Medication Appropriateness at End-of-Life
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Objectives
- Define medication appropriateness
- Review medication management for patients facing life-limiting illnesses
- Discuss examples of how to continually evaluate medication lists over time

The Interdisciplinary Team
- The Medicare Regulations for Hospice Care, Including the Conditions of Participation for Hospice (42 CFR 418)
- Core services
- Examples of pharmacy services:
  - Standard: Rights of the patient: effective pain management and symptom control
  - Standard: Content of the comprehensive assessment: drug profile review
  - Standard: Ordering drugs and biologicals: IDT must confer with an individual with education and training in drug management

Medication Appropriateness
- Medication appropriateness refers to whether a medication is useful in an individual clinical situation based on both the attributes of the medication and those of its recipient.
- Important factors to consider:
  - Remaining life expectancy of patient
  - Time until therapeutic benefit of medication
  - Goals of care
  - Treatment target

Medication Spotlight:
HMG-CoA reductase inhibitors
- A 2014 multisite study randomized 381 patients with life-limiting illness to discontinue or continue their statins (1:1).
- Rate of death within 60 days was not statistically significant between the continue and discontinue groups.
- The discontinue group had longer median time to death.
- Total QOL was better among the discontinue group.
- The investigators concluded that it is unlikely that harm will accrue when statins being used for primary prevention are discontinued in the setting of end of life.

Medication Spotlight:
Sulfonylureas
- Gerstein et al., studied 10,251 diabetic patients to determine whether intensive glucose control would reduce CV events in these patients (who had CV or additional CV risk factors).
- Intensive therapy actually increased mortality and did not significantly reduce major CV events.
- Hypoglycemia is a significant risk factor for dizziness, weakness and altered mental status which can lead to devastating falls.
- Long-acting sulfonylureas (e.g., glyburide) meet the Beers Criteria and are not recommended in the elderly.
Medication Spotlight: Methadone

**AAHPM Methadone Dose Conversion Guidelines**

<table>
<thead>
<tr>
<th>Step</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>Step 1:</td>
<td>Calculate total daily morphine dose</td>
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<tr>
<td>Step 2:</td>
<td>Convert current opioid therapy to PO morphine</td>
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<tr>
<td>Step 3:</td>
<td>Account for incomplete cross-tolerance</td>
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<td>Step 4:</td>
<td>Convert to Methadone PO</td>
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<tr>
<td>Step 5:</td>
<td>Choose a PRN medication</td>
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<tr>
<td>Step 6:</td>
<td>Determine the PRN dose</td>
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<tr>
<td>Step 7:</td>
<td>Make adjustments to regimen</td>
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</tbody>
</table>

AAHPM Methadone Dose Conversion Guidelines; 2017

Medication Spotlight: Transdermal Scopolamine

- **Terminal Secretions** - noisy, rattling breathing
- **Normalize for caregivers and family**
- **Anticholinergic Agents** - mixed reviews!
  - Atropine
  - Hyoscyamine
  - Glycopyrrolate
  - Scopolamine
    - Transdermal Scopolamine [Transderm Scop]
  - Apply 1 patch 1-2 times per day
  - Time to steady-state


Medication Appropriateness: Regulatory Issue

- **FY2016 Medicare Part D Spending:** $347,500,000
- **Great concern:** “Hospices are responsible for covering drugs and biologicals related to the palliation and management of the terminal illness and related conditions.”
- **Medicare Part D:** treatments unrelated to the terminal prognosis
  - High blood pressure
  - Heart disease
  - Asthma
  - Diabetes
- **Top Ten CMS Survey Deficiencies**
  - §418.54(c)(6) – Drug profile

FY2016 Hospice Wage Index Proposed Rule, April 2017

Medication Appropriateness: Palliative Medication Management

- **Adult patients,** prognosis <12 months
  - Statin for primary cardiovascular disease prevention
  - Followed for 1 year with all medications recorded at least monthly
  - Average medications at enrollment = 11.5
  - Most common medications prescribed near end of life:
    - Antihypertensives, bronchodilators/broncholytics, laxatives, antidepressants & GI protective agents
  - Average medications at study termination or death = 10.7


Medication Appropriateness: Medication Reconciliation

- **Know Your Buckets**
  - Related to hospice
  - Unrelated to hospice
  - Unrelated to patient
  - Discontinue or patient pays

References

- AAHPM Methadone Dose Conversion Guidelines; 2017.