Practical Palliative Care Updates for the Master Internist

Patrick White MD, HMDC, FACP, FAAHPM
Stokes Family Endowed Chair in Palliative Medicine
Associate Professor of Medicine
Washington University School of Medicine
Chief Medical Officer, BJC Home Care
Disclosure: Scientific Advisory Board Heron Therapeutics

Patrick White, MD
My Background

- Internal Medicine - Washington University/BJH
- PhD Program, Clinical and Translational Science, University of Pittsburgh
- Chief Medical Officer, BJC Home Care
- Chief, Division of Palliative Medicine, Washington University
I. Communication techniques

II. Polypharmacy

III. Symptom management
   – Constipation
   – Nausea
   – Depression
   – Pain

IV. The Future
Palliative Care Versus Hospice Care

**Palliative Care**
- Focus on improving quality of life and controlling symptoms
- At any point in a serious illness
- Patients often continuing curative therapies including chemotherapy and hospitalizations
- Home support varies by program
- Medications and equipment often have copays

**Hospice Care**
- Focus on improving quality of life and controlling symptoms
- Prognosis less than 6 months
- Focus on comfort focused therapies with patients often desiring to be at their homes without intensive therapies
- Home support includes home nurses, social workers, chaplains, and NPs/physicians
- Medications and equipment are typically without copays
The Problem
CPR SURVIVAL RATES: ON SCREEN VS. REAL LIFE

ER
- 68%

CHICAGO HOPE
- 64%

GREY'S ANATOMY
- 46%

CASUALTY
- 42%

IN REAL LIFE...
- 12%

IN THE REAL WORLD, CPR SAVES JUST ONE IN EIGHT HOSPITAL PATIENTS.
Family Perspectives on Aggressive Cancer Care Near the End of Life

Alexis A. Wright, MD, MPH; Nancy L. Keating, MD, MPH; John Z. Ayanian, MD, MPH; Elizabeth A. Chrischilles, PhD; Katherine L. Kahn, MD; Christine S. Ritchie, MD, MPH; Jane C. Weeks, MD, MSc; Craig C. Earle, MD, MSc; Mary B. Landrum, PhD

Importance: Patients with advanced-stage cancer are receiving increasingly aggressive medical care near death, despite growing concerns that this reflects poor-quality care.

Objective: To assess the association of aggressive end-of-life care with bereaved family members’ perceptions of the quality of end-of-life care and patients’ goal attainment.

Design, Setting, and Participants: Interviews with 1146 family members of Medicare patients with advanced-stage lung or colorectal cancer in the Cancer Care Outcomes Research and Surveillance study (a multiregional, prospective, observational study) who died by the end of 2011 (median, 14.4 days after death; interquartile range, 5.5–33.0 days).

Exposures: Claims-based quality measures of aggressive end-of-life care (ie, intensive care unit [ICU] admission or repeated hospitalizations or emergency department visits during the last month of life, chemotherapy in the last 2 weeks of life, no hospice or <3 days of hospice services, and deaths occurring in the hospital).

Main Outcomes and Measures: Family member-reported quality rating of “excellent” for end-of-life care. Secondary outcomes included patients’ goal attainment (ie, end-of-life care congruent with patients’ wishes and location of death occurred in preferred place).

Results: Of 1146 patients with cancer (median age, 76.0 years [interquartile range, 65.0–87.0 years]; 55.8% male), bereaved family members reported excellent end-of-life care for 51.3%. Family members reported excellent end-of-life care more often for patients who received hospice care for longer than 3 days (58.8% [352/599]) than those who did not receive hospice care or received hospice care for fewer days (43.1% [296/547]) (adjusted difference, 16.5 percentage points 95% CI 10.7–22.4 percentage points). In contrast, family members of patients admitted to an ICU within 30 days of death reported excellent end-of-life care less often (45.0% [68/150]) than those who were not admitted to an ICU within 30 days of death (52.3% [520/993]) (adjusted difference, −9.4 percentage points 95% CI −18.2 to −0.6 percentage points). Similarly, family members of patients who died in the hospital reported excellent end-of-life care less often (42.2% [194/460]) than those who did not die in the hospital (57.4% [394/686]) (adjusted difference, −17.0 percentage points 95% CI −22.9 to −11.1 percentage points). Family members of patients who did not receive hospice care or received hospice care for longer than 3 days (72.8% [287/394]) were less likely to report that patients died in their preferred location (40.0% [152/380]) than those who received hospice care for longer than 3 days (72.8% [287/394]) (adjusted difference, −34.4 percentage points 95% CI −41.7 to −27.0 percentage points).

Conclusions and Relevance: Among family members of older patients with fee-for-service Medicare who died of lung or colorectal cancer, earlier hospice enrollment, avoidance of ICU admissions within 30 days of death, and death occurring outside the hospital were associated with family satisfaction with end-of-life care.

Author Affiliations: Author affiliations are listed at the end of this article.

JAMA. 2016 Jan 19;315(3):284-92
Key Communication Skills

• Disclosing bad news
• Communicating prognostic information
• Addressing patients’ and families’ emotions
• Discussing end-of-life options including hospice
1) Disclosing Bad News (SPIKES)

- Setting: Quiet location/tissues/pagers off
- Perception: Ask what they have been told/believe
- Invitation: Permission to discuss prognosis
- Knowledge: Provide information without jargon
- Empathy: Acknowledge emotions
- Summary: Discuss next steps
2) NURSE Statements

- **Naming emotion**
  “I can’t imagine how frustrating this must be.”

- **Understanding**
  “If a doctor told me that I would be frustrated and have trouble trusting.”

- **Respecting**
  “All of us are so impressed with what a great job you have done taking care of Jack.”

- **Supporting**
  “We will be with there to support you through the rest of Jack’s illness.”

- **Exploring**
  “Could you share more about what “X” means to you?”
3) Tips for Talking about Hospice

- Talk first about what hospice is and the support it can provide long before you use the word “hospice”
- Learn how to address the hope for miracle or that God will intervene to help their loved one
- Know the power of “I wish” statements
- “What would your loved one say if they were doing the talking”
Other Tips

- It is okay to cry in front of your patients/families and they are almost always touched by it.
- Expect to get some bizarre reactions when sharing really bad news.
- Think of a really anxious situation you encountered before entering a challenging goals of care discussion. It will help ground you before entering these often emotional draining conversations.
• Symptoms to make patients/families aware of:
  • 1) Delirium/agitation
  • 2) Secretions
  • 3) Respiratory changes
  • 4) Mottling/Cyanosis
87% of EOL patients experience dreams and visions

- The vast majority of dreams/visions are comforting
  - Reunions with deceased loved ones
  - Going on a trip
  - Meaningful experience

Minimizing Polypharmacy
5) Risks and Benefits of Statins in Advanced Illness

Statins in Advanced Illness (Quality of Life Impact)

<table>
<thead>
<tr>
<th>Domain Measure</th>
<th>Estimate (95% CI)</th>
<th>Favors Discontinuation</th>
<th>Favors Continuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of life</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>0.18 (-0.28 to 0.64)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td>-0.08 (-0.43 to 0.26)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychological</td>
<td>0.39 (-0.02 to 0.80)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Well-being</td>
<td>0.32 (0.00 to 0.64)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support</td>
<td>0.53 (0.16 to 0.90)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0.26 (0.02 to 0.50)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symptoms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard items</td>
<td>-2.19 (-5.01 to 0.63)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statin items</td>
<td>-0.23 (-1.39 to 0.93)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All items</td>
<td>-2.45 (-6.02 to 1.12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AKPS scale score</td>
<td>-0.80 (-4.11 to 2.50)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total medications</td>
<td>-0.67 (-1.29 to -0.05)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular</td>
<td>-0.25 (-0.77 to 0.27)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRN ≥1/2 d</td>
<td>-0.19 (-0.46 to 0.08)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRN &lt;1/2 d</td>
<td>-0.11 (-0.32 to 0.11)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommend care</td>
<td>0.08 (-0.05 to 0.20)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Statin in Advanced Illness (Survival Impact)

![Graph showing survival probability over days for continued and discontinued statin therapy]

<table>
<thead>
<tr>
<th>Days, No.</th>
<th>0</th>
<th>25</th>
<th>50</th>
<th>75</th>
<th>100</th>
<th>125</th>
<th>150</th>
<th>175</th>
<th>200</th>
<th>225</th>
<th>250</th>
<th>275</th>
<th>300</th>
<th>325</th>
<th>350</th>
<th>375</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survival Probability</td>
<td>1.0</td>
<td>0.8</td>
<td>0.6</td>
<td>0.4</td>
<td>0.2</td>
<td>0.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No. at risk

- Continued statin therapy: 192, 149, 105, 64, 47, 32, 21
- Discontinued statin therapy: 189, 135, 93, 68, 52, 36, 26

 BJCTHE WORLD’S BEST MEDICINE. MADE BETTER.
Symptoms of Hypercalcemia

- Constipation
- Fatigue
- Dyspepsia
- Depression
- Anxiety
- Cognitive Decline
- Agitation
- Anorexia
- Nausea
- Polyuria
7) Success of Drug Discontinuation: Antihypertensives

Medications Associated with Constipation

- Opioids/tramadol
- (methadone and fentanyl are the least constipating)
- Amiodarone
- Antacids (Tums)
- Antidepressants
- Antihistamines (Benadryl)
- Calcium
- Calcium Channel Blockers (Norvasc, Diltiazem, Verapamil)
- Iron
- Zofran
8) Opiate-induced Constipation

- “the passage of small, hard feces infrequently and with difficulty”
- 10% of all people > 65
- 50% of all patients on admission to hospice
- Up to 90% of patients on opioids will experience constipation at some point!
Randomized, Double-Blind, Placebo-Controlled Trial of Oral Docusate in the Management of Constipation in Hospice Patients

Yoko Tarumi, MD, Mitchell P. Wilson, Olga Szafran, MHSA, and G. Richard Spooner, MD, CCFP, FCFP

Department of Oncology (Y.T.), Faculty of Medicine and Dentistry (M.P.W.), and Department of Family Medicine (O.S., G.R.S.), University of Alberta, Edmonton, Alberta, Canada

Abstract

Context. The stool softener docusate is widely used in the management of constipation in hospice patients. There is little experimental evidence to support this practice, and no randomized trials have been conducted in the hospice setting.

Objectives. To assess the efficacy of docusate in hospice patients.

Methods. This was a 10-day, prospective, randomized, double-blind, placebo-controlled trial of docusate and sennosides vs. placebo and sennosides in hospice patients in Edmonton, Alberta. Patients were included if they were age 18 years or older, able to take oral medications, did not have a gastrointestinal stoma, and had a Palliative Performance Scale score of 20% or more. The primary outcome measures were stool frequency, volume, and consistency. Secondary outcomes were patient perceptions of bowel movements (difficulty and completeness of evacuation) and bowel-related interventions.

Results. A total of 74 patients were randomized into the study (35 to the docusate group and 39 to the placebo group). There were neither significant differences between the groups in stool frequency, volume, or consistency, nor in difficulty or completeness of evacuation. On the Bristol Stool Form Scale, more patients in the placebo group had Type 4 (smooth and soft) and Type 5 (soft blobs) stool, whereas in the docusate group, more had Type 3 (sausage like) and Type 6 (mushy) stool (P = 0.01).

Conclusion. There was no significant benefit of docusate plus sennosides compared with placebo plus sennosides in managing constipation in hospice patients. Docusate use should be considered on an individual basis. J Pain Symptom Manage 2013;45:2-13. © 2013 U.S. Cancer Pain Relief Committee. Published
# Bristol Poop Chart

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Separate hard lumps</td>
<td>Very constipated</td>
</tr>
<tr>
<td>2</td>
<td>Lumpy and sausage like</td>
<td>Slightly constipated</td>
</tr>
<tr>
<td>3</td>
<td>A sausage shape with cracks in the surface</td>
<td>Normal</td>
</tr>
<tr>
<td>4</td>
<td>Like a smooth, soft sausage or snake</td>
<td>Normal</td>
</tr>
<tr>
<td>5</td>
<td>Soft blobs with clear-cut edges</td>
<td>Lacking fibre</td>
</tr>
<tr>
<td>6</td>
<td>Mushy consistency with ragged edges</td>
<td>Inflammation</td>
</tr>
<tr>
<td>7</td>
<td>Liquid consistency with no solid pieces</td>
<td>Inflammation</td>
</tr>
</tbody>
</table>
Lubiprostone vs Senna in postoperative orthopedic surgery patients with opioid-induced constipation: A double-blind, active-comparator trial

Christina M Marciniak, Santiago Toledo, Jungwha Lee, Michael Jesselson, Jillian Bateman, Benjamin Grover, Joy Tierny

Christina M Marciniak, Santiago Toledo, Department of Physical Medicine and Rehabilitation, School of Medicine, Northwestern University, Chicago, IL 60611, United States
Jungwha Lee, Department of Preventive Medicine, Feinberg School of Medicine, Northwestern University, Chicago, IL 60611, United States
Michael Jesselson, University of Chicago Medical Center, Chicago, IL 60637, United States
Jillian Bateman, Joy Tierny, The Rehabilitation Institute of Chicago, Chicago, IL 60611, United States
Benjamin Grover, Chicago College of Osteopathic Medicine, Chicago, IL 60515, United States

Author contributions: Marciniak CM, Toledo S, Jesselson M, Bateman J and Lee J designed the research project; Marciniak day or Senna (generic) two capsules administered daily for six days. Subjects were assessed using the patient assessment of constipation (PAC)-symptoms (PAC-SYM) and the PAC-quality of life (PAC-QOL) scales measured at baseline and Day 7; Subjects were assessed daily for secondary measures included the Bristol stool scale bowel consistency, specific bowel symptom score (Nausea, cramping, straining, completeness, abdominal pain, time per lavatory attempt, assistance needed), adverse events and rescue medications required. Function was measured using the functional independence measure (FIM) at admission and discharge; length of stay (LOS) and missed treatments due to constipation.
9) Pearls for Treating Depression at End-of-life

- SSRIs often have a considerable time to action in patients with significant comorbid illness
  - (median time of 6+ weeks for a 50% reduction in the symptoms in Star*D trial.)
- Mirtazapine
  - Advantages include quicker relief, appetite stimulation and reduction in insomnia
- Ritalin offers quick relief for many refractory patients but trials are mixed
- Ketamine has demonstrated very encouraging preliminary results
  - Earliest studies IV and intranasal
Mirtazapine for Treating Depression in Patients with Advanced Cancer

A recent RCT with 47 patients in 2017 did not find any benefit for treatment of depression.
Ketamine for Suicidal Ideation

- Single intravenous dose of 0.5 mg/kg racemic ketamine hydrochloride administered over 40 minutes

- On the right is pooled data from 10 studies

Interesting New Therapies!
10) Pearls for Treating Pain at End-of-Life

- Opiates can be titrated quickly if patients are carefully monitored.
- Most typically start to schedule long-acting opioids if OME >30 mg.
- Use caution in prescribing opiates in patients with renal failure.
- Methadone can work wonders for patients refractory to other opioids.
- If using Narcan in pt with chronic pain, dilute 0.4mg Narcan vial with 9mL of normal saline and give 1mL per minute.
- For uncomplicated painful bone metastases a single fraction of radiation can offer significant pain relief.
11) Benefits of Radiation Therapy in End-of-life

- Pain relief for uncomplicated bone metastases
  - pain relief typically starts within 2 weeks of treatment
  - partial response in 60-80% of patients at 4 weeks
  - complete relief in 30-50% of patients at 4 weeks

- Impact of early treatment of cord compression
  - Maintain ambulation and functional status
  - Maintain urinary/fecal continence and quality of life

- Some cancers respond better to radiation
  - Lymphoma, myeloma, small cell lung CA, breast CA, prostate CA, ovarian CA

Rubin EB, Buehler AE, Halpern SD. States Worse Than Death Among Hospitalized Patients With Serious Illnesses. JAMA Intern Med. 2016 PMID 24479808
Comparing Efficacy of Single Fraction vs Extended Courses of Radiation Therapy for Bone Metastases

• No statistically significant differences in pain control or pathologic fractures rate
• Higher increase in retreatment rate in single fraction group (20% vs 8%)
• Lower rates of toxicity in single fraction regimens
  – Appetite loss (56% vs 66%)
  – Vomiting (13 vs 23%)
  – Diarrhea (23% vs 31%)
  – Skin discoloration (14% vs 24%)

**Patient Reported Outcomes Comparing Single-fraction Vs Multi-fraction Palliative Radiotherapy**

**Table 5**

Uncomplicated and complicated BoM PRO and pain responses for SFRT and MFRT.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Uncomplicated BoM</th>
<th>Complicated BoM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SFRT</td>
<td>MFRT</td>
</tr>
<tr>
<td>Improvement in Total score</td>
<td>80% (309)</td>
<td>83% (180)</td>
</tr>
<tr>
<td>Pain OR</td>
<td>75% (289)</td>
<td>75% (163)</td>
</tr>
<tr>
<td>Pain CR</td>
<td>22% (86)</td>
<td>21% (45)</td>
</tr>
<tr>
<td>Improvement in function</td>
<td>74% (213)</td>
<td>77% (118)</td>
</tr>
<tr>
<td>Improvement in symptom frustration</td>
<td>78% (264)</td>
<td>81% (156)</td>
</tr>
</tbody>
</table>

PRO = Patient Reported Outcomes; BoM = Bone Metastases; SFRT = Single Fraction Radiotherapy; MFRT = Multiple Fraction Radiotherapy; OR = Overall Response; CR = a post-RT score of zero.

International Variation in Practice Patterns Comparing Single-Fraction to Multi-fraction Radiotherapy

Review Article

International patterns of practice in radiotherapy for bone metastases:
A review of the literature

Rachel McDonald, Edward Chow, Henry Lam, Leigha Rowbottom, Hany Soliman

Rapid Response Radiotherapy Program, Department of Radiation Oncology, Odette Cancer Centre, Sunnybrook Health Sciences Center, University of Toronto, 2075 Bayview Avenue, Toronto, Ontario, Canada M4N 3M5

ABSTRACT

Purpose: Radiation therapy is the standard treatment for symptomatic bone metastases. Several randomized control trials and meta-analyses have concluded a similar efficacy in pain relief when comparing single versus multiple fraction regimes. However, there continues to be reluctance to conform to published guidelines that recommend a single treatment for the palliation of painful bone metastases. The purpose of this literature review is to summarize international patterns of practice, and to determine if guidelines recommending single fraction treatment have been implemented in clinical care. Methods: A literature search was conducted in Ovid Medline, Embase, and Cochrane Central. Search words included, 'bone metastases,' 'radiotherapy,' 'radiation therapy,' 'patterns of practice,' and 'dose fractionation.' Both prospective and retrospective studies that investigated the prescription of radiotherapy to bone metastases using actual patient databases were included. Articles were excluded if they investigated hypothetical scenarios. Results: Six hundred and thirteen results were generated from the literature search. Twenty-six articles met the inclusion criteria. Of these, 11 were Canadian, 8 were European, 6 were American, and 1 was Australian. The use of single fraction radiotherapy (SIRT) ranged from 35% to 75%, but was generally lower in American studies. Choice of fractionation depended on a variety of factors, including patient age, prognosis, site of irradiation, and physician experience. Conclusion: Despite the publication of robust randomized control trials, meta-analyses, and clinical practice guidelines recommending the use of a single treatment to palliate uncomplicated bone metastasis, SIRT is internationally underutilized.

© 2014 Published by Elsevier GmbH. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).
Economic Impact of Single-fraction Versus Multi-fraction Radiotherapy

Economic evaluation of single-fraction versus multiple-fraction palliative radiotherapy for painful bone metastases in breast, lung and prostate cancer

Lucie Collinson, Giorgi Kvzhinadze, Nisha Nair, Melissa McLeod and Tony Blakely

Burden of Disease, Epidemiology, Equity and Cost Effectiveness Programme (BODE), Department of Public Health, University of Otago, Wellington, New Zealand

Abstract

Introduction: Single- and multiple-fraction external beam radiotherapy (SFX-EBRT and MFx-EBRT) are palliative treatment options for localized metastatic bone pain. MFx is the preferred choice in many developed countries. Evidence shows little difference in how effectively SFX and MFx reduce pain. However, SFX is associated with higher retreatment and (in one meta-analysis) pathological fracture rates. MFx is, however, more time-consuming and expensive.

We estimated the cost-effectiveness of SFX versus MFx for metastatic bone pain in breast, prostate and lung cancer in New Zealand.

Methods: We constructed a Markov microsimulation model to estimate health gain (in quality-adjusted life-years or QALYs), health system costs (in real 2011 NZ dollars) and cost-effectiveness. The model was populated using effect estimates from randomized controlled trials and other studies, and New Zealand cancer and cost data. Disability weights from the 2010 Global Burden of Disease study were used in estimating QALYs.

Results: Across all three cancers, QALY gains were similar for SFX compared to MFx, and per patient costs were less for SFX than MFx, with a difference of NZ$1460 (95% uncertainty interval $1112 to $1886) for lung cancer, $1316 ($810 to $1854) for prostate cancer and $1344 ($855 to $1846) for breast cancer. Accordingly, from a cost-effectiveness perspective, SFX was the preferable treatment option. Various sensitivity analyses did not overturn the clear preference for SFX.

Conclusion: For all three cancers, SFX was clearly more cost-effective than MFx. This adds to the case for desisting from offering MFx to patients with metastatic bone pain, from a cost-effectiveness angle.

Key words: bone pain; cost-effectiveness analysis; metastatic cancer; radiotherapy; single fraction.
12) Pearls for Treating Secretions at End-of-life

- Nothing works as well as we would like
- One survey of 391 caregivers found
  - Secretions occurred in 48% of patients
  - Of those with secretions, 2/3 of families found them highly distressing
  - Female caregivers who were not prepared were at highest risk
- Mixed evidence that minimizing fluid intake reduces secretions
- Minimize deep suctioning
- Scopolamine patches can contribute to delirium while glycopyrrolate does not cross the blood barrier

13) Pearls for Treating Agitation at End-of-life

- Identify under etiology when possible
  - infections, urinary retention, hypoxia, impaction, medications, pain, electrolytes, renal failure, hepatic failure etc.
  - If reversible, mean survival 40 days compared to 17 if not reversible
- Environmental factors
  - glasses, hearing aids, etc.
- Minimize high risk medications:
  - Anticholinergics, benzodiazepines, opioids, steroids, etc.
- For refractory patients with poor prognosis consider phenobarbital
- Recent controversy about efficacy of haloperidol / risperidone

Agitation and delirium at the end of life: "We couldn't manage him". JAMA. 2008 Dec 24;300(24):2898-910.
14) Supporting Caregivers

- 40-70% of family caregivers report clinically significant symptoms of depression
- 70% report caregiving had an impact on their employment
- One study found caregivers who reported “strain” had a 63% higher mortality rate than their non-caregiving peers

15) The Future of Palliative Care

- Population Health
  - Telehealth
- Increased specialty-embedded PC clinics
- Triggered Consults
  - ICU
  - ER
- EMR Screening/Machine Learning

Results from Kaiser Permanente’s In-Home Palliative Care Intervention Pilot

16) Transportable Physician Orders for Patient Preferences TPOPP (Missouri POLST equivalent)
Questions?