


Transitioning historically inpatient chemotherapy regimens to the ambulatory setting
(Ensuring safety and feasibility)

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Disclosures

Nothing to disclose at this time

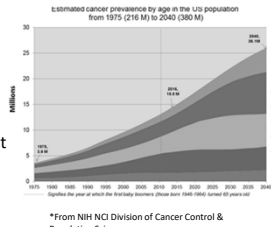
Objectives

- Identify the advantages associated with transitioning inpatient chemotherapy regimens to the ambulatory setting and the benefits to patient and institution
- Recognize the potential barriers and limitations that may be encountered
- Discuss the stepwise approach to the implementation process and how to overcome potential barriers




Access to Care Where You Live



- Problems with disparities of care
 - Impoverished
 - Elderly
 - Geographically isolated
- Transportation for the Cancer Patient
- Approximately 39.6% of the U.S. population will be diagnosed with cancer at some point during their lifetime*



*From NIH/NCI Division of Cancer Control & Population Sciences





Access to Care – Geography Example

The Concept of Cancer Care Where You Live...

Key Concepts

- Adherence to common pathways providing consistent care no matter where treated
- Availability of Clinical Trials to all sites
- Academic Hybrid Model of Care – fusion of academic clinicians and practice oncologists with centralized Cancer Trials Office, centralized IRB and staff training
- Use of telemedicine to provide wide variety of services

Reasons for Traditionally Inpatient Chemotherapy Treatment

- Frequency and timing of certain chemotherapeutics
 - High dose cytarabine - HiDAC, DHAP, ESHAP
- Continuous administration/infusion
 - EPOCH (lymphoma), PACE (myeloma)
- Patient monitoring
- Immediate management of emergent toxicities
- Urgent treatment
- Proximity to treatment center/hospital
- Caregiver services

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Advantages for the Patient

- Convenience
- Ease of drug administration
- Familiar environment facilitating comfort and well-being
- Increased access to
 - Therapy
 - Financial counselors
 - Patient assistance programs
- Avoidance of hospital-associated infections
- Patient satisfaction

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Advantages for the Institution

- Increased bed availability
- Avoidance of potential community/hospital-associated infections
- Avoiding increased inpatient care costs
 - Drug
 - Nursing etc.
- Higher reimbursement in ambulatory setting

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Martin AL, Frank JP, Waggoner ML. J Oncol Pharm Pract. 2017 Jan 1. [Epub ahead of print]
Clemmons AB, Anderregg S. J Oncol Pharm Pract. 2017 Jul;23(5):384-388.

Challenges

- Drug level monitoring (access and turn-around-time)
 - Methotrexate
- Pharmacokinetic monitoring for investigational drugs
- Autologous and allogeneic transplant care
- Side effect management (e.g. nausea/vomiting)

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Key Factors/Players

- Improved nausea/vomiting management
 - Newer, longer acting agents
- Continuous ambulatory infusion pumps
- Clinical pharmacists
- Patient navigators

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Considerations during Transitioning to Outpatient Administration

- Choice of chemotherapy regimen
- Anticipation of potential toxicities
- Patient selection
- Education
- Preparation and administration of chemotherapy
- Scheduling aspects
- Implementation of the new process and quality improvement

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Choice of Chemotherapy Regimen

- | Hematology | Solid Tumors |
|-------------------|---------------------|
| • EPOCH +/- R | • VIP |
| • ICE +/- R | • VeIP |
| • D-PACE-based | • TIP |
| • ESHAP +/- R | • Doxorubicin-based |
| • DHAP +/- R | • 5-FU-based |
| • HyperCVAD +/- R | • Trabectedin |
| • HiDAC | |

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Anticipation of Potential Toxicities

- Thorough review of regimens/drugs
 - Neurotoxicity (ifosfamide, cytarabine)
 - Extravasation (vesicants)
- Develop institutional management plans
- Educate everyone in applying them
- Communication plan between all involved parties

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Patient Selection

- Patient medical history
 - Prior neurotoxicity, seizure disorder
- Organ function evaluation
 - Renal dysfunction/impairment
- Current specific clinical risks
 - Tumor lysis
 - Tumor infiltration of critical organs
- Transportation availability
- Caregiver availability
- Assess initial tolerability in inpatient setting

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Education

- Patient and caregiver
 - Identification and communication of critical aspects
 - Extravasation and toxicities
- Develop specific educational materials
- Delivery of education
 - In clinic, infusion room, on discharge
 - By pharmacists, nurses, patient navigators

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Preparation and Administration

- Document and ensure stability
 - Physico-chemical and microbiological
- Develop specific order sets
 - Inpatient vs outpatient regimens
- Availability of accurate and reliable infusion pumps
 - Safety
 - Administration of whole dose vs no dose
 - Timely
 - Line/filter clogging, air bubbles
- Develop plan to address issues
- Standardize treatment plans (prophylaxis)

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Scheduling

- Develop specific treatment calendars
- Coordinate delivery of care between
 - Clinic, infusion room, laboratory, pharmacy, interventional radiology
- Availability of services
 - Weekends vs weekdays
 - Time of day
- Specific administration considerations
 - Long/slow rituximab infusion (anticipate reactions)
 - Intrathecal chemotherapy

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Scheduling - EPOCH

	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed
A	R + 1		3		D/C + C	N	(N)			
B		R + 1		3		D/C + C	N	(N)		
C				R + 1		3		D/C + C	N	(N)

R= Rituximab

1= Day 1 continuous infusion starts

3= Day 3 continuous infusion starts

D/C = pump discontinuation on Day 5

C= Cyclophosphamide (30 min)

N= Neulasta (pegfilgrastim); (N) = Neulasta given in a delayed fashion if the continuous infusion ends late on day 5

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Process Implementation and Quality Improvement

- Plan pilot implementation
- Consider location
 - Clinic, infusion room, regimen
- Education of all parties involved
 - Physicians
 - Nursing (clinic and infusion room)
 - Pharmacies (pharmacists and technicians)
 - Emergency department staff
 - Schedulers, hotlines
- Look for feedback (don't forget about the patient!)
- Expand to other locations

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Conclusions

- Prepare, Plan, Anticipate
- Involve
- Communicate, Educate
- Track, Record
 - Outcomes
 - Unexpected problems

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