

# Making the Case for ICU Palliative Care Integration

A Presentation of the IPAL-ICU Project

Sponsored by  
Center to Advance Palliative Care and  
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# Objectives

- Highlight the importance of the ICU as a venue for providing and improving palliative care
- Identify opportunities for improvement of ICU palliative care
- Describe expected benefits of an ICU–palliative care initiative

# Why Is Palliative Care Essential in the ICU?

- Despite aggressive treatment, many ICU patients die or remain chronically critically ill
  - 20% of Americans (500,000 people per year) die in or after ICU care
  - 100,000 ICU “survivors” continue with critical illness on a chronic basis
- For some critically ill patients, ICU treatment is more burdensome than beneficial and/or inconsistent with their values, goals and preferences

Angus DC et al. *Crit Care Med* 2004; 32:638–43

Nelson JE et al. *Am J Resp Crit Care Med* 2010 (Epub 5/6/10)

# Failure to align ICU treatment with individual preferences and achievable care goals is:

- Distressing for patients, families and clinicians
- Wasteful of scarce and expensive resources
- ▶ Integration of palliative care in the ICU can help address these issues and other important needs

# Why Should Palliative Care Be Integrated with Critical Care from the Time of Admission to the ICU?

- Patients and families want both disease-modifying treatment and palliative care
- Clinicians cannot reliably predict who will survive ICU and who will die or stay chronically critically ill
- Neither clinicians nor patients/families can make an abrupt shift from one set of care goals to another
- Palliative care and critical care are mutually enhancing, not mutually exclusive

# Quality of ICU Palliative Care Prioritized for Improvement by:

- Institute of Medicine
- All four major societies representing critical care professionals
- National hospital and health care networks, e.g., Voluntary Hospital Association (VHA), Inc.
- Veterans Administration Healthcare System
- Institute for Healthcare Improvement
- Commercial insurers

# Research Continues to Document Deficiencies in ICU Palliative Care

- Untreated pain and other symptoms
- Unmet needs for family care
- Inadequate communication
- Conflict among clinicians/patients/families
- Divergence of treatment goals from patient/ family preferences
- Inefficient resource utilization
- Clinician “moral distress” and burnout

# The Slow Pace of Progress on Relief of Pain in the ICU: (Some of) the Evidence

Patient interviews after transfer from surgical intensive care unit:

- 1990—Puntillo (*Heart Lung*; 19:526–33):  
>70% recalled pain, 63% moderate or severe
- 2007—Gélinas (*Intensive Crit Care Nurs*; 23:298–303): 77% recalled pain, 50% moderate or severe

# Family Suffering—Short and Long Term

## **Anderson WG et al. *J Gen Intern Med* 2008; 23:1872**

Anxiety/depression in ICU and 1 mo and 6 months later. PTSD and complicated grief at 6 months

## **Paparrigopoulos T et al. *J Psychosom Res* 2006; 61:719**

High rates of anxiety, depressive, and posttraumatic stress symptoms within a week of ICU admission, persisting at ICU discharge in fewer but still majority of families

## **Siegel MD et al. *Crit Care Med* 2008; 36:1722**

Among bereaved families of patients who died in MICU, one-third had depression, anxiety, panic, or complicated grief

# Communication Is Inadequate

- Families fail to comprehend even basic information about the illness, treatment and prognosis
- Patients and families lack understanding of the goals of the ICU's plan of care
- Family meetings miss the mark:
  - Physicians spend disproportionate time talking instead of listening
  - Opportunities to provide information and support are often missed
  - For many patients, no family meeting is ever held, even over a prolonged ICU stay

# Conflict: A Decade of Data

- Azoulay E et al. *Am J Respir Crit Care Med* 2009; 180:853. Conflicts perceived by 72% of respondents to this large international survey; RN-MD conflicts were most common (33%). Many conflicts were rated as severe and dangerous, creating job strain
- Frick S et al. *Crit Care Med* 2003; 31:456. For two-thirds of ICU patients dying in hospital, the MD and RN disagreed about treatment goals; the sicker the patient and longer the ICU stay, the more the MD and RN diverged
- Studdert D et al. *Intensive Care Med* 2003; 29:1489. One-third of conflicts about patient management occurred within the ICU team and these were identified more often by RNs than MDs
- Breen C et al. *J Gen Intern Med* 2001; 16:283. Conflict within the ICU team about care, decision making and other issues was found for almost 50% of patients considered for limitation of life-supporting treatment

# An Epidemic of Burnout and “Moral Distress” Among Critical Care Professionals

Three papers in a single 2007 issue of *American Journal of Respiratory and Critical Care Medicine* (vol. 175, no. 7) addressed this problem:

1. Poncet MC et al. Burnout syndrome in critical care nursing staff
2. Embriaco N et al. High level of burnout in intensivists: prevalence and associated factors
3. Mealer ML et al. Increased prevalence of post- traumatic stress disorder symptoms in critical care nurses

# Big- (and Getting Bigger) Ticket Item in Health Care

From 1994 to 2004, annual Medicare cost for ICU increased by 35.7%—from \$23.8 billion to \$32.3 billion

In 2000, critical care medicine costs represented 13.3% of hospital costs, 4.2% of national health expenditures and 0.56% of the gross domestic product

Milbrandt EB et al. *Crit Care Med* 2008; 36:2504

Halpern NA et al. *Crit Care Med* 2004; 32:1254

# How Can Integration of Palliative Care in the ICU Help?

# Expected Benefits from an Initiative to Improve ICU Palliative Care

- Family satisfaction/comprehension
- Lower levels of family anxiety, depression and post-traumatic stress disorder
- Less conflict in the ICU
- Timely implementation of care plans that are realistic, appropriate and consistent with patients' preferences
- Reductions in use of nonbeneficial treatments and lengths of stay in ICU/hospital—with stable ICU mortality
- Professional gratification for clinicians
- Significant cost savings for the hospital

# Expected Benefits of an ICU–Palliative Care Initiative

Outcome	Selected Relevant References*
↓ ICU/Hospital Length of Stay	Campbell 2003; Campbell 2004; Norton 2007; Curtis 2009
↓ Use of Nonbeneficial Treatments	Campbell 2003; O’Mahony 2009
↑ Family Satisfaction/Comprehension	Azoulay 2002
↓ Family Anxiety/Depression, PTSD	Lautrette 2007
↓ Conflict over Goals of Care	Lilly 2000
↓ Time from Poor Prognosis to Comfort-Focused Goals	Campbell 2003
↑ Symptom Assessment/Patient Comfort	Erdek 2003; Chanques 2006

\*References included in [IPAL-ICU Reference Library](#)

# Cost Savings Associated With US Hospital Palliative Care Consultation Programs

R. Sean Morrison, MD; Joan D. Penrod, PhD; J. Brian Cassel, PhD; Melissa Caust-Ellenbogen, MS; Ann Litke, MFA; Lynn Spragens, MBA; Diane E. Meier, MD; for the Palliative Care Leadership Centers' Outcomes Group

**Background:** Hospital palliative care consultation teams have been shown to improve care for adults with serious illness. This study examined the effect of palliative care teams on hospital costs.

**Methods:** We analyzed administrative data from 8 hospitals with established palliative care programs for the years 2002 through 2004. Patients receiving palliative care were matched by propensity score to patients receiving usual care. Generalized linear models were estimated for costs per admission and per hospital day.

**Results:** Of the 2966 palliative care patients who were discharged alive, 2630 palliative care patients (89%) were matched to 18 427 usual care patients, and of the 2388 palliative care patients who died, 2278 (95%) were matched to 2124 usual care patients. The palliative care patients who were discharged alive had an adjusted net savings of \$1696 in direct costs per admission ( $P = .004$ ) and \$279 in direct costs per day ( $P < .001$ ) including sig-

nificant reductions in laboratory and intensive care unit costs compared with usual care patients. The palliative care patients who died had an adjusted net savings of \$4908 in direct costs per admission ( $P = .003$ ) and \$374 in direct costs per day ( $P < .001$ ) including significant reductions in pharmacy, laboratory, and intensive care unit costs compared with usual care patients. Two confirmatory analyses were performed. Including mean costs per day before palliative care and before a comparable reference day for usual care patients in the propensity score models resulted in similar results. Estimating costs for palliative care patients assuming that they did not receive palliative care resulted in projected costs that were not significantly different from usual care costs.

**Conclusion:** Hospital palliative care consultation teams are associated with significant hospital cost savings.

*Arch Intern Med.* 2008;168(16):1783-1790

# Palliative care consultation for ICU patients dramatically reduces costs—not only for patients dying in hospital but also for those discharged alive

	Live Discharges			Hospital Deaths		
Costs	Usual Care	Palliative Care	Δ	Usual Care	Palliative Care	Δ
Per Day	\$ 830	\$ 666	\$ 174*	\$ 1,484	\$ 1,110	\$ 374*
Per Admission	\$11,140	\$ 9,445	\$ 1,696**	\$22,674	\$17,765	\$4,908**
Laboratory	\$ 1,227	\$ 803	\$ 424*	\$ 2,765	\$ 1,838	\$ 926*
ICU	\$ 7,096	\$ 1,917	\$ 5,178*	\$14,542	\$ 7,929	\$7,776*
Pharmacy	\$ 2,190	\$ 2,001	\$ 190	\$ 5,625	\$ 4,081	\$1,544***
Imaging	\$ 890	\$ 949	(\$58)***	\$ 1,673	\$ 1,540	\$ 133
Died in ICU	X	X	X	18%	4%	14%*

Morrison RS et al. *Arch Intern Med* 2008; 168:1783

\*P<.001

\*\*P<.01

\*\*\*P<.05

# Cost Savings Are Achieved Without Increasing Mortality

- Primarily through proactive communication, palliative care facilitates earlier implementation of a care plan that is realistic, appropriate and consistent with the patient's preferences and values
- This reduces use of nonbeneficial intensive care treatments and shortens lengths of stay while increasing availability of ICU resources for patients in need

Norton SA et al., *Crit Care Med* 2007; O'Mahony S et al., *Palliat Med* 2009;  
Campbell ML, Guzman JA, *Chest* 2003

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

Sally A. Norton, PhD, RN; Laura A. Hogan, MS, RN, ACHPN; Robert G. Holloway, MD, MPH; Helena Temkin-Greener, PhD, MPH; Marcia J. Buckley, MS, RN, BC-PCM; Timothy E. Quill, MD

**Objective:** The purpose of this study was to examine the effect of proactive palliative care consultation on length of stay for high-risk patients in the medical intensive care unit (MICU).

**Design:** A prospective pre/post nonequivalent control group design was used for this performance improvement study.

**Setting:** Seventeen-bed adult MICU.

**Patients:** Of admissions to the MICU, 191 patients were identified as having a serious illness and at high risk of dying: 65 patients in the usual care phase and 126 patients in the proactive palliative care phase. To be included in the sample, a patient had to meet one of the following criteria: a) intensive care admission following a current hospital stay of  $\geq 10$  days; b) age  $> 80$  yrs in the presence of two or more life-threatening comorbidities (e.g., end-stage renal disease, severe congestive heart failure); c) diagnosis of an active stage IV malignancy; d) status post cardiac arrest; or e) diagnosis of an intracerebral hemorrhage requiring mechanical ventilation.

**Interventions:** Palliative care consultations.

**Measurements and Main Results:** Primary measures were patient lengths of stay a) for the entire hospitalization; b) in the MICU; and c) from MICU admission to hospital discharge. Secondary measures included mortality rates and discharge disposition. There were no significant differences between the usual care and proactive palliative care intervention groups in respect to age, gender, race, screening criteria, discharge disposition, or mortality. Patients in the proactive palliative care group had significantly shorter lengths of stay in the MICU (8.96 vs. 16.28 days,  $p = .0001$ ). There were no differences between the two groups on total length of stay in the hospital or length of stay from MICU admission to hospital discharge.

**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. (Crit Care Med 2007; 35:1530–1535)

**KEY WORDS:** palliative care; critical care; intensive care unit; length of stay; terminal care; patient care

Proactive palliative care consultation reduced MICU length of stay from

16.28 to 8.96 days ( $p=0.0001$ )

*No changes in mortality or discharge disposition*

# Additional Benefits Associated with Reduced Resource Utilization

- Improved throughput
- Availability of beds for high-margin/short-stay patients, e.g., postoperative patients
- Reduction of ICU staffing needs in low-capacity systems

# Other Positive Outcomes of Effective Communication

- ✓ Less conflict
  - Lilly C et al. *Am J Med* 2000; 109:469–75.
- ✓ Better family comprehension
  - Azoulay E et al. *Am J Respir Crit Care Med* 2002; 165:438–42
- ✓ Family satisfaction
  - Stapleton RD et al. *Crit Care Med* 2006; 34:1679–85
  - McDonagh JR et al. *Crit Care Med* 2004; 32:1484–8
- ✓ Improved family psychological well-being
  - Lautrette A et al. *N Engl J Med* 2007; 356:469–78

ORIGINAL ARTICLE

## A Communication Strategy and Brochure for Relatives of Patients Dying in the ICU

Alexandre Lautrette, M.D., Michael Darmon, M.D., Bruno Megarbane, M.D., Ph.D.,  
Luc Marie Joly, M.D., Sylvie Chevret, M.D., Ph.D., Christophe Adrie, M.D., Ph.D.,  
Didier Barnoud, M.D., Gérard Bleichner, M.D., Cédric Bruel, M.D.,  
Gérald Choukroun, M.D., J. Randall Curtis, M.D., M.P.H., Fabienne Fieux, M.D.,  
Richard Galliot, M.D., Maité Garrouste-Orgeas, M.D., Hugues Georges, M.D.,  
Dany Goldgran-Toledano, M.D., Mercé Jourdain, M.D., Ph.D., Georges Loubert, M.D.,  
Jean Reignier, M.D., Fayçal Saidi, M.D., Bertrand Souweine, M.D., Ph.D.,  
François Vincent, M.D., Nancy Kentish Barnes, Ph.D., Frédéric Pochard, M.D., Ph.D.,  
Benoit Schlemmer, M.D., and Elie Azoulay, M.D., Ph.D.

Lautrette A et al. *N Engl J Med* 2007; 356:469–78

# Impact of Communication on Family Well-Being After the ICU

Lautrette et al. cited in the preceding slide reported a randomized controlled trial of proactive, protocol-based ICU family meetings with distribution of printed informational materials

## Results at 90-day follow-up of families:

- Lower Impact of Event (PTSD) score
- Lower prevalence of PTSD-related symptoms
- Lower levels of anxiety and depression
- Lower prevalence of anxiety and depression

# Improved Performance of Evidence-Based Care Processes

- An ICU–palliative care initiative can achieve more timely and reliable performance of evidence-based care processes
- For example, ICUs in the Transformation of the ICU (TICU) program of the Voluntary Hospital Association (VHA), Inc., implemented initiatives to improve performance of nine processes measured in the “Care and Communication Bundle” ([www.qualitymeasures.ahrq.gov](http://www.qualitymeasures.ahrq.gov))

# “Care and Communication Bundle” of Time-Triggered ICU Palliative Care Quality Measures

## By ICU Day 1

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

## By ICU Day 3

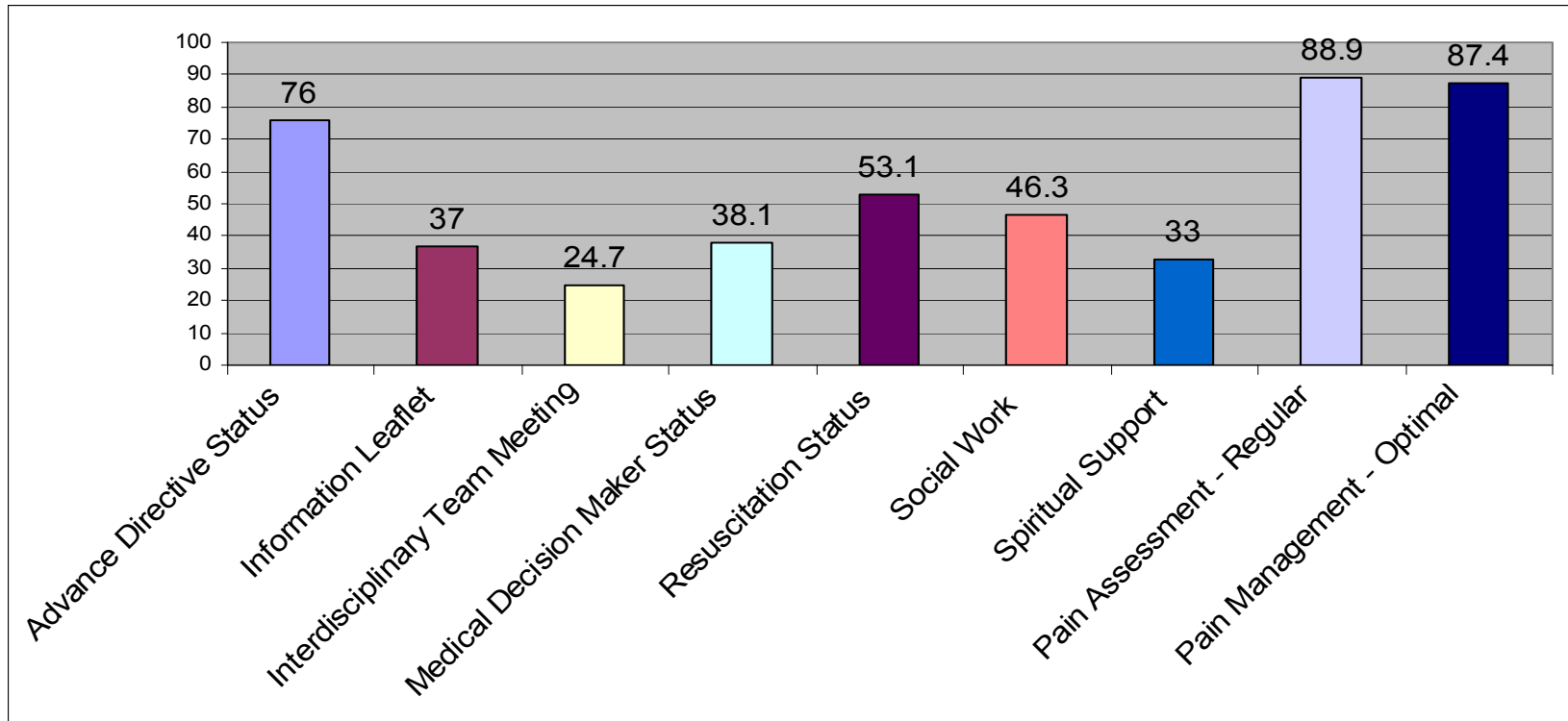
- (7) Offer social work support
- (8) Offer spiritual support

## By ICU Day 5

- (9) Interdisciplinary family meeting

*Quality and Safety in Health Care* 2006; 15:264–71

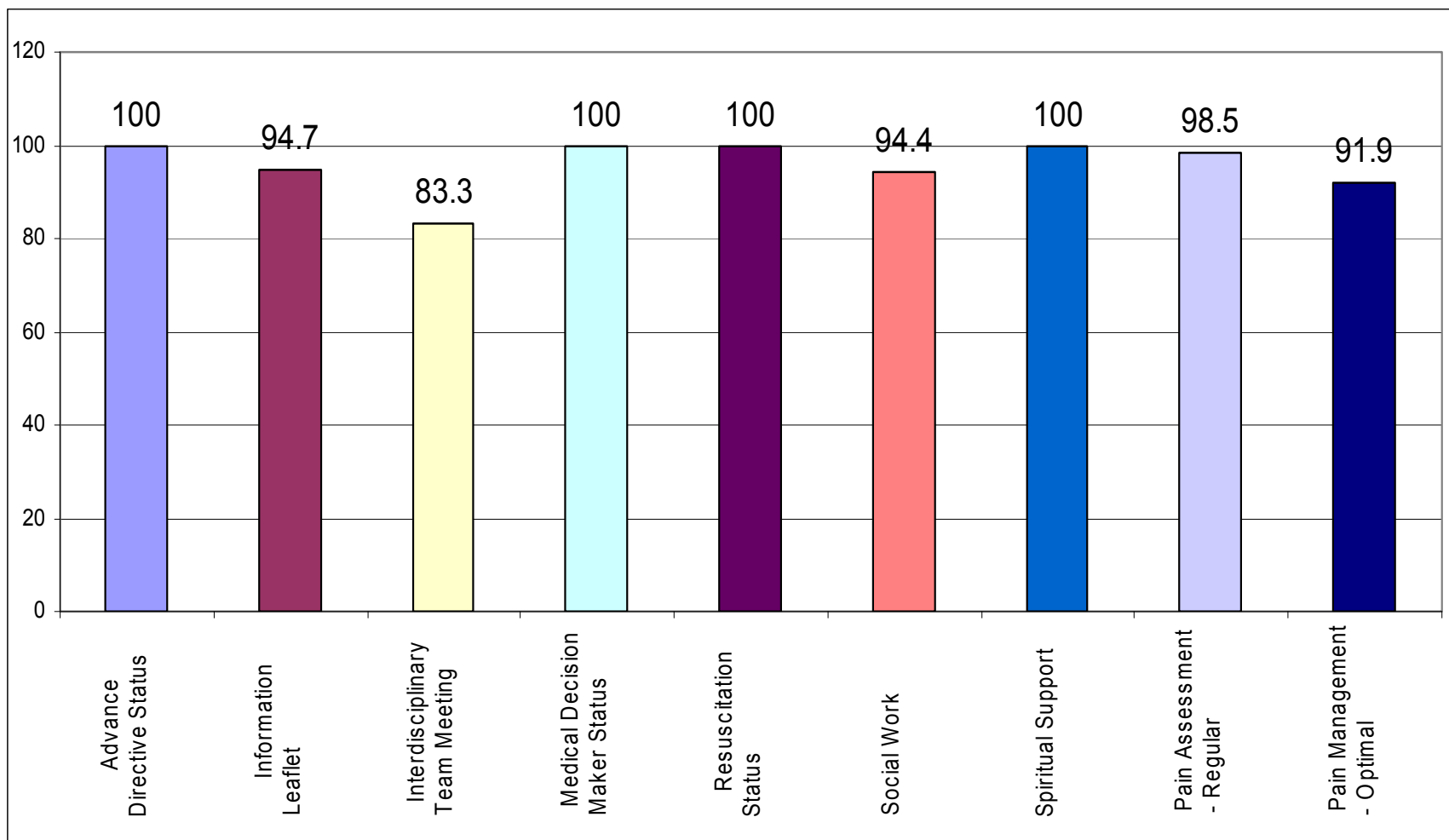
# BEFORE the ICU–Palliative Care Initiative



Percent of patients with ICU stay  $\geq 5$  days for whom care process was performed in fourth quarter 2006

(N=100 patients in 6 ICUs in VHA, Inc., Transformation of the ICU program)

# AFTER the ICU–Palliative Care Initiative: Performance of “Care and Communication Bundle,” May–July 2007



# Palliative Care Initiative Can Also Help Support ICU Clinicians

- *Education*: Knowledge and skills needed for optimal patient and family care
- *Facilitation*: Assistance with time-consuming family meetings and arrangements for post-ICU care
- *Alleviation*: Direct and indirect support to reduce clinician distress and burnout

# Making the Case

- The ICU is a key venue for providing and improving palliative care
- Persistent deficiencies in this care cause distress for patients, families and clinicians and inefficient utilization of resources
- An ICU–palliative care initiative can achieve a broad range of clinical benefits and cost savings
- Tools, technical assistance and other resources to support such an initiative are available through The IPAL-ICU Project