HOW TO DISCUSS CPR AND MAKE A RECOMMENDATION
Case HS

- 93 yo male
  - Cognitively intact
  - Class IV D CHF, hypotensive (syst 80’s-90’s)
  - Stage 4 CKD, swollen legs to waist
  - Recent hospitalization for CHF flare
  - Glaucoma, Pacemaker, afib, s/p Aortic valve replacement, severe spinal stenosis
  - Wants to know if he is eligible for a kidney or heart transplant.
Case HS

- **Full Code**
  - When asked why?
    - “I want to live”
    - “Go out fighting in the ICU”
Case HS Question 1

Would you make a recommendation for DNR?
A. Yes
B. No
Case HS Question 2

- What would your next step be?
Case HS Question 3

- What survival rate would you quote?
  A. 0%
  B. 1%
  C. 5%
  D. 10%
  E. 20%
Goals of the lecture

- Physicians will have more flexibility in communicating about CPR
- Patients will have a code status that reflects a good fit with their goals, values, understanding and efficacy
Outline

- Focus on outcomes
  - Review outcomes of CPR
  - Discuss communicating the outcomes
    - Health literacy
    - Values
- How to make a recommendation
  - Shared decision making
  - Scripts
What is a code status?

- Refers to when someone is dead
  - Not breathing, no pulse
  - Two options: Full or none
    - Caveats….Shocks only? ICD only? Witnessed?

- Does not refer to
  - When someone is alive
  - Limits on life sustaining treatment
    - i.e. ICU care, dialysis, major surgery, PEG’s
![Beyond code status](image)

<table>
<thead>
<tr>
<th>Alive (Advance care plan)</th>
<th>Dead (code status)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curative care</td>
<td>Full Code</td>
</tr>
<tr>
<td>Curative care</td>
<td>DNR/DNI</td>
</tr>
<tr>
<td>Palliative care</td>
<td>DNR/DNI</td>
</tr>
<tr>
<td>Palliative care</td>
<td>Full Code*</td>
</tr>
</tbody>
</table>

Trying to cram everything into DNR/DNI is not possible. DNR may suggest palliative goals but not always. *(This is a frustrating situation)*
What is CPR?

- Intubation
- Chest compressions
- Electrical shocks
- Medications via vein or endotracheal
- ICU care on a vent (often)
What are the clinical outcomes?

1. Immediate death
   - Person does not survive the code
2. Prolonged death in the hospital
   - Due to cardiogenic shock or anoxic encephalopathy
3. Survival with impairment
   - Institutionalized, dependent
4. Survival at or near baseline status
# Efficacy-absolute rates

<table>
<thead>
<tr>
<th>Site of CPR</th>
<th>Does not survive code</th>
<th>Death in hospital</th>
<th>Alive to hospital discharge</th>
<th>Survival to d/c with good neuro outcomes</th>
<th>Survival at 1 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient (geriatric specific data)</td>
<td>50%</td>
<td>32%</td>
<td>18%</td>
<td>8-14%</td>
<td>5-8%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>18% ind from community</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>9% dependent from NH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outpatient (For all outpatients)</td>
<td>77%</td>
<td>15%</td>
<td>8%</td>
<td>3%</td>
<td>?</td>
</tr>
<tr>
<td>Nursing home</td>
<td>80-100%</td>
<td>10-20%</td>
<td>0-7%</td>
<td></td>
<td>?</td>
</tr>
</tbody>
</table>
## Efficacy-relative rates

<table>
<thead>
<tr>
<th>Site of CPR</th>
<th>Good Outcome</th>
<th>Prolonged death or significantly worse neuro status</th>
<th>Does not survive code (or pronounced in ED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpt</td>
<td>1</td>
<td>3-5</td>
<td>6-7</td>
</tr>
<tr>
<td>Outpatient</td>
<td>1</td>
<td>8</td>
<td>25</td>
</tr>
<tr>
<td>NH</td>
<td>1 (or 0)</td>
<td>3-4 (vs infinity)</td>
<td>50 (to infinity)</td>
</tr>
</tbody>
</table>
Special circumstances

- Inpatient survival rates depend on diagnosis

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Survival rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatic insufficiency</td>
<td>7.3%</td>
</tr>
<tr>
<td>Sepsis</td>
<td>7.6%</td>
</tr>
<tr>
<td>Metastatic cancer</td>
<td>7.8%</td>
</tr>
<tr>
<td>Coma</td>
<td>8.2%</td>
</tr>
<tr>
<td>Trauma</td>
<td>9.7%</td>
</tr>
<tr>
<td>Acute CVA</td>
<td>10.9%</td>
</tr>
<tr>
<td>ESRD on HD</td>
<td>11.4%</td>
</tr>
<tr>
<td>MI</td>
<td>23.9%</td>
</tr>
<tr>
<td>s/p Cardiac Surgery</td>
<td>31.1%</td>
</tr>
</tbody>
</table>

Special circumstances

- **Time in hospital**

<table>
<thead>
<tr>
<th>Days in hosp before CPR</th>
<th>Preserved functional status</th>
<th>Worse functional status</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3 days</td>
<td>69%</td>
<td>31%</td>
</tr>
<tr>
<td>&gt;4 days</td>
<td>40%</td>
<td>60%</td>
</tr>
</tbody>
</table>


- **Age**

<table>
<thead>
<tr>
<th>Age</th>
<th>Survival Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-39 years</td>
<td>13.6%</td>
</tr>
<tr>
<td>40-59</td>
<td>19%</td>
</tr>
<tr>
<td>60-79</td>
<td>16.9%</td>
</tr>
<tr>
<td>80+</td>
<td>10.9%</td>
</tr>
</tbody>
</table>

Other caveats....

- **Observational data**
  - Selection bias of studies
    - Self selection: Sicker patients were DNR
    - Population=Those who choose to be full code.
  - External validity/applicability problem
    - Studies includes too many healthy patients
    - Those with whom we initiate conversations have more comorbidities
      - Neurological disease, Sepsis, Cancer, history of cardiac disease, CKD, older age, decreased functional status
Validity concerns

Our patient population (External validity)

Observe population (Selection bias)

Sick

Healthy

Our population
Those with whom we initiate a conversation

Observed population
Those who choose to be full code
Other caveats

- **Bad prognostic signs**
  - Needing chest compressions
  - Presenting with asystole/PEA
  - Unwitnessed codes
    - (more common in elderly)
  - Time to EMS arrival

- **Hard to anticipate these factors**
  - Why our experience does not match data
Adverse effects

- Trauma
  - 31% rib fractures
  - 21% sternal fracture
  - 18% mediastinal hemorrhage
  - 20% upper airway damage
  - 30% gastric distention and liver/splenic lacs

CPR Risks

- **Prolonged death in the hospital**
  - Instead of dying from an arrhythmia, pt survives only to die from…
  - 59% from respiratory failure
    - Anoxic encephalopathy
  - 31% cardiogenic shock (i.e. chf)
  - 10% another arrhythmia
  - Many die in the ICU and can not be weaned off the ventilator
    - 84% choose to withdraw care
    - 16% declared brain dead
CPR Risks

- Living with a worse neurological status
  - Change in status from home to NH
  - Cognitively intact to cognitively impaired
    - Memory, ability to communicate
  - Dependency in IADL’s and ADL’s
CPR Risks

- Giving up the goal of dying peacefully (100%)*
Discussion

- Based on this review, describe an additional way you could explain CPR to a patient.
What is CPR?

- CPR is a medical procedure for people who have died peacefully to try to bring them back to life.
- Because of chest compressions and intubation, it often leads to pain and trauma.
- Most of the time the patient dies anyway.
- When it works, most people have a significantly worse quality of life.
- Some would consider the pain and risks to be unacceptable and avoided at all costs and not worth the small chance of success. That is a DNR.
Communicating the outcomes

- **Absolute rates**
  - Your rate of surviving well is 5-10%.

- **Relative rates**
  - CPR is 10 times more likely to fail or leave you worse off than return you to normal.

- **Qualitative**
  - CPR usually fails but when it does work, usually leaves a person worse off. Rarely do people return to how they were.

- **Goal oriented**
  - CPR is meant to rescue people from death, not fix any underlying problems or improve comfort/function.
Making a recommendation
Why older adults are different

- Goals change as adults get older
  - Longevity vs comfort vs function vs QOL

- Limits change
  - Pain tolerance
    - Pain of the intervention
  - Risk tolerance
    - Adverse effects
    - Potential bad outcomes
    - Willingness to pursue low yield interventions
Framework

- Comfort/longevity
- QOL
- Risk tolerance
- Pain Tolerance

- Clinical outcomes
- Efficacy
- Adverse events
  - Risks of harms
  - Pain of the procedure
When does a code status not fit?

- **Concerning reasons**
  - Goals are intrinsically inconsistent
  - Goals are unrealistic or unachievable
  - Poor understanding of the CPR steps
  - Patient is focused on CPR without any clear goal
  - Patient interested in the purpose but not the outcomes of CPR

- **Unconcerning Reasons**
  - Goals are different than a physician’s personal goals
  - Cultural/religious differences
    - CPR means something different
    - Suffering means something different
    - Moral obligations to pursue care/caring
How not to make a recommendation

- Do you want me to jump on your chest?
- You’re not going to live long anyway.
- It’s time to give up wanting to live longer.
- You’ll end up as a vegetable.
- Do you want us to do everything?
- Having family watch
- Default DNR’s
- Limit disclosure: Hide that it may work
Framework

Goals of care (asking and listening)  Medical intervention (Explaining, health literacy)

<table>
<thead>
<tr>
<th>Model</th>
<th>Goals of care</th>
<th>Medical intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paternalism</td>
<td>Physician Decides</td>
<td>Physician Decides</td>
</tr>
<tr>
<td>Informed Consent</td>
<td>Patient</td>
<td>Patient</td>
</tr>
<tr>
<td>Collaborative</td>
<td>Shared</td>
<td>Shared</td>
</tr>
<tr>
<td>Agent</td>
<td>Patient</td>
<td>Physician</td>
</tr>
<tr>
<td>Dysfunctional</td>
<td>Physician</td>
<td>Patient</td>
</tr>
<tr>
<td>Avoidant</td>
<td>No one</td>
<td>Everyone</td>
</tr>
</tbody>
</table>
Preparing for a recommendation

- If the goal is to get limits on life sustaining care, then be clear about that.
- Let people separate out goals/limits for life sustaining care vs when they are dead.
  - Alive=aggressive goals, ICU care okay
  - Dead=leave them in peace
  - AKA: DNR in ICU on a vent is okay
    - (uncomfortable but okay)
Preparing for a recommendation

- Clarify goals until they make sense
  - How they balance goals and limits - priorities
  - Ask “what are you hoping for?” - redirect to goals
- Clarify the mechanics and outcomes of CPR
- Use wish statements to:
  - Agree with their goal but not being full code
  - Drive a wedge between CPR and what the pt thinks it will achieve
  - Show the patient how CPR fits or does not fit their goals and limits
Preparing for a recommendation

- Be clear when a goal is medically unachievable by CPR-true futility
- Accept it when a patient has different goals/limits than you
- Explore cultural differences within the other person’s framework
- Think specifically about what is causing your concern for poor fit
Stop 1: Active listening

- How do you feel when I bring this up?
  - What do you worry about?
- What has it been like when doctors have asked you to make decisions?
- What does being full code mean to you?
- What are you hoping for?
- How could I be helpful to you in making this decision?
- Do you need time to make this decision?
Agent model of shared decisions

- What I heard you say is that…..
  - Your goals are comfort oriented
  - You have goals for dying peacefully that are important to you
  - You are not a gambler
    - When unexpected outcomes have happened you have regretted the decision
    - You said being more dependent would make life not worth living
- Therefore I would not recommend CPR for you
Agent model of shared decisions

- What I heard you say is that…
  - You are more likely to end up with a QOL worse than what you find tolerable than you are to end up how you are now
  - You have turned down other interventions that are painful, risky etc…. (hints)
  - You would like to live longer but it isn’t worth…. (ie acknowledge how some fits but some parts don’t)
- Therefore I would not recommend CPR for you
## Applying outcomes to goals

<table>
<thead>
<tr>
<th>Goal</th>
<th>Full Code</th>
<th>DNR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Longevity</td>
<td>Longevity is still a goal</td>
<td>Longevity is no longer a goal</td>
</tr>
<tr>
<td></td>
<td>Dying peacefully is not a goal</td>
<td>Dying peacefully or naturally is a goal</td>
</tr>
<tr>
<td></td>
<td>Avoiding a prolonged death is not a goal</td>
<td>Avoiding a prolonged death is a goal</td>
</tr>
<tr>
<td>Comfort</td>
<td>Not a primary goal</td>
<td>Comfort is a primary goal</td>
</tr>
<tr>
<td>Function</td>
<td>Low functional requisite for living</td>
<td>High functional requisite for living</td>
</tr>
<tr>
<td>Pain tolerance</td>
<td>High tolerance for trauma</td>
<td>Low tolerance for pain and trauma</td>
</tr>
<tr>
<td>Risk Tolerance</td>
<td>A bad outcome would be okay because at least an attempt was made for longevity</td>
<td>A bad outcome means the intervention was not worth it.</td>
</tr>
</tbody>
</table>
Informed consent

- Requirement includes risks and benefits as it pertains to the patient
  - Even though the purpose of CPR fits your goals, I want to make sure you are willing to live with the outcomes.
  - I don’t want you to regret your decision, or be surprised.
Informed consent model

- As long as you understand that
  - CPR usually does not work
  - Is more likely to cause a prolonged/painful death
  - Is more likely to leave you significantly impaired
  - Is more likely to make your health status worse
  - Than surviving to be the same
  - Coming back to how you are now is only about 5-10% (or low)
Informed consent model

- You are willing to **live with the potential outcomes:**
  - Trauma and pain from CPR
  - Dying on a ventilator in the ICU
  - Being in a vegetative state
  - Living in a nursing home
  - Being unable to be independent in
    - Communication, toileting and other self care
  - Giving up the idea of dying peacefully and having CPR be the last thing you experience
  - Making a decision about PEG tubes now
Case HS

- What are possible next steps for communicating with Mr HS?
Conclusion

“Advancing a code status” is never the goal
  • Finding the right fit

Separate CPR from decisions on life sustaining treatments

Explore values first, use those to anchor
  • You said that….

Be clear on outcomes, risks
  • Not just mechanics of CPR

You only need one very important reason to be DNR.
The End
So, now you’re DNR

- This is not a withdrawal of care
- The alternate is comfort or function oriented care and a natural peaceful death.
Why you should be full code

- Being DNR means you may give up a chance of living longer the way you are now which you like.
- You can tolerate CPR
- If you are willing to live with the outcomes for the small chance that you will live longer then you should be full code.
“Getting the DNR” options

Before....
- Describe CPR in pejorative terms
- Try to make pts give up wanting to live longer
- Hide efficacy

After...
- Listen carefully
- Provide information about success rates flexibly
- Discuss mechanism, outcomes, goals, risks
- Use agent model vs informed consent as needed
- Value centered
- Patient centered