Developing a Home Infusion Service for Specialized Oncology Treatment:

Expanding Access Through Innovation

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BACKGROUND:

Oncology treatment faces significant challenges that impact timely access to treatment and overall patient outcomes. Despite advances in treatment options, disparities persist, particularly for patients in rural and underserved areas. Geographic distance, limited infrastructure, and transportation barriers often lead to delays in diagnosis, missed appointments, and lower adherence to treatment plans.[1,2,3]

Transportation-related challenges—including long travel times, lack of reliable vehicle access, insufficient public transportation, and financial burdens—are among the most common obstacles. Additionally, treatment side effects such as fatigue or impaired mobility can further limit patients' ability to travel for care. Addressing these barriers is critical to improving equity in cancer treatment and ensuring that patients receive timely, high-quality care regardless of location. Innovative care models that bring treatment to the home or reduce logistical burdens have the potential to significantly improve outcomes and patient experience.[1,2,3]

Hepatic Artery Infusion (HAI) is a therapy indicated for colorectal cancer liver metastases and intrahepatic cholangiocarcinoma. HAI therapy delivers high-dose, localized chemotherapy directly to the liver via an implanted pump and catheter system. HAI may help to reduce tumor burden, improve disease control in the liver, and increase the likelihood of conversion to surgical resection. It may also increase overall survival.[4]

Treatment consists of two weeks of infused floxuridine followed by two weeks of heparinized saline with or without dexamethasone. Upon completion of active treatment, glycerin is instilled into the pump, slowing the infusion due to its viscosity, thereby extending the refill interval while maintaining catheter patency. HAI pump refills are complex, sterile procedures requiring specialized nurse experience.[4]

Patient access to HAI therapy is limited, impacted by the scarcity of HAI centers nationwide. To address this gap, a national specialty care company with extensive experience in home-based maintenance for implanted pumps partnered with the therapy manufacturer to develop a home infusion program for HAI therapy.

PURPOSE:

To describe the development, implementation, and early outcomes of a home infusion program for oncology patients designed to reduce logistical barriers and improve access to HAI therapy.

METHODS:

A cross-functional team led by a dedicated project manager coordinated efforts across legal, contracting, billing, intake, pharmacy, nursing, and sales departments. New procedures, training materials, communication protocols, and documentation were developed and integrated into existing infrastructure where possible. Additional personnel were hired to support the program.

Staff underwent comprehensive training and competency validation prior to launch. The program was rolled out in phases, beginning with glycerin fills and progressing to active chemotherapy administration. A controlled pilot preceded national deployment.

Pilot Phase 1: Glycerin → **Pilot Phase 2:** Active Chemotherapy → **National Deployment**

>500
Home HAI refills completed to date

25 States
(Including DC)
Where home HAI refills have been performed

RESULTS:

The project was launched in May 2023. The first home glycerin pump fill occurred in November 2023, followed by the first home chemotherapy pump fill in November 2024. As of this writing, over 500 home HAI pump fills have been completed across 25 states and Washington DC. Patients and providers report high satisfaction with the service, and the program continues to expand.

DISCUSSION:

Developing a new home infusion service required extensive cross-departmental collaboration and agile project management. Weekly team meetings, shared documentation platforms, and direct engagement between the program director and individual departments ensured alignment and timely execution. Lessons learned during the pilot phase informed process refinement and training enhancements.

CONCLUSION:

An oncology-based home infusion program was successfully developed and implemented, significantly expanding access to a complex treatment. By addressing transportation and infrastructure barriers, the program helped to expand cancer care delivery and enhance the overall patient experience. The initiative demonstrates the potential of coordinated innovation to overcome logistical barriers, promote equitable access to oncology treatment, and improve patient care.

RESOURCES:

1. Pringle, S., Ko, E.M., Doherty, M. et al. Addressing transportation barriers in oncology: existing programs and new solutions. Support Care Cancer 32, 317 (2024). https://doi.org/10.1007/s00520-024-08514-2
2. Munhoz, R., Sabesan, S., Thota, R. et al. Revolutionizing Rural Oncology: Innovative Models and Global Perspectives. Am Soc Clin Oncol Educ Book 44, e432078(2024). DOI:10.1200/EDBK_432078
3. Wercholuk AN, Parikh AA, Snyder RA. The Road Less Traveled: Transportation Barriers to Cancer Care Delivery in the Rural Patient Population. JCO Oncol Pract. 2022 Sep;18(9):652-662. doi: 10.1200/OP.22.00122. Epub 2022 Jul 14. PMID: 35834768.
4. https://www.interaoncology.com/healthcare-professionals. Accessed September 12, 2025.

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