Contact days vs. study days • Impact of pump on time spent • Tasks per dispense cycle

For more information, please visit https://www.nhia.org/nhif_home/ or contact **Ryan.Garst@NHIA.org** or nhifdata@nhia.org.

Participants receive complete analysis, as well as individualized reports comparing organization/site performance to benchmarks. Broader publication of benchmarks depends on program participation and applicability of the data.