



Reference Notes for Palliative Care Consultation

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The interprofessional health care specialty of palliative care employs holistic evaluation and person-centered communication in the care of people with life-threatening illness. Palliative care clinicians are consulted for one or more of the following reasons:

- Symptom assessment and management
- Assistance with making difficult decisions about continued use or withdrawal of life-sustaining interventions
- Communication for planning the most appropriate care setting to meet person/family goals for end-of-life care
- Assessment of suitability and eligibility for hospice care

This resource is a compilation of previously published documents and tools useful to palliative care clinicians in preparing for and conducting these consultations. In addition, it can be a reference for students and clinical trainees doing course work, analyzing case studies, or simulating clinical communication scenarios. The materials are indexed for easy retrieval, referenced to acknowledge sources and allow further exploration, and organized into the following categories:

- **Palliative Care Definitions/Domains/Dimensions**
- **Communication**
- **Symptom Assessment**
- **Functional Status Evaluation**
- **Prognostication**
- **End-of-Life Assessment and Management**
- **Symptom Management**
- **Hospice Eligibility Criteria**
- **Withholding and Withdrawing Life-Sustaining Interventions**
- **Pediatric End-of-Life Issues**

Reference Notes for Palliative Care Consultation

Compiled by Robert F Johnson MD

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Selected Abbreviations

ACEI = angiotensin-converting enzyme inhibitor
ADL = Activities of Daily Living
ALS = Amyotrophic Lateral Sclerosis
BIS = Burden of Illness Score
Ca++ = Calcium level
CCI = Charlson Comorbidity Index
CD4 = cluster of differentiation 4 (category of white blood cell – lymphocyte)
CDT = Clock-Drawing Test
CHF = Congestive Heart Failure
CLL = Chronic Lymphocytic Leukemia
CML = Chronic Myelocytic Leukemia
CNS = Central Nervous System
CPR = cardiopulmonary resuscitation
COPD = Chronic Obstructive Pulmonary Disease
DIC = Disseminated Intravascular Coagulation

DNAR = Do-Not-Attempt-Resuscitation
DVT = Deep Vein Thrombosis
ECOG = Eastern Cooperative Oncology Group
EF = ejection fraction, cardiac
EOL = End-of-Life
ESRD = End-stage Renal Disease
FAST = Functional Assessment STaging (dementia)
FEV1 = Forced Expiratory Volume 1 Second
GCS = Glasgow Coma Scale
Greater Than (>), Less Than (<)
HD = hemodialysis
Hgb = hemoglobin level
HIV = Human Immunodeficiency Virus
IABP = Intra-Aortic Balloon Pump
IADL = Instrumental Activities Daily Living
KPS = Karnosky Performance Scale
KS = Kaposi sarcoma
LDH = Lactic DeHydrogenase level
LVAD = Left Ventricular Assist Device
MBO = Malignant Bowel Obstruction
MRIS = Mortality Risk Index Score
m-R = modified Rankin score
MAC = mycobacterium avium complex
NCF = National Consensus Project for Quality Palliative Care
NIPPV = Non-Invasive Positive Pressure Ventilation
NHL = Non-Hodgkins Lymphoma
NQF = National Quality Forum
NSAID = Non-steroidal anti-inflammatory drug
NSCLC = Non-Small Cell Lung Cancer
NYHA = New York Heart Association
PAD = Pain/Agitation/Delerium
PaP = Palliative Prognostic Score
PC = Palliative Care
PACD = Palliative Care for Advanced Disease
PCN = Palliative Care Notes
PE = Pulmonary Embolism
PIMOA = Prognostic Index 1-yr Mortality Older Adults
plt = platelet level
PPI = Palliative Prognostic Index
PPS = Palliative Performance Scale
QOL = Quality of Life
QTc = corrected QT interval on ECG
RASS = Richmond Agitation-Sedation Scale
SAS = Sedation-Agitation Scale (Riker)

SBP = Spontaneous Bacterial Peritonitis
SDM = Shared Decision-Making
SCCM = Society of Critical Care Medicine
SCLC = Small Cell Lung Cancer
SNRI = Serotonin Norepinephrine Re-Uptake Inhibitor
SQ = subcutaneous
SSRI = Selective Serotonin Re-Uptake Inhibitor
TCA = Tri-Cyclic Anti-Depressant
UDT = urine drug/toxin screen
WBC = White Blood Cell count
WWLST = Withholding/Withdrawing Life-Sustaining Treatment

WHO Definition of Palliative Care

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Palliative care is an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual. Palliative care:

- provides relief from pain and other distressing symptoms;
- affirms life and regards dying as a normal process;
- intends neither to hasten or postpone death;
- integrates the psychological and spiritual aspects of patient care;
- offers a support system to help patients live as actively as possible until death;
- offers a support system to help the family cope during the patients illness and in their own bereavement;
- uses a team approach to address the needs of patients and their families, including bereavement counselling, if indicated;
- will enhance quality of life, and may also positively influence the course of illness;
- is applicable early in the course of illness, in conjunction with other therapies that are intended to prolong life, such as chemotherapy or radiation therapy, and includes those investigations needed to better understand and manage distressing clinical complications.

WHO Definition of Palliative Care for Children

Palliative care for children represents a special, albeit closely related field to adult palliative care. WHO's definition of palliative care appropriate for children and their families is as follows; the principles apply to other pediatric chronic disorders (WHO; 1998a):

- Palliative care for children is the active total care of the child's body, mind and spirit, and also involves giving support to the family.
- It begins when illness is diagnosed, and continues regardless of whether or not a child receives treatment directed at the disease.
- Health providers must evaluate and alleviate a child's physical, psychological, and social distress.
- Effective palliative care requires a broad multidisciplinary approach that includes the family and makes use of available community resources; it can be successfully implemented even if resources are limited.
- It can be provided in tertiary care facilities, in community health centers and even in children's homes.

Definition of palliative care (English): European Association for Palliative care

Palliative care is the active, total care of the patients whose disease is not responsive to curative treatment. Control of pain, of other symptoms, and of social, psychological and spiritual problems is paramount.

Palliative care is interdisciplinary in its approach and encompasses the patient, the family and the community in its scope. In a sense, palliative care is to offer the most basic concept of care – that of providing for the needs of the patient wherever he or she is cared for, either at home or in the hospital.

Palliative care affirms life and regards dying as a normal process; it neither hastens nor postpones death. It sets out to preserve the best possible quality of life until death.

Palliative care focuses on improving a patient's quality of life by managing pain and other distressing symptoms of a serious illness. Palliative care should be provided along with other medical treatments. *Hospice* is palliative care for patients in their last year of life. Hospice care can be provided in patients' homes, hospice centers, hospitals, long-term care facilities, or wherever a patient resides. Physicians who specialize in hospice and palliative medicine work with other doctors and healthcare professionals; listen to patients and align their treatments with what's important to them; and help families navigate the complex healthcare system.

Nine Dimensions of Whole Patient Assessment for Palliative Care

1. Illness, Treatment – Summary
2. Physical
3. Psychological
4. Decision-Making
5. Communication
6. Social
7. Spiritual
8. Practical
9. Anticipatory Planning

Perspectives on a Suffering Person

1. Disease – what a person has
2. Dimension – what a person is
3. Behavior – what a person does
4. Life Status – what a person wants

National Consensus Project for Quality Palliative Care (NCF) – National Quality Forum (NQF) Domains:

- 1. Structure/Process**
- 2. Physical**
- 3. Psychologic/Psychiatric**
- 4. Social**
- 5. Spiritual/Existential/Religious**
- 6. Cultural**
- 7. Care of Imminently Dying**
- 8. Ethical/Legal**

NCF: Palliative care means patient- and family-centered care that optimizes QOL by anticipating, preventing, and treating suffering. Palliative care throughout the continuum of illness involves addressing physical, emotional, emotional, social, and spiritual needs – and to facilitate patient autonomy, access to information, and choice.

PCAD Introduction



Purpose of PCAD:

The Goals of PCAD are to:

- Respect patient autonomy, values, and decisions
- Continually clarify the goals of care
- Minimize symptom distress at the end of life
- Optimize appropriate supportive interventions and consultations
- Reduce unnecessary interventions
- Support families by coordinating services
- Eliminate unnecessary regulations
- Provide bereavement services for families and staff
- Facilitate the transition to alternative care settings, such as hospice, when appropriate

PCAD consists of three components (forms are available in .pdf format):

- PCAD Care Path – the interdisciplinary plan of care
- PCAD Daily Patient Care Flowsheet – an interdisciplinary documentation tool for daily assessments and interventions
- PCAD Healthcare Provider/MD-Order Sheet – a documentation tool and suggestions for symptom control approaches

Process for utilization of PCAD Pathway (See Flowchart below):

Step 1: Patient Identification

Identification of a patient that is likely to die during this hospitalization (i.e., likely to die within minutes to days) by any staff member. Any staff member or others listed may suggest a patient for PCAD.

Step 2: Interdisciplinary Assessment

Interdisciplinary assessment of the patient for PCAD and discussion with the primary healthcare provider – The unit leadership assesses the appropriateness of the patient for PCAD and initiates an order for PCAD with the primary healthcare provider.

Step 3: Provider Clarification

Clarification of goals of care with the patient/family by the primary healthcare provider – The primary healthcare provider clarifies the goals of care with the patient and/or family and orders PCAD if end-of-life supportive care is the primary goal of care.

Step 4: Implementation

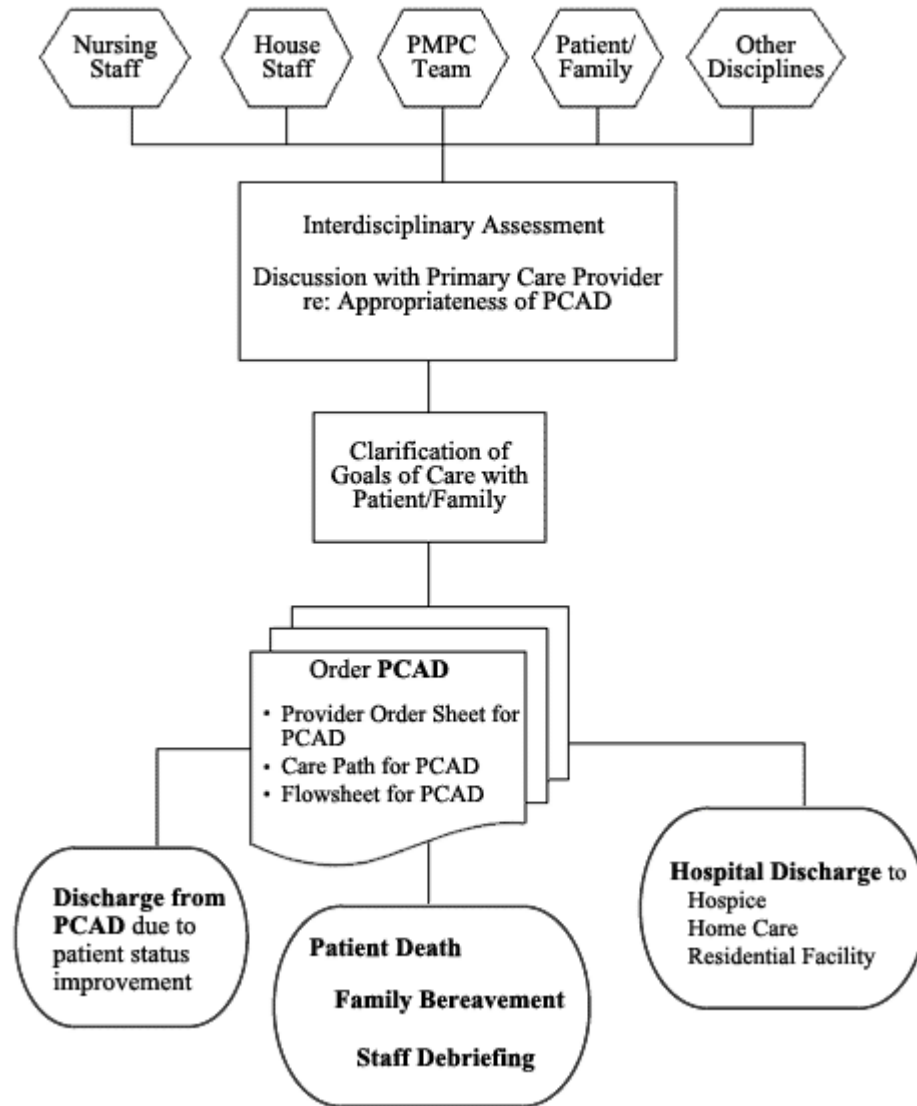
The primary healthcare provider orders PCAD using the PCAD Provider Order Sheet and rewrites the orders for the patient. Nurses complete the demographic information on the PCAD Pathway and initiate a PCAD Daily Patient Care Flowsheet.

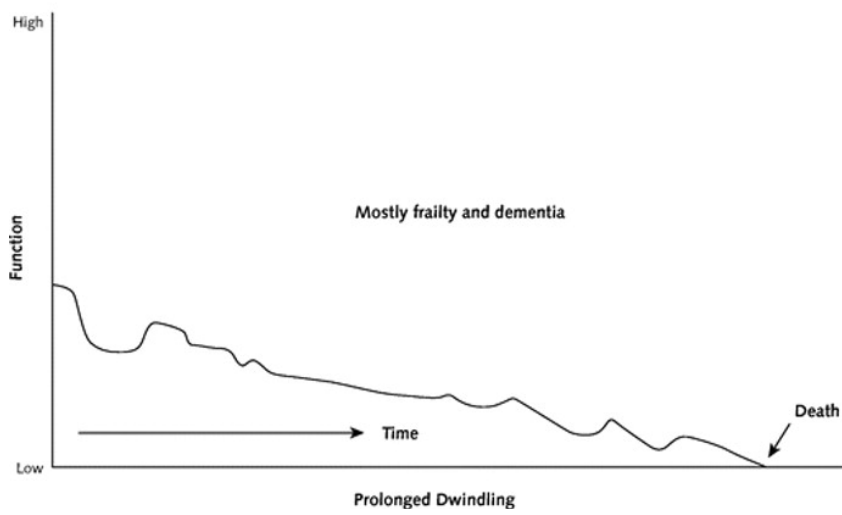
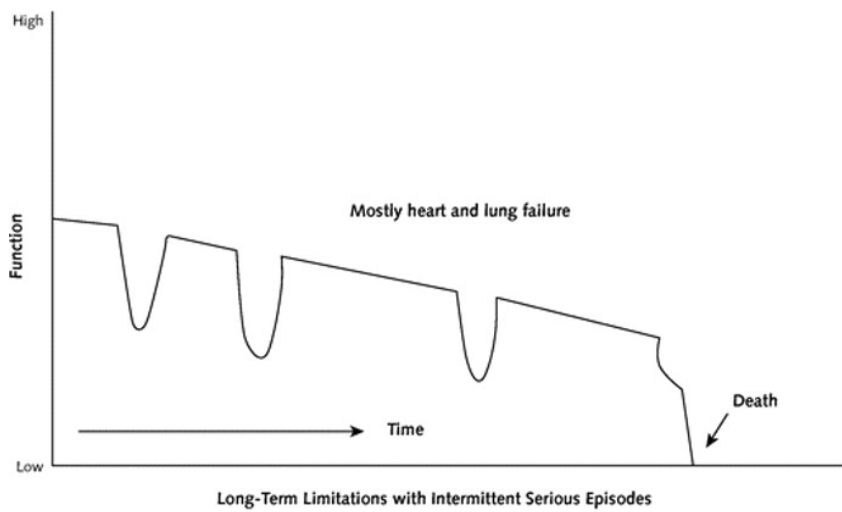
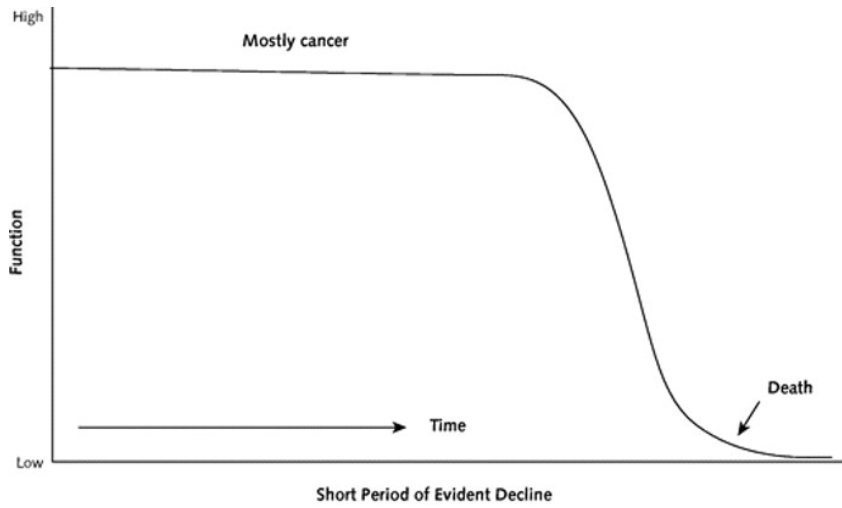
Step 5: Discharge

The patient is discharged to an alternative care setting or dies on unit. A family bereavement policy is initiated (e.g., condolence card and educational materials sent) and a staff debriefing session is conducted.

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Flowchart of Palliative Care for Advanced Disease (PCAD) Pathway





Name/Service, Attending, Patient Name/#, Requesting/Reason/Date

Palliative Care Assessment:

Introduction: Age, Gender, Location, Adm Date, 1° Disease, CC

Background: Social (Family, Work, Live)

Psych (prior dx, coping, substances)

Spirit (religion, existential)

PMH: Med, Surg, Allergies, incoming Meds

1°Disease: Dx, Rx, current Status, Adv Directive, Code Status

Symptoms: Describe, Assess

Pain

Fatigue

Sedation, Drowsiness

Sleep Disturbance

Appetite, Dysphagia, Wt Loss

N/V, Constipation, Diarrhea

Incontinence

Itch

Depression, Anxiety

Hallucination, Myoclonus, Seizure

Exam: VS

Cachexia, Wt Loss, Overt Manifestation of 1° Disease

Cognition/Delerium

Mouth, Nodes, Chest, Heart, Abd, Skin, Extremities, Neuro

Describe Painful Locations

Other Info: Relevant Labs, Imaging, Consults

Impressions: Palliative Care Diagnoses

Assessment: Analysis of sx and/or perspective on communication/decision- making
Recommend/Plan

Assessment in Palliative Medicine – Outline

Patient Who is patient? – social context
 What is wrong? – illness, where in course of illness
 Is patient “clear-headed” – What does patient understand?
 What are Goals of Care?
 Prolong survival
 Optimize function
 Optimized comfort
 What are consequences – How are you coping?

Physical/psychological/social/existential

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What are deeper thoughts/future problems

Family

Who is family? – social context

What is physical/psychological well-being of family?

Coping?

What are deeper thoughts/future problems/other losses in past?

HCP

Who is involved?

? expertise/experience/understanding of illness

Care Plan

Medical condition/Goals of care

Patient/family issues

Physical

Psychological

Spiritual/existential

Social

Communication/decision-making

Understanding

HCP issues

Staffing

Training

Resources

Emotional coping

Coping assessment

Patient

Family

HCP

Contingency planning

Patient-Centered Communication (PCC): Goal is **Shared Decision-Making (SDM)**

Elements:	<u>Setting</u>	<u>Issues/Discussion Points</u>	<u>Strategies</u>
	<u>Assess P/F Perspective</u> (P/F=Patient/Family)	(Start Here) Environment/Introductions Condition Implication Values/Goals/Preferences Information/Decision Style	“Warning Shot” Active listening “Tell-Me-More” “Most Important” 3 Levels
	<u>Exchange Information</u>	Diagnosis Prognosis Bad News Options Curative Palliative Hospice EOL/LSI/DNAR	Correlate to V/G/P “Ask-Tell-Ask”
	<u>Respond to Emotion</u> <u>Manage Uncertainty</u>		“NURSE” “Best-Worst” “Hope-Worry”
	<u>Summary/Recap</u>	(Finish Here) Information Goals/Preferences Decision(s) Plan(s) Follow-up	

Shared Decision-Making: Overall Purpose: Mutual/shared Understanding
Mutual/shared Goals and Plan
Healing Relationship

“VALUE”
V alue Patient/family statements
A cknowledge emotion/uncertainty
L isten
U nderstand
E licit questions

“ASCEND”
A nticipate (pre-planning)
S ummarize (understanding)
C oncerns (acknowledge)
E xplore, Explain (information, goals)
N ext steps
D ocument

SPIKES: “Bad News” format (and a “roadmap” for PCC communication event)

S:	Setting	<ul style="list-style-type: none"> “Set-up”: Preparation/Planning Environment/Comfort Avoid Distractions Participants/Introductions “Warning Shot”
P:	Patient/Family Perspective	<ul style="list-style-type: none"> ? Perception of current status ? Expectations ? Misunderstanding/Misconception/Denial Values/Goals
I:	Invitation	Type/Extent of Information (Prognosis)
K:	Knowledge	<ul style="list-style-type: none"> Gauge to individual Direct/Avoid Jargon Small “Chunks” Ask-Tell-Ask Relate information to values/goals Address decision points <ul style="list-style-type: none"> Overall goals Necessary specifics (eg DNR)
E:	Emotion/Uncertainty	<ul style="list-style-type: none"> Respond to Emotion (NURSE mnemonic) Manage Uncertainty
S:	Summary	<ul style="list-style-type: none"> Summarize Assess Understanding Strategy/Next Steps Follow-up Nonabandonment

NURSE: Responding to Emotion

N:	Name	<ul style="list-style-type: none"> Suggestive rather than Declarative (“it sounds like.....”) Active Listening Restate/Summarize
U:	Understand	<ul style="list-style-type: none"> Exploration/Active Listening/Appropriate Silence (“I’m understanding you to say.....”) (“I cannot imagine what it is like....”) Avoid Premature Reassurance
R:	Respect	<ul style="list-style-type: none"> Acknowledge/Respect Intensity of Emotion Normalize Praise Coping Skills Non-Verbal Cues Important
S:	Support	<ul style="list-style-type: none"> Expression of Concern Articulate Understanding Willingness to Help/Partner Nonabandonment
E:	Explore	<ul style="list-style-type: none"> (“tell me more....”) Empathy (contrasted with sympathy) (“I.....you....”)

UFO-UFO

Understand: elicit patient's understanding of their medical situation

Listen for gaps in knowledge, mixed messages
Choose your words to match theirs
Listen for concrete vs abstract thinking styles

"I'm wondering if you could tell me what you already know about your illness"
"What have the doctors told you about your father's condition?"

Fill in Gaps: add your understanding of the situation

May need to break bad news
Take time to support emotions

"Let me fill in some details"
"I have some new information....."

Outcomes: elicit the range of patients desired outcomes; explore values, hopes, fears, expectations

Have patient describe an acceptable quality of life and function
Test the lower limit carefully

"Paint me a picture of what you would be able to do and enjoy"
"If things were a bit worse such as _____ would that be acceptable?"
"Are there health situations you are worried about getting stuck in?"
"Is there a quality of life your mother would find intolerable?"
"Given everything that has gone on, how do you think this will most likely turn out?"

Understand: find out more about the patient as a person and why they want what they want

"Help me understand your decision-making"
"Can you tell me about yourself that will help me understand you and where you're coming from?"
"What things are most important to you right now"
"Has your father or anyone in his family ever had experiences with severe illness – did he make any comments about his wishes then?"

Feasible Outcome: describe the range of outcomes you think are possible with treatment

May need to break bad news
Take time to support emotions

"Here is what we think are the possible results/outcomes of treatment – the best case scenario is _____, unfortunately there is a real possibility that _____ might happen, at this point what I think is most likely to happen is _____"

If there is overlap between the lowest acceptable QOL and the feasible outcomes:

"Since you are telling me you (your ___) would be OK even if the best we could do is get you out of the hospital to a nursing home, I recommend we try the _____, here is the plan I would recommend....., what do you think? OR Am I understanding you correctly?"

If there is NO overlap between the lowest acceptable QOL and feasible outcomes:

"We think the best we can hope for with the most aggressive continued treatment is to get your _____ out of the hospital but would still need 24 hour care in a nursing home, probably for the rest of _____ life, but ___ has said this would not be acceptable. In that case, I'm sorry to say that I cannot recommend that we continue the current level of treatment. We will not be able to get _____ to a life _____ would accept. I recommend that we focus on things we can accomplish, like ensuring the absence of pain and other symptoms"

Communication – Seven Steps:

Prepare	
Establish	(patient perspective)
Determine	(patient/family preferences)
Deliver	(information)
Respond	(emotion)
Establish	(plan, goals)

Decision-Making Communication Tool

Medical Indications

Diagnosis
 Prognosis
 Intervention
 Risks
 Benefits
 Symptom Management
 Nutrition

Patient Preferences

Informed/involved in decisions
 Plan of care
 Expectations
 Resuscitation

Quality of Life

Activities
 Relationships
 Emotional
 Spiritual

Contextual Issues

Home
 Caregiver/Family
 Cultural
 Spiritual
 Financial
 Legal
 Social

“how much information do you want to know about your prognosis”?

Wants to know:	determine specific information wanted
how to present:	provide information with “ballpark” exception “it is impossible to predict for any individual with certainty but the average person with your.....”

Does not want to know: assess why, acknowledge emotion, provide enough for decisions or establish proxy

Ambivalent or afraid: acknowledge, explore concerns, provide options for presenting

Pain Assessment – Comprehensive

Patient's self-report is the "gold" standard, alternative methods/observations if patient unable to report

Pain Experience and Context

Location, referral, radiation

Intensity

Last 24 hours and current, rest/movement

Interference with activities

General, mood, relationships, sleep, appetite

Timing

Onset, duration course; persistent/intermittent

Quality

Aching, stabbing throbbing, pressure (somatic)

Gnawing, cramping, aching, sharp (visceral)

Sharp, tingling, shooting (neuropathic)

Aggravating/Alleviating factors

Other symptoms

Current pain management

Meds, how much/often, prescriber

Response, relief, compliance, side effects

Prior pain therapies

Reason, length of use, response, ?discontinued

Special issues

Meaning/consequence for patient/family

Knowledge/beliefs regarding pain medications

Cultural, religious, spiritual, existential beliefs

Goals and expectations

Psychosocial/psychiatric

Prior/current substance abuse

Risk factors for aberrant use/diversion (environmental, social)

Risk factors for undertreatment

Peds, geriatric, minorities, female

History abuse, history neuropathic pain

Cultural factors

Medical history – current/prior

Oncologic treatment, chemotherapy, radiation, surgery

Other significant illnesses. Pre-existing chronic pain

Physical exam, labs, imaging

>> Pain diagnosis and individualized pain treatment plan based on mutually developed goals

Pain diagnosis includes etiology (disease process, treatment implication) and pathophysiology (somatic/visceral, neuropathic)

Pain Assessment Mnemonic:

Words

Intensity

Location

Duration

Aggravating/Alleviating

4 A's of pain management outcome

Analgesia

Activities

Adverse effects

Abrerrant behavior

Facial Expression	frown, fright, grimace forehead wrinkle, rapid blinking
Vocalizations	sigh, moan, groan, grunt, chant, call out noisy breathing, ask for help, verbally abusive
Body Movements	rigid, tense, guarded, fidget, pace, rock restricted movement; altered gait, mobility
Change in Interpersonal Interaction	aggressive, combative, decreased interaction inappropriate, disruptive, withdrawn
Change in Activity Pattern or Routines	refuse food, appetite change, increased resting, change in sleep pattern stop routines, wandering
Mental Status Changes	crying/tears, confusion, irritable, distressed

Categories:

FACIAL EXPRESSION	UPPER LIMBS	COMPLIANCE WITH VENTILATOR
	(POINTS)	
	(1)	
relaxed	no movement	tolerating
	(2)	
partially tightened brow	partially bent	coughing but tolerating most of time
	(3)	
fully tightened brow	fully bent, finger flexion	fighting ventilator
	(4)	
grimacing	retracted	unable to control ventilation

Score points for each category

Total 5 or greater consistent with pain response

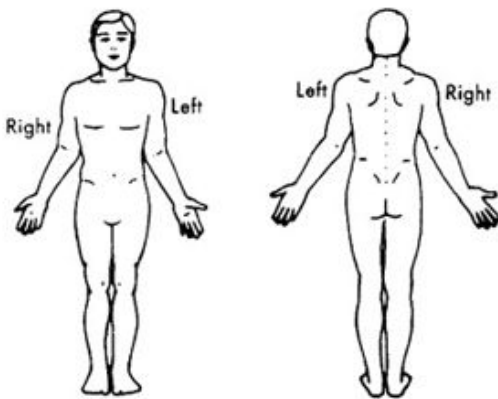
FORM 3.2 **Brief Pain Inventory**

Date ___ / ___ / ___ Time: _____

Name: _____
Last First Middle Initial

1) Throughout our lives, most of us have had pain from time to time (such as minor headaches, sprains, and toothaches). Have you had pain other than these everyday kinds of pain today?
 1. Yes 2. No

2) On the diagram shade in the areas where you feel pain. Put an X on the area that hurts the most.



3) Please rate your pain by circling the one number that best describes your pain at its **worst** in the past 24 hours.

0 1 2 3 4 5 6 7 8 9 10
 No pain pain as bad as you can imagine

4) Please rate your pain by circling the one number that best describes your pain at its **least** in the past 24 hours.

0 1 2 3 4 5 6 7 8 9 10
 No pain pain as bad as you can imagine

5) Please rate your pain by circling the one number that best describes your pain on the **average**

0 1 2 3 4 5 6 7 8 9 10
 No pain pain as bad as you can imagine

6) Please rate your pain by circling the one number that tells how much pain you have **right now**.

0 1 2 3 4 5 6 7 8 9 10
 No pain pain as bad as you can imagine

7) What treatments or medications are you receiving for your pain?

8) In the Past 24 hours, how much **relief** have pain treatments or medications provided? Please circle the one percentage that most shows how much relief you have received

0% 10 20 30 40 50 60 70 80 90 100%
 No Complete relief
 relief relief

9) Circle the one number that describes how, during the past 24 hours, pain has **interfered** with your:
 A. General activity

0 1 2 3 4 5 6 7 8 9 10
 Does not Completely
 interfere interferes

B. Mood

0 1 2 3 4 5 6 7 8 9 10
 Does not Completely
 interfere interferes

C. Walking ability

0 1 2 3 4 5 6 7 8 9 10
 Does not Completely
 interfere interferes

D. Normal work (includes both work outside the home and housework)

0 1 2 3 4 5 6 7 8 9 10
 Does not Completely
 interfere interferes

E. Relations with other people

0 1 2 3 4 5 6 7 8 9 10
 Does not Completely
 interfere interferes

F. Sleep

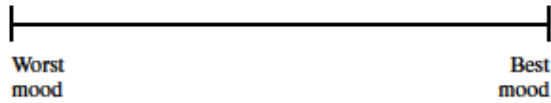
0 1 2 3 4 5 6 7 8 9 10
 Does not Completely
 interfere interferes

G. Enjoyment of life

0 1 2 3 4 5 6 7 8 9 10
 Does not Completely
 interfere interferes

Memorial Pain Assessment Card

4 Mood Scale



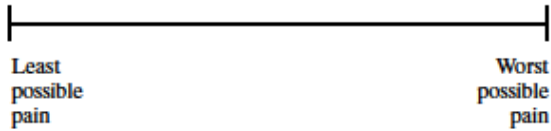
Put a mark on the line to show your mood.

2 Pain Description Scale

Moderate Strong Mild Just noticeable
No pain
Excruciating Weak Severe

Circle the word that describes your pain.

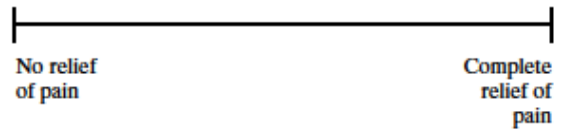
1 Pain Scale



Put a mark on the line to show how much pain there is.

Fold page along broken line so that each measure is presented to the patient separately in the numbered order.

3 Relief Scale



Put a mark on the line to show how much relief you get.

Used with permission. Memorial Sloan-Kettering Cancer Center Pain Assessment Card.

Pain Assessment in Advanced Dementia Scale (PAINAD)

Instructions: Observe the patient for five minutes before scoring his or her behaviors. Score the behaviors according to the following chart. Definitions of each item are provided on the following page. The patient can be observed under different conditions (e.g., at rest, during a pleasant activity, during caregiving, after the administration of pain medication).

Behavior Score

1. Breathing Independent of vocalization
 - 0 Normal
 - 1 Occasional labored breathing, short periods of hyperventilation
 - 2 Noisy labored breathing, long periods of hyperventilation, Cheyne-Stokes
2. Negative vocalization
 - 0 none
 - 1 occasional moan or groan, low-level speech with a major disapproving quality
 - 2 repeated trouble calling out, loud moaning or groaning, crying
3. Facial expression
 - 0 smiling or inexpressive
 - 1 sad, frightened, frown
 - 2 facial grimacing
4. Body language
 - 0 relaxed
 - 1 tense, distressed pacing, fidgeting
 - 2 rigid, fists clenched, knees pulled up or pushing away, striking out
5. Consolability
 - 0 no need to console
 - 1 distracted or reassured by voice or touch
 - 2 unable to console, distract, or reassure

TOTAL SCORE

(Warden et al., 2003)

Scoring:

The total score ranges from 0-10 points. A possible interpretation of the scores is: 1-3=mild pain; 4-6=moderate pain; 7-10=severe pain. These ranges are based on a standard 0-10 scale of pain, but have not been substantiated in the literature for this tool.

Source:

Warden V, Hurley AC, Volicer L. Development and psychometric evaluation of the Pain Assessment in Advanced Dementia (PAINAD) scale. *J Am Med Dir Assoc.* 2003;4(1):9-15.

PAINAD Item Definitions

(Warden et al., 2003)

Breathing

1. *Normal breathing* is characterized by effortless, quiet, rhythmic (smooth) respirations.
2. *Occasional labored breathing* is characterized by episodic bursts of harsh, difficult, or wearing respirations.
3. *Short period of hyperventilation* is characterized by intervals of rapid, deep breaths lasting a short period of time.
4. *Noisy labored breathing* is characterized by negative-sounding respirations on inspiration or expiration. They may be loud, gurgling, wheezing. They appear strenuous or wearing.
5. *Long period of hyperventilation* is characterized by an excessive rate and depth of respirations lasting a considerable time.
6. *Cheyne-Stokes respirations* are characterized by rhythmic waxing and waning of breathing from very deep to shallow respirations with periods of apnea (cessation of breathing).

Negative Vocalization

1. *None* is characterized by speech or vocalization that has a neutral or pleasant quality.
2. *Occasional moan or groan* is characterized by mournful or murmuring sounds, wails, or laments. Groaning is characterized by louder than usual inarticulate involuntary sounds, often abruptly beginning and ending.
3. *Low level speech with a negative or disapproving quality* is characterized by muttering, mumbling, whining, grumbling, or swearing in a low volume with a complaining, sarcastic, or caustic tone.
4. *Repeated troubled calling out* is characterized by phrases or words being used over and over in a tone that suggests anxiety, uneasiness, or distress.
5. *Loud moaning or groaning* is characterized by mournful or murmuring sounds, wails, or laments in much louder than usual volume. Loud groaning is characterized by louder than usual inarticulate involuntary sounds, often abruptly beginning and ending.
6. *Crying* is characterized by an utterance of emotion accompanied by tears. There may be sobbing or quiet weeping.

Facial Expression

1. *Smiling or inexpressive*. Smiling is characterized by upturned corners of the mouth, brightening of the eyes, and a look of pleasure or contentment. Inexpressive refers to a neutral, at ease, relaxed, or blank look.
2. *Sad* is characterized by an unhappy, lonesome, sorrowful, or dejected look. There may be tears in the eyes.
3. *Frightened* is characterized by a look of fear, alarm, or heightened anxiety. Eyes appear wide open.
4. *Frown* is characterized by a downward turn of the corners of the mouth. Increased facial wrinkling in the forehead and around the mouth may appear.
5. *Facial grimacing* is characterized by a distorted, distressed look. The brow is more wrinkled, as is the area around the mouth. Eyes may be squeezed shut.

Body Language

1. *Relaxed* is characterized by a calm, restful, mellow appearance. The person seems to be taking it easy.
2. *Tense* is characterized by a strained, apprehensive, or worried appearance. The jaw may be clenched. (Exclude any contractures.)

3. *Distressed pacing* is characterized by activity that seems unsettled. There may be a fearful, worried, or disturbed element present. The rate may be faster or slower.
4. *Fidgeting* is characterized by restless movement. Squirming about or wiggling in the chair may occur. The person might be hitching a chair across the room. Repetitive touching, tugging, or rubbing body parts can also be observed.
5. *Rigid* is characterized by stiffening of the body. The arms and/or legs are tight and inflexible. The trunk may appear straight and unyielding. (Exclude any contractures.)
6. *Fists clenched* is characterized by tightly closed hands. They may be opened and closed repeatedly or held tightly shut.
7. *Knees pulled up* is characterized by flexing the legs and drawing the knees up toward the chest. An overall troubled appearance. (Exclude any contractures.)
8. *Pulling or pushing away* is characterized by resistiveness upon approach or to care. The person is trying to escape by yanking or wrenching him- or herself free or shoving you away.
9. *Striking out* is characterized by hitting, kicking, grabbing, punching, biting, or other form of personal assault.

Consolability

1. *No need to console* is characterized by a sense of well-being. The person appears content.
2. *Distracted or reassured by voice or touch* is characterized by a disruption in the behavior when the person is spoken to or touched. The behavior stops during the period of interaction, with no indication that the person is at all distressed.
3. *Unable to console, distract, or reassure* is characterized by the inability to soothe the person or stop a behavior with words or actions. No amount of comforting, verbal or physical, will alleviate the behavior.

Characterize multiple dimensions of pain:

- Intensity

- Temporal features (onset, course, daily fluctuation, breakthrough)

- Location, radiation

- Quality

- Aggravating/alleviating factors

Understand nature of pain:

- Cause

- Pathophysiology

- Pain syndrome

Identify effects of the Pain on Quality of Life:

- Physical function and well-being

- Mood, coping, psychological well-being

- Social and family relationships

- Sleep, vitality, sexuality

Clarify extent of malignant disease, planned intervention(s), prognosis

Clarify nature and quality of previous testing and past treatments

Detail medical comorbidities

Elucidate psychiatric comorbidities:

- Substance-use history

- Depression/anxiety

- Personality disorder

Detail current interventions/medications

Identify other need for palliative care intervention:

- Other symptoms

- Psychosocial/spiritual distress

- Caregiver burden

- Communication, care coordination, goal-setting

1. Have you been feeling down much of the day for the past few weeks?
2. Do you find that you don't experience pleasure or enjoyment from your usual activities, not because of pain, but because you just don't feel interested?
(depression)
3. During the last six months have you been nervous or worried a lot of the time about bad things that might happen?
4. Has worry at night – or during the day – kept you from being able to sleep soundly?
(anxiety)
5. Have you experienced a past or recent loss with which you are still having some difficulty coping?
(bereavement)
6. Are you currently worried about your family members' ability to cope with your illness?
(relationships)
7. Have you found that you are struggling to find a sense of purpose in your life or to feel more hopeful?
8. Have you been struggling with your faith as a result of your illness?
(existential, spiritual)
9. What is most stressful to you about your illness? (e.g. change in function or appearance, fear of dying)
10. Circle the number below that best describes in general how much **distress** you have been experiencing in the past week including today:
No Distress __1__2__3__4__5__6__7__8__9__10 Extremely Distressed

(6+ on scale or 5+ "yes" answers > consider psych referral)

Psychosocial Distress Mnemonic

B	ackground	(what is going on?)
A	ffect	(how feel?)
T	rouble	(what bothers?)
H	andle	(how cope?)
E	mpathy	

Depression screen: Have you been bothered by feeling down, depressed, or hopeless?
 Have you been bothered by a lack of pleasure in doing things?

Fear of Burdening Family:

- Ask for more information, clarify meaning
- Identify communication barriers
- Normalize feelings
- Open communication
- “disease is a burden, not you”
- Consider family support a gift

Fear of Dying/Leaving Family:

- Stay present emotionally
- Normalize (vs. “naturalize”)
- Reassure regarding symptom control
- Determine what has been done to prepare for death
- Identify communication barriers
- Acknowledge difficulty of communication
- Listen more than speak
- Acknowledge courage to speak of this issue

Denial vs Approach:

- Listen, ask reflective questions
- Clarify “accept” and “acknowledge”
- Assess impact on family
- Assess communication with family
- Do not be a prognosis “hammer”

Anticipatory Grief

Anticipated loss of one's self, prepare for separation from world

Progression of changes (emotional, social, spiritual, physical, cognitive, behavioral) through which a person attempts to recognize and resolve or adjust to loss of his/her own place

Withdrawal from family, friends

Sadness, crying

Anxiety

Ruminations about past

MDD = Major Depressive Disorder

2 weeks of depressed mood or loss of interest (anhedonia) + at least four symptoms:

Sleep disturbance – insomnia or hypersomnia

Guilt, worthlessness

Lack of energy

Loss of concentration, difficulty making decisions

Anorexia and/or weight loss

Psychomotor agitation or retardation

Suicidal ideation

-symptoms are either new or worse than before the depressive episode, and they persist for most of the day, nearly every day, for 2 consecutive weeks

-episode is accompanied by clinically significant distress or impairment in social, occupational, or other important areas of functioning

-symptoms are NOT due to bereavement or to physiological effect of medication, general medical condition, or substance abuse

-mood described as “depressed”, “sad”, “hopeless”, “doen in the dumps”

Dysthymia = depressed mood + hopelessness (not suicidal) 2 years or more

Depression NOS = does not meet other criteria but with significant impairment of functioning

PTSD = Post-Traumatic Stress Disorder

Re-experiencing traumatic event

Avoidance of situations associated with event

Increased arousal

Social/occupational impairment

Adjustment Disorder:

Emotional and/or behavioral symptoms in response to an identifiable stressor, within 3 months of onset of stressor – symptoms evidenced by:

- Marked distress in excess of what would be expected
- Social/occupational impairment

Stress-related disturbance does not meet criteria for another diagnosis and is not an exacerbation of pre-existing diagnosis; does not represent expected bereavement; once stressor has terminated, does not continue for more than an additional 6 months

Diagnostic criteria:

- Onset of symptoms must occur within 1 month of stressor (not unusual or catastrophic)
 - Manifests behavior disturbances found in any affective disorder (except delusions and hallucinations), neurotic disorder, stress-related disorder, somatoform disorder, or conduct disorder
- BUT criteria for any individual disorder not met

Example symptom features:

- Brief depressive reaction, transient, mild, less than 1 month
- Mixed anxiety/depression
- Predominant conduct disorder
- Mixed disturbance of emotion and conduct
- Prolonged depressive reaction, mild depressive state occurring in response to prolonged exposure to stressful situation (not more than 2 years)

PCN Manic Episode/Hypomaniac Episode (Bipolar I/Bipolar II)

Manic (Bipolar I) Episode: distinct period during which there is an abnormally and persistently elevated, expansive, or irritable mood lasting at least 1 week (or less if hospitalization is required)

Must be accompanied by at least three (3) of the following symptoms (4 if mood is only irritable); inflated self esteem/grandiosity, decreased need for sleep, pressurized speech, racing thoughts, distractibility, psychomotor agitation, excessive involvement in pleasurable activities with a higher potential for painful consequences, increased involvement in goal-directed activity

Disturbance must be sufficiently severe to cause marked impairment in social and occupational functioning or to require hospitalization, or is characterized by the presence of psychotic features

Symptoms not due to direct physiological effects of medication, general medical condition, or substance abuse

Symptoms do not meet criteria for a mixed episode

Hypomaniac (Bipolar II) Episode: distinct period during which there is an abnormally and persistently elevated, expansive, or irritable mood lasting at least 4 days

Must be accompanied by at least three (3) of the following symptoms (4 if mood is only irritable); inflated self esteem/grandiosity, decreased need for sleep, pressurized speech, racing thoughts, distractibility, psychomotor agitation, excessive involvement in pleasurable activities with a higher potential for painful consequences, increased involvement in goal-directed activity

Hypomaniac episodes must be clearly different from the usual non-depressed mood and there must be a clear change in functioning that is not characteristic of usual functioning

Changes in mood and functioning must be observable by others – **in contrast** to a manic episode, a hypomaniac episode is NOT severe enough to cause marked impairment in social or occupational functioning, does not require hospitalization or demonstrate psychotic features

Symptoms not due to direct physiological effects of medication, general medical condition, or substance abuse

Likert scale for each question:

- 0: not at all
- 1: somewhat
- 2: a lot

1. How much of the time are you having trouble accepting the death of a loved one?
2. How much does your grief interfere with your life?
3. How much are you having images or thoughts of your loved one when he or she died or other thoughts about the death that really bother you?
4. Are there things that you used to do when your loved one was alive that you don't feel comfortable doing any more, that you avoid? How much are you avoiding these things?
5. How much are you feeling cut off or distant from other people since your loved one died, even people you used to be close to, like family or friends?

Score of 5 or greater: consider referral/evaluation/intervention

Duration of symptoms 6-12 months after death

Delerium Criteria: corresponds with **ICU/CAM**

Feature 1 = acute change or fluctuating course of mental status AND

Feature 2 = inattention

Instruct to squeeze hand with letter "A"

SAVEAHAART

AND

Either Feature 3 or Feature 4

Feature 3 = Disorganized Thinking

Use either a or b:

a – will a stone (leaf) float on water

are there fish (elephants) in the sea

does 11/21 pounds weigh more than 21/11 pounds

can you use a hammer to pound a nail (cut wood)

b – hold up this many (2) fingers, now with the other hand

Feature 4 = altered Level of Consciousness (RASS other than 0)

Delerium Differential Diagnosis:

Metabolic	(Ca ⁺⁺ , Na ⁺ , renal, hepatic, thyroid, O ₂ , glucose)
Infectious	(UTI, Pneum, cellulitis, wound, IVC, CNS)
Comorbidity	(constipation, urine retention, PE, MI, stroke)
Cancer-related	(leptomeningeal, mets, RT, paraneoplastic)
Seizure	(complex, partial, postictal)
Deficiency	(B12, thiamine, HgB)
Recent surgery	(anesthesia, sedation)
Substance	(opioid, benzo, anti-Ach, anti-histamine, NSAID, steroid)
Multi-factorial	

Terminal	(restlessness often combination of progressive disease, dehydration, accumulation of metabolites from organ failure)
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SAS = Sedation-Agitation Scale (Riker)

- 7 – dangerous agitation
- 6 – very agitated
- 5 – agitated
- 4 – calm, cooperative
- 3 – sedated
- 2 – very sedated
- 1 – unarousable

RASS = Richmond Agitation-Sedation Scale

- +4 combative, violent, dangerous
- +3 very agitated, aggressive
- +2 agitated, frequent non-purposeful movements
- +1 restless, anxious but not aggressive or vigorous

- 0 alert and calm

- 1 drowsy, not fully awake but sustains awake 10 seconds or more
- 2 light sedation, brief awake less than 10 seconds
- 3 moderate sedation, movement or eyes open to voice but no eye contact
- 4 deep sedation, no response to voice but responds to physical stimulation
- 5 unarousable, no response to voice or physical stimulation

Cut point analysis showed the best sensitivity and specificity for the screening instrument (prioritizing high sensitivity) at a total CAPD score of 9 or greater. Sensitivity was 94.1% (95% CI, 83.8–98.8%) and specificity 79.2% (95% CI, 73.5–84.9%). (CCM, 3/14)

Figure 1. Cornell Assessment of Pediatric Delirium (CAPD) revised						
RASS Score ____ (if -4 or -5 do not proceed)						
Please answer the following questions based on your interactions with the patient over the course of your shift:						
	Never	Rarely	Sometimes	Often	Always	Score
	4	3	2	1	0	
1. Does the child make eye contact with the caregiver?						
2. Are the child's actions purposeful?						
3. Is the child aware of his/her surroundings?						
4. Does the child communicate needs and wants?						
	Never	Rarely	Sometimes	Often	Always	
	0	1	2	3	4	
5. Is the child restless?						
6. Is the child inconsolable?						
7. Is the child underactive—very little movement while awake?						
8. Does it take the child a long time to respond to interactions?						
TOTAL						

Developmental Anchor Points For Youngest Patients							
	NB	4 weeks	6 weeks	8 weeks	28 weeks	1 year	2 years
1. Does the child make eye contact with the caregiver?	Fixates on face	Holds gaze briefly Follows 90 degrees	Holds gaze	Follows moving object/caregiver past midline, regards examiner's hand holding object, focused attention	Holds gaze. Prefers primary parent. Looks at speaker	Holds gaze. Prefers primary parent. Looks at speaker	Holds gaze. Prefers primary parent. Looks at speaker
2. Are the child's actions purposeful?	Moves head to side, dominated by primitive reflexes	Reaches (with some discoordination)	Reaches	Symmetric movements, will passively grasp handed object	Reaches with coordinated smooth movement	Reaches and manipulates objects, tries to change position, if mobile may try to get up	Reaches and manipulates objects, tries to change position, if mobile may try to get up and walk
3. Is the child aware of his/her surroundings?	Calm awake time	Awake alert time Turns to primary caretaker's voice May turn to smell of primary care taker	Increasing awake alert time Turns to primary caretaker's voice May turn to smell of primary care taker	Facial brightening or smile in response to nodding head, frown to bell, coos	Strongly prefers mother, then other familiars. Differentiates between novel and familiar objects	Prefers primary parent, then other familiars, upset when separated from preferred care takers. Comforted by familiar objects especially favorite blanket or stuffed animal	Prefers primary parent, then other familiars, upset when separated from preferred care takers. Comforted by familiar objects especially favorite blanket or stuffed animal
4. Does the child communicate needs and wants?	Cries when hungry or uncomfortable	Cries when hungry or uncomfortable	Cries when hungry or uncomfortable	Cries when hungry or uncomfortable	Vocalizes /indicates about needs, eg. hunger, discomfort, curiosity in objects, or surroundings	Uses single words, or signs	3-4 word sentences, or signs. May indicate toilet needs, calls self or me
5. Is the child restless?	No sustained awake alert state	No sustained calm state	No sustained calm state	No sustained calm state	No sustained calm state	No sustained calm state	No sustained calm state
6. Is the child inconsolable?	Not soothed by parental rocking, singing, feeding, comforting actions	Not soothed by parental rocking, singing, feeding, comforting actions	Not soothed by parental rocking, singing, feeding, comforting actions	Not soothed by parental rocking, singing, comforting actions	Not soothed by usual methods eg. singing, holding, talking	Not soothed by usual methods eg. singing, holding, talking, reading	Not soothed by usual methods eg. singing, holding, talking, reading (May tantrum, but can organize)
7. Is the child underactive—very little movement while awake?	Little if any flexed and then relaxed state with primitive reflexes (Child should be sleeping comfortably most of the time)	Little if any reaching, kicking, grasping (still may be somewhat disordinated)	Little if any reaching, kicking, grasping (may begin to be more coordinated)	Little if any purposive grasping, control of head and arm movements, such as pushing things that are noxious away	Little if any reaching, grasping, moving around in bed, pushing things away	Little if any play, efforts to sit up, pull up, and if mobile crawl or walk around	Little if any more elaborate play, efforts to sit up and move around, and if able to stand, walk, or jump
8. Does it take the child a long time to respond to interactions?	Not making sounds or reflexes active as expected (grasp, suck, moro)	Not making sounds or reflexes active as expected (grasp, suck, moro)	Not kicking or crying with noxious stimuli	Not cooing, smiling, or focusing gaze in response to interactions	Not babbling or smiling/laughing in social interactions (or even actively rejecting an interaction)	Not following simple directions. If verbal, not engaging in simple dialogue with words or jargon	Not following 1-2 step simple commands. If verbal, not engaging in more complex dialogue

Delirium Observation Screening (DOS) Scale

Scoring: 0 = Never
 1 = Sometimes or Always

Observations:

1. Dozes off during conversation or activities
2. Is easily distracted by stimuli from the environment
3. Does not finish question or answer
4. Gives answers that do not fit the question
5. Reacts slowly to instructions
6. Thinks is somewhere else
7. Picking, disorderly, restless
8. Pulls IV tubing, feeding tubes, catheters etc
9. Easily or suddenly emotional
10. Sees/hears things which are not there

Scoring: 1 = Never
 0 = Sometimes or Always

11. Maintains attention to conversation or action
12. Knows which part of the day it is
13. Remembers recent events

Less than 3/13 = not delirious

3/13 or greater = probably delirious

- H:** sources of hope, meaning, comfort, strength, peace, love, connection
What gives you support?
What are your sources of hope....?
What do you hold onto during difficult times?
What sustains you and keeps you going?
For some people religious and spiritual beliefs act as a source of strength and comfort. ? true for you
- O:** organized religion
How important is this to you?
What parts are helpful and not so helpful?
Are you part of a faith community?
- P:** personal spirituality and practices
Do you have personal/spiritual beliefs that are independent of organized religion?
Do you believe in God?
What aspects of your spirituality or spiritual practices do you find most helpful?
- E:** effects on medical care and end-of-life issues
Has being sick affected the things you usually do to help you spiritually?
Are you worried about conflicts between your spiritual beliefs and medical care?
? wish to speak to clergy
? practices/restrictions to know
? influence on EOL care

PCN Spiritual Assessment FICA Mnemonic

- F** faith, belief, meaning
“do you consider yourself spiritual or religious”?
“do you have spiritual beliefs that help you cope with stress”?
“what gives your life meaning”?
- I** importance and influence
“what importance does your faith or belief have on your life”?
“have your beliefs influenced you in how you handle stress”?
“do you have specific beliefs that might influence your healthcare decisions”?
- C** community
“are you a part of a religious or spiritual community”?
“is there a group of people you really love or who are important to you”?
- A** address/action in care
“how should the health care provider address these issues in health care”?

Spirituality = meaning, purpose, something beyond oneself

Qualities of being: hope, love, purpose, meaning

PCN Spiritual Assessment SPIRIT Mnemonic

- S:** spiritual belief system
 ? formal affiliation
 ? important
- P:** personal spirituality
 ? in what ways important
- I:** integration with a spiritual community
 ? belong to religious group/community
- R:** ritualized practices/restrictions
 ? specific practices
- I:** implications for health care
 ? discuss religious/spiritual implications of health care
- T:** terminal events planning
 ? particular aspects of medical care to forego because of religion/spirituality

Cultural Competency and the Role of Race, Ethnicity, and Religion

Physicians who practice in a multicultural environment have a responsibility to understand that family members from some cultures may have very different perspectives on the family's role and on who should be involved in treatment decisions. Individuals from some cultures may not endorse tenets of Western clinical ethics, such as the equivalence of withholding and withdrawing life support or the definition of brain death. It is important to anticipate differences in perspectives and apply principles of culturally effective end-of-life care to these situations.

Several studies of patients' attitudes toward end-of-life care identify values that vary by race, ethnicity, and geographic origin. On average, nonwhites are more likely to request life-sustaining therapy and are less likely to have advanced directives or do-not-resuscitate orders or accept hospice care. Much of this difference is influenced by patients' and families' lack of trust in physicians and health-care institutions. Although understanding ethnic variations in preferences will not solve all problems with end-of-life care, a clearer understanding of what contributes to patients' and families' understanding, fears, and preferences improves communication and is a crucial step in providing better end-of-life care.

Physicians have a responsibility to avoid stereotyping patients or making assumptions about their attitudes based solely on race, ethnicity, religion, or other demographic characteristics. Existing recommendations can help physicians provide end-of-life care that accommodates needs based on religion and culture. The dying process is one of the most important events in which ritual aspects of religion and spirituality play a role. During discussions of end-of-life care, time should be spent discussing, understanding, and accommodating cultural and religious perspectives, and reasonable efforts should be made to accommodate rituals associated with dying. Physicians should not assume that physician and hospital staff share the same values as patients and families of similar religious or ethnic background, and should not substitute statements from persons of similar background for a more thorough discussion with the patient and their family.

“Cross-cultural” Mnemonics

L earn, listen
E xplain
A cknowledge
R ecommend
N egotiate

E xplanation
T reatment
H ealers
N egotiation
I ntervention
C ollaboration

Spiritual belief system

Personal spirituality

Integration in a spiritual community

Ritualized practices and restrictions

Implications for medical care

Terminal events planning

Hope: “as you look to the future, what are your biggest fears”?

“are there things you might hope for even if you cannot be cured”?

“does the word hope have any spiritual significance for you”?

“would anything be unfinished if you were to die sooner rather than later”?

Meaning: “what gives your life most meaning”?

“what gives you strength in difficult times”?

“do you have any thoughts about why this happened to you”?

“if your time were limited, what would be most important to you”?

Values: “are you able to hold on to your sense of dignity and purpose”?

“how are others treating you since you became ill”?

Relationships: “how is your family coping with your illness”?

“what is it like to be taken care of by others after being a caregiver for so long”?

“is there anyone you have to make amends with”?

“(if religious) how are things between you and God”?

Hope for Miracle:

All humans are subjects to the laws of nature by the virtue of God's sovereign rule issued for people; although God is not bound by the laws of nature, humans are; it is appropriate to accept a miracle when granted by God, but it is not appropriate to expect it, as this would imply that God follows human rules and not his sovereign design

One Shall Not Give Up On The God Of Faith:

Continuing with the aggressive treatment no longer constitutes awaiting for God's will to manifest itself in a miracle; rather it is interfering with God's plan made evident in the abundantly given due time; withholding treatment amounts to acceptance of God's plan

Life Must Be Preserved At All Costs:

Life given by God is a supreme gift; yet life artificially maintained by a machine is not; the abundant gift of life includes a promise of presence, personhood,, and participation in the divine vision; the technology-dependent support of vegetative function discounts the true gift of life

Suffering Is Redemption:

One needs capacities of personhood and free choice in order to elect participation in a redemptive and transformative suffering; when such a choice is made to and not for a person, suffering becomes an end in itself

No Symptom ___1___2___3___4___5___6___7___8___9___10 Worst Possible Symptom

Pain

Fatigue

dyspnea

Nausea

Constipation

Depression

Anxiety

Drowsiness

Appetite

Well-Being

PCN Mental Status Examination Terms

Appearance and Behavior:

- Grooming, clothing, hair, nails

- Attitude to situation/examiner – hostile, withdrawn, seductive

- Motor – slow, restless, tremors, bizarre

Speech:

- Slow, pressured, monotonous

- Volume – loud, quiet, slurred

- Quantity – restricted/excessive, spontaneous

Mood/Affect:

- Depressed, euphoric, suspicious, labile

- Restricted, flattened, inappropriate

Form of Thought:

- Amount and rate of production – hesitant, vague, flight of ideas

- Continuity of ideas – logical order of the flow of ideas

Content of Thought:

- Delusions – persecution, poisoning

- Suicidal thoughts/plans/intent

- Other – obsessions, compulsions, hypochondriacal preoccupation

Perception:

- Hallucinations – sound, vision, smell, taste, tactile, somatic

- Other – derealization, depersonalization, heightened/dulled

Sensorium and Cognition:

- Level of Consciousness (LOC) – abnormal drowsiness, clouding, delirium

- Memory – immediate recent, remote

- Orientation – time, place, person

- Concentration – serial 7s

- Abstract thinking

Insight:

- Extent of awareness of problem(s)

- Compliance with intervention(s)

PCN Abbreviated Mental Status Score

- 1 age
- 2 time (nearest hour)
- 3 address (repeated at end of exam)
- 4 year
- 5 name of current location
- 6 recognition of two persons
- 7 date of birth
- 8 year World War I started
- 9 name of president
- 10 count backwards from 20 to 1

6 or less correct consistent with dementia

PCN Short Test of Mental Status (STMS)

- Orientation: 0-8 points
Name, address, current location (building), city, state, date (day), month
- Attention: 0-7 points
Present 5, then 6, then 7 digits to repeat
2-9-6-8-3 5-7-1-9-4-6 2-1-5-9-3-6-2
- Immediate
- Recall: 0-4 points
Present four(4) unrelated words to repeat (subtract #trials needed to learn)
"apple, Mr Smith, charity, tunnel"
- Calculation: 0-4 points
5x13 65-7 58/2 29+11
- Abstraction: 0-3 points
Describe similarity:
Orange – banana
Dog – horse
Table – bookcase
- Construction and Copying: 0-4 points (2 points each)
Draw a clock face showing 11:10
Copy a cube
- Information: 0-4 points
President
1st president
Define an island
Number of weeks in a year
- Recall: 0-4 points
"apple, Mr Smith, charity, tunnel"

38 possible points

34-38 – normal

29-33 – cognitive impairment

28 or less - dementia

PCN MMSE Mini-Mental-Status Exam

Orientation:	Points
year/season/date/day/month	5
state/country/town/hospital/floor	5
Registration:	
name three objects – 1 second to say each (i.e. ball, flag, tree)	
ask patient to repeat all three after you have said them	3
then repeat them until patient learns all three, count trials	
Attention/Calculation:	5
serial 7's – up to 5 answers OR	
spell WORLD backwards (DLROW)	
Recall:	3
ask for the three objects repeated above	
Language:	
show/name a pen and watch	2
“repeat – no ifs, ands, or buts”	1
follow a 3 stage command:	
take a paper in your hand	
fold it in half	
place it on the floor	3
read and obey	
“CLOSE YOUR EYES”	1
“write a sentence”	1
“copy the design” (intersecting pentagons)	<u>1</u>
	30
Cognitive Function:	
24-30 normal	
19-23 mild	
10-18 moderate	
<10 severe	

PCN Neuro-Cognitive Behavioral Assessment Terms

Mental Status

Oriented: aware of person, place, time, season

Inattention: difficult in focusing attention
easily distracted
difficulty in following conversation

Disorganized Thinking:
incoherent, rambling, irrelevant
unclear, illogical flow of ideas

Altered Level of Consciousness (LOC):
vigilant – startled easily
lethargic – repeatedly dozes off but responds to touch or voice
stuporous – very difficult to arouse
comatose – cannot be aroused

Psychomotor Retardation:
unusually decreased level of activity
sluggish
staring into space
sitting/lying in one position

Cognitive Skills for Daily Decision-Making

Independent: decisions consistent and reasonable

Modified Independence:
some difficulty in new situations only

Moderately Impaired:
decisions poor
cues and/or supervision required

Severely Impaired:
never or rarely makes decisions

1. Symptoms present:

depression	anxiety
fatigue	dyspnea
nausea	vomiting
pain	sleep difficulty
bowel problems	difficulty concentrating
loss of appetite	cough

2. Rank (1,2,3,.....) of symptoms present – from most distressing to next most distressing.....

3. On a scale of 1 to 10, in general how distressing are ALL of your symptoms to you?

1 – not at all

10 – extremely

4. On a scale of 1 to 10, how well are you able to manage your symptoms?

1 - cannot manage

10 - manage extremely well

PCN Fall Risk Assessment

Points

7	history of a fall within past 12 months
3	altered elimination – incontinence, frequency, urgency
3	cognitive impairment – inability to recall recent events Confusion, impaired judgment
3	sad, depressed
3	intrinsic factors orthostatic hypotension syncope arrhythmia peripheral neuropathy seizure history parkinsons hx stroke neuromuscular disorder
2	communication – HOH, language barrier, tracheostomy
2	visual impairment
2	diuretics or laxatives
4	anti-hypertensive medication
6	opioid medication
Very High Risk	19 points or greater
High Risk	14-18 points
Medium Risk	10-13 points
Low Risk	9 points or less

PCN Functional Activities Questionnaire

Score each question on a 4 point scale:

0 = normal, 1 = does with difficulty, 2 = requires assistance, 3 = dependent

In the past 4 weeks, did the patient have any difficulty or need help with:?

- 1 writing checks, paying bills, keeping financial records
- 2 assembling tax records, business affairs, papers
- 3 shopping alone – clothes, household, groceries
- 4 playing a game of skill or working on a hobby
- 5 heating water, making coffee, turning off stove
- 6 preparing a balanced meal
- 7 keeping track of current events
- 8 paying attention to, understanding, or discussing a TV program/book/magazine
- 9 remembering appointment, family occasion, holiday, medication
- 10 traveling out of the neighborhood, driving, arranging to take bus

normal = 0-1

mild cognitive impairment = 4-9

mild dementia = 10-13

Level of Innervation	Sensory	Muscle Group
C4	acromioclavicular joint	diaphragm
C5	lateral antecubital fossa	shoulder rotators/abductors; elbow flexor
C6	thumb	supinators, pronators, wrist extensor
C7	middle finger	elbow extensor, wrist flexor
C8	little finger	finger flexors, distal phalanx
T1	medial antecubital fossa	intrinsic hand muscles
L2	upper anterior thigh	hip flexor
L3	medial femoral condyle	knee extensor
L4	medial malleolus	ankle dorsiflexor
L5	dorsum of foot	toe extensors
S1	lateral heel	plantar flexors
S2-5	peri-anal	sphincter

- 0: breathless with strenuous exercise
- 1: short of breath when hurrying on level ground or walking up a slight hill
- 2: on level ground, walking slower than people of same age because of breathlessness
or have to stop for breath when walking at my own pace
- 3: stop for breath after walking about 100 yards or after a few minutes on level ground
- 4: too breathless to leave the house; breathless when dressing

Function Assessment: Activities of Daily Living (ADL)

Bathing	receives either no assistance or assistance in bathing only one part of the body
Dressing	gets clothes and dresses without any assistance except for tying shoes
Toileting	goes to toilet room, uses toilet and returns without assistance (may use cane or walker and may use bedpan or urinal at night)
Transferring	moves in and out of bed and chair without assistance (may use cane or walker)
Continence	controls bowel and bladder completely by self, without occasional accidents
Feeding	feeds self without assistance (except for help with cutting meat or buttering bread)

Function Assessment: Instrumental Activities of Daily Living

Use telephone
Shop
Prepare food
Clean house
Laundry
Use transportation
Take medications
Manage finances

Function Assessment

Eastern Cooperative Oncology Group (ECOG)

Performance Status

- 0** Fully active, able to carry out all pre-disease performance without restriction
- 1** Restricted in physically strenuous activity, but ambulatory and able to carry out work of a light or sedentary nature (light house work, office)
- 2** Ambulatory and capable of all self-care but unable to carry out any work activities. Up and about more than 50% of waking hours
- 3** Capable of only limited self-care, confined to bed or chair more than 50% of waking hours
- 4** Completely disabled. Cannot carry out any self-care. Totally confined to bed or chair
- 5** Dead

PCN Function Assessment FAST

Functional Assessment Staging (dementia, cognitive impairment)

- 5 requires assistance in choosing proper clothing to wear for day/season/occasion
- 6A improperly putting on clothes without assistance
- 6B unable to bathe properly occasionally or more often over past weeks
- 6C inability to handle mechanics of toileting occasionally or more often over past weeks
- 6D urinary incontinence occasionally or more often
- 6E fecal incontinence occasionally or more often over past week

- 7A ability to speak limited to approximately 6 words or fewer in the course of a day
- 7B speech ability limited to use of a single intelligible word in a day (may be repeated)
- 7C ambulatory ability is lost; cannot walk without personal assistance
- 7D cannot sit up without assistance; will fall without lateral support
- 7E loss of ability to smile
- 7F loss of ability to hold head up independently

Based on highest CONSECUTIVE level of disability

- 5 correlates with moderate dementia
- 6 correlates with moderately severe
- 7 correlates with severe
- 7 roughly correlates with 6 month prognosis

Clock-Drawing Test

- Step 1 give patient a sheet of paper with a drawn large circle
 Step 2 instruct to draw numbers in the circle to look like the face of a clock;
 then draw the hands of the clock to read "10 after 11"

Scoring:

1	perfect	no errors
2	minor visual-spatial errors	mildly impaired spacing of numbers draws numbers outside of circle turns page > draws numbers upside down draws with lines ("spokes")
3	inaccurate representation of 10 after 11 when visual-spatial organization is perfect or minor deviation	minute hand points to 10 writes "10 after 11" unable to make any notation of time
4	moderate visual-spatial disorganization of times such that accurate notation of 10 after 11 not identified	moderately poor spacing omits numbers perseveration counterclockwise dysgraphia
5	severe level of disorganization	as in 4
6	no reasonable representation of a clock	no attempt no semblance of a clock writes a word or name

(3 or greater = cognitive deficit)

High NEGATIVE predictive value (95%) > normal CDT strong argument against cognitive deficit

Requires comprehension, visual-spatial ability, reconstruction skills, concentration, numerical knowledge, visual memory, executive function; not biased by age, gender; not influenced by language limitation or altered mood

Function Assessment: **Karnofsky** Performance Status Score (KPS)

<u>Karnofsky Score</u>	<u>Level of Functional Capacity</u>
100	normal, no complaints, no evidence of disease
90	able to carry out normal activity, minor signs/symptoms of disease
80	normal activity with effort, some signs or symptoms of disease
70	cares for self, unable to carry on normal activity or to do active work
60	requires occasional assistance but is able to care for most needs
50	requires considerable assistance and frequent medical care
40	disabled, requires special care and assistance
30	severely disabled, hospitalization indicated although death not imminent
20	hospitalization necessary, very sick, active supportive treatment necessary
10	moribund, fatal processes, progressing rapidly
0	dead

Function Assessment: modified Rankin score (**m-R**)

- 0 no symptoms
- 1 no significant disability despite symptoms – able to carry out all usual activities
- 2 slight disability – unable to carry out all previous activities but able to carry out ADLs without assistance
- 3 moderate disability – requiring some help but able to walk without assistance
- 4 moderately severe disability – unable to walk without assistance and unable to carry out ADLs without assistance
- 5 severe disability – bedridden, incontinent, requiring constant nursing care and attention
- 6 dead

Eye opening response:

- Spontaneous – open with blinking at baseline 4 points
- Opens to verbal command, speech or shout 3 points
- Opens to pain, not applied to face 2 points
- None 1 point

Verbal response:

- Oriented 5 points
- Confused conversation, but able to answer questions 4 points
- Inappropriate responses, words discernible 3 points
- Incomprehensible speech 2 points
- None 1 point

Motor response:

- Obeys commands for movement 6 points
- Purposeful movement to painful stimuli 5 points
- Withdraws to pain 4 points
- Abnormal (spastic) flexion, decorticate posture 3 points
- Extensor (rigid) response, decerebrate posture 2 points
- None 1 point

Max 15 points

PCN Function Assessment

Palliative Performance Scale (PPS)

%:	100
Ambulation:	Full
Activity/Evidence of Disease:	Normal/no evidence
Self-Care:	Full
Intake:	Normal
LOC:	Intact
%:	90
Ambulation:	Full
Activity/Evidence of Disease:	Normal/some
Self-Care:	Full
Intake:	Normal
LOC:	Intact
%:	80
Ambulation:	Full
Activity/Evidence of Disease:	Normal with effort/some
Self-Care:	Full
Intake:	Normal or reduced
LOC:	Intact
%:	70
Ambulation:	Reduced
Activity/Evidence of Disease:	Unable to do normal/some
Self-Care:	Full
Intake:	Normal or reduced
LOC:	Intact or confusion
%:	60
Ambulation:	Reduced
Activity/Evidence of Disease:	Unable to do hobby or some housework/significant
Self-Care:	Occasional assist
Intake:	Normal or reduced
LOC:	Intact or confusion

%: **50**
Ambulation: Mainly sit/lie
Activity/Evidence of Disease: Unable to do any work/extensive
Self-Care: Considerable assist
Intake: Normal or reduced
LOC: Intact or confusion

%: **40**
Ambulation: Mainly in bed
Activity/Evidence of Disease: Unable to do any work/extensive
Self-Care: Mainly assist
Intake: Normal or reduced
LOC: Intact, drowsy, or confusion

%: **30**
Ambulation: Bed bound
Activity/Evidence of Disease: Unable to do any work/extensive
Self-Care: Total care
Intake: Reduced
LOC: Intact, drowsy, or confusion

%: **20**
Ambulation: Bed bound
Activity/Evidence of Disease: Unable to do any work/extensive
Self-Care: Total care
Intake: Sips
LOC: Intact, drowsy, or confusion

%: **10**
Ambulation: Bed bound
Activity/Evidence of Disease: Unable to do any work/extensive
Self-Care: Total care
Intake: Mouth care
LOC: Drowsy or coma

Instructions for PPS

Begin at the left column and read downward until the appropriate ambulation level is reached, then read across to the next column and downwards again until the activity/evidence of disease is located. These steps are repeated until all five columns are covered before assigning the PPS. Leftward columns (ambulation on left>activity level/evidence of disease>self-care>intake>LOC on right) are "stronger" determinants and take precedence over others to the right. PPS scores are in 10% increments. Choosing a "half-fit" level (such as 45%) is not correct. The combination of clinical judgment and "leftward" precedence determines the score. PPS may be used for: communication regarding functional status, criterion for workload assessment or other measurements/comparisons, and as a prognostic indicator.

<u>Domain</u>	<u>Item</u>	<u>Score</u>
Cognition	Please imagine that this pre-drawn circle is a clock. Please place the numbers in the correct positions and Then place the hands to indicate a time of “ten past eleven”	0 – no errors 1 - minor spacing errors 2 - other errors
General Health Status	In the past year how many times have you been admitted to the hospital? In general, how would you describe your health?	0 -0, 1 -1, 2 - 2 or more 0 -excellent, very good , or good 1 -fair, 2 -poor
Functional Independence	With how many of the following activities do you help: meal preparation, shopping, transportation, telephone, housekeeping, laundry, managing money, taking medications?	0 -1, 1 -2 to 4, 2 -5 to 8
Social Support	When you need help, can you count on someone who is willing and able to meet your needs?	0 -always, 1 -sometimes, 2 -never
Medication Use	Do you use five or more prescriptions on a regular basis? At times do you forget to take your prescription medications?	0 -no, 1 -yes 0 -no, 1 -yes
Nutrition	Have you recently lost weight so that your clothing has become looser?	0 -no, 1 -yes
Mood	Do you often feel sad or depressed?	0 -no, 1 -yes
Continenence	Do you have a problem with losing control of urine when You don't want to?	0 -no, 1 -yes
Functional	Please sit in this chair with your back and arms resting. When I say “go”, please stand up and walk to the mark on the floor (approximately 10 feet away), then turn around, return to the chair and sit down.	0 -10 seconds or less 1 -11 to 20 seconds 2 ->20 seconds or unwilling, unable

Scoring:

0-5	not frail
6-7	vulnerable
8-9	mild frailty
10-11	moderate frailty
12-17	severe frailty

PCN Malnutrition Categories

Severe:

Albumin	< 2.0 g/dl
Prealbumin	< 5.0 mg/dl
Ideal body weight	<70%
Usual body weight	<75% or *
BMI	<16

Moderate:

Albumin	< 2.5 g/dl
Prealbumin	< 10.0 mg/dl
Ideal body weight	<80%
Usual body weight	<85%
BMI	<17

Mild:

Albumin	< 3.0 g/dl
Prealbumin	< 15.0 mg/dl
Ideal body weight	<90%
Usual body weight	<95%
BMI	<18.5

*unintended weight loss of > 5% in one month, >7.5% in 3 months, >10% in 6 months, or >20% in one year

“chronic” malnutrition is defined as a duration of three months or more.

At least two indicators should be present in addition to physical findings and high-risk clinical circumstances. Albumin and prealbumin should be considered one indicator, not two.

CPC 1: good cerebral performance – conscious, alert, able to work, might have mild neurologic or psychologic deficit

CPC 2: moderate cerebral disability – conscious, sufficient cerebral function for independent activities of daily life, able to work in sheltered environment

CPC 3: severe cerebral disability – conscious, dependent on others for daily support because of impaired brain function, ranges from ambulatory state to severe dementia or paralysis

CPC 4: coma or vegetative state – any degree of coma without the presence of all brain death criteria; unawareness, even if appears awake (vegetative state) without interaction with environment, may have spontaneous eye opening and sleep/awake cycles, cerebral unresponsiveness

CPC 5: brain death – apnea, areflexia, EEG silence

Activity

Feeding:

- 0 = unable
- 5 = needs help cutting, spreading butter etc, or requires modified diet
- 10 = independent

Bathing:

- 0 = dependent
- 5 = independent (or in shower)

Grooming:

- 0 = needs help with personal care
- 5 = independent face/hair/teeth/shaving

Dressing:

- 0 = dependent
- 5 = needs help but can do about half unaided
- 10 = independent (including buttons, zips, laces)

Bowels:

- 0 = incontinent (or needs to be given enemas)
- 5 = occasional accident
- 10 = continent

Bladder:

- 0 = incontinent, or catheterized and unable to manage alone
- 5 = occasional accident
- 10 = continent

Toilet Use:

- 0 = dependent
- 5 = needs some help
- 10 = independent (on and off, dressing, wiping)

Transfers: (bed to chair and back)

- 0 = unable, no sitting balance
- 5 = major help (one or two people, physical) can sit
- 10 = minor help (verbal or physical)
- 15 = independent

Mobility: (on level surfaces)

- 0 = immobile or less than 50 yards
- 5 = wheelchair independent, including corners, more than 50 yards
- 10 = walks with help of one person (verbal or physical) more than 50 yards
- 15 = independent

Stairs:

- 0 = unable
- 5 = needs help (verbal, physical, carrying aid)
- 10 = independent

0 – 100 points

Record what patient actually does; need for supervision > not independent; usually last 24-48 hrs

PCN Prognostic Assessment

Non-Disease Specific

Population: Hospitalized, age 70 or greater

Burden of Illness Score (BIS)

BIS variables	BIS points
High-risk diagnoses See below	0-3
Albumin < 3.5	1
Creatinine > 1.5	1
Dementia	1
Walking impairment	1

(Scoring for High-risk diagnoses)

<u>Variable</u>	<u>points</u>
Lymphoma	6
Leukemia	6
Acute renal failure	5
Cancer	3
Stroke	2
CHF	2
COPD	2
Chronic renal failure	2
DM with organ disease	1
Pneumonia	1

(Transfer High-risk diagnoses score to BIS:

0	0
1-2	1
3-5	2
6 or greater	3

Correlation of BIS Score with 1-year mortality risk %

0-1	8
2	24
3	51
4 or greater	74

Prognosis Assessment Non-Disease Specific

CARING criteria

Population: Criteria on day of admission to acute care hospital

Caring criteria components:

C: Primary Diagnosis of Cancer
 Cancer diagnosis is primary reason for admission including admission for chemoRx

A: Admitted to the hospital 2 or more times in the past year
 for the same chronic illness or complication of that illness

R: Resident in a Long-Term Care or Skilled Nursing Facility (Nursing Home)

I: ICU admission with Multiple Organ System Failure (MOF)
 MOF = any two or more of the following
 Mechanical ventilation
 Pressor support for hypotension
 Renal replacement therapy (RRT) indicated or already started

NG: Presence of two or more items from one category of non-cancer hospice guidelines

Categories

Items

Renal

Stop/decline dialysis
 Not transplant candidate
 Urine output < 40ml/24 hours
 Creatinine > 8.0
 Creatinine clearance 10 ml/min or less
 Uremia
 Persistent K+ > 7.0
 One or more comorbid conditions:
 Cancer
 Congestive Heart Failure
 Chronic Lung Disease
 Sepsis
 Cirrhosis
 HIV/AIDS

Dementia

Unable to ambulate independently
 Urinary or fecal incontinence
 Unable to speak with more than single words
 Unable to bathe independently
 Unable to dress independently
 One or more comorbid conditions:
 Aspiration pneumonitis
 Pyelonephritis
 Decubitus ulcer
 Difficulty swallowing
 or refusal to eat

Cardiac

Ejection Fraction < 20%
 Symptoms despite diuretic/vasodilator
 Not transplant candidate
 History of cardiac arrest
 History of syncope
 Systolic BP < 120
 CVA of cardiac origin

One or more comorbid conditions:

Cancer
 Chronic Lung Disease
 Sepsis
 Cirrhosis
 HIV/AIDS

Pulmonary

Dyspnea at rest
 FEV1 < 30%
 Frequent ER or hospital admits for
 pulmonary infection or respiratory distress
 SaO2 < 88% on O2
 Cor pulmonale
 pCO2 > 50
 Resting tachycardia > 120

One or more comorbid conditions:

Cancer
 Congestive Heart Failure
 Sepsis
 Cirrhosis
 HIV/AIDS

Liver

End-stage cirrhosis
 Not transplant candidate
 Prottime > 5 sec and albumin < 2.5
 Ascites unresponsive to treatment
 Hepatorenal syndrome
 Hepatic encephalopathy
 SBP

Recurrent variceal bleed

One or more comorbid conditions:

Cancer
 CHF
 Chronic Lung Disease
 Sepsis
 Cirrhosis
 HIV/AIDS

Stroke/CVA

Coma at onset
 Coma > 3 days duration
 Limb paralysis
 Urinary/fecal incontinence
 Impaired sitting balance
 KPS < 50%
 Recurrent aspiration
 Age > 70

One or more comorbid conditions:

Cancer
 CHF
 Chronic Lung Disease
 Sepsis
 Cirrhosis
 HIV/AIDS

HIV/AIDS

Persistent decline in function
 Chronic diarrhea
 Decision to stop treatment
 CNS lymphoma
 Systemic lymphoma
 Dilated cardiomyopathy
 CD4 < 25 with disease progression
 Viral load > 100,000

Neuromuscular

Diminished respiratory function
 Chosen not to receive BiPAP/MV
 Difficulty swallowing
 Diminished functional status
 Incontinence

One or more comorbid conditions:

Cancer
 CHF
 Chronic Lung Disease
 Sepsis
 Cirrhosis
 HIV/AIDS

Caring Criteria Components [or combination(s) of components] predicting 1-year mortality probability of 0.49 or greater (49 % or greater):

**Caring Criteria Components [or combination(s) of components] predicting
1-year mortality probability of 0.49 or greater (49 % or greater):**

Age < 55: A and/or R Plus C and/or I and or NG

**Age 55-65: A and/or R Plus C and/or I
NG**

**Age 66-75: A and/or R Plus C and/or I
NG**

**Age > 75: A plus R
C
I
NG**

PCN Prognostic Assessment

Non-Disease Specific

Charlson Comorbidity Index (CCI)

Score = total points

Comorbidity component (# points)

Myocardial infarction	(1)
Congestive heart failure	(1)
Peripheral vascular disease	(1)
Cerebrovascular disease	(1)
Dementia	(1)
COPD	(1)
Connective tissue disease	(1)
Peptic ulcer disease	(1)
Diabetes mellitus-uncomplicated	(1)
Diabetes mellitus-end organ damage	(2)
Chronic kidney disease-moderate to severe	(2)
Hemiplegia	(2)
Leukemia	(2)
Malignant lymphoma	(2)
Solid tumor	(2)
Solid tumor-metastatic	(6)
Liver disease-mild	(1)
Liver disease-moderate to severe	(3)
AIDS	(6)

PCN Prognostic Assessment

Non-Disease Specific

Population: Newly Admitted Nursing Home Residents

Mortality Risk Index Score (MRIS)

MRIS variables	MRIS Points
Presence of cancer	2.43
Shortness of breath	2.15
CHF	1.66
Bedbound	1.99
Male	1.42
Unstable conditions	1.59
<75% of food eaten	1.75
Low functional ability score	1.77
Swallowing problem	1.41
Bowel incontinence	1.44
BMI < 23	

Correlation of **MRIS points** with **1-year mortality risk %**

0-1	11.4
2-3	20.2
4-5	32.3
6-7	44.5
8-9	55.9
10-11	69.0
12-13	81.7
14-15	87.6
16-17	95.4
18-19	100

PCN Prognosis Assessment

Non-Disease Specific

Population: Hospital Palliative Care Consults

Palliative Prognostic Score (PaP): 30-day survival probability

PaP Variables		PaP points
Dyspnea	Yes	1
	No	0
Anorexia	Yes	1.5
	No	0
KPS	30 or greater	0
	Less than 30	2.5
Total WBC	4.8-8.4	0
	8.5-11	0.5
	> 11	1.5
Lymphocyte%	20-40	0
	12-19.9	1.0
	<11.9	2.5
Clinician Prediction #Weeks Survival	>12	0
	11-12	2
	7-10	2.5
	5-6	4.5
	3-4	6
	1-2	8.5
Total Possible		17.5 points

Correlation of Points score with 30 day mortality %

0-5.5	>70%
5.6-11.0	30%-70%
11.1-17.5	<30%

PCN Prognostic Assessment

Non-Disease Specific

Population: Community Hospital (age 70 or greater, excluding ICU, LOS less than 2 days)

Prognostic Index 1-yr Mortality Older Adults (PIMOA)

PIMOA variables	PIMOA points
Male	1
ADL Dependence at discharge	
1-4 ADLs	2
All ADLs	5
CHF	2
Cancer-localized	3
Cancer-metastatic	8
Admission creatinine	
3.0 or greater	2
Admission albumin	
3.0-3.4	1
<3.0	2

Correlation of total points with 1-year mortality risk %

0-1	4
2-3	19
4-6	34
>6	63

PCN Prognosis PPS

Prognostic Assessment PPS (Palliative Performance Scale)

Population: Non-disease specific
 Community Palliative Program Consults
 Acute care
 LTC
 In-patient hospice unit

	Survival Rate %										
	#days: 1	3	5	7	14	30	45	60	90	180	365
PPS(%)											
80	100	100	100	100	100	100	81	75	46	35	10
70	100	97	96	95	94	82	76	68	57	36	12
60	100	100	100	98	91	65	52	41	25	10	7
50	100	97	94	91	76	57	41	33	14	4	0
40	98	97	96	88	73	50	36	27	16	8	1
30	97	87	71	63	42	23	22	17	11	2	0
20	92	72	53	42	19	8	6	5	4	0	0
10	52	33	19	13	5	0	0	0	0	0	0

6 month mortality % for patients with Advanced Chronic Medical Conditions:

Chronic heart failure, NYHA III-IV

Chronic lung failure, dyspnea stage 3+, sat <90% RA or chronic O2

Chronic renal failure, GFR<30, creat 3 or greater

Chronic liver failure, Child-Pugh > 7

Chronic neurologic disease with cognitive impairment (18 or less MMSE) or functional impairment (Barthel Index < 60)

Characteristics	PALIAR score
85 years old or more	3
Anorexia	3.5
Dyspnea at rest	3.5
Pressure ulcer(s)	3
Serum albumin < 2.5	4
ECOG 3 or more	4

0 – 21 points

Correlation with observed mortality(% in 6 months):

<u>Points</u>	<u>% mortality 6 months</u>
0	21
3	25
3.5	37
4	39
6-6.5	43
7-7.5	47
8-10.5	65
11-21	67

PCN Prognostic Assessment

Non-Disease Specific

Parameters of Prognosis Time Estimate

Hours to Days	less than 4 days
Days to Weeks	4 to 30 days
Weeks to Months	31 to 180 days
Months to Years	more than 181 days

Patients with diagnosis of solid organ cancer who were in good enough health to participate in clinical trial > ambulatory and good functional status)

	Response rate %	Median Duration of Response (months)	Median Survival (months)
Breast	25-55	8-12	24-36
Lung (Nonsmall Cell)			
Squamous	24-36	4-6	6-11
Nonsquamous	20-25	4-6	10-12
Esophagus	30-50	4-6	6-9
Gastro-Esophageal Junction	40-60	6-8	9-12
Gastric			
HER2 negative	20-40	4-7	6-11
HER2 positive	~50	6-7	12-14
Pancreas	20-32	4-6	8-11
Liver			
Hepatocellular HCC	25-40	2-5	
Nonhepatitis C related HCC			6-10
Hepatitis C related HCC			14
Biliary-Cholangiocarcinoma	20-35	4-8	9-14
Colon	30-45	8-10	16-21
Melanoma	15-40	4-14	6-15

Prognosis Assessment: Disease specific, all cancers

Palliative Prognostic Index (PPI)

Population: **cancer patients in palliative care unit**

<u>Variable</u>	<u>Points</u>
PPS	
10-20	4.0
30-50	2.5
60 or greater	0
Oral Intake	
Severely reduced (less than mouthfuls)	2.5
Moderately reduced	1.0
Normal	0
Edema	
Present	1.0
Absent	0
Dyspnea at rest	
Present	3.5
Absent	0
Delirium	
Present	4.0
Absent	0

Risk Groups: A(PPI 2 or less) B(PPI more than 2 up to 4) C(more than 4)

Expected Survival: PPI more than 6 less than 3 weeks
 PPI more than 4 less than 6 weeks

Patient population: **Hospice patients with cancer****Predicted Survival in Days**

	KPS(%)	10-20		30-40		50 or greater	
		<u>50% Dead</u>	<u>90% Dead</u>	<u>50% Dead</u>	<u>90% Dead</u>	<u>50% Dead</u>	<u>90% Dead</u>
# Symptoms							
0	53	232	115	450	172	450	
1	38-46	168-199	83-98	362-428	125-191	450	
2	29-38	128-165	63-82	275-356	95-123	413-450	
3	23-30	101-131	50-62	218-270	75-93	328-406	
4	19-23	10-95	41-49	181-215	62-74	272-322	
5	16	72	36	156	54	234	

Symptoms:

Dry mouth
Dyspnea
Anorexia or difficulty eating
Trouble swallowing
Weight loss

Cancer Presentations with a Median Survival of Six Months or Less

Breast

Any metastatic breast carcinoma with one or more of the following:

KPS < 60, ECOG > 2

Ca⁺⁺ > 11.2

Spinal cord compression with decreased ability to walk

C-reactive protein > 10 and albumin < 3.5

Peritoneal or leptomeningeal metastases

Any metastatic breast carcinoma with three or more of the following:

KPS < 80, ECOG > 2

LDH > 500

Any liver metastasis

2 different sites of metastasis

Disease free interval from presentation to metastases < 24 months

Recurrent or refractory disease after initial chemoRx

ER -, PR -

Metastatic breast carcinoma and brain metastases with one or more of the following:

KPS < 80, ECOG > 2

2 or more brain metastases plus extracranial metastases

ER -, PR -

Brain (Glioblastoma)

with one or more of the following:

KPS < 70, ECOG > 2

Suboptimal resection or unresectable

Progressive or refractory despite initial treatment

with two or more of the following:

KPS < 90, ECOG > 1

Age > 55

Recurrent disease after initial treatment

Lesion in critical hemispheric region

Tumor volume > 50cm³ before resection

Hgb < 12

Platelet count > upper limit of normal

Colorectal

Metastatic colorectal carcinoma with one or more of the following:

- KPS < 70, ECOG 2 or greater
- Age > 75
- Brain metastases with KPS < 80, age > 70

Metastatic colorectal carcinoma with two or more of the following:

- KPS < 90, ECOG 1 or greater
- Peritoneal carcinomatosis
- More than 2 metastatic sites
- Malignant ascites
- Refractory disease after chemoRx

Esophageal/Gastric

Locally advanced or metastatic esophageal/gastric with one or more of the following:

- KPS < 80, ECOG > 1
- Recurrent or refractory disease with disease-free interval < 6 months

Locally advanced or metastatic esophageal/gastric with two or more of the following:

- KPS < 90, ECOG 1 or greater
- Liver or peritoneal metastases
- Alkaline phosphatase > 100
- LDH > 200
- Hgb < 11

Hepatobiliary/Pancreatic Carcinoma

Locally advanced or metastatic biliary tract or pancreatic with one or more of the following:

- KPS < 90, ECOG 1 or greater
- Total bilirubin > 10
- Recurrent or refractory after initial chemoRx
- Liver, peritoneal, or distant metastases
- Portal vein thrombosis
- Albumin < 3.5
- LDH > 500
- Episode of DVT or PE
- Malignant ascites

Any **hepatocellular** carcinoma with one or more of the following:

- KPS < 60, ECOG > 2
- Tumor diameter > 10 cm
- Any brain metastasis

Unresectable locally advanced or metastatic **hepatocellular** carcinoma with two or more of the following:

- KPS < 90, ECOG 1 or greater
- Extrahepatic metastases
- Symptomatic cirrhosis:
 - Jaundice
 - Ascites
 - Fatigue
 - bleeding
- AFP > 400
- Portal vein thrombosis

Head and Neck Squamous Cell

Recurrent, refractory, or metastatic head and neck squamous cell carcinoma with one or more of the following:

- KPS < 90, ECOG 1 or greater
- Recurrence of disease with any metastasis
- Greater than 10% weight loss
- Muscle invasion or residual tumor at primary site
- Pretreatment Hgb < 11
- Ca++ > 11.2

Thyroid

Anaplastic thyroid cancer with one or more of the following:

- Extracapsular extension or metastases
- Unresectable disease or incomplete resection

Melanoma

Advanced or metastatic melanoma with one or more of the following:

- KPS < 80, ECOG 2 or greater
- LDH x 2 upper limit of normal
- Ca++ > 11.2
- Metastases to brain or spine
- Metastases to liver and one other site

NSCLC

Any locally advanced or metastatic NSCLC with one or more of the following:

- KPS < 70, ECOG > 2
- Weight loss of 5% or albumin < 3
- Liver metastases
- Bone metastases
- CNS metastases with symptoms, age > 65
- Pericardial involvement
- Pleural effusion with evidence of distant metastases
- Hgb < 12
- Ca > 11

(SCLC)

Extensive Disease: median survival 6-12 months with Rx, 4 months without Rx

Female Genital

Locally advanced or metastatic ovarian/endometrial/cervical with regional or distal spread and one or more of the following:

- KPS < 60, ECOG > 2
- Ca⁺⁺ > 11.2
- 2 or more brain metastases
- Bowel obstruction without successful repair or urinary tract obstruction
- Unresectable disease

Locally advanced or metastatic ovarian/endometrial/cervical with regional or distal spread and two or more of the following:

- KPS < 80, ECOG > 1
- Recurrent or refractory disease
- Disease-free interval < 6 months (diagnosis to recurrence)
- Suboptimal resection with bulky residual disease
- Weight loss > 5%
- Extra-abdominal metastases

Male Genital

Hormone-refractory metastatic prostate cancer with one or more of the following:

KPS < 60, ECOG > 2

Hgb < 10

Spinal cord compression with decreased ability to walk

Bladder and Renal Cell

Locally advanced or metastatic bladder or renal cell cancer with one or more of the following:

KPS < 70, ECOG > 2

Greater than 2 brain metastases

Ca++ > 11.2

Locally advanced or metastatic bladder or renal cell cancer with three or more of the following:

KPS < 80, ECOG 2 or greater

Hgb < 11.5

LDH > 300

Disease-free interval < 1 year

Visceral metastases

Solid Cancers in general

Any locally advanced or metastatic solid cancer with one or more of the following:

KPS < 60, ECOG > 2

Ca⁺⁺ > 11.2

Episode of DVT or PE

Any brain metastasis with KPS < 70

More than 2 brain metastases and extracranial metastasis

Spinal cord compression with decreased ability to walk

Malignant pericardial effusion

Unknown Primary

Any metastatic adenocarcinoma or undifferentiated carcinoma of unknown primary with one or more of the following:

KPS < 80, ECOG > 1

Hepatic, bone, or adrenal metastases

Recurrence of disease after chemoRx

Albumin < 3.5 or weight loss of > 10% in 6 months

Acute Leukemia

Acute Lymphoblastic or myeloid leukemia with one or more of the following:

Age > 70

Extramedullary disease involving Central Nervous System

Refractory to 2 or more courses of chemoRx

Recurrence with disease-free interval of < 14 months

Acute Lymphoblastic or myeloid leukemia with two or more of the following:

Age > 60

KPS < 80, ECOG 2 or greater

Central Nervous System involvement

Evidence of hemorrhage or infection

WBC > 25

LDH > 500

Chronic Leukemia

Chronic myeloid leukemia in blast transformation with one or more of the following:

- Age > 50 with predominant myeloid origin
- Myeloid blast transformation with WBC > 50, plt < 100, or Hgb < 10
- Greater than 50% blasts in peripheral blood

Chronic lymphocytic leukemia with one or more of the following:

- Refractory to initial chemoRx
- Recurrent disease after 2 or more courses of chemoRx

Lymphoma/Multiple Myeloma

Non-Hodgkins lymphoma or multiple myeloma with one or more of the following:

- Secondary extranodal or extramedullary involvement of CNS
- Primary CNS lymphoma related to HIV

Aggressive non-Hodgkins lymphoma or multiple myeloma that is refractory or recurrent after initial treatment – with 2 or more of the following:

- KPS < 70, ECOG 2 or greater
- Age > 65
- LDH above normal
- albumin < 3
- multiple myeloma with plt < 80
- multiple myeloma with serum creatinine 2 or greater

Non-Cancer Presentations with a Median Survival of Six Months or Less

Heart Failure

Hospitalization for moderate to severe symptomatic heart failure (HF), NYHA (New York Heart Association) Class III or IV with three or more of the following:

Age > 70

Left Ventricular Ejection Fraction (LVEF) 20% or less

Beta-type Natriuretic Peptide (BNP) > 950

Cardiac troponin I > 0.4

C-reactive protein > 3.5

4th hospitalization for CHF or repeat hospitalization within 2 months

Dependency of 3 or more ADL (activities of daily living) or need for home care

Weight loss of 2.3 kg or greater in 2 months or albumin < 2.5

History of:

Cardiogenic shock

Ventricular or supraventricular arrhythmia

Cardiac arrest

Cardiopulmonary resuscitation or

Mechanical ventilation

Systolic blood pressure < 110

Creatinine > 2 or BUN > 40

Sodium < 135

Cardiovascular disease:

Ischemic cerebrovascular disease or

Peripheral vascular disease

Other comorbid illness:

Diabetes Mellitus

Dementia

COPD

Cirrhosis

Cancer

Dementia

Advanced dementia with dependency in all activities of daily living, bedbound status, urinary and bowel incontinence, decreased ability to communicate verbally, AND admission to a hospital or skilled nursing facility with one or more of the following:

- BMI < 18.5, decreased oral intake, or significant weight loss
- Presence of at least one pressure ulcer
- Evidence of at least one comorbid illness
- Male sex and age > 90
- Placement of a feeding tube due to inability to eat or history of aspiration

Geriatric Failure-to-Thrive

Age > 75, albumin < 3.5, dependency in 2 or more activities of daily living, AND admission to a hospital or skilled nursing facility with one or more of the following:

- Dependency in all activities of daily living with malnutrition
(weight loss >10% or albumin < 3)
- Evidence of heart failure
- Creatinine > 3
- Evidence of delirium during hospitalization

End-Stage Renal Disease (ESRD)

ESRD on dialysis with age > 70 and 2 or more of the following:

- KPS < 50
- Significant comorbid condition such as
 - Coronary artery disease
 - Peripheral vascular disease
 - Heart failure
 - Cancer
- Malnutrition
 - BMI < 19.5 or albumin < 2.2
- Residence in a skilled nursing facility
- Admission to an intensive care unit for an acute illness
- Hip fracture with inability to ambulate

ESRD without dialysis with age > 70 and 1 or more of the following:

- Dialysis withheld due to decreased performance status and significant comorbidity

- Dialysis withdrawn due to advanced age, functional dependence, and comorbidity

Cirrhosis

Decompensated hepatic cirrhosis and 1 or more of the following:

Child-Pugh 12 or greater

MELD 21 or greater

Decompensated hepatic cirrhosis with hospitalization for an acute illness related to liver disease and 1 or more of the following:

Child-Pugh 10 or greater

MELD 18 or greater

Child-Pugh 9 or greater AND dependency in 3 or more ADL AND malnutrition (significant weight loss and albumin < 2.5

Hospitalization in an intensive care unit related to severe decompensation of liver disease, with hypotension requiring the use of vasopressors, creatinine > 1.5, OR evidence of jaundice

Evidence of hepatopulmonary syndrome or rapidly progressive hepatorenal syndrome

Chronic Obstructive Pulmonary Disease (COPD)

Hospitalization for a severe COPD exacerbation with hypoxemia ($paO_2 < 55$), hypercapnia ($pCO_2 > 50$), dependence on supplemental O_2 , and 3 or more of the following:

Age > 70

Evidence of cor pulmonale

Repeat hospitalization within 2 months

History of intubation/mechanical ventilation

KPS < 60

Need for home care after discharge

Malnutrition (weight loss > 2.3 kg, albumin < 2.5, or BMI < 18

Creatinine > 2

Mortality Prediction at 3 months and 1 year

Comorbidity :	Charlson Index	
	0-4	0 points
	5-7	1 point
	8 or greater	2 points
Obstruction:	FEV1%	
	65 or greater	0 points
	50-64	1 point
	36-49	2 points
	35 or less	3 points
Dyspnea:	mMRC = modified medical research council dyspnea scale	
	0-1	0 points
	2	1 point
	3	2 points
	4	3 points
EXacerbation:	exacerbations during the previous year (requiring ED visit and/or hospitalization)	
	0	0 points
	1-2	1 point
	3 or more	2 points

Score 1-10

<u>Score</u>	<u>Predicted 3 month mortality (%)</u>	<u>Predicted 1 year mortality (%)</u>
0	0	0
1	0	2
2	0	5
3	2	10
4	5	15
5	5	18
6	8	20
7	10	25
8	15	30
9	18	35
10	20	50

Mortality Prediction at 4 years

<u>Variable</u>	<u>BODE Index points</u>
Body Mass Index (BMI)	
More than 21	0
21 or less	1
Obstruction	
FEV1% - 65 or greater	0
FEV1% 50-64	1
FEV1% 36-49	2
FEV1% 35 or less	3
Dyspnea	
mMRC 0-1	0
mMRC 2	1
mMRC 3	2
mMRC 4	3
Exercise	
6-minute Walk Test (meters)	
350 or more	0
250-349	1
150-249	2
149 or less	3

Score 1-10

Approximate 4-year mortality (%)

<u>BODE Score</u>	<u>4-year mortality (%)</u>
0-2	20
3-4	33
5-6	43
7-10	82

Prognostic Index: Liver Disease

Child-Pugh Score

Class A	5-6 points
Class B	7-9 points
Class C	10-15 points

<u>Variable</u>	<u>Points</u>
Serum bilirubin	
<2	1
2-3	2
>3	3
Serum albumin	
3.5 or greater	1
3-3.5	2
Less than 3	3
Prothrombin time (INR)	
Less than 1.7	1
1.7-2.3	2
2.3 or greater	3
Ascites	
None	1
Slight	2
Moderate	3
Encephalopathy	
None	1
Minimal	2
Advanced	3

Disease-Specific, Non-Cancer Heart Failure

Community and Teaching Hospitals within 24 hours of admission (excludes > 105 years old and non-residents)

Survival/Mortality Prediction at 30 days and 1-year

Start with age in years as initial score:	30 day	1-year
Respiratory Rate	+ rate (breaths/min)	+ rate (breaths/min)
Systolic BP		
180 or more	- 60	- 50
160-179	- 55	- 45
140-159	- 50	- 40
120-139	- 45	- 35
100-119	- 40	- 30
90-99	- 35	- 25
Less than 90	- 30	- 20
Blood Urea Nitrogen (max 60 mg/dl)	+ level in mg/dl	+ level in mg/dl
Serum Sodium less than 136 meq/l	+ 10	+ 10
Cerebrovascular Disease	+ 10	+ 10
Dementia	+ 20	+ 15
Chronic Obstructive Pulmonary Disease	+ 10	+ 10
Cirrhosis	+ 25	+ 35
Cancer	+ 15	+ 15
Hemoglobin less than 10 g/dl	NA	+ 10

<u>Risk Category</u>	<u>HFRSS Score</u>	<u>30 day mortality (%)</u>	<u>1-year mortality (%)</u>
Very Low	less than 60	0.5	5-8
Low	61-90	3-4	12-15
Intermediate	91-120	12-15	30
High	121-150	30	55-60
Very High	more than 150	50-60	75

Prognosis Assessment: PLAN Clinical Prediction Rule

Population: hospital admission acute ischemic stroke without thrombolysis

<u>Variable</u>	<u>Points</u>
Preadmission medical comorbidities	
ADL dependence	1.5
Cancer	1.5
CHF	1.0
Atrial Fibrillation	1.0
Level of consciousness	
Reduced	5.0
Age	One point per decade (max = 10)
Neurologic deficit	
Arm weakness	2.0
Leg weakness	2.0
Neglect or aphasia	1.0

Correlation of PLAN Score to	30 day and	1 year	m-R* of 5 or 6 (%)
	mortality %		
Less than 6	0.7	2.1	0.9
6	1.9	4.8	1.2
7	1.4	4.5	1.3
8	2.1	6.4	2.5
9	4.4	13.1	4.3
10	4.4	16.2	6.0
11	7.6	21.7	9.8
12	10.9	26.3	14.8
13	15.3	32.0	20.3
14	21.7	42.2	30.7
15	29.3	46.0	35.8
16	35.4	57.7	43.9
17	42.5	63.3	54.4
18	50.5	74.3	65.0
19	61.2	73.8	73.2
More than 19	65.9	83.6	78.4

*= modified Rankin score

Mortality Prediction at 3 months and 1 year for patients receiving prolonged mechanical ventilation – measured on day #21 of mechanical ventilation

One (1) point each for:

- Age 50 years or more
- Vasopressor
- Platelet count 150,000 or less
- Hemodialysis or CRRT

<u>Score</u>	<u>Observed 3 month mortality (%)</u>	<u>Observed 1 year mortality (%)</u>
0	12	15
1	29	42
2	77	88
3	91	95
4	95	100

<u>Components</u>	<u>Points</u>
Glasgow Coma Scale (GCS)	
3-4	2
5-12	1
13-15	0
ICH volume, cm ³	
30 or more	1
Less than 30	0
Intra-ventricular hemorrhage	
Yes	1
No	0
Infra-tentorial origin	
Yes	1
No	0
Age, years	
80 or more	1
Less than 80	0

Score 0-6

30-day mortality (%) correlated with ICH score:

<u>Score</u>	<u>30-day Mortality (%)</u>
0	0
1	10
2	25
3	75
4	95
5	99
6	100

<u>Predictor</u>	<u>Points</u>
Age, years	
59 or less	0
60-69	1
70-79	2
80 or older	4
Initial Rhythm VF/VT	
Time to initial defibrillation	
3 minutes or less	0
4-5 minutes	2
5 minutes or more	3
Initial Rhythm PEA	6
Initial Rhythm Asystole	7
Prearrest CPC score	
1	0
2	2
3 or more	9
Location of arrest	
Telemetry unit	0
Intensive Care Unit	1
Non-monitored unit	3
Duration of Resuscitation (minutes)	
4 or less	0
5-9	3
10-14	5
15-19	6
20-24	6
25-29	6
30 or more	8
Factors present prior to arrest	
Mechanical ventilation	3
Renal insufficiency	2
Hepatic insufficiency	4
Sepsis	3
Cancer	4
Hypotension	3

Predictor Points correlated with likelihood (mean survival %) of survival to hospital discharge				
0-4	82.6	20-24	12.3	
5-9	66.6	25-29	5.2	35 points or more = 0% survival to discharge
10-14	42.0	30-34	2.1	
15-19	23.1	>34		

PCN Cerebral Performance Category after Resuscitation Attempt (GO-FAR)

GO-FAR: **Good Outcome Following Attempted Resuscitation**

Variable	GO-FAR Score
Neurologically intact or with minimal deficits at admission	- 15
Major trauma	10
Acute stroke	8
Metastatic or hematologic cancer	7
Documented bloodstream infection	7
Medical noncardiac diagnosis	7
Hepatic insufficiency	6
Bilirubin >2 mg/dl	
AST > 2x normal	
Cirrhosis	
Admit from skilled nursing facility	6
Hypotension or hypoperfusion	5
Mean BP < 60	
Vasopressor	
IABP	
Renal insufficiency or dialysis/CRRT	4
Serum creatinine > 2 mg/dl	
Respiratory insufficiency	4
Intubation/mechanical ventilation	
NIPPV	
PaO ₂ /FiO ₂ < 300	
PaCO ₂ > 50 mmHg	
PaO ₂ < 60	
Pneumonia	1
Age	
70-74	2
75-79	5
80-84	6
85 or older	11

GO-FAR Score correlated with % of survivors with **CPC of 1** (chances for “good outcome”)

24 or more	0.8	(very low – less than 1%)
14-23	2.0	(low – 1-3%)
-5 to 13	9.2	(average – 3 -15%)
-15 to -6	27.8	(above average – more than 15%)

General End-Stage Disease Guidelines

Changes in clinical variables apply to patients whose decline is not considered reversible

Documented decline in functional status (both should be met)

1. Assistance needed with at least 2 ADLs (toilet, feed, dress, groom, walk, bathe)
2. Decline in PPS to less than 70%

Decline in nutritional status

Unintentional progressive weight loss (10% over 6 months)

Serum albumin < 2.5 gm/dl

Dysphagia leading to recurrent aspiration and/or inadequate intake

Increased ED visits, physician visits, or hospitalizations related to primary hospice diagnosis

Multiple co-morbidities

Goal for palliative care

Adult "failure to thrive"

PPS < 50%

BMI < 22

Declining enteral or parenteral nutrition support or has not responded to such nutritional support, despite adequate caloric intake

Dementia

The patient has dementia which has progressed to:

- FAST stage 7 or beyond
- Unable to ambulate without assistance
- Unable to dress without assistance
- Unable to bathe without assistance
- Urinary and fecal incontinence, intermittent or constant
- No meaningful verbal communication
 - Stereotypical phrases only
 - Ability to speak is limited to six or fewer intelligible words

AND

The patient must have had one of the following within the past 12 months

- Aspiration pneumonia
- Pyelonephritis or other upper urinary tract infection
- Septic episode
- Decubitus ulcers, multiple, stage 3-4
- Fever, recurrent after antibiotics
- Inability to maintain sufficient fluid and calorie intake

Liver Disease

The patient has end-stage liver disease demonstrated by:

Prothrombin time >5 sec – OR - INR > 1.5 – AND - serum albumin < 2.5 gm/dl

AND:

One or more of the following:

Refractory ascites

History of SBP

Hepatorenal syndrome

Refractory hepatic encephalopathy

History of recurrent variceal bleeding

Additional supporting documentation:

Progressive malnutrition

Muscle wasting with reduced strength and endurance

Continued active alcoholism (>80 gm alcohol/day)

Hepatocellular carcinoma

Hepatitis B positivity

Neurologic Disease

ALS
Parkinsons
Muscular Dystrophy
Myasthenia Gravis
Multiple Sclerosis
Neuromuscular Disease

Meet at least one of the following criteria:

1. Critically impaired breathing capacity – all of following:
 - a. Dyspnea at rest
 - b. Vital capacity < 30%
 - c. Requires oxygen at rest
 - d. Declines mechanical ventilation

2. Rapid disease progression:
 - a. Independent ambulation to wheelchair or bed-bound status
 - b. Normal to barely intelligible or unintelligible speech
 - c. Normal to pureed diet
 - d. Independence in most ADLs to needing major assistance in all ADLs

AND

Critical nutritional impairment – all of the following in the last 12 months:

- a. Oral intake of nutrients and fluids insufficient to sustain life
- b. Continuing weight loss
- c. Dehydration or hypovolemia
- d. Absence of artificial feeding methods

3. Rapid disease progression:
 - a. Independent ambulation to wheelchair or bed-bound status
 - b. Normal to barely intelligible or unintelligible speech
 - c. Normal to pureed diet
 - d. Independence in most ADLs to needing major assistance in all ADLs

AND

Life threatening complications – one or more of the following in the last 12 months:

- a. Recurrent aspiration pneumonia
- b. Pyelonephritis
- c. Sepsis or recurrent fever
- d. Stage 3 or 4 decubitus ulcer(s)

Heart Disease/Cardiovascular

The patient has 1 and either 2 or 3:

1. CHF with NYHA class IV symptoms and both:
 - a. Significant symptoms at rest
 - b. Inability to carry out even minimal physical activity without dyspnea or angina
2. Patient is optimally treated with diuretics and vasodilators including ACEI
3. The patient has angina pectoris at rest, resistant to medical therapy, and is either not a candidate for/or has declined invasive procedures.

Supporting documentation:

- EF < 20%
- Treatment resistant dysrhythmias
- Cardiac-related syncope
- Stroke related to cardiac embolism
- History of CPR
- Concomitant HIV

HIV/AIDS

The patient has either **1A** or **1B**; AND **2** AND **3**

- 1A.** CD4+ < 25
- 1B.** viral load > 100,000
- 2.** At least one of the following:
 - CNS lymphoma
 - Untreated or refractory wasting (loss of > 33% lean body mass)
 - MAC bacteremia
 - PML
 - Systemic lymphoma
 - Visceral KS
 - Renal failure, no HD
 - Cryptosporidium infection
 - Refractory toxoplasmosis
- 3.** PPS < 50%

Pulmonary Disease

The patient has:

Disabling dyspnea at rest or with minimal exertion and little or no response to bronchodilators, resulting in decreased functional capacity, fatigue, cough, AND

Progression of end-stage pulmonary disease, as evidenced by prior increasing visits to the emergency department or prior hospitalizations for pulmonary infections and/or respiratory failure, AND

Room air findings of hypoxemia, as evidenced by $pO_2 < 55$ mmHg and oxygen saturation $< 88\%$ or hypercapnia as evidenced by $pCO_2 > 50$ mmHg

Cor pulmonale and right heart failure secondary to pulmonary disease (not secondary to left heart disease or valvulopathy)

Unintentional progressive weight loss greater than 10% of body weight over the preceding six months

Resting tachycardia > 100 bpm

Renal Failure

A patient has:

Acute renal failure OR
Chronic renal failure (ESRD) AND

The patient is not undergoing dialysis AND
Creatinine clearance < 10 cc/min OR
Serum creatinine > 8 mg/dl (6 for diabetics)

Supporting documentation:

Mechanical ventilation
Malignancy
Chronic lung disease
Advanced cardiac disease
Advanced liver disease
Sepsis
Immunosuppression/AIDS
Albumin < 3.5 gm/dl
Cachexia
Platelet count < 25,000
Disseminated Intravascular Coagulation (DIC)
Gastrointestinal bleeding
Uremia
Oliguria (<400 cc/day)
Intractable hyperkalemia (>7.0) not responsive to treatment
Uremic pericarditis
Hepatorenal syndrome
Intractable fluid overload

Stroke and Coma

Acute hemorrhagic or ischemic stroke

Poor functional status (PPS < 50 %) AND

Poor nutritional status with inability to maintain sufficient fluid and calorie intake as evidenced by one or more of the following:

10% or more weight loss in past 6 months

7.5% or more weight loss in past 3 months

Serum albumin < 2.5 gm/dl

Current history of pulmonary aspiration without effective response to speech therapy interventions to improve dysphagia and decrease aspiration events

Supporting documentation:

Coma or persistent vegetative state secondary to stroke, beyond 3 days duration

Coma or severe obtundation, secondary to post-anoxic stroke

accompanied by severe myoclonus, persisting beyond 3 days after the anoxic event

Chronic phase of hemorrhagic or ischemic stroke evidenced by:

Post stroke dementia, FAST stage 7 or beyond

Poor functional status with KPS %0% or less

Coma (any etiology) with any 3 of the following on day three of coma:

Abnormal brainstem response

Absent verbal response

Absent withdrawal response to pain

Serum creatinine > 1.5 mg/dl

Cancer

Clinical findings of malignancy with widespread, aggressive, or progressive disease
as evidenced by increasing symptoms, worsening lab values, and/or evidence of metastatic
disease

AND

PPS 70 % or less

AND

Refuses further life-prolonging therapy or continues to decline in spite of definitive therapy
(may receive disease-specific intervention if palliative)

The following cancer disease categories are considered hospice appropriate due to the small probability that treatment would result in cure or cessation of disease:

Category 3: malignancies that are treatable but incurable when metastatic in a large percentage of patients, with favorable prognosis:

prostate, breast, CLL, CML, NHL, multiple myeloma, myelodysplastic syndrome
(often may be controlled for periods of time with hormonal and/or chemotherapy, may require no therapy or are only treated when symptoms occur, generally have a history of having received and failed one or more standard therapeutic regimens and should have symptoms compatible with disease progression before considering hospice option)

Category 4: malignancies that are treatable in only a small percentage of patients with less favorable prognosis:

invasive bladder, glioblastoma, gynecological carcinomas other than ovary, colorectal, gastric, head and neck, esophageal, NSCLC, soft tissue sarcoma
(majority are adult solid tumors, presence of metastatic disease generally indicative of a terminal prognosis, usually 40% or less of patients have an objective response to chemotherapy, chemotherapy responses are usually not durable, impact of chemotherapy on symptoms and quality of life not well documented in medical literature, as chemotherapy is of limited benefit to most patients once these diseases have metastasized such patients could be offered the option of hospice in lieu of chemotherapy, if chemotherapy is chosen by the patient as a therapeutic option, failure of first-line therapy should prompt serious consideration of hospice)

Category 5 malignancies that are virtually untreatable:

renal cell, pancreatic, malignant melanoma
(generally resistant to currently available chemotherapy, with the lack of efficacious systemic therapy – patients with these diseases and have metastatic disease should be offered hospice As an option)

Early

- Bed-bound
- Loss of interest
- Loss of ability to eat/drink
- Increased time sleeping
- +/- delirium

Middle

- Obtunded
- Oral secretions (“rattle”)

Late

- Coma
- Fever
- Aspiration
- Altered respiratory pattern
- Mottling

PCN EOL Management Palliative Sedation

Confirm that goal of care is comfort

Advanced terminal illness

Suffering severe refractory physical or neuropsychiatric symptoms – or – psychosocial problems

Order to withhold life-sustaining interventions

Informed consent

Document all of above, inform clinical team

Specify loading dose, infusion, bolus doses

Midazolam

0.3-0.5 mg/kg over 2-5 minutes

Infusion 0.02-0.1 mg/kg/hr

Additional boluses = hourly infusion rate

Propofol

(central venous catheter only)

Start infusion 2.5-5.0 mcg/kg/min (10-20 mg/hr)

Bolus doses 10-20 mg q 10 min

Pentobarbital

Loading dose 2-3 mg/kg

Infusion 1-2 mg/kg/hr

PCN SQ Dosing

Drug	Bolus(mg)	Infusion(mg)
Morphine Sulfate	2.5-5 q 4h	15-30/24 h
Hydromorphone	2-5 q 4h	15/24 h
Fentanyl	use infusion	0.150-0.300/24 h
Midazolam	2.5 q 4h	20-40/24 h
Haloperidol	0.5-2.5 q 6-8 h	5-25/24 h
Phenobarbital	60 q 6-8 h	200-1000/24 h
Metoclopramide	10 q 6 h	30-100/24 h
Hyoscine	0.3-0.6 q 2-4 h	0.6-2.4/24 h
Glycopyrrolate	0.2-0.4 q 4-6 h	0.6-1.2/24 h
Octreotide	0.1-0.2 q 8 h	0.3-0.6/24 h

DNAR

Patient Categories/Hierarchy of Decision-makers

DNAR: Do-Not-Attempt-Resuscitation

Basically healthy

20-40% survival

+ benefit

Advanced/Chronic Illness

5-20% survival

+/- benefit

Imminent death

0%

0 benefit

Hierarchy of decision-makers:

Capable patient

DPOAHC

Legal guardian

Spouse

Adult children

Parents

Adult sibling(s)

Grand-parents

Other

1. Use a multidrug approach. Combine opioids with nonopioids and adjuvant medications.
2. Base administration schedule on the analgesic's duration of effect. Best to use sustained-release opioids for scheduled dosing and immediate-release opioids for rescue or breakthrough dosing.
3. In opioid-naïve patients, start with low-dose, short-acting opioids and titrate for effect.
4. Avoid meperidine (Demerol), propoxyphene (Darvon), and the mixed agonist-antagonist opioids (eg, Stadol, Nubain, Talwin). Do not exceed 4000 mg of acetaminophen (APAP) in 24 hours.
5. Noninvasive routes preferred. For severe pain or rapidly escalating pain, it may be necessary to provide IV analgesics until the pain is managed. If oral or transdermal dosing is no longer practical or appropriate, continuous subQ or IV infusions are indicated.
6. Mild pain (rating 1-3): Start with simple analgesics, APAP or NSAIDS, with adjuvant analgesics as appropriate.
7. Moderate to severe pain (rating 4-10): When pain does not respond to nonopioid analgesics and adjuvants, consider adding an opioid. Drugs with APAP, ASA, or NSAIDS in combination with opioids limit flexibility of dosing.
8. Titration: Increase by 25% to 50% for moderate pain; increase by 50% to 100% for severe pain. Or calculate the average dose of breakthrough medication per day and add to the sustained-release medication dose (except when breakthrough is taken for incident pain).
9. Breakthrough: Scheduled dosing will maintain stable serum drug levels and provide consistent relief. Patients receiving long-acting opioids or continuous parenteral infusions must have an order for breakthrough pain medication. Frequent breakthrough dosing requires a change in the sustained-release drug dose. Oral breakthrough dose is 10% to 20% of the oral 24-hour baseline dose. Peak effect of immediate-release opioid is ~ 1 hour; may repeat dose every hour if patient is not sedated. IV/SQ breakthrough dose is 50% to 100% of the hourly IV/SQ rate. Peak effect of IV opioids is 10-15 minutes; may repeat dose every 15 minutes if patient

10. not sedated. Peak effect of SQ opioids is 30 minutes; may repeat dose every 30 minutes if patient not sedated. Intramuscular dosing not recommended.
11. When changing drug or route of administration, use equianalgesic doses. If changing from one drug to another, the new drug may be more effective because of differences of potency or drug availability. Start at $2/3$ to $3/4$ of the amount calculated by using equianalgesic tables. Make sure breakthrough medication is available and titrate dose according to individual response.

Manage opioid adverse effects. Patients never become tolerant to the constipating effects of opioids. Always start stimulant laxative/softener combination with opioids

Equianalgesic Opioid Conversion (Miscellaneous)

Morphine Sulfate (MS) 30 mg PO = 10 mg IV (3:1)

Hydromorphone (HM) 7.5 mg PO = 1.5 mg IV (5:1)

Oxycodone (OX) 0.66 mg PO = MS 1 mg PO

Fentanyl (FT) 1 mcg/hr = 2 mg Oral Morphine Equivalent (OME)

Codeine 30 mg PO = MS 4.5 mg PO

Tramadol 50 mg PO = MS 10 mg PO

Converting Opioids: Point A to Point B

M=morphine, H=hydromorphone, X=oxycodone, F=fentanyl, MET=methadone
O=oral, V=intravenous, T=transdermal

- 1: all doses in mg unless otherwise noted
- 2: note 100 mcg = 0.1 mg
- 3: dose in mcg/hr

B: →DESIRED ¹ →	MO ("OME")	MV	HO	HV	XO	FV ²	FT ³ (MCG/HR)	METO	METV
A: ↓CURRENT ¹ ↓									
MO ("OME")	---	1/3	1/4	1/20	2/3	1/300	1/2	¼ OME/24°< 90 1/8 OME/24°90- 300 1/12 OME/24°>300	
MV	3/1	---	3/4	1/7	2/1	1/100	3/2		
HO	4/1	4/3	---	1/5	3/1	1/75	2/1		
HV	20/1	7/1	5/1	---	14/1	1/15	10/1		
XO	3/2	1/2	1/3	1/14	---	1/200	3/4		
FV	300/1	100/1	75/1	15/1	200/1	---	150/1		
FT ³ (MCG/HR)	2/1	2/3	1/2	1/10	4/3	1/150	---		
METO	5/1							---	1/2
METV	13.5/1							1.3/1	---

A: Find current drug (Point A) in far left column

B: Find desired drug (Point B) in top row

Intersection of A and B in table defines conversion ratio

Dose desired drug (B) = Dose current drug (A) x conversion ratio

Calculated dose represents an estimated equianalgesic dose. Significant individual patient variation should be expected. The actual dose of the desired drug to administer should be adjusted for a variety of factors including but not limited to: age, pain intensity, cross-tolerance, and renal/hepatic dysfunction.

Consider the following when adjusting the calculated (estimated) equianalgesic dose:

0% reduction: moderate to severe pain, no side effects (sedation, respiratory depression, neurotoxicity) on current medication

25% reduction: mild to moderate pain, no side effects

50% reduction: mild or controlled pain, presence of side effects

Select the new drug on the basis of pharmacologic features, previous experience, availability, cost

Calculate the equianalgesic dose:

If switching to any opioid other than methadone or fentanyl:

Plan dose reduction of 25-50% (incomplete cross tolerance)

Select dose reduction closer to 50% if higher dose, elderly, medically frail

If switching to methadone:

Dose reduction is 50-75%, rarely converting to methadone at dose higher than 100 mg/day

If switching to transdermal fentanyl:

Use calculated equianalgesic dose included in product information (approx. OME/2)

On the basis of assessment of severity of pain severity and other medical/psychologic characteristics, increase or decrease the calculated dose by 15-30% to increase the likelihood that the initial dose will be effective, or conversely, unlikely to cause withdrawal or side-effects

If a supplemental (breakthrough) dose is used, calculate this dose at 10-20% of the total daily dose (OME) and administer at an appropriate interval

Exception: transmucosal fentanyl formulations should always be initiated at lower doses and titrated

<u>System Failure</u>	<u>Preferred</u>	<u>Consider</u>	<u>Avoid</u>
Hepatic	hydromorphone methadone morphine	oxycodone	fentanyl hydrocodone tramadol
Renal	methadone fentanyl oxycodone	hydromorphone hydrocodone	morphine codeine tramadol
Hepatic + Renal	methadone hydromorphone	fentanyl oxycodone	morphine codeine tramadol hydrocodone

PCN Opioid Dose Size Availability

Morphine IR	15, 30 Oral solution 1mg/ml, 2mg/ml, 4mg/ml, 20mg/ml
Morphine SR	15, 30, 60, 100
Oxycodone IR	5, 15, 30 Oral solution 1mg/ml, 20mg/ml
Oxycodone SR	10, 15, 20, 30, 40, 60, 80
Hydromorphone	2,4,8 po tablets
Fentanyl	lozenge – 2000, 400,600, 800, 1200, 1600 mcg buccal – 100, 200, 400, 600 800 mcg transdermal – 12, 25, 50, 75 mcg/hr
Methadone	5, 10

Opioid Risk Variables

Family History

Alcohol, Illegal Drugs, Prescription agents

Personal History

Alcohol, Illegal Drugs, Prescription agents

Age (16-45)

History preadolescent sexual abuse

Psychologic/Psychiatric Disease: ADD, OCD, Bipolar, Schizophrenia, Depression

Aberrant Behaviors – more predictive:

Selling prescription drugs

Prescription forgery

Stealing/"borrowing"

Injecting oral drugs

Multiple drugs

Unsanctioned escalation

Resisting change despite side effects

Prescription losses

Aberrant Behaviors – less predictive:

Aggressive complaining about need for increased doses

Drug hoarding

Specific drug request

Use of drug to treat other symptoms

Multiple escalations

PCN Urine Drug Testing

<u>Drug:</u>	<u>Metabolite(s):</u>	<u>Duration (days):</u>
Codeine	codeine, morphine, hydrocodone	2-4
Morphine	morphine, hydromorphone, codeine	2-4
Hydrocodone	hydrocodone, hydromorphone	2-4
Hydromorphone	hydromorphone	2-4
Oxycodone	oxycodone, oxymorphone, hydrocodone	2-4
Oxymorphone	oxymorphone, oxycodone	2-4
Alprazolam	alprazolam, alpha-hydroxyalprazolam	up to 7
Clonazepam	7-aminoclonazepam	up to 7
Chlordiazepoxide	nordiazepam, oxazepam	up to 7
Diazepam	nordiazepam, temazepam, oxazepam	up to 7
Flurazepam	2-hydroxyethyl flurazepam	up to 7
Lorazepam	lorazepam	up to 7
Oxazepam	oxazepam	up to 7
Temazepam	oxazepam	up to 7
Barbituates		up to 6
Cocaine		2-4
Alcohol		0.25-0.5
THC		up to 5
PCP		2-7
Opioids		2-4
Methadone		2-4
Propoxyphene		2-4
Tramadol		2-4

Convert PO Methadone to IV Methadone: Total Methadone Dose/2
 Infused over 24 hrs or divided q6-8 hr

Convert 24 hour Oral Morphine Equivalent (OME) to equianalgesic Morphine dose:

OME	Ratio OME to 24 hr PO Methadone dose
<60	“opioid naïve” – Methadone 2.5 mg bid or tid
60-200	10:1 (less than 65 years old)
>200	20:1 (or if greater than 65 years old)

(consider Fixed dose Methadone of 30 mg when OME > 300)

Adjust (decrease) calculated dose of Methadone up to 50%:

- Incomplete cross tolerance
- Varied metabolism
- Imperfection of equianalgesic tables

Dose should not be increased before 5-7 days and not increased by more than 5-10 mg/day once a total daily dose of 30-40 mg has been reached

ECG evaluation for QTc prolongation based on clinical judgment

Methadone Interactions

CYP450 inhibition > increase effect

- Macrolides – clarithromycin, erythromycin
- diltiazem, verapamil
- ketoconazole
- itraconazole
- cyclosporine
- grapefruit juice

CYP450 induction > decrease effect

- phenobarbital
- phenytoin
- carbamazepine
- ritonavir

Estimate of Methadone to Morphine Conversion (JPM 2008;11:1103)

1 mg Methadone PO	=	4.7 mg Morphine PO
1 mg Methadone IV	=	13.5 mg Morphine PO

PCN Methadone Notes 2

This table incorporates:

- Incomplete cross tolerance
- Variations in metabolism
- Imperfections in equianalgesic tables

- Do not decrease after conversion

<u>OME mg/24 hrs</u>	<u>Morphine to Methadone Ratio</u>
Less than 100	3:1
101-300	5:1
301-600	10:1
601-800	12:1
801-1000	15:1
Greater than 1000	20:1

Oral methadone to IV methadone = 2:1

PCN Fentanyl (F) Notes

For bolus dosing: 100 mcg (0.1 mg) F = 10 mg Morphine IV = 30 mg Morphine PO

For continuous infusion: 100 mcg (0.1 mg) F/hr = 6.6 mg Morphine/hr

F TTD to F IV: decrease by 50%

F IV to F TTD: 1:1

OME to F TTD: OME/2

F IV peak effect 6-10 min, duration 30-90 min

F TTD doses available: mcg/hr 12, 25, 50, 75, 100

F oral lozenge (Actiq) = OTFC

200 mcg OTFC = 12 mg Morphine PO
2-4 mg Morphine IV
7.5 mg oxycodone PO

OTFC mcg doses sizes available: 200, 400, 600, 800, 1200, 1600

F buccal tablets (Fentora): 2X strength of OTFC

dose sizes available: 100, 200, 400, 600, 800

PCN Fentanyl Notes 2

50 mcg/hr Fentanyl TD = OME 100

IV Fentanyl

Peak effect IV push = 6-10 minutes

Duration of effect = 30-90 minutes

Conversion to IV Fentanyl:

100 mcg IV Fentanyl = 10 mg IV Morphine

(for bolus dosing or do not decrease for cross tolerance)

100 mcg Fentanyl IV = 6.6 mg Morphine Sulfate

(for continuous infusion)

TransDermal to IV Fentanyl - decrease by 50%

IV to TD - 1:1

	Female Score	Male Score
Family History EtOH	1	3
Family History Illegal Drugs	2	3
Family History Prescription Drugs	4	4
Personal History EtOH	3	3
Personal History Illegal Drugs	4	4
Personal History Prescription Drugs	5	5
Age 16-45	1	1
History Preadolescent Sexual Abuse	3	0
Psychological Disease		
ADD	2	2
OCD	2	2
Bipolar	2	2
Depression	1	1

Low Risk 0-3 Moderate Risk 4-7 High Risk 8 or more

Psychological Variables Potentially Implicated in Opioid-Related Mortality

Fear and desperation in the face of pain (catastrophizing)

Impulsivity

Chemical coping

Lack of acceptance

Personal disorder ("borderline")

 A: odd, eccentric

 B: emotional overreactivity, self destructiveness, repetitive acting out

 C: anxious, avoidant

Demoralization, existential distress

Sensation seeking

Escapism

Pharmacological

- Opioid analgesics
- Non-opioid analgesics
- Adjuvant analgesics

Interventional

- Injection therapies
- Neural blockade
- Implant therapy

Rehabilitative

- Modalities
- Therapeutic exercise
- Occupational therapy
- Hydrotherapy

Psychological

- Psychoeducational interventions
- Cognitive-behavioral therapy
- Relaxation therapy
- Guided imagery
- Other stress management and psychotherapy

Neurostimulation

- Transcutaneous
- Transcranial
- Implanted

Integrative (complementary, alternative)

- Acupuncture
- Massage
- Physical movement
- Others

Psychoactive Meds

SSRI: mg dosage

Citalopram	(Celexa)	20-80
Fluoxetine	(Prozac)	20-80
Paroxetine	(Paxil)	20-80
Sertraline	(Zoloft)	50-300

Fewest drug/drug interactions: citalopram, sertraline

Sedation, discontinuation syndromes: paroxetine

SNRI:

Venlafaxine	(Effexor)	37.5-300
Duloxetine	(Cymbalta)	20-120

for neuropathic pain at least 60 mg qd

Atypical:

Bupropion	(Wellbutrin)	100-450	seizure risk
Mirtazapine	(Remeron)	15-45	increased appetite, weight gain

2nd generation Anti-Psychotic Agents:

Haloperidol	(Haldol)	2.5-15
Risperidone	(Risperdal)	1-6
Olanzapine	(Zyprexa)	2.5-30
Aripiprazole	(Abilify)	5-30
Quetiapine	(Seroquel)	25-800
Clozapine	(Clozaril)	250-450

Benzodiazepines:

			<u>equivalent PO dose mg</u>
Alprazolam	(Xanax)	0.25-3	0.5
Clonazepam	(Klonopin)	0.25-3	0.25
Diazepam	(Valium)	2.5-20	5.0
Lorazepam	(Ativan)	0.5-5	1.0
Flurazepam	(Dalmane)	15-30	30
Temazepam	(Restoril)	10-20	20

GABA_A – Sleep Agents:

Zaleplon	(Sonata)	5-10
Zolpidem	(Ambien)	5-10

Other:

Buspirone	(Buspar)	10-45
Trazodone		25-100

PCN Anti-Depressant Agents – Notes

Escitalopram	5-20 qd	fewer interactions
Citalopram	10-40 qd	fewer interactions
Fluoxetine	5/10-60 qd	longer half-life, taper when discontinuing
Paroxetine	10 qPM – 40	sedating, significant interactions
Sertraline	12.5/25-200	
Venlafaxine	37.5 qAM or bid-150 bid	stimulating (not use with anxiety), taper
Duloxetine	10/20 q AM -60 bid	use with coexistent anxiety Nausea, dry mouth, constipation
Desipramine	10/25 qhs- 150/day	
Nortriptyline	10 qhs – 150	fewer anti-cholinergic side effects
Mirtazapine	7.5/15 qhs-60	sedation, weight gain NE, 5HT antagonist
Bupropion	75-100 qAM – 450/day	useful with fatigue, low energy not with seizures, bulimia, anorexia weak NE, 5HT, Dop antagonist
Methylphenidate	2.5/5 qAM or noon - 60/day	side effects: nervousness, agitation

Citalopram	reduces agitation, anxiety Not as activating as fluoxetine Not as sedating as paroxetine “neutral
Mirtazapine	sedation, increased appetite, enhances effect of Coumadin not effective for pain consider with combination of nausea/anorexia/insomnia/depression
Fluoxetine	activating
Bupropion	activating
Duloxetine	better tolerated in elderly consider with depression/anxiety/neuropathic pain in elderly

Tri-cyclic agents: contraindicated with CHF, liver failure, BPH

PCN – Antidepressant Medication Considerations (CoMorbid Neuro/Med and Psych Symptoms)

Symptom(s)	Consider	Avoid
Depression+		
Anxiety	SNRI	
OCD	Fluoxetine	TCA, Bupropion
Psychosis	SSRI, SNRI + Anti-psych	TCA, Bupropion
Somatization	Duloxetine	TCA
Abulia	Bupropion	TCA, Paroxetine
Delirium or Dementia	Citalopram	TCA, Bupropion
Fatigue	Bupropion, Fluoxetine	TCA, Paroxetine
Insomnia	Mirtazapine	TCA, Fluoxetine
Pain	Duloxetine, TCA	SSRI
Parkinsonism	Bupropion, Mirtazapine	Sertraline, Paroxetine
Seizures	SSRI, SNRI	Bupropion
Tremor	Mirtazapine	SSRI, SNRI
Stroke	Citalopram	TCA
Vertigo	Fluoxetine	TCA
Advanced Age	Citalopram, Bupropion	TCA
Constipation	Bupropion, SSRI, SNRI	TCA
Diarrhea	Mirtazapine, TCA	SSRI, Bupropion
DM	Bupropion, SSRI, SNRI	TCA, Paroxetine
Glaucoma	Bupropion, SSRI, SNRI	TCA
Heart Disease	SSRI	TCA, Mirtazapine
Hypotension	Bupropion, SNRI	TCA
Renal Failure	Fluoxetine	Bupropion
Hepatic Failure	Bupropion	Duloxetine, Citalopram
Nausea, GERD		Paroxetine, Sertraline
Overweight	Bupropion	TCA, Mirtazapine
Pregnancy	SSRI, SNRI	TCA
Sexual Dysfunction	Bupropion	Paroxetine, SSRI
Smoker	Bupropion	TCA
Urine Retention	Bupropion	TCA

(SSRI,SNRI,Bupropion,Mirtazapine)

-no agent superior for associated pain, anxiety, insomnia

-higher incidence of side effects:

Venlafaxine > nausea

Sertraline > diarrhea

Mirtazapine > weight gain

Bupropion > less sexual dysfunction

Mirtazapine > faster onset of action

Alprazolam	0.25-2 tid/qid	peak 30 minutes, ++ rebound
Lorazepam	0.5-1.5 bid/qid	peak 5-20 min, ½ life 13-15 hrs
Clonazepam	0.25-2 bid/tid	peak 20-60 min, ½ life 19-50 hrs
Diazepam	2-10 bid/qid	peak 15-45 min, ½ life 20-50 hrs metabolites 50-100 hrs
Buspirone	5-10 bid/tid	peak 1-1.5 hrs, ½ life 2-11 hrs
Haloperidol	0.5-5 q2-12 hrs	

NSAID Classes:

- Propionic acids
 - Fenoprofen
 - Ibuprofen
 - Ketoprofen
 - Naproxen
- Acetic acids
 - Diclofenac
 - Indomethacin
 - Ketorolac
 - Sulindac
 - Tolmentin
- Endic acids
 - Meloxicam
 - Piroxicam
- Anthranilic acids
 - Mefenamic acid

Risk for GI complications:

- Prior ulcer, GI bleed
- Age > 60
- High dose
- Concurrent steroids
- Concurrent anticoagulation

1 or 2 variables: moderate risk, use cytoprotective agent concurrently
More than 2 variables: “don’t use”

Other contraindications:

- Strong history CV disease
- Hypercoagulable state
- Renal disease/failure
- Low perfusion state

Sub-anesthetic (off-label) uses for pain management

MNDA channel blockade – involved in central (dorsal horn) sensitization

Consider for: neuropathic pain

opioid-induced hyperalgesia (opioid alternative)

Continuous IV infusion: 0.05-0.3 mg/kg/hr

PO Ketamine: liquid – dilute to 50 mg/ml
start 10-25 mg tid to qid, titrate in steps of 10-25 mg
usual effective dose 100-300 mg/day

Surgery Indications:

- Spinal instability
- Previous RT
- Worse despite RT
- Radioresistant tumor
- Unknown primary
- Paraplegia less than 48 hrs
- Single area of compression

Steroid dosing: dexamethasone

“high dose” – if neuro exam abnormal
96 mg bolus IV, 24 q 6 hr po x 3 days
10 day taper

“moderate dose” – all others
10 mg bolus IV, 4 qid
2 week taper

PCN: Nausea/Vomiting
 Nervous System Pathways/Mechanisms/Receptors
 Correlation of Mechanisms/Receptors with Medications

4 pathways:

Chemoreceptor Trigger Zone (CTZ)

Cortex

Peripheral

Gastrointestinal (GI)

Serosa

Viscera

Vestibular

Receptors:

Acetylcholine (Ach)/Muscarinic(m)

Dopamine-2 (D2)

Histamine (H1)

Neurokinin (NK)

5-hydroxytryptamine-2 (5-HT2)

5-hydroxytryptamine-3 (5-HT3)

CTZ, opioids > D2 > metoclopramide, prochlorperazine, chlorpromethazine, haloperidol, olanzapine

ChemoRx, RT, opioids, uremia, post-op > 5-HT3 > ondansetron, dexamethasone

Bowel obstruction > D2, Ach > metoclopramide, haloperidol/olanzapine, dexamethasone, hyoscyamine

Motion > H1 > scopolamine, diphenhydramine, promethazine

Sample Agents:

Metoclopramide	D2 (GI), 5HT2
Prochlorperazine	D2 (CTZ)
Chlorpromazine	D2 (CTZ)
Promethazine	D2, H1, Ach
Diphenhydramine	H1
Scopolamine	Ach
Hyoscyamine	Ach
Ondansetron	5HT3
Mirtazapine	5HT3
Olanzapine	D2, Ach, H1, 5HT3
Haloperidol	D2
Propofol	5HT3

PCN NYHA Heart Failure Classification

Symptoms = fatigue, dyspnea, palpitations, angina

- I: cardiac disease without resulting limitation of physical activity
ordinary physical activity does not cause symptoms

 - II: cardiac disease resulting in slight limitation of physical activity
comfortable at rest
ordinary physical activity results in symptoms

 - III: cardiac disease with limitation of physical activity
comfortable at rest
less than ordinary physical activity causes symptoms

 - IV: cardiac disease resulting in inability to carry out any physical activity
symptoms present even at rest
if any physical activity is undertaken, discomfort is increased
-

Device Failure/infection
Artificial nutrition/hydration
Transfusions
Renal replacement therapy
Mechanical ventilation
Organ donation

Comorbidities
 Stroke
 Sepsis
 Renal failure

Catastrophic event

Peri-operative mortality/morbidity
Rehabilitation plans

Quality of life
Goals/expectations
Psychosocial assessment
Spiritual/religious preferences

Reference: Swetz, LVAD Preparedness Plan
Mayo Clinic Proceedings
2011;86(6):493

- Agitation in critically ill patients may result from inadequately treated pain, anxiety, delirium, and/or ventilator dysynchrony.
- Detection and treatment of pain, agitation, and delirium should be reassessed often in these patients.
- Patients should be awake and able to purposely follow commands in order to participate in their care unless a clinical indication for deeper sedation exists.

Assess and Treat Statements and Recommendations

- Pain assessment should be routinely performed in all ICU patients (1B).
- Self report is preferred over the use of behavioral pain scales to assess pain in ICU patients who are able to communicate (B).
- The BPS and CPOT are the most valid and reliable behavioral pain scales for use in ICU patients who cannot communicate (B).
- Vital signs should not be used alone to assess pain, but they may be used adjunctively for pain assessments (2C).
- Preemptively treat chest tube removal with either analgesics and/or non-pharmacologic therapy (1C).
- Suggest preemptively treating other types of procedural pain with analgesic and/or non-pharmacologic therapy (2C).
- Use opioids as first line therapy for treatment of non-neuropathic pain (1C).
- Suggest using non-opioid analgesics in conjunction with opioids to reduce opioid requirements and opioid-related side effects (2C).
- Use gabapentin or carbamazepine, in addition to intravenous opioids, for treatment of neuropathic pain (1A).
- Use thoracic epidural for postoperative analgesia in abdominal aortic surgery patients (1B).
- Suggest thoracic epidural analgesia be used for patients with traumatic rib fractures (2B).
- Depth and quality of sedation should be routinely assessed in all ICU patients (1B).
- The RASS and SAS are the most valid and reliable scales for assessing quality and depth of sedation in ICU patients (B).
- Suggest using objective measures of brain function to adjunctively monitor sedation in patients receiving neuromuscular blocking agents (2B).
- Use EEG monitoring either to monitor non-convulsive seizure activity in ICU patients at risk for seizures, or to titrate electrosuppressive medication to achieve burst suppression in ICU patients with elevated intracranial pressure (1A).
- Target the lightest possible level of sedation and/or use daily sedative interruption (1B).
- Use sedation protocols and checklists to facilitate ICU sedation management (1B).
- Suggest using analgesia-first sedation for intubated and mechanically ventilated ICU patients (2B).
- Suggest using non-benzodiazepines for sedation (either propofol or dexmedetomidine) rather than benzodiazepines (either midazolam or lorazepam) in mechanically ventilated adult ICU patients (2B).
- Delirium assessment should be routinely performed in all ICU patients (1B).
- The CAM-ICU and ICDSC delirium monitoring tools are the most valid and reliable scales to assess delirium in ICU patients (A).
- Mobilize ICU patients early when feasible to reduce the incidence and duration of delirium, and to improve functional outcomes (1B).
- Promote sleep in ICU patients by controlling light and noise, clustering patient care activities, and decreasing stimuli at night (1C).
- Avoid using rivastigmine to reduce the duration of delirium in ICU patients (1B).
- Suggest avoiding the use of antipsychotics in patients who are at risk for torsades de pointes (2B).
- Suggest not using benzodiazepines in ICU patients with delirium unrelated to ETOH/benzodiazepine withdrawal (2B).

PAIN 1. ICU patients routinely experience pain at rest and with ICU care (B). Pain in cardiac surgery patients, especially women, is poorly treated (B). Procedural pain is common in ICU patients (B).

2. Perform routine pain assessment in all patients (1B). In motor intact patients unable to self report, we suggest using behavioral pain scales rather than vital signs to assess pain (2C). The BPS and CPOT are the most valid and reliable behavioral pain scales (B). Vital signs should only be used as a cue for further pain assessment (2C).

3. For non-neuropathic pain, use intravenous opioids as first line analgesic therapy (1C); use non-opioid analgesics to reduce opioid side effects (1C); and use either gabapentin or carbamazepine in conjunction with intravenous opioids for neuropathic pain (1A).

4. Suggest preemptively treating procedural pain (2C), especially chest tube removal (1C).

5. Use thoracic epidural analgesia for abdominal aortic surgery (1B), and suggest also using for traumatic rib fractures (2B). No evidence guides the use of lumbar epidural analgesia for abdominal aneurysm surgery (0A), or thoracic epidural analgesia for either intrathoracic or nonvascular abdominal surgical procedures (0B). No evidence guides the use of regional vs. systemic analgesia in medical ICU patients

AGITATION 1. Maintaining lighter levels of sedation in ICU patients is associated with improved clinical outcomes (B); light levels of sedation should be maintained in these patients (1B).

2. The RASS and SAS scales are most valid and reliable instruments for assessing adequacy and depth of sedation (B).

3. Use Brain Function monitors only as adjuncts to subjective sedation scales in unparalyzed patients (1B), but suggest using brain function monitors to primarily monitor depth of sedation in patients receiving neuromuscular blocking agents (2B).

4. Use EEG monitoring to monitor non-convulsive seizure activity in ICU patients at risk for seizures, and to titrate burst suppression therapy in ICU patients with elevated intracranial pressure (1A).

5. Use either use daily sedative interruption or titrate sedative medications to maintain light levels of sedation (1B). Suggest using Analgesia-first sedation (2B). Suggest using non-benzodiazepines rather than benzodiazepine infusions for sedation (2B). Use sedation protocols and daily checklists to integrate and to facilitate management of pain, sedation, and delirium in ICU patients (1B).

1. **Delirium** is associated with increased mortality (A), prolonged ICU and hospital LOS (A), and post-ICU cognitive impairment (B).

2. Delirium risk factors include: pre-existing dementia, HTN, history of alcoholism, and a high severity of illness at baseline (B); coma (B); and benzodiazepine use (B). Mechanically ventilated ICU patients at risk for delirium have a lower delirium prevalence when treated with dexmedetomidine rather than with benzodiazepines (B).

3. Routinely monitor ICU patients for delirium (1B). The CAM-ICU and ICDSC are the most valid and reliable instruments for this purpose (A).

4. Pursue early mobilization to reduce the incidence and duration of delirium (1B).

5. Suggest not using either haloperidol or atypical antipsychotics prophylactically to prevent delirium (2C).

6. Promote sleep in adult ICU patients by optimizing patients' environments, using strategies to control light and noise, to cluster patient care activities, and to decrease stimuli at night in order to protect patients' sleep cycles (1C).

7. Do not use rivastigmine to reduce the duration of delirium in ICU patients (1C).

8. Suggest withholding antipsychotics in patients with baseline QT prolongation, a history of Torsades de Pointes, or in those receiving concomitant medications known to prolong the QT interval (2C).

9. When sedation is required in delirious ICU patients, suggest using dexmedetomidine rather than benzodiazepine infusions for sedation in these patients, unless delirium is related to either alcohol or benzodiazepine withdrawal

Small text at the bottom of the page, likely a footer or reference note, containing information about the source of the guidelines and the authors.

Screening Checklist; ETOH = ethanol; LOS = length of stay; HTN = hypertension.
Barr J, Gilles LF, Puntillo K, et al. Clinical Practice Guidelines for the Management of Pain, Agitation, and Delirium in Adult Patients in the Intensive Care Unit. *Crit Care Med.* 2013;41:263-306

Most patients who die in ICU and acute-care settings do so after a decision to limit life-sustaining treatments. Physicians have an important responsibility to improve the process by which life-sustaining treatments are withheld or withdrawn. Although little empiric evidence is available to guide clinicians in the practical aspects of withdrawing life-sustaining treatments, ICU physicians should thoroughly understand the goals of withdrawing life-sustaining treatments (to remove all treatments no longer desired or indicated while ensuring patient comfort during the process) and should develop expertise in withdrawing life-sustaining treatments in order to minimize patient symptoms and support the family.

Withdrawal of life-sustaining treatments is a clinical procedure; physicians must have the same preparation and expectation of its quality as for other procedures. The rationale for the decision to withdraw life support should be documented in the medical record. Several topics should be discussed with families, including explaining how interventions will be withdrawn, how the patient's comfort will be ensured, the patient's expected length of survival, and family or patient preferences about other aspects of end-of-life care. An explicit plan for performing the procedure and handling complications should be formulated. The patient should be in the appropriate setting with irrelevant monitoring removed; the process should be carefully documented, including reasons for increasing sedation or analgesia; and outcomes should be evaluated to improve the quality of future care.

Once a decision is made and a time is set to withdraw life-sustaining treatments, the course and timing of withdrawal should be determined by the potential for patient discomfort as treatment is stopped. Although time should be provided for family to say goodbye, the only rationale for tapering life-sustaining treatment is to allow time to meet the patient's needs for symptom control. Vasopressors, antibiotics, nutrition, or most other critical care treatments can be discontinued immediately, without tapering. Mechanical ventilation is one of the few life-support treatments for which abrupt termination can lead to discomfort; consequently, physicians have a responsibility to develop an approach to terminal ventilator discontinuation that ensures patient comfort. A protocol that explicitly details an approach to withdrawal of life support in the ICU, including mechanical ventilation, has been associated with high ratings of clinician satisfaction and may help improve the quality of care, especially in settings where physicians are not familiar with withdrawal of life support or where there is significant practice variation. A sample protocol devised for withdrawal of mechanical ventilation is shown in Table 1. Physicians also should inform families that, while death is expected after withdrawal of support, it may not be certain and the timing can vary.

Any protocol for withholding life-sustaining treatments should include an explicit protocol for sedation and analgesia during this procedure. Such a protocol, carefully developed and implemented, has been associated with high levels of physician and nurse satisfaction, as well as with increased use of opiates and benzodiazepines for some patients without change in time from ventilator withdrawal to death. Furthermore, higher

doses of opiates and benzodiazepines in the context of withdrawing mechanical ventilation has been shown to be associated with no change or an actual increase in time from withdrawal of mechanical ventilation to death, suggesting that these drugs can be used to provide for patient comfort without hastening death.

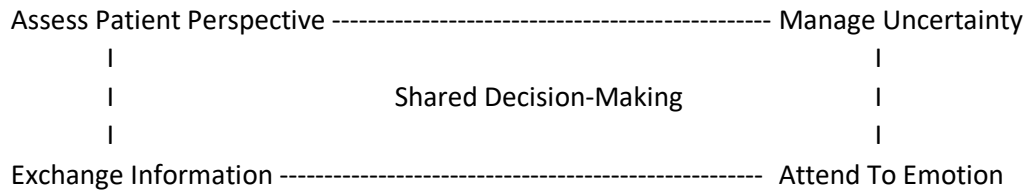
Table 1

Sample Protocol for Terminal Withdrawal of Mechanical Ventilation Previously Developed and Evaluated^a

1. Initial ventilator setting: IMV rate __, PS level __, (choose IMV or PS, not both), Fio₂ __, PEEP __
 2. Reduce apnea, heater, and other ventilator alarms to minimum setting
 3. Reduce Fio₂ to room air and PEEP to zero over < 5 min and titrate sedation as indicated for discomfort
 4. As indicated by level of comfort, wean IMV to 4 or PS to 5 over 5 to 20 min; titrate sedation for comfort
 5. When patient is comfortable on IMV rate 4 or PS of 5, select one of the following:
Extubate patient to air
T-piece with air (not CPAP on ventilator)
- IMV = intermittent mandatory ventilation; PS = pressure support; Fio₂ = fraction of inspired oxygen; PEEP = positive end-expiratory pressure; CPAP = continuous positive airway pressure.

PCN Communication 1

5 Key Elements of Patient-Centered Communication (Gustin)



Mnemonics:

SPIKES

- S: Setting up interview
- P: assessing patient Perception/Perspective
- I: obtaining patient Invitation
- K: giving Knowledge and information
- E: addressing patient Emotions
- S: Strategies and Summary

VALUE

- V: Value patient/family input
- A: Acknowledge emotion
- L: Listen
- U: Understand patient as a person
- E: Elicit concerns

NURSE

- N: Name
- U: Understand
- R: Respect
- S: Support
- E: Explore

ASCEND

- A: Anticipate – preplanning
- S: Summarize patient/family understanding
- C: Acknowledge Concerns
- E: Explore and Explain
- N: Next steps
- D: Document

PCN Spiritual Assessment/Management

Spirituality (meaning, hope, relationships, forgiveness)

Existential (how and whether life has meaning and why we exist)

Palliative Care Practitioner Role in Spiritual Healing

- Be: Human
- Real
- Honest
- Be: Present
- Listen
- Be: Sensitive to spiritual needs
- Respect: Belief systems
- Include: In intervention plan

Simple Questions:

- Do you have any spiritual or religious concerns at this point?
- Are there spiritual resources that could help you at this point

On-line resource: George Washington Institute for Spirituality and Health (GWish)

Criterion: **Understanding**

Patient Ability: grasp fundamental meaning of information communicated

Assessment Approach: encourage paraphrasing of disclosed information regarding condition and treatment

Sample Questions: “please tell me in your own words...”:
 “the problem with your health now”
 “the recommended treatment”
 “the possible risks and benefits of the treatment”
 “any alternative treatments and their risks/benefits”
 “risks and benefits of no treatment”

Comment: information to be understood includes nature of condition, nature and purpose of proposed treatment, possible risks and benefits of that treatment, and alternative approaches – including no treatment

Criterion: **Appreciation**

Patient Ability: acknowledge medical condition and likely consequences of treatment options

Assessment Approach: ask for description of perspective on medical condition, proposed treatment, likely outcomes

Sample Questions: “what do you believe is wrong with your health now?”
 “do you believe that you need some kind of treatment?”
 “what is treatment likely to do for you?”
 “what makes you believe it will have that effect?”
 “what do you believe will happen if you are not treated?”
 “why do you think (this treatment) has been recommended?”

Comment: consider that patients who do not recognize their illnesses (“lack of insight”) cannot make valid decisions about treatment; delusions or pathologic levels of distortion or denial are the most common causes of impairment in this criterion

Criterion: **Deliberation/Reasoning**

Patient Ability: demonstrate rational process of manipulating the relevant information

Assessment Approach: ask for comparison of treatment options/consequences and reasons for choice

Sample Questions: “how did you decide to accept or reject the recommended treatment?”
 “what makes (chosen option) better than (alternative option) for you?”

Comment: focus on process of decision-making, not outcome; patients have right to make “unreasonable” choices

Criterion: **Communication**

Patient Ability: clearly indicate a treatment choice

Assessment Approach: ask patient to identify/indicate a treatment choice

Sample Questions: “have you decided to follow a recommendation for treatment?”
 “can you tell me what that decision is?”
 OR “what is making it hard for you to decide”

Comment: frequent reversals of choice because of psych/neuro conditions may indicate lack of capacity”

Pathways to EOL

Non-Escalation of Life Prolonging Therapies

Mode of Death: Progression of Underlying Disease

Comments:

Difficult to control or predict exactly when and how death will occur

Allow family to recognize dying as a consequence of disease progression and beyond their control

Blood transfusions and antibiotics may provide comfort and should be judged on the basis of their

actual effects on comfort (e.g. fluid overload versus improved energy level)

Compassionate Extubation

Mode of Death: Hypoxia, hypercarbia, acidosis, hemodynamic collapse

Comments:

Allows for a rapid death if lung disease is severe or if patient has no respiratory drive

Prepare for possible secretions, anxiety, dyspnea

Stop neuromuscular blockade prior to extubation

Consider pre-medication to help alleviate symptoms

Cessation of Hemodynamic Support (Inotropes, Vasopressors, ECMO)

Mode of Death: Hypotension progressing to acidosis, shock, coma

Comments:

Hypotension can result in significant sedation

Death may be rapid if patient is on significant hemodynamic support or may be hours to days if on

lesser degrees of hemodynamic support

Can precipitate symptoms of heart failure or ischemia

Discontinuation of Dialysis

Mode of Death: Acidosis, Electrolyte Disturbances, Uremia, Fluid Overload,

Comments

Uremia can cause sedation

Symptoms of fluid overload be distressing-prepare family and treat symptoms appropriately

Typically a prolonged course (days to weeks)

However, death can ultimately be rapid (hyperkalemia with cardiac arrest)

Withholding of Artificial Nutrition or Fluid

Mode of Death: Dehydration and Underlying Condition (NOT Starvation)

Comments:

Aids with comfort related to fluid status and digestive system shutting down

Hunger and thirst lessen after 1-2 days with an increase in ketones and release of endogenous

endorphins which can have an analgesic effect

Death tends to occur within days to weeks (reported range 2-37 days) and often during sleep
Requires good mouth care

Dramatic physical changes can occur: significant weight loss, skin changes, sunken eyes,
concave abdomen, abnormal respiration (including prolonged apnea)

Emotionally charged topic: important to have a consensus among team to provide a united
front

Provide emotional support to family around concern for “starving” or “killing” their child, legal
ramifications of decisions, judgment of extended family and friends

Avoid use of terms “withdrawal of care” and “reduction of care”; instead use terms such as
“focus on comfort and quality of life” or “preventing suffering”

Care itself is never withdrawn, goals for care have changed while care often intensifies in other
ways

Difficult care choices are ideally made when there is consensus among patients, parents,
providers

However, in some cases it can be important to emphasize that decisions are provider-directed
to minimize parental feelings of burden and guilt

Limit invasive tests or monitoring that do not promote comfort

Some parents want to know how long their child will live

Guide parents by speaking in terms of minutes/hours, hours/days, days/weeks,
weeks/months

Acknowledge that it is difficult to predict length of survival-Examples:

“It is hard for us to know and we find that when we make predictions we are frequently
Wrong. Based on _____’s medical situation, my best estimate would be _____. It is
important to know, however that children often surprise us and may live longer or
shorter than we anticipate, so it is important that we are prepared for both situations”

“Based on how much support _____ is currently receiving, we expect he/she will die
within _____. Some kids do surprise us, though, and it is possible that he/she could
live for a longer time. Regardless of what happens, we are ready to keep _____
comfortable.”

Dyspnea

Pharmacologic

- Opioids are the primary treatment for dyspnea at EOL
- Opioid dose generally 25% of the amount used for pain
- Consider lorazepam as an adjunct

Non-Pharmacologic

- Oxygen
- Elevate head of bed
- Bedside fan
- Fluid restriction

Secretions

Pharmacologic

- Glycopyrrolate

Non-Pharmacologic

- Fluid restriction
- Gentle suction
- Reposition
- Educate families that noisy breathing may occur when death is imminent
- May be distressing to hear but the child likely does not experience discomfort

Agitation/Anxiety

Pharmacologic

- Lorazepam
- Consider midazolam infusion (if lorazepam required more than q 3 hours)
- Note agitation caused by delirium may be worsened by benzodiazepine
- Consider use of anti-psychotic

Non-Pharmacologic

- Low lighting
- Soothing music
- Familiar people/objects
- Decrease sensory stimuli
- Provide developmentally appropriate supportive therapy

Nausea/Vomiting

Pharmacologic

- 1st line: ondansetron or granisetron
- 2nd line: lorazepam
- 3rd line: prochlorperazine, haloperidol, metoclopramide, dexamethasone

Non-Pharmacologic

- Avoid irritating foods and smells

Consider etiology/source of nausea when selecting agent
 Be aware of distinction between true reduction in nausea versus sedation

Pain

Pharmacologic

Opioid with appropriate loading dose
 Reassess patient frequently
 Consider repeat doses q 20 min x 3 doses
 After 3 doses consider continuous infusion

Once pain is adequately controlled with intermittent dosing
 Consider switching to continuous infusion
 Determine 24 hour opioid use (OME)
 Consider starting with 50% OME, calculate hourly rate

For patients already on a continuous infusion with symptom escalation
 Adjust rate no more often than every 8 hours
 Add total prn boluses
 Divide by the number of hours over which those boluses were
 given

 Divide again by 2 (50% reduction)
 Add to current basal rate, adjust prn dosing based on new hourly
 Rate

General Considerations:

No ceiling dose for opioids in EOL symptom management
 Dosing interval for intermittent dosing may need to be shortened to achieve comfort
 Take into account other possible sedating medications
 Consider long-acting opioids that may not yet have achieved steady state (e.g. methadone, fentanyl TD)
 Consider expected course/nature of pain, anticipated procedure etc.
 Consider adjunctive medications and non-pharmacologic interventions
 Consider opioid rotation if significant adverse effects

Non-Pharmacologic

See measures for agitation/anxiety
 Consider other integrative therapies
 Acupuncture, biofeedback, guided imagery, mindfulness,
 Meditation, aromatherapy

Phases of Death*Pre-Active*

- Withdrawal from active participation in social activities
- Increased and prolonged periods of sleep
- Hypersensitivity to stimulation (e.g. light, sound, touch)
- Decreased appetite and PO intake
- Increased restlessness, confusion, agitation

Active

Circulation

- Blood pressure goes down, heart rate faster, pulse weaker
- Cold extremities, profound mottling of skin, cyanosis

Fluids and metabolism

- Inability to tolerate enteral nutrition
- Decreased energy requirements
- Notable decrease in urine and stool output, bowel or bladder

incontinence

Respiratory

- Changes in breathing pattern
 - Cheyne-Stokes breathing
 - Agonal breathing
 - Prolonged periods of apnea
- Inability to close mouth or constant breathing through mouth
- Difficulty managing secretions, gurgling/noisy breathing (“death rattle”)

Neurologic

- Unresponsive or responsive only to significant stimulation
- Limited purposeful movement
- Decreased muscle tone
- May experience a sudden unexplained surge of energy
- “Terminal Agitation” severe multifactorial distress
 - Rule out other confounding variable:
 - Urinary retention, Constipation, Medication toxicity
- Unable to speak despite appearing awake

Senses

- Hearing may remain intact until death
 - Be cognizant of what is said around patient
- Vision is blurred

Confusion Assessment Method for the ICU-7 Delirium Severity Scale

1. Acute onset or fluctuation of mental status:
Is the patient different than his/her baseline mental status?
Has the patient had any fluctuation in mental status in the last 24 hours as evidenced by fluctuation on a sedation/level of consciousness scale (such as RASS or GCS)?
0 for absent
1 for present
2. Inattention
Say to the patient, "I am going to read you a series of 10 letters. Whenever you hear the letter "A", indicate by squeezing my hand."
Read letters from the following letter list in a normal tone 3 seconds apart. "SAVEAHAART" (Errors are counted when patient fails to squeeze on the letter "A" or when the patient squeezes on any letter other than "A.")
0 for absent (correct 8 or more)
1 for inattention (correct 4-7)
2 for severe inattention (correct 0-3)
3. Altered Level of Consciousness
Present if the actual Richmond Agitation-Sedation Scale Score is anything other than alert and calm (zero)
0 for absent (RASS:0)
1 for altered level (RASS:1, -1)
2 for severe altered (RASS:>1, <-1)
4. Disorganized Thinking
Yes/No questions:
Will a stone float on water?
Are there fish in the sea?
Does one pound weigh more than two pounds?
Can you use a hammer to pound a nail?
0 for absent (correct 4 or more)
1 for disorganized (correct 2-3)
2 for severe (correct 0-1)
Errors are counted when the patient incorrectly answers a question.

Command: Say to patient "Hold up this many fingers" (Hold two Fingers in front of patient). "Now do the same with the other hand" (Do not repeat number of fingers)

An error is counted if patient is unable to complete entire command

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Compiled by RF Johnson MD

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