

Evidence-Based Palliative Care In The ICU

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San Antonio, Texas
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Objectives

1. Discuss the origins of palliative care and the ICU
2. Describe what kinds of problems ICUs have that may benefit from palliative care
3. Discuss the different models involving palliative care and the ICU
4. List the benefits of collaboration
5. Explore “non-palliative care” literature to explain these objectives



“I don't want to achieve immortality through my work, I want to achieve it through not dying.”

Woody Allen

US movie actor, comedian, & director (1935 -)



“In principle, people want a peaceful, dignified, comfortable death but ... in reality, they do not want it quite yet. They prefer life-prolonging care in the hope that their peaceful, dignified death can occur later.... We will [not] achieve more comfortable or peaceful deaths by trying to persuade our patients that comfort care is their best

option when they still have what many perceive as reasonable odds for longer survival. We will have an impact only when we assiduously treat the uncomfortable symptoms of all seriously ill patients, whether they are receiving life prolonging care with its treatment-induced discomforts or only palliative care.”

Ainslie. *Ann Intern Med* 1997.



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Ainslie. *Ann Intern Med* 1997.

Death and Dying in America

Disparity between the way people die / the way they want to die

- Most prefer to be cared for at home
- Majority interested in a program such as hospice

“Doctor, I Want Everything”

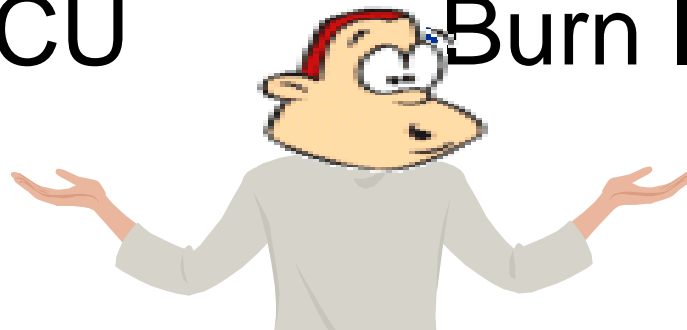


Types of Intensive Care Units

- Medical ICU
- Surgical ICU
- MTCU
- STCU
- Cardiac ICU

- Trauma ICU
- Neonatal ICU
- Burn ICU

*What the hell
am
I doing
here ???*



What Is ICU Medicine?

- ♥ We can cure anyone
- ♥ Death is failure
- ♥ Failure is not an option
- ♥ When in doubt, do more tests
- ♥ When really in doubt, order another consult
- ♥ We are right often, wrong occasionally, but never in doubt



What is Palliative care?

- ☠ Euthanasia
- ☠ Physician assisted suicide
- ☠ Giving up
- ☠ Discontinuing care
- ☠ Morphine drips
- ☠ Last 24 - 48 hours
- ☠ Death squads



Traditional Dichotomous Paradigm:



Traditional Dichotomous Paradigm:



“Do everything” until “there is nothing more to be done” and then give “comfort care only”

VS.

Palliative Care initiated at the time of diagnosis, independent of prognosis, and delivered in concert with curative / life-extending efforts

What Is Palliative Care?



Life →

“I see dead people!”



The Old "Exhaustion" Model



- ICU care involves multiple specialists who provide support for a particular defined organ system
- Intervene in each crisis with a goal to support life until all options are exhausted
- ICU stays may stretch to weeks or months with each new complication or crisis being addressed and managed
- The palliative care referral, if there is one, occurs when treatment options, insurance benefits, or finances are exhausted

Case 1



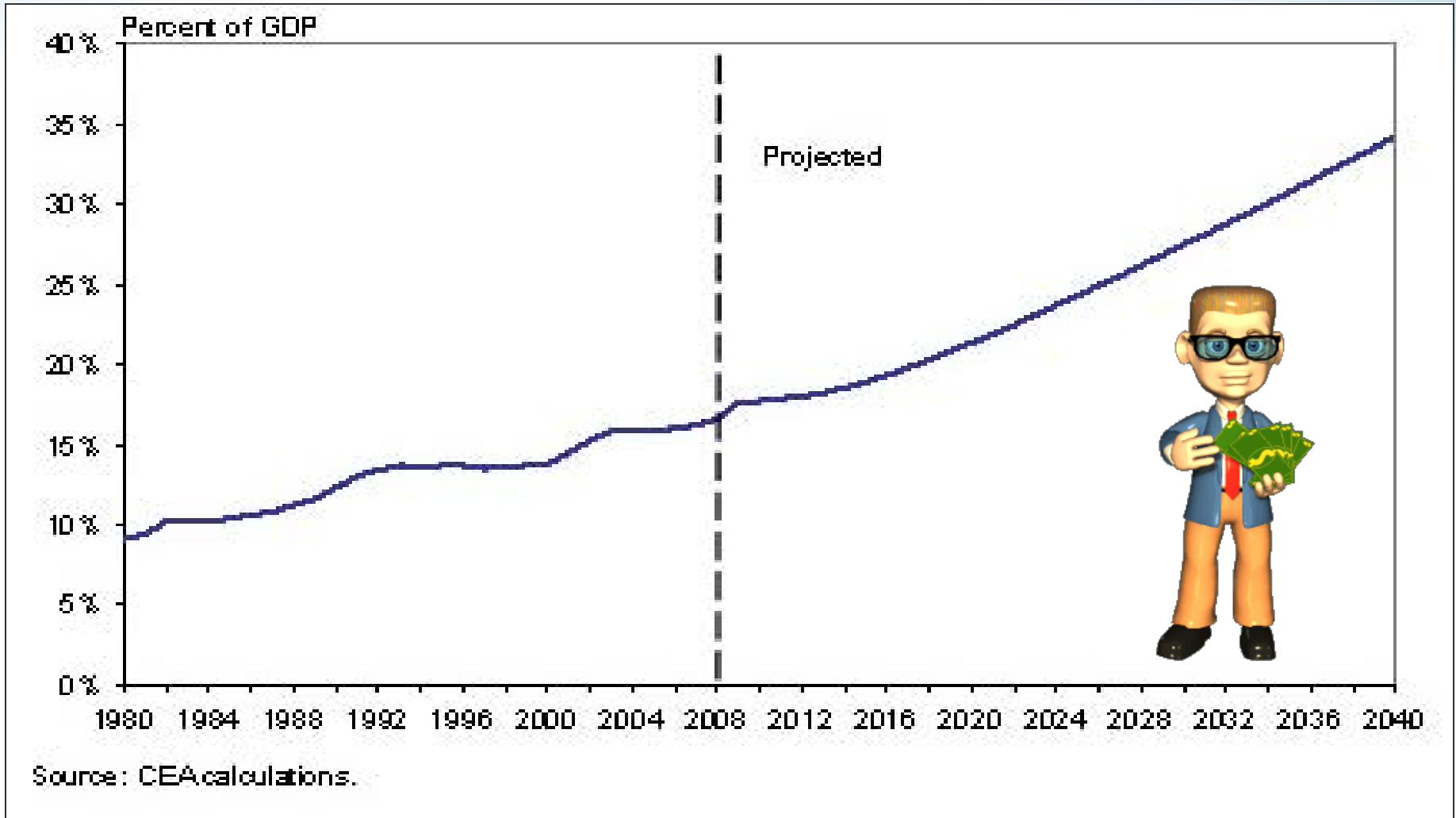
62 year old female, with a history of substance abuse, wanders into traffic and is struck by a truck. After one month in the trauma unit, she has never been alert. She is on the ventilator and is showing signs of hepatic failure and sepsis. She is also going into renal failure, and you need to decide if dialysis should be started.



ICU Costs

- Adult patients on prolonged acute mechanical ventilation (PAMV) comprise 1/3 of all adult MV patients
- Consume 2/3 of hospital resources allocated to MV population
- Are nearly twice as likely to require a discharge to a skilled nursing facility (SNF)
- Their numbers are projected to double by year 2020

National Healthcare Expenditures as a Share of GDP

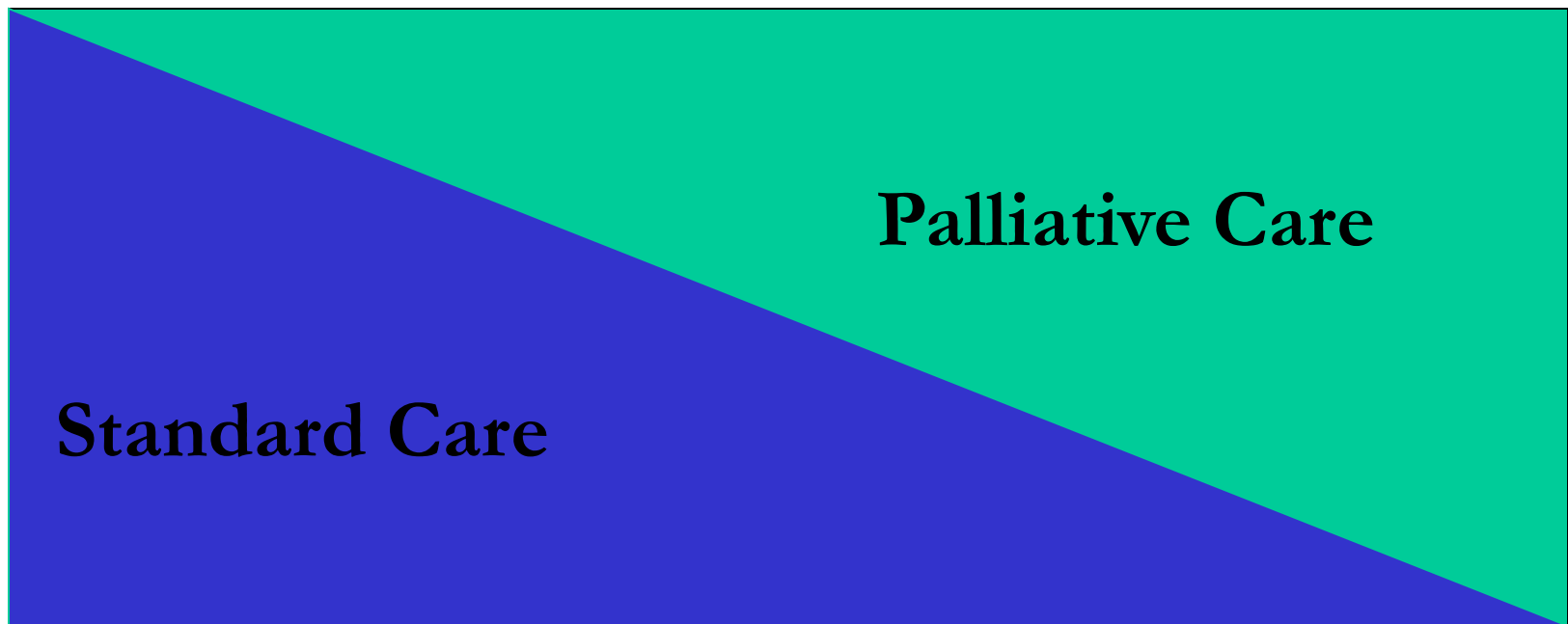


Source: CEA calculations.

What Palliative Care is NOT

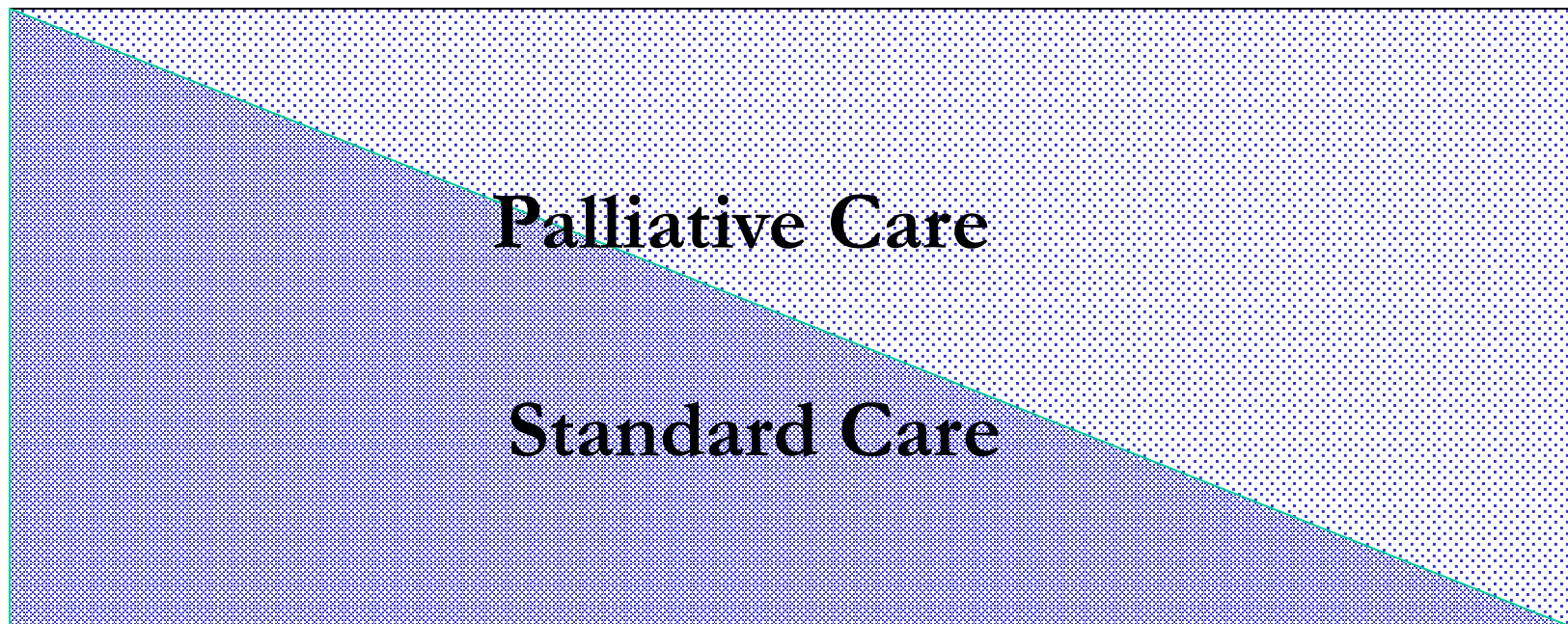
- A mutually exclusive alternative to life-prolonging, restorative care
- A way to “periodically cleanse the hospital of its long stay outliers”

What Is Palliative Care?



Life →

What Is Palliative Care?



Life →

Balfour Mount MD



York Hospital Palliative Care

What Is Palliative Care?

The term “palliative care” was coined by a surgeon, Balfour Mount, in the context of introducing the hospice concept to the Royal Victoria Hospital, an acute care multi-specialty hospital in Montreal.

What Is Palliative Care?

“Palliative care seeks to prevent, relieve, reduce or soothe the symptoms of diseases or disorders without effecting cure...”

What Is Palliative Care?

Palliative care may be needed at any time in the disease trajectory and bereavement.

What Is Palliative Care?

It may be combined with therapies aimed at reducing or curing the illness, or it may be the total focus of care. Care is delivered through the collaboration efforts of an interdisciplinary team including the individual, family and others involved in the provision of care. Where possible, the palliative care should be available in the setting of personal choice.”

Balfour Mount MD, McGill University, Director of the Royal Victorian Hospital,
Palliative Care Center

What Is ICU Medicine?

Intensive-care medicine or **critical-care medicine** is a branch of medicine concerned with the provision of life support or organ support systems in patients who are **critically ill** and who usually require intensive monitoring

From Wikipedia, the free encyclopedia

What Is ICU Medicine?

1. The ICU's roots can be traced back to the Monitoring Unit of critical patients through nurse **Florence Nightingale** (1820-1910).
2. Because of the lack of critical care and the high rate of infection, there was a high mortality rate of hospitalized soldiers.
3. Upon arriving and practicing, the mortality rate fell to 2%.



What Is ICU Medicine?

1. **Bjørn Aage Ibsen (1915–2007)**
He became involved in the 1952 poliomyelitis outbreak in Denmark.
2. Ibsen changed management directly, instituting protracted positive pressure ventilation by means of intubation into the trachea.
3. Patients were managed in 3 special 35 bed areas, which aided charting and other management.



What Is ICU Medicine?

1. **Peter Safar** (1924-2003) was the first Intensivist doctor in the USA.
2. In the 1950s, he started the "Urgency & Emergency" room setup (now known as an ICU).
3. It was at this time the ABC (Airway, Breathing, and Circulation) protocols were formed.



What Is ICU Medicine?

1. Doctors, nurses and other health care professionals with **special training**
2. The use of **special devices** and technology for the care of such patients
3. **Specialized areas** in the hospital for critically ill patients



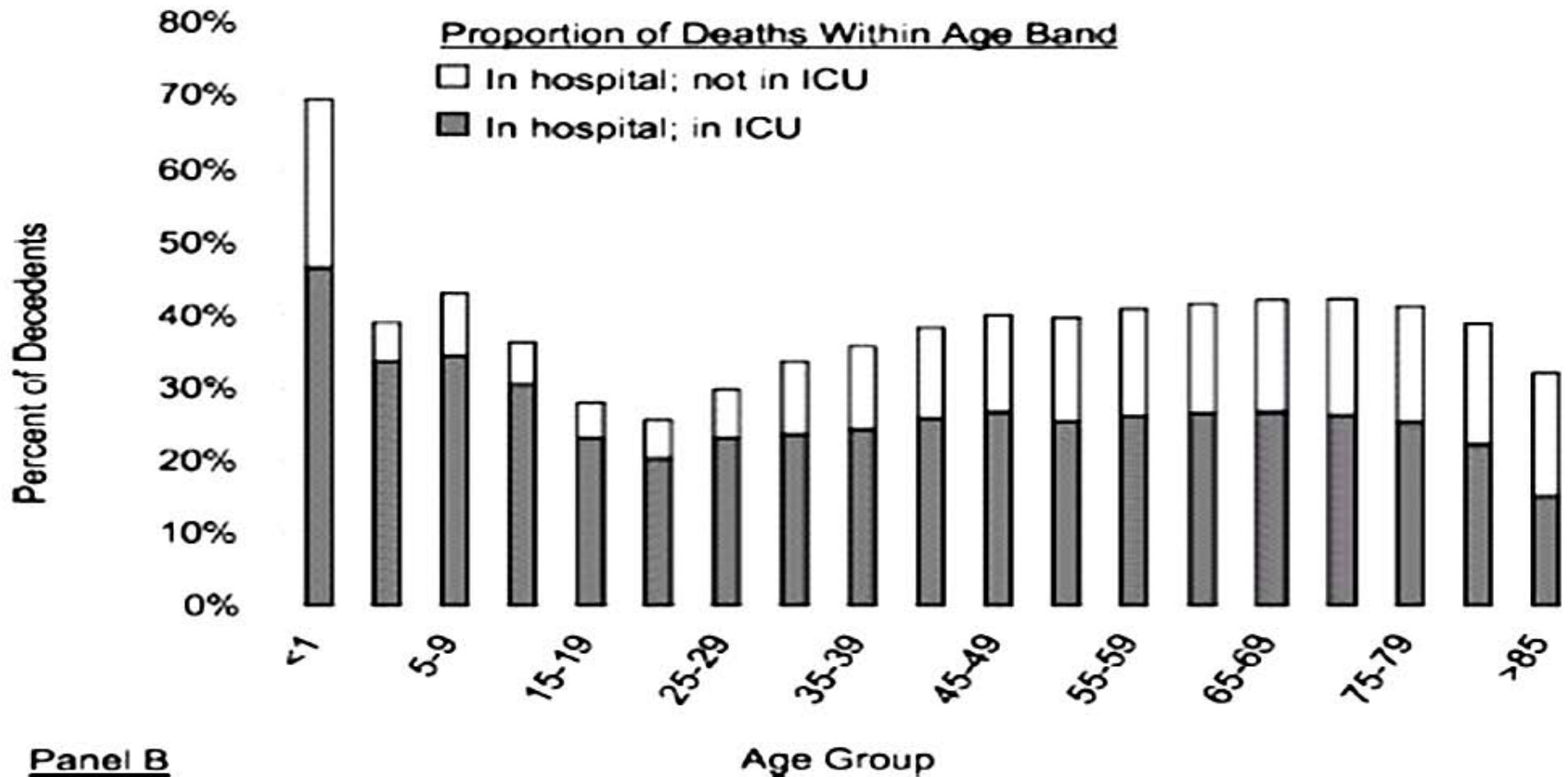
What Is ICU Medicine?

Intensive-care medicine or **critical-care medicine** is a branch of medicine concerned with the provision of life support or organ support systems in patients who are **critically ill** and who usually require intensive monitoring.

What Is ICU Medicine?

- Approximately 20% of deaths in the United States occur in an intensive care unit (ICU) or shortly after a stay in the ICU
- The majority of deaths in the ICU are preceded by a decision to withhold or withdraw life-sustaining therapies
- There is considerable evidence of problems in the quality of care these patients and their families receive

Where We Die



The SUPPORT Study

- \$28 million study, 5 Medical Centers, 10 years
- 4301 patients observed to determine terminally-ill patients base-line experiences during the dying process
- Less than 50% of physicians knew whether their patients wanted CPR or not
- 50% of patients who died in the hospital, the family reported that the patient had moderate to severe pain at least half of their stay

Study to Understand Prognoses and
Preferences for Outcomes and Risks of
Treatments



Management of Pain in Cardiac Surgery ICU Patients: Have We Improved Over Time?

Amazing Results!

1. Patients were 10 times as likely to remember having an ET tube and its removal then if they had any visitors (50% vs. 5%).
2. Most reported that the pain was in there chest (*duh!*) and was made worse when they were turned.
3. 75% reported that there pain was moderate to severe!

Pain Management Within the Palliative and End-of-Life Care Experience in the ICU

1. All ICU patients experience pain and discomfort regardless of prognosis or goals.
2. For those dying in the ICU, a shift to comfort care goals *may* be the most beneficial treatment.
3. Communication and cultural sensitivity with the patient-family unit is important for comprehensive ICU care.

Pain Management Within the Palliative and End-of-Life Care Experience in the ICU

4. Ethical, (medical) and legal misconceptions about the escalation of opiates should not be barriers to appropriate care.
5. Standardized instruments, performance measurement and care delivery aids are effective strategies for improving palliative care.
6. Palliative care should address family and caregiver stress associated with caring for critically ill patients and anticipated suffering and loss.

Important Opportunities for Improvement

- Untreated pain and other distressing symptoms
- Failure to address other patient/family needs
- Poor communication that compromises decision making and worsens the patient/family experience
- Conflict among clinicians/patients/families
- Divergence of treatment goals from pt/family preferences
- Delay in implementation of appropriate care plans
- Use of therapies with burdens > benefits

What is Palliative Care?

Care for patients and families facing serious and complex illness, focused on:

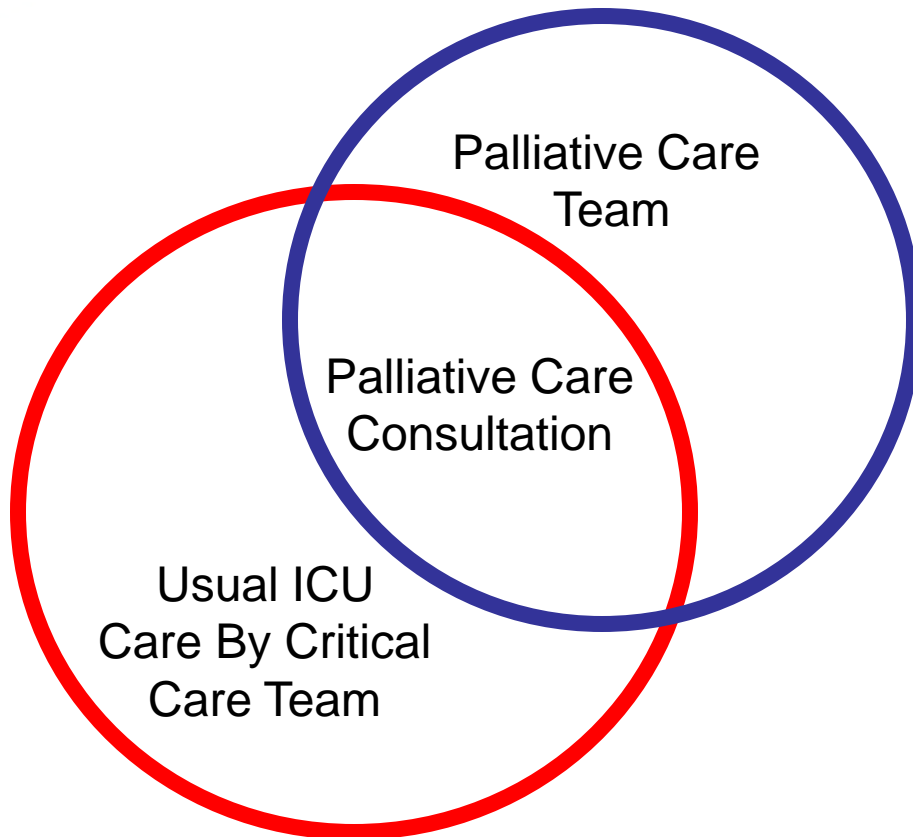
- Alleviation of distress
- Communication about treatments and care goals
- Alignment of plan with preferences
- Smooth and continuous transitions across settings
- *Provided simultaneously with medical treatment for cure, disease-modification, life-prolongation*

What is Palliative Care?

- Incorporated in comprehensive critical care for all patients, including those pursuing life-prolonging treatments
- Not simply a sequel to failed intensive care, but a synchronous, synergistic, component of ICU treatment

ICU-Palliative Care Models

Consultative Model



Integrative Model



Integration by Critical Care Team - Advantages



- Availability of palliative care for all ICU patients and families
- Palliative care service not required
- Clearly acknowledges importance of palliative care as core element of intensive care
- Systematization of ICU work processes promotes reliable performance of palliative care

Integration by Critical Care Team - Disadvantages



- Requires education of ICU clinicians in palliative care knowledge and skills
- Depends on commitment of critical care clinicians and supportive ICU culture
- Requires dedication of staff and other resources that may be lacking in ICU
- Requires handoff to new team for post-ICU palliative care for patients who cannot benefit from or no longer need the ICU

Consultation by PC Service –Advantages



- Expert input from interdisciplinary team of specialists
- Expertise already exists, additional training unnecessary
- Empirical evidence of benefit
- Continuity of care before, during and after ICU
- Facilitation of transfer out of ICU for end-of-life care, if appropriate

Consultation by PC Service –Disadvantages



- Requires palliative care service with adequate staffing and other resources
- Consultants may lack familiarity with biomedical and nursing aspects of critical care, seen as “outsiders”
- Consultants must rapidly establish effective relationship with patients/families
- Fragmentation of care may be compounded
- ICU team may have less incentive to improve palliative care knowledge and skills

Domains to Measures: ICU Palliative Care “Bundle”

Day 1

- (1) Identify decision-maker
- (2) Address AD
- (3) Address CPR status
- (4) Distribute info leaflet
- (5) Assess pain regularly
- (6) Manage pain optimally

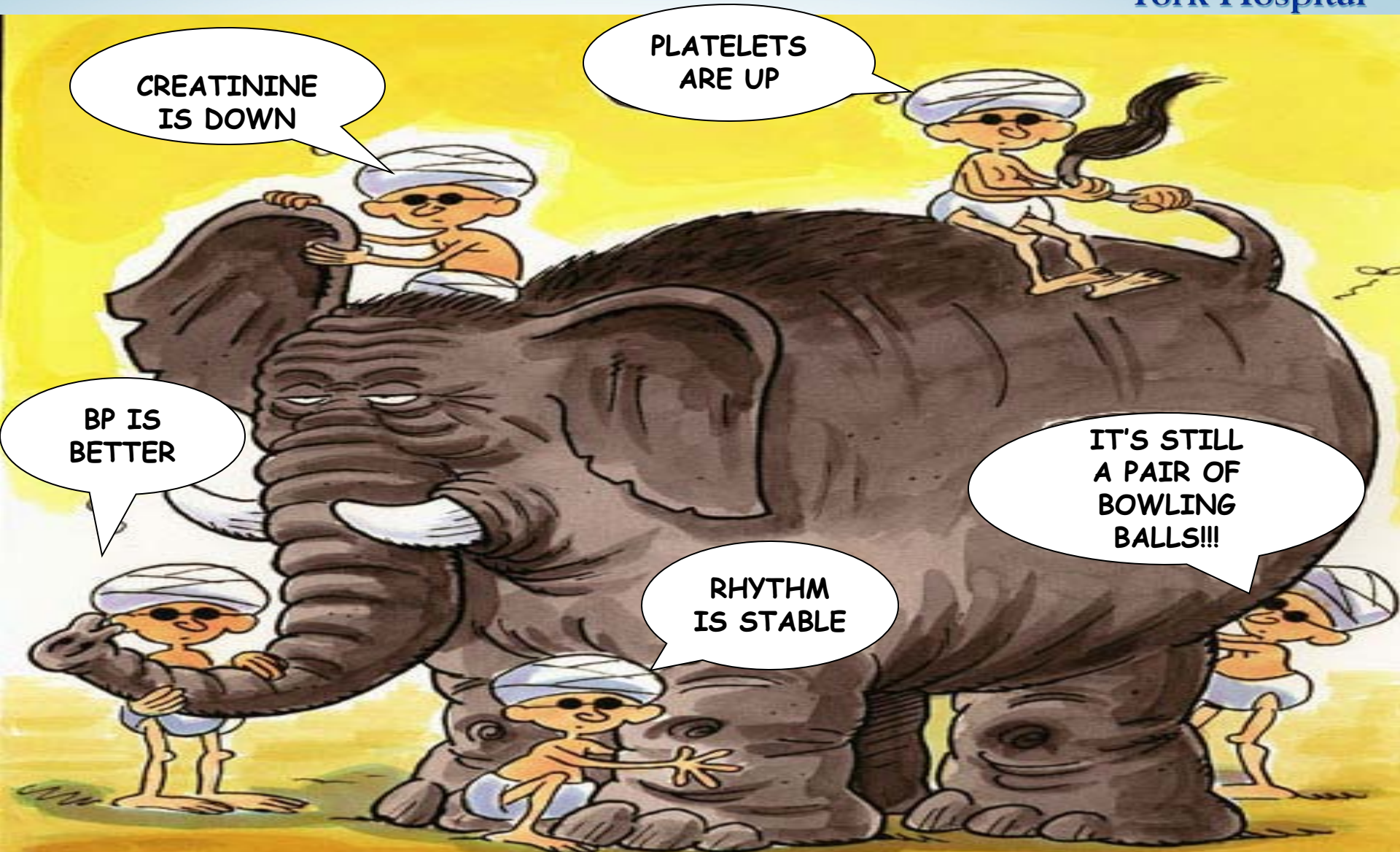
By Day 3

- (7) Offer SW support
- (8) Offer spiritual support

By Day 5

- (9) Family meeting

ICU Communication



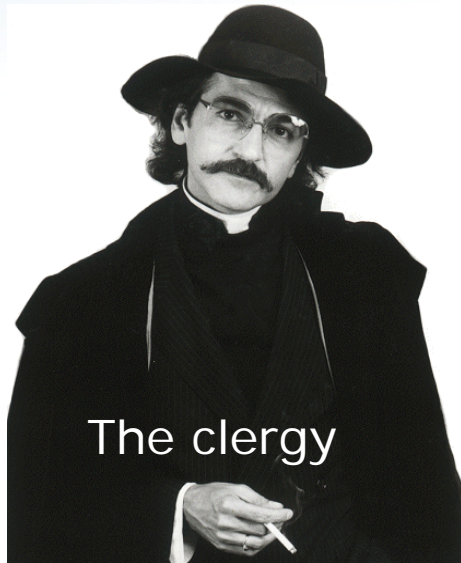
Case 2



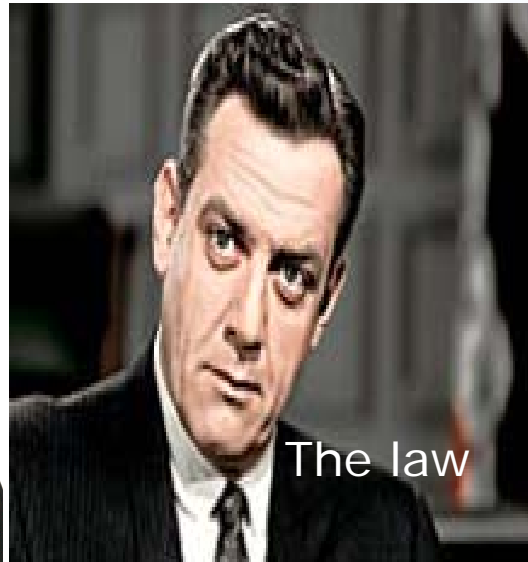
50 Year old mentally retarded man comes into the hospital from the group home with a chief complaint of shortness of breath. His caretaker states he tried to swallow a hairpin. He is about to be placed on a ventilator, but his family arrives and states that he is a “no code.”



Who Should Make End of Life Decisions?



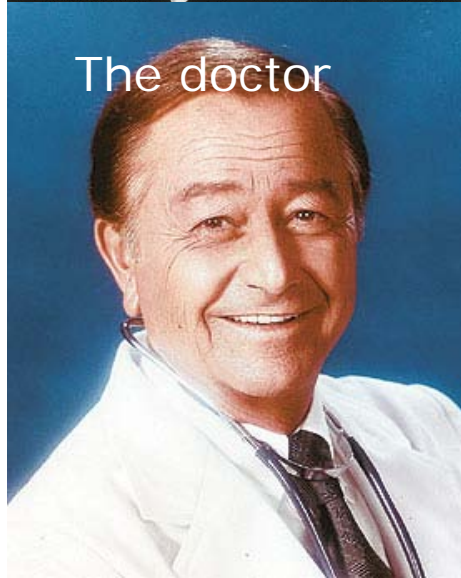
The clergy



The law



The patient



The doctor



The Partner



The family

Who Should Make End of Life Decisions?



Comparative Effectiveness



H.R.1

Title: American Recovery and Reinvestment Act of 2009

Sponsor: Rep Obey, David R.[WI-7]

Introduced 1/26/2009 Cosponsors 9

Latest Major Action: Became Public Law No: 111-5
COSPONSORS(9):

Rep Frank, Barney

Rep Miller, George

Rep Spratt, John N, John M

Rep Velazquez, Nydia M.

Rep Rangel, Charles

Rep Gordon, Bart

Rep Oberstar, James

Rep Towns, Edolphus

Rep Waxman, Henry A.

Comparative Effectiveness



In addition, \$400,000,000 shall be available for comparative effectiveness research to be allocated at the discretion of the Secretary of Health and Human Services That the funding appropriated in this paragraph shall be used to accelerate the development and dissemination of research assessing the comparative effectiveness of health care treatments and strategies, through efforts that:

- (1) conduct, support, or synthesize research that compares the clinical outcomes, effectiveness, and appropriateness of items, services, and procedures that are used to prevent, diagnose, or treat diseases, disorders, and other health conditions; and
- (2) encourage the development and use of clinical registries, clinical data networks, and other forms of electronic health data that can be used to generate or obtain outcomes data

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Comparative Effectiveness: A👁️A Position

- *The AOA is confident that the growing emphasis on comparative effectiveness research bodes well for the osteopathic medical profession.*
- The AOA supports the concept of comparative effectiveness research, as long as the results are not used to control medical decision-making.
- Any guidelines developed “should be advisory not mandatory.”

Impact of Limiting Futile Care

Method of Medicare Reimbursement and the Rate of Potentially Ineffective Care of Critically Ill Patients

Daniel J. Cher MD; Leslie A. Lenhart MD, MS

JAMA, September 24, 1997 – Vol 278, No. 12

Impact of Limiting Futile Care

- Potentially ineffective care (PIC) was defined as in-hospital death or death within 100 days of discharge AND resource use above the 90th percentile
- Study looked at all California patients in 1994 hospitalized in the ICU, 3914 met criteria for PIC
- Compared patients enrolled in traditional Medicare costs versus those enrolled in HMO Medicare

Impact of Limiting Futile Care

- PIC was less likely among HMO members versus non-HMO members (adjusted odds ratio 0.75; 95% confidence interval, 0.65 versus 0.87)
- However, there was an 8% increase in 100 day mortality and a 9% increase in one year mortality

Impact of Limiting Futile Care

Prognosis-based futility guidelines: does anyone win?

Teno JM, Murphy D, Lynn J, Tosteso A, Desbiens A,
Connors AF Jr, Hamels MB, Wu A, Phillips R,
Wenger N, et al.

J AM Geriatr Soc.1994 Nov;42(11):1202-7.

Impact of Limiting Futile Care

- 4301 patients, 115 (2.7%) had an estimated chance of 2-month survival of $<$ or $=$ 1%
- All but one of these 115 subjects died within 6 months
- 86% died within 5 days of prognosis
- A DNR order was written either before ($n = 61$) or within 5 days ($n = 18$) of reaching this prognosis for 68.6% of the patients
- At the time of death, 92 subjects (80.0%) had had no attempt at resuscitation

Impact of Limiting Futile Care

- These 115 subjects had total hospital charges of \$8.8 million
- By forgoing or withdrawing life-sustaining treatment 199 of 1,688 hospital days (10.8%) would be forgone, with estimated savings of \$1.2 million in hospital charges
- Nearly 75% of the savings in hospital days would have resulted from stopping treatment for 12 patients, six of whom were under 51 years old, and one of whom lived 10 months

Impact of Limiting Futile Care

CONCLUSIONS:

Patients at a high risk of dying can be identified prospectively. Implementation of a strict, prognosis-based futility guideline on the third day of a serious illness would result in modest savings

COMMENTARY

Substituted Interests and Best Judgments An Integrated Model of Surrogate Decision Making

Daniel P. Sulmasy, MD, PhD

Lois Snyder, JD

MAKING DECISIONS ON BEHALF OF PATIENTS WITHOUT decision-making capacity remains challenging, especially at the end of life. Under the current US model, formal written or oral directives expressing patient wishes for future care are preferred. Lacking that, surrogates are instructed to provide substituted judgments, choosing what the patient would have chosen. If the patient never had capacity or the patient's preferences are unknown, a decision should be made in the patient's best interests. This hierarchical model of separate standards, however, does not always reflect clinical reality or the interests of patients and families. In this commentary, we propose an alternative approach: the substituted interests model.

How Should Decisions Be Made?

Decision making should honor the wide variability in patient beliefs about how decisions ought to be made. Some value autonomy highly and have detailed directives; others defer decisional authority to loved ones because they value relationships or cultural norms. Most patients prefer decisions using both their own preferences and the judgments of loved ones and physicians about what would be best for them.² The substituted interests model provides for this individualized decision making (Table) and differs from other models as follows:

1. The hierarchical model emphasizes information and the intellectual process of decision making. Surrogates experience enormous stress,³ however, and the substituted interests model highlights empathy for the surrogate, not just a menu of options.

2. The hierarchical model emphasizes patient preferences, either in treatment directives or by substituted judgments. Nev-

Authentic Values & Real Interests: Step by Step



1. Empathic connection
2. Authentic values
3. Clinical data
4. Real Interests
5. Clinical judgment
6. Best judgment for the patient

1. Empathic Connection

Clinician acknowledges the stresses of the situation & the difficulty of the task & attends to the needs of the surrogate

“It must be very difficult to see your loved one so sick.”

2. Authentic Values

Surrogate is asked to express an understanding of the patient as a person

Values: interpersonal, moral, religious

Directives: preferences regarding treatment, who decides, and how

“Tell us about your loved one.”

“Has anyone else in the family ever experienced a situation like this?”

3. Clinical Data

Clinician provides a shared understanding of the clinical circumstances and prognosis

“Here is what is wrong.”
“This is what is likely to happen.”

4. Real Interests

Surrogate helps determine what the real interests of the patient might be, given the patient's authentic values and given the clinical circumstances

“Knowing your loved one, what do you think would be most important for him or her right now?”

5. Clinical Judgment

Clinician establishes a shared understanding of the options & offers a recommendation based on clinical experience & a community standard of reasonability, tailored to the patient's real interests

“Here’s what could be done.”

“Here’s what we would recommend, based on what we know and what you’ve said about your loved one.”

6. Best judgment



Together, determine what would best promote the good of the patient as a unique person, in the context of his/her relationships, authentic values, known wishes, & real interests, given the clinical circumstances & options

“Knowing your loved one, does our recommendation seem right for him/her?”

“Do you think another plan would be better, given his/her values, preferences, and relationships?”

Case 3



An 87 year old female comes into the hospital after a fall, and has a witnessed cardiac arrest while still in the ED. CPR and the hypothermia protocol are started, but after three days in the ICU, she is on a ventilator, off sedation and unresponsive. Her son wants to have her removed from the ventilator, but her granddaughter does not want to “pull the plug.”



Technological Support



- Automatic internal cardiac defibrillator
- Left ventricular assist device
- Peg feeding
- IV fluids
- Dialysis
- Pressors
- Ventilator

The Process

- Complete all forms and documents
- Focus on the patient and the family will too
- Let other staff know what is happening

The Process

- Turn off monitors and alarms
- Allow for privacy
- Gather loved ones (if they wish)
- Hand holding, touching, prayer (if they wish)
- Don't be secretive
- Be open and inclusive
- Talk about comfort
- “Her comfort is our priority”, “How can we help”

Ventilator Withdrawal

Assess the patient's ventilator status

- No patient effort of breathing
- IMV at 8 bpm, patient breathing 18 bpm

Assess the patient's comfort needs

- Completely non responsive, no sign of suffering
- Non verbal indicators of distress, suffering

Ventilator Withdrawal

- IV or Sub q access
- Rx: Morphine, Versed, Ativan
- O2: tubing, prongs, mask, trach mask
- Suction
- Oral mouth piece
- If family is present, be ready for the faint, screaming and cultural diversity needs

Ventilator Withdrawal

- Suction PRN
- Comfort the patient
- Extubate
- Clean the patient's face
- Tidy the bed linens
- Take tubes and machines away quietly

After Withdrawal

- Continue palliative medications
- Oxygen and suction for comfort
- Involve the loved ones (if they wish)
- Keep a quiet peaceful environment
- Offer comfort to family
- “What can I do for you?”

Important Concepts

- Offer continuing care
- Patients and families fear abandonment
- Understand family dynamics
- Guilt, blame, anger should be comforted
- Remove any associated burdens

What if....

- The patient doesn't die
- Becomes more alert
- Has increased suffering

Sedation of the Imminently Dying vs. Sedation To Death

What do you think the Devil is going to look like if he's around? Nobody is going to be taken in if he has a long, red, pointy tail...He will look attractive and he will be nice and helpful and he will get a job where he influences a great God-fearing nation and he will never do an evil thing... he will just bit by little bit lower standards where they are important...



Finally

- If all goes well, the loved ones will forget the event and remember the patient.
- If all does not go well, there will be no forgetting.



Case 4



An 87 year old man comes in from home with pneumonia. After three days, he requires a ventilator and pressors. He has a “living will” which states that if he has an end-stage medical condition or is permanently unconscious, he would not want life-support.



Three Proactive Studies about Palliative Care in the ICU



Proactive palliative care in the medical intensive care unit: Effects on length of stay for selected high-risk patients

High Risk Patients:

- a. ICU admission after a current hospital stay of ≥ 10 days
- b. Age > 80 with two or more life threatening comorbidities (CHF, ESRD)
- c. Active stage IV malignancy
- d. S/P cardiac arrest
- e. ICH requiring mechanical ventilation

Proactive palliative care in the medical intensive care unit: Effects on length of stay for selected high-risk patients

Table 3. Length of stay (in days)

	Usual Care (n = 65)	Proactive Palliative Care Intervention (n = 126)	Difference	p Value
MICU	16.28 (16.54) [12]	8.96 (9.27) [5.5]	-7.32 [-6.5]	.0001 ^a ←
MICU admission to hospital discharge	33.87 (55.01) [18]	26.65 (43.95) [12]	-7.22 [-6]	.3394
Hospital admission to hospital discharge	41.40 (58.41) [24.5]	35.77 (50.19) [17]	-5.63 [-5.5]	.5011

Proactive palliative care in the medical intensive care unit: Effects on length of stay for selected high-risk patients

Conclusions: Proactive palliative care consultation was associated with a significantly shorter MICU length of stay in this high-risk group without any significant differences in mortality rates or discharge disposition.

Impact of a Proactive Approach to Improve End-of-Life Care in a Medical ICU

Study Objective: To assess the impact of a proactive case finding approach to end-of-life care for critically ill patients experiencing global cerebral ischemia (GCI) after CPR and multiple organ system failure (MOSF) in comparison to historical control subjects.

Impact of a Proactive Approach to Improve End-of-Life Care in a Medical ICU

Hospital LOS

Historical Control MOSF

26.1 +/- 4.1 days

Historical Control GCI

8.6 +/- 1.6 days

Proactive MOSF

15.1 +/- 2.5 days

Proactive GCI

4.7 +/- 0.6 days

Impact of a Proactive Approach to Improve End-of- Life Care in a Medical ICU

Poor Prognosis to CMO

Historical Control MOSF

7.3 +/- 2.9 days

Historical Control GCI

6.3 +/- 1.2 days

Proactive MOSF

2.2 +/- 0.8 days

Proactive GCI

3.5 +/- 0.4 days

Impact of a Proactive Approach to Improve End-of-Life Care in a Medical ICU

Conclusions: Proactive interventions from a palliative care consultant within this subset of patients decreased the use of nonbeneficial resources and avoided protracted dying.

A Proactive Approach to Improve End-of-Life Care in a Medical ICU for Patients with Terminal Dementia

Variable	Control (n = 26)	Intervention (n = 26)	p Value
Hospital LOS, days	12.1 ± 1.6	7.4 ± 1.4	<.007
MICU LOS, days	6.8 ± 0.98	3.5 ± 0.5	<.004
Discharge outcome			
Died	14/26	17/26	NS
Nursing home	10/26	6/26	NS
Home	2/26	2/26	NS
Another hospital	0	1/26	NS

3



A Proactive Approach to Improve End-of-Life Care in a Medical ICU for Patients with Terminal Dementia

- Gap between what needs to be known and practiced and what is currently demonstrated about EOL care in the terminal stages of dementia in the community and the ICU
- Proactive palliative care produces measurable improvements in LOS and use of nonbeneficial resources
- Terminally ill dementia patients should not be subjected to a protracted potentially uncomfortable death.

Two Studies from France

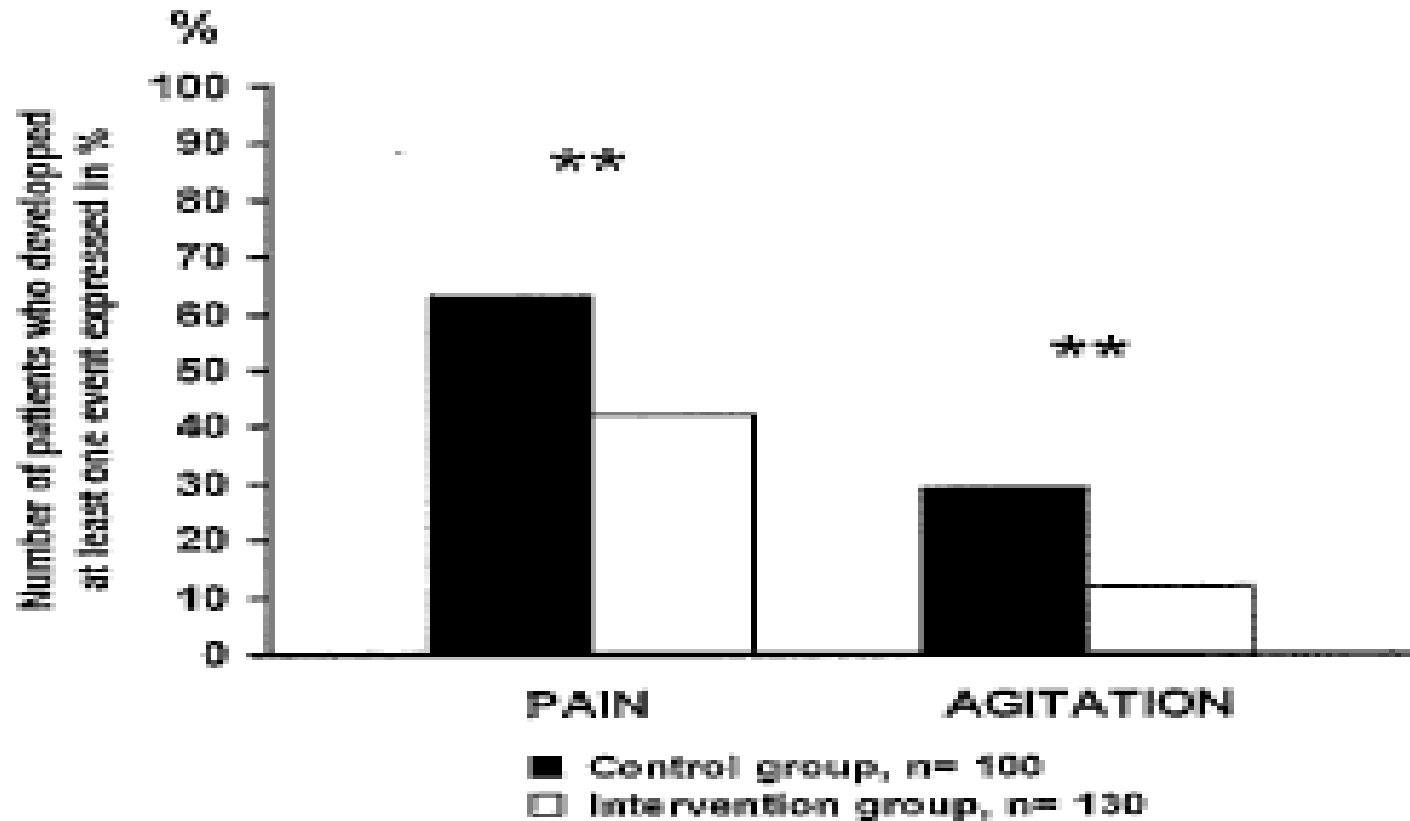


Impact of Systemic Evaluation
of Pain and Agitation in an ICU
Crit Care Med 2006 Vol 34 No. 6



Pain Assessment is Associated with Decrease
of Mechanical Ventilation in the ICU
Anesthesiology No. 6 December 2009

Impact of Systemic Evaluation of Pain and Agitation in an ICU



Richmond Agitation and Sedation Scale

Score	Descriptor	Characteristics
+4	Combative	Combative, violent, immediate danger to staff
+3	Very agitated	Pulls or removes tube(s) or catheter(s); aggressive
+2	Agitated	Frequent nonpurposeful movement, fights ventilator
+1	Restless	Anxious, apprehensive but movements not aggressive or vigorous
0	Alert and calm	
-1	Drowsy	Not fully alert, but has sustained awakening to voice (eye opening and contact >10 seconds)
-2	Light sedation	Briefly awakens to voice (eye opening and contact <10 seconds)
-3		
-4	Moderate sedation	Movement or eye opening to voice (but no eye contact)
	Deep sedation	No response to voice, but movement or eye opening to physical stimulation
-5	Unarousable	No response to voice or physical stimulation

Behavioral Pain Scale

Face

- 0 - No particular expression or smile
- 1 - Occasional grimace or frown, withdrawn, disinterested
- 2 - Frequent to constant quivering chin, clenched jaw

Legs

- 0 - Normal position or relaxed
- 1 - Uneasy, restless, tense
- 2 - Kicking, or legs drawn up

Activity

- 0 - Lying quietly, normal position, moves easily
- 1 - Squirming, shifting back and forth, tense
- 2 - Arched, rigid or jerking

Cry

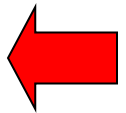
- 0 - No cry (awake or asleep)
- 1 - Moans or whimpers; occasional complaint
- 2 - Crying steadily, screams or sobs, frequent complaints

Consolability

- 0 - Content, relaxed
- 1 - Reassured by occasional touching, hugging or being talked to, distractible
- 2 - Difficult to console or comfort

Impact of Systemic Evaluation of Pain and Agitation in an ICU

Use of an intravenous continuous sedation			
Use of a hypnotic, n (%)	54 (54)	72 (55)	.83
Duration of infusion, hrs	84 (39–201)	48 (24–144)	.03
Use of a morphinic, n (%)	47 (47)	60 (46)	.90
Duration of infusion, hrs	96 (48–216)	60 (24–144)	.02
Total duration of ventilation, hrs	120 (48–312)	65 (24–192)	.01
Number of reintubations, n (%)	6 (10)	7 (7)	.77
Surgical reintervention, n (%)	6 (10)	7 (9)	.77
Upper gastrointestinal hemorrhage, n (%)	3 (3)	2 (2)	.65
Thromboembolic event, n (%)	4 (4)	3 (2)	.47
Myocardial ischemia, n (%)	12 (12)	9 (7)	.25
First day of intestinal transit, days	5.0 (4.0–10.0)	6.0 (3.0–8.0)	.19
Maximal amount of daily gastric residuals, mL	400 (200–600)	300 (100–500)	.09
Intestinal occlusion, n (%)	1 (1)	2 (2)	>.99
Self-extubation, n (%)	3 (4)	2 (2)	.65
Self-removal of central venous catheter, n (%)	2 (2)	3 (3)	>.99
Self-removal of bladder catheter, n (%)	4 (5)	1 (1)	.17
Self-removal of gastric tube, n (%)	9 (12)	10 (10)	.81
Length of ICU stay	8.5 (4.0–14.7)	7.0 (4.0–13.0)	.38
Mortality rate, n (%)	12 (12)	19 (15)	.76



Pain Assessment is Associated with Decrease of Mechanical Ventilation in the ICU

Table 4. Patient Outcomes and Pain Assessment on Day 2 of the ICU Stay

Outcome Measure	Pain Assessment		Unadjusted Odds Ratio (95% CI)*†	P Value
	No (n = 631)	Yes (n = 513)		
ICU mortality, n (%)	136 (22)	95 (19)	0.91 (0.58–1.43)	0.69
ICU duration of stay, median (IQR), days	18 (10–30)	13 (7–25)	1.70 (1.29–2.25)	<0.01 ←
Duration of MV, median (IQR), days	11 (6–30)	8 (4–17)	1.87 (1.41–2.48)	<0.01 ←
Ventilator-acquired pneumonia, n (%)	117 (24)	66 (16)	0.61 (0.43–0.85)	<0.01 ←
Thromboembolic events, n (%)	13 (3)	10 (2)	0.91 (0.39–2.09)	0.82
Gastroduodenal hemorrhage, n (%)	8 (2)	4 (1)	0.59 (0.18–1.97)	0.39
Central venous catheter colonization, n (%)	28 (6)	19 (5)	0.79 (0.44–1.44)	0.45

Anesthesiology V 111 No. 6 Dec 2009

How Palliative Care Reduces Length of Stay and Cost

- ✓ Clarifies realistic and appropriate goals of care with patients and families
- ✓ Helps families to select medical treatments and care settings that meet their goals
- ✓ Coordinates care across multiple specialties and disciplines
- ✓ Facilitates transitions within and from hospital
- ✓ Enhances continuity across venues of care
- ✓ Better symptom control

Benefits of Palliative Care in the ICU

- Intensive care unit/hospital length of stay ↓
- Use of nonbeneficial treatments ↓
- Duration of mechanical ventilation ↓
- Family satisfaction/comprehension ↑
- Family anxiety/depression, PTSD ↓
- Conflict over goals of care ↓
- Time from poor prognosis to comfort goals ↓
- Symptom assessment/patient comfort ↑

York Hospital Palliative Care

2011

	Number	Percent
MSIC	103	10.0
CCU	72	7.0
MTCU	58	5.6
OHICU	11	1.1
Total	244	23.7



NASA Director: This could be the worst disaster NASA's ever faced.

Gene Kranz: With all due respect, sir, I believe this is gonna be our finest hour

