Expanding Oncology in the Home Setting

Justin Bekelman, MD
Cassandra Redmond, PharmD, MBA
Katherine Major, MSN, RN, CHPN
Suzanne McGettigan, MSN, CRNP, AOCN
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Cassandra Redmond, PharmD, MBA
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Katherine Major, MSN, RN, CHPN
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Suzanne McGettigan, MSN, CRNP, AOCN
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McKesson Medical-Surgical
Objectives

• Review the need for options for anti-cancer therapy administration during the pandemic
• Discuss the therapies and regimens being administered in the home setting
• Describe the clinical management and safety for the patient and health care provider
• Discuss barriers to implementation of a home anti-cancer therapy program
Why move more cancer care to home?
Penn Medicine’s Cancer Care @ Home (CC@H) Program

We have demonstrated that home infusion of anti-cancer therapies could, for appropriate cancer drugs and patient populations, take the place of inpatient or outpatient administration by

- Improving the **patient** experience
- Improving the **clinician** experience
- Improving **Penn Medicine** capacity to provide world-class cancer care
The Right Team

• We engaged executive sponsors and established a coordinating team comprised of clinical and operational leaders across Penn Medicine.

• We focused on safety and quality.
  • Shared decision making
  • Treating oncologist
  • Oncology-certified nursing
  • Benefits outweigh risks

Source: NEJM Catalyst 2020
Patients referred for home administration of cancer drugs, February to July 2020

- Leuprolide: Breast cancer
- Prostate cancer
- EPOCH: Lymphoma
- Pembrolizumab: Lung, head & neck cancers
- Bortezomib: Multiple myeloma
- Rituximab: Lymphoma

Rapid Scale

Patients referred for home administration of cancer drugs, February to July 2020.
Desiree Harmon’s Story

“I called it my calendar-killer, I had to work my life around this shot.”

For almost five years after her treatment for breast cancer, Ms. Harmon made an inconvenient, monthly trek to the Hospital of the University of Pennsylvania for a leuprolide depot injection that helps keep the disease from coming back.

“As much as I love Penn, not having to go there gives me peace of mind.”

With CC@H, an oncology-certified nurse now gives the estrogen-suppressing shot to Ms. Harmon at her home in Mount Airy, where she, her husband, and their two children live.
Penn Home Infusion Therapy
Penn Home Infusion Therapy (PHIT)

Quick Facts & Figures

- Average Daily Census: 2,450 patients
  - 200 Average Daily Visits
  - 190 Average Daily Dispenses

- 24/7 Infusion Pharmacy licensed in PA, and non-resident NJ, DE, and FL
- Holistic clinical model, not simply focusing on the pharmaceutical dispense
  - Care teams organized by disease state
  - Integrated across all Penn Medicine at Home Services
Penn Home Infusion Therapy (PHIT)

Focus on Patient Safety & Satisfaction
Administering Therapy, Education & Care
Where & When It’s Needed

- PRN therapies (Hydration, Diuretics, Antiemetics)
- Same day visits offered, as needed
- First dose administration of approved therapies
- In-home lab draws, same day results to providers
- Extensive sit-through & reaction protocols for complex therapies
- Liaisons available for patient hovering

Expanding range of therapies offered across multiple disease states & patient populations

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<th>Chemotherapy</th>
<th>Immune Globulin</th>
<th>Antibiotics</th>
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<td>Biologics</td>
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<tr>
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<td>Injectables</td>
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Patient Touch Points

Intake
Authorization/Admission
Clinical Care Team
Scheduling
Compounding

Picking/Packing
Delivery/Pick-up
Direct Care Nursing
DME Inventory Management
Business Development Liaison
Hematology/Oncology Clinical Care Team

- 4 Clinical Pharmacist
- 4 Registered Nurse Coordinators
- 3 Patient Supply Representatives
- 2 Patient Service Associates

- Patient Census
  - 850 pre-COVID

- Therapies
  - 5-Fluorouracil
  - EPOCH
  - IVIG
  - Hormone replacement
  - Hydration
  - Anti-emetics
Staffing/Resources

• Direct Care Nurses
  • Minimum 3 years of Critical Care experience
  • ONS certified

• Adaptability
  • Cross training
    • Business Development
    • Home Health Nurses to perform chemo take down
    • Increased availability of ONS courses

• Redeployment
  • Hospital employees
  • Infusion clinic employees
Medication Review

• Safety and efficacy
• Does it make sense to administer at home?
  • Ease of administration
  • Preparation complexity
  • Stability
• Risk assessment
  • NIOSH listed?
  • Home mix eligible
Staff education

• Indication for use
• Mechanism of Action
• Dosing
• Drug Interactions
• Administration
• NIOSH classification
• Nursing specific notes
• Preparation
Safety protocols

• First Dose Administration
• Sit through medications
• Infusion Related Reaction Protocol
• Chemotherapy Double Check Process
Initiating the Cancer Care at Home Project
Cancer Care at Home Project

- Sept – Oct 2019: Engage Executive Sponsors, Identified stakeholders, Created the Right Team
- Nov-Dec 2019
- Jan-Feb 2020
We engaged executive sponsors and established a coordinating team comprised of clinical and operational leaders across Penn Medicine.
Cancer Care at Home Project

Sept – Oct 2019
Engage Executive Sponsors
Identified stakeholders
Created the Right Team

Nov-Dec 2019
Identified Leuprolide and EPOCH as first use cases

Jan-Feb 2020
The Right Drugs

We selected leuprolide and EPOCH to demonstrate feasibility at two operational extremes

**Leuprolide**

*Simple, intramuscular injection*
- Typically delivered in outpatient settings for breast or prostate cancer
- Administered every 1-3 months for 5-10 years for breast cancer and every 3-6 months for various durations for prostate cancer

**Return on investment**
- Every injection moved to home frees up 40 chair minutes

**EPOCH**

*Complex, multi-drug intravenous infusion*
- Typically delivered in an inpatient setting for aggressive non-Hodgkin lymphoma
- Includes a 96-hour continuous infusion of combination chemotherapy; patients receive six five-day cycles every 21 days

**Return on investment**
- Every cycle moved to home frees up 5 bed days
Cancer Care at Home Project

Sept – Oct 2019
- Engage Executive Sponsors
- Identified stakeholders
- Created the Right Team

Nov-Dec 2019
- Identified Leuprolide and EPOCH as first use cases

Jan-Feb 2020
- Created streamlined workflows and processes, optimizing PHIT infrastructure.
- Began providing Leuprolide and EPOCH therapies in the home
Harnessing Motivation and Transitioning to Standard of Care
Cancer Care at Home Project

- Sept – Oct 2019
- Nov-Dec 2019
- Jan-Feb 2020
- March-April 2020
- May – June 2020

Accelerated the transition of therapies into the home as standard of care
Enter COVID-19

• Health System Action
  • Staff
    • Moved to remote work
    • Implemented social distancing
    • Universal Masking
    • Universal Thermal Screening
  • Clinical Areas
    • Reduced visits to clinic locations
    • Reduced hours
    • Increased utilization of telehealth
    • Increased utilization of Home Infusion

• Penn Home Infusion Therapy
  • Staff
    • Activated resources
    • Implemented PPE van
    • Implemented universal precautions with PPE
      • Conservation efforts on site
  • Operational
    • Focus on most vulnerable patients
    • Assessment of current P&P
      • Emergency Management
Cancer Care at Home Project

- Sept – Oct 2019
- Nov-Dec 2019
- Jan-Feb 2020
- March-April 2020
- May – June 2020

Accomplishments:
- Accelerated the transition of therapies into the home as standard of care
- Piloted pembrolizumab, rituximab, and bortezumab
Patients referred for home administration of cancer drugs, February to July 2020

- Leuprolide: Breast cancer, Prostate cancer
- EPOCH: Lymphoma
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- Pembrolizumab: Lung, head & neck cancers

Rapid Scale
Patients referred for home administration of cancer drugs, February to July 2020.
Increasing Transparency

- Challenges with Different eMR systems
  - CPR+ and EPIC
- Patient tracking
  - Use of Business Development Liaison
  - Development of tracking tool
  - Weekly status calls
- Integration into EPIC
  - Order sets
  - Dot Phrase: .lupronhome
  - Home visit schedules
  - Nursing notes
  - In basket messaging
Pathway

Patient elects to receive leuprolide depot at home

NO

Disease-specific triage RN:
- Notifies provider team that patient will be coming in for leuprolide depot
- Ensures provider enters/signs orders into Beacon
- Contacts PSA or AA to schedule appointment*

*Ideal time to schedule appointment is either before 10am or after 2pm.

PSA or AA confirms appointment with patient

YES

1-2 days prior, PHIT courier confirms delivery

One day prior, PM@H RN calls patient to confirm administration time

Leuprolide depot injection administered at home through PHIT

PM@H nurses enter documentation of injection in one of two ways.
- Scheduled visit documentation in Epic and medication administration crosses over to the infusion flow sheet.
- The other is a paper document that can be found in the media tab. The paper document as it was uploaded into Epic should be routed to primary team. After APP/MD receives notification that Lupron was administered, open Beacon plan, sign Lupron order, then click under action as "given externally."
Getting Noticed
Provider Acceptance

• Overwhelmingly positive feedback from providers
  • Well-timed project
  • Just in time effort
  • Could be the new normal
  • Great potential impact on infusion logjam and patient satisfaction
  • “This is awesome!”
Widespread Interest

We received widespread coverage in media outlets, heard from numerous health systems and payers interested in CC@H, and published a description of our experience in NEJM Catalyst.
Key Takeaways/Next Steps

- Home cancer treatment can, for appropriate cancer medications and populations take the patient inpatient or outpatient administration

- Opportunity for improved coordination & communication between patient, provider and home infusion team