EVIDENCE-BASED END-OF-LIFE CARE:
WHAT DO WE KNOW ABOUT WHAT WE DO?

JOHN BURROUGHS, MD

WHO RECEIVES HOSPICE?

- Figures from 2018 via the National Hospice and Palliative Care Organization
- Patients by disease
  - Cancer (29.6%) Heart (17.4%) Dementia (15.6%)
  - Other (14.7%) Respiratory (11%) Stroke (9.5%)
  - Kidney (2.2%)
- Patients by gender
  - 55.1% female (females make up 50.5% of the general population)
- Patients by age
  - < 65 (16.3%) 65-74 (22.3%) 75-84 (28.0%) > 84 (33.4%)

WHO RECEIVES HOSPICE?

- Patients by Demographics (2018)
  - Caucasian (82%)
  - Black/African-American (8.2%)
  - Hispanic (6.7%)
  - Asian/Pacific Island (1.8%)
  - Native American (0.4%)
- Demographics of General Population (2020 census)
  - Caucasian (71%)
  - Black/African-American (14.2%)
  - Hispanic (18.7%)
  - Asian/Pacific Island (7.7%)
  - Native American (2.9%)

HOW LONG DO PEOPLE STAY ON HOSPICE?

- Average length of stay on hospice in 2018 of 89.6 days

1-7 days (27.9%)	8-14 days (12.5%)	15-30 days (13.4%)
31-60 days (12.4%)	61-90 days (7.7%)	91-180 days (12.1%)
> 180 days (14.1%)		

- Length of stay per diagnosis in 2018

Dementia/Parkinson’s (105 days)	Stroke (82 days)	Heart (80 days)
Respiratory (72 days)	Cancer (45.6 days)	Kidney (38 days)

DOES HOSPICE PROLONG LIFE?

- 2007 retrospective study (4493): Lung cancer patients lived 39 days longer on hospice
    - Pancreatic cancer lived 21 days longer
    - Colon, breast, and prostate cancer patients did not show statistically different survival times
- 2015 retrospective study (566): Lung cancer patients lived 91 days longer on hospice
- 2014 retrospective study (862): Metastatic melanoma patients with at least 4 days of hospice lived 3.3 months longer than those receiving 3 or less days of hospice

DOES HOSPICE REDUCE HEALTH CARE COSTS?

- Cost of care is significantly less for the last 3 days ($2813), week ($6806), 2 weeks ($8785), month ($11,747), and 3 months ($10,908) for patients on hospice
- No significant change seen over the last 6 months of life
- Family out-of-pocket expenditures less as well on hospice
  - Cost not "transferred" from hospice to patient/family
  - This can certainly vary case by case

DOES HOSPICE CHANGE OUTCOMES IN DEMENTIA?

- Hospice care *might* increase comfort in dying (evidence not statistically strong)
- Advanced directives discussions seem to help increase documentation of advanced directives as well as improve concordance with a patient’s goals of care
- Studies have NOT shown a statistically-significant change in symptom management

DOES HOSPICE CHANGE OUTCOMES IN CANCER PATIENTS?

Review of randomized-controlled studies

- Improved health-related quality of life on hospice
- No difference noticed in symptoms of depression

DOES HOSPICE HELP PATIENTS MEET THEIR GOALS OF CARE?

- More patients on hospice die at home
- Hospice showed better satisfaction at 1-month follow-up
- No change with 6-month follow-up

WHERE DO PEOPLE DIE WHEN ON HOSPICE?

- Home (51.5%)
- Nursing home (17.4%)
- Hospice/inpatient (12.8%)
- Assisted Living (12.3%)
- Other (2%)

SHOULD WE TRY BLOOD TRANSFUSIONS WHEN PATIENTS ARE ANEMIC?

- Studies reviewed regarding advanced cancer patients
  - Anemia found in 68-77% of advanced cancer patients

- Patients receiving transfusions showed 14 days or less of improved fatigue and breathlessness (improvement seen in 31-70% of patients)
- A significant number of patients receiving transfusions died within 2 weeks of the transfusion

TREATMENT OF DYSPNEA

- Most often seen in end-stage pulmonary and cardiac disease
  - Can also be seen in cancer, cerebrovascular disease, and dementia
  - Symptoms include tachypnea, increased respiratory effort, restlessness, grunting
- Opiates are the medications of choice
- Opiates are not shown to hasten death or impair respiratory status
- Evidence is not strong for use of nebulized opiates
- Oxygen can help hypoxemic patients
  - So can moving room air (either by nasal cannula or a fan)
- No statistical benefit with anxiolytics

TREATMENT OF DELIRIUM/AGITATION

- Assess for treatable causes
  - Medication effects, urinary retention, constipation, untreated pain

- Antipsychotic medications (Haldol, Quetiapine) are effective
- Benzodiazepines can help at end of life due to sedative effects
  - Use with caution as they can provoke increased symptoms, especially in the elderly

TREATMENT OF NAUSEA AND VOMITING

- Dopaminergic medications (Haldol, Reglan, Compazine) inhibit triggers in brain
  - Off-label use for nausea
- Ondansetron (Zofran) has not been shown to be superior in end-of-life nausea
- Vestibular-sourced nausea can be treated with anticholinergic meds (scopolamine, meclizine)
- Corticosteroids might help (especially if suspect bowel obstruction)
- Medical marijuana can help (watch for delirium)
- Consider benzodiazepines for anticipatory nausea

WHICH INTERVENTIONS HELP END-OF-LIFE SECRETIONS?

- Noisy breathing is thought to be due to accumulation of secretions in the airway
  - Present in 23-92% of dying patients (depending on the report)
  - Treated physically (repositioning, suctioning) or pharmacologically (atropine, hyoscyamine)

- Studies have not shown superiority over placebo with any physical or pharmacologic interventions

WHAT INTERVENTIONS HELP ITCHING?

- Uremic (kidney failure) pruritus
  - Gabapentin is effective (100 mg daily)
  - Cromolyn can also be effective
- Cholestatic (liver failure) pruritus
  - Rifampin ($245 for 30 days) and flumecinol most effective
  - Naltrexone can help (but can reduce analgesic effects of pain medication)
- Paroxetine has been shown to reduce pruritus in other cases of pruritus
- Consider indomethacin for HIV-related pruritus (small sample size in studies)