Barnstorming, Directing, & Producing: Integration of a Clinical Pharmacist Across the Continuum of Palliative Care and Hospice Services

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Disclosures
- Drs. Moore and Radwany have no relevant financial relationships to disclose.

Barnstorming?!?
A stunt pilot?
A flying circus?
A cropduster?

Or All of the Above and More?
- The right PharmD can fly from place to place and positively impact care in many settings for a palliative care and hospice program
  - Producing policies
  - Directing clinical activities
  - Helping on the ground one-on-one with patients and staff

Objectives
- Describe the role of the clinical pharmacist across the full spectrum of hospice and palliative care (HPM) services
- Align clinical pharmacist goals of care with Hospice Medicare Conditions of Participation
- Conduct a cost-benefit analysis for incorporating a palliative care pharmacist in the HPM program
- Describe the team, patient-centered, and program outcomes of having a clinical pharmacist integrated into HPM interdisciplinary care teams

Summa’s Integrated Delivery System

Hospitals
- Summa Akron City Hospital
- Summa St. Thomas Hospital
- Crystal Clinic Orthopaedic Center
- Summa Western Reserve Hospital
- Summa Akron Children's Hospital
- Summa Health Wadsworth Hospital
- Summa Health Robinson Memorial Hospital
The Integrated Delivery System Structure

Hospitals
- Integrad Delivery System Structure
- Hospitals
  - Tertiary/Academic Campus
  - 1600 IPP admissions
  - 1040 IPP Visits
  - 7800 births
  - Over 220 residents

Physicians
- Physicians
  - Multiple Alignment Options
  - Employment
  - Joint Ventures

Health Plan
- Health Plan Foundation
  - System Foundation
  - Multiple Alignment Options
  - Employment
  - Joint Ventures

Foundation
- Foundation
  - Education
  - Research
  - Community Benefit
  - Government Relations

Summa's Hospice and Palliative Care Services
- Hospice ADC of 180
- Palliative Care Consult Service for Extended Care Facilities
- Palliative Care Clinic
- Palliative Care Consult Services in 5 hospitals with 200 new patients monthly
- Palliative Care Consults in ambulatory cancer center
- HPM Fellowship accepting 3 fellows annually
- Multiple PharmD, Medical and Nursing students in every site of care

Summa Health System HPM Pharmacy Services - 2007
- Hospice medication costs averaging $12/pt/day and climbing
- Hospice medications dispensed by inpatient pharmacy and delivered by hospice staff and delivery service
- Pharmacist available for consultation and overseeing dispensing, but not directly involved in the IDTs

Summa Health System HPM Pharmacy Services - 2008
- Hospice contracted with pharmacy benefit manager to manage billing of hospice medications dispensed at community pharmacies
- An extra fee of $1/pt/day was paid for pharmacist-on-demand service
  - Hospice nurse contacted pharmacist at enrollment and as needed for recommendations regarding medications

The “Ah Ha” Moment
- Average daily costs of 140 patients x $1/pt/day = $51,100 per year for the pharmacist-on-demand service
- Plan to grow the hospice service, Acute Palliative Care Unit opened 2 years prior, Palliative Medicine Fellowship was in its 2nd year
- What would it cost to hire a pharmacist?
  - Approximate salary was $110,000 at that time
- Worked with inpatient pharmacy director to develop a position for a Clinical Lead Pharmacist for Pain & Palliative Care, half funded by Hospice
**What would we get for our money?**

Initially, 20 hours/week to cover
- 2 hospice IDT meetings
- 3 inpatient Acute Palliative Care Unit IDTs
- Quarterly/monthly reviews of hospice patients above budget for medications
- Protocol, policy and order set development and revision
- Development of evidence-based symptom management protocols for a research study and handbook
- Pearls during team
- Membership on the hospice leadership team

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**Pharmacist’s Role in Palliative Care**

Palliative care
"active total care of patients whose disease is not responsive to curative treatment...the goal is achievement of the best quality of life for patients and their families"

Pharmaceutical care
"the direct, responsible provision of medication-related care for the purpose of achieving definite outcomes that improve a patient's quality of life"

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**American Society of Health-System Pharmacists Statement: Responsibilities**

1) Assessing appropriateness of medications
2) Educating hospice team
3) Ensuring patients/caregivers understand medications
4) Compounding non-standard dosage forms
5) Addressing financial concerns
6) Safe and legal disposal of medications
7) Communication with regulatory agencies

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**Initial & Comprehensive Assessment**

- Information about terminal condition
- Functional status/imminence of death
- Severity of symptoms
- Complications and risk factors
- Initial bereavement assessment
- A drug profile review
- Any further referrals or evaluations as appropriate

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**Drug Profile Review**

- A review of
  - the patient’s prescription and over-the-counter drugs
  - herbal remedies
  - alternative treatments that could affect drug therapy
- Including but not limited to the identification of
  - ineffective drug therapy
  - unwanted drug side and toxic effects
  - actual and potential drug interactions
  - duplicate drug therapy
  - drug therapy associated laboratory monitoring
Drug Related Problems

- Improper drug selection
- Failure to receive or take medications
- Compliance, cost or unavailable route
- Sub-therapeutic dose
- Overdose
- Renal or hepatic insufficiency
- Adverse drug events
- Drug interactions
- Untreated indication
- Drug use without indication - what's the goal?

Managing Drugs and Biologicals

Requires the interdisciplinary group confers with:
1. An individual with education and training in drug management as defined in hospice policies and procedures and State law
2. Who is an employee of or under contract with the hospice
3. To ensure that drugs and biologicals meet each patient’s needs

Hospices Providing Inpatient Care

A pharmacist must oversee an inpatient hospice's pharmacy program including:
1. Evaluation of a patient’s response to medication therapy
2. Identification of potential adverse drug reactions
3. Recommend appropriate corrective action

Educating Hospice Team

- Teachable moments during IDT
- “pearls”
- Drug information questions
- Case conferences
- In-services and continuing education

Team/Fellow Education

Ensuring Patients & Caregivers Understand Medications

- Patient/caregiver handbook
- Palliative care/Hospice specific medication guides
- Education to palliative care/hospice staff
Non-standard Dosage Forms

- What can be crushed?
- Tablets given rectally
  - Long-acting morphine
  - Quetiapine
  - Phenobarbital
- Magic bullet suppositories
- Subcutaneous injections
- Opioids
- Midazolam
- Dexamethasone
- Haloperidol
- Ketamine
- Metoprolol
- Phenobarbital
- Topicals
- Morphine gel 0.1%

Addressing Financial Concerns

- Hospice is responsible for providing care pertaining to the terminal diagnosis
  - Capitated benefit approximately $150 per patient per day
- Formulary alternatives
  - $6.50 per patient per day budgeted for medications for Hospice of Summa patients
  - National average $15/pt/day
  - Pharmacy benefit manager average $10/pt/day
  - Currently Summa’s average $6/pt/day

Disposal of Medications

- Going green
- Awareness
  - Drug Take-Back Days
- Safety
  - Fentanyl products
  - Long-acting opioids
  - Immediate release medications

Problem: How to Dispose of Unused Medications?

- Increasing number of families questioning the process for disposal of medications left over when no longer needed, patient unable to take oral meds, or after death
- Lay literature discusses high levels of medications polluting our water
- What do the experts say?

Resolution: Ask the Pharmacist!

- Review of FDA and EPA websites and resources lead to development of a new process
- Indicates that drug manufacturer instructions should be followed when available
- Otherwise, long-acting opioids and fentanyl products should be flushed down the drain
- All others should be disposed of in a manner that makes them not easily retrievable, unidentifiable, and/or undesirable
- Education about community drug collection programs

Communication with Regulatory Agencies

- U.S. Food & Drug Administration (FDA)
  - Unapproved medications removed from the market
    - Concentrated oral morphine (20mg/1mL)
  - Risk Evaluation Mitigation Strategies (REMS)
    - Long-acting opioids
    - Transmucosal immediate release fentanyl
- Ohio Department of Health
  - Efforts to reduce the risk of death due to misuse and abuse of controlled substances without unnecessarily restricting access
- Board of Pharmaceutical Specialties
  - Board certification for pharmacists practicing in pain & palliative care
### Patient-centered Benefits

- Primarily indirect but through increased education and direct consultation with staff regarding medications
- Occasional direct patient consultation – example of “Sparky”
- Worked with the team to develop hospice specific medication information sheets

### IDT-centered Benefits

- Resource for best evidence regarding medications used for symptom management
  - Most appropriate medications/formulations for infections, agitation, pain
- Education regarding off-label use
  - Subcutaneous use of opioids, midazolam, haloperidol, dexamethasone, ketorolac, ketamine, metoprolol and phenobarbital
- Policy and order set development and revision
  - Midazolam injection and infusion for management of refractory symptoms
  - Ketamine injections and infusion for refractory pain

### Ketamine Order Set

- Vitals once prior and then q15min x 3 after the initial dose
- Physician and pharmacist at the bedside
- Premedication options
  - lorazepam 0.5mg
  - glycopyrrolate 0.2mg
- Ketamine trial options
  - 0.1 mg/kg IV push q15 min
  - 0.5mg/kg subcut q30min
- Ketamine scheduled options
  - 10mg po q4hrs
  - 0.04mg/kg/hr IV infusion
- Adjunct orders
  - lorazepam 0.5mg po or IV q4hrs pm hallucinations
  - glycopyrrolate 0.2mg IV or subcut q4hrs pm secretions

### Problem: Patient has uncontrolled symptoms despite our controlled sedation medication regimen

- Typically we have good success with midazolam up to 20mg/hour with scheduled or infusion of opioids and sometimes scheduled haloperidol
- What do we do when this isn’t enough?
- Call the ICU attending for recommendations on pentobarbital, propofol or dexmedetomidine, which are restricted to the ICU
- But, what if the patient doesn’t have IV access?

### Resolution: Ask the pharmacist!

- We have some palliative care literature recommending phenobarbital, but the manufacturer and typical drug references don’t recommend subcutaneous administration.
- Pharmacist digs deeper, contacts authors of published references to get more information.
- New order set and medication administration guidelines proposed for the use of subcutaneous phenobarbital on the palliative care unit.
Program Benefits: Protocols

- Identified handbook inline with our formulary to utilize as the guidelines for symptom management for the hospice service
- Assist with processes regarding preparation of prescriptions, disposal of unused medications
- Aligning protocols and order sets across the 6 hospital health system as palliative care and hospice services grow

Program Benefits: Research

- Assist medical fellows and NPs with research and quality improvement projects
- Member of research team and IDT for home-based palliative care
- Developed evidence-based symptom management protocols

Program Benefits: Cost Reduction

Hospice of Summa 2008 medication costs
$12/pt/day x 140 pts x 365 days = $613,200

Hospice of Summa 2011 medication costs
$6/pt/day x 190 pts x 365 days = $416,100

$416,100 savings
- $70,000 for 0.5 FTE PharmD
$346,100 to care for our patients

Program Benefits: Staff Satisfaction

n=27

<table>
<thead>
<tr>
<th>Site of interaction with the pharmacist</th>
<th>48% hospice</th>
<th>41% APCU/PCCS</th>
<th>11% multiple</th>
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</thead>
<tbody>
<tr>
<td>Respondent role</td>
<td>45% RN, LPN</td>
<td>14% APN, assessment RN</td>
<td>26% physician, fellow</td>
</tr>
<tr>
<td></td>
<td>11% social worker</td>
<td>4% unit secretary</td>
<td></td>
</tr>
<tr>
<td>Method of contacting the pharmacist</td>
<td>63% pager</td>
<td>22% in team meeting</td>
<td>7% e-mail</td>
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</table>

Program Benefits: Staff Satisfaction

<table>
<thead>
<tr>
<th>Pharmacist:</th>
<th>Percent responding</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly agree or Agree</td>
</tr>
<tr>
<td>strives to meet the needs of patients, family and staff</td>
<td>100</td>
</tr>
<tr>
<td>participation improves the care of our patients</td>
<td>100</td>
</tr>
<tr>
<td>recognizes and values the expertise of team members</td>
<td>100</td>
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<tr>
<td>is available for urgent issues</td>
<td>100</td>
</tr>
<tr>
<td>is respectful of time constraints on team members</td>
<td>100</td>
</tr>
<tr>
<td>is efficient in evaluating medication issues in a timely manner</td>
<td>100</td>
</tr>
<tr>
<td>is willing to be flexible if something out of the ordinary happens</td>
<td>92 (3 N/A)</td>
</tr>
<tr>
<td>helped me take better care of my patients</td>
<td>97 (3 N/A)</td>
</tr>
<tr>
<td>Overall the pharmacist has had a positive impact on our program</td>
<td>100</td>
</tr>
</tbody>
</table>

References:
### Conclusions

- Palliative care and pharmaceutical care both center on achievement of quality of life for the patient
- There is a cost-benefit associated with the integration of a clinical pharmacist into the HPM IDTs across the continuum of care
- There are many patient-centered, team, and program benefits due to the involvement of the pharmacist with HPM teams

### Future Directions

- Transitioning to 0.75 FTE clinical pharmacist supported by Summa Health System’s HPM programs
- Preparing to enroll first Summa Pain & Palliative Care PGY2 specialty pharmacy resident also 0.75 FTE supported by Summa Health System’s HPM programs
- Preparing for pharmacist billing in the outpatient palliative care clinic
- Preparing for expansion of clinical pharmacy services as HPM services evolve and grow within the health system

### Questions?