Prognostication

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Prognosis Objectives

The participant will be able to:

1. Define the benefits and limitations of prognostication
2. Understand theories for accurate formulation of prognostication
3. Discover tools for more accurate prognostication
Prognosis

• How good are we at predicting?
• What do most patients and caregivers think?
• Do medical providers over estimate or under estimate prognosis?
Prognosis

- 2232 study participants and 1667 in validation
- Used a scoring system to place patients in low, middle or high risk groups
- Score based on Age, Sex, Functional status and Comorbid conditions
Prognosis

• Predications made about 3 year survival
• Compare Nursing Home population to PACE population into 3 groups
  • High risk group 7% and 18%
  • Middle risk group 11% and 36%
  • Low risk group 22% and 55%
Prognosis

• General Medical Population and Physicians
• Study published in BMJ in 2000
• Duplicated what had been seen before
• 343 physicians providing prognosis on 468 terminally ill patients
Prognosis

• Median survival was 24 days
• Only 20% of predictions were within 33% of actual death
• 63% of physicians were overly optimistic
• 17% of physicians were overly pessimistic
• The average over estimation was by a factor of 5.3
Prognosis

• This repeats several other studies done that show physicians have a tendency to over estimate prognosis.

• Why is this important?
Prognosis

• The change in this study from previous showed that physicians who had a longer relationship with patient did better at estimating prognosis.

• It also showed that the more often the patient was seen by physician the better at estimating prognosis.
Prognosis

• Patient must have prognosis of six months or less to refer to hospice
• It is very hard to predict when this is
• Determining when patient should be on comfort pathway may be a better way
• Looking at functional decline may be a better way to predict
Prognosis

• What is prognostication:
• A prediction of future Medical Outcomes of a treatment or disease course based on medical judgement and knowledge
Prognosis

• What is not prognostication:
• It is not fortune telling
• Playing God
• Magical thinking
Prognosis

• There are two parts to prognosis
• **Formulation** looking at anticipated vs. true
• **Communication** in a compassionate way to patient and family as much as they want to hear
Prognosis

• Why prognosticate?
• Clinical implications
• Relationship
• Administrative issues
• Futility
Life Expectancy

• 1900 life expectancy was 47.3 years for both sexes for Caucasian, 33.0 for both sexes for African-Americans

• In 2015 it was 81 years for females and 76 years for males
Prognosis

• NHPCO guidelines study looked at COPD, CHF, and end stage Liver disease
• If found that repeated estimates are more accurate
• Better at predicting as death is near
• Clinical experience may increase accuracy
Prognosis

- The best predictors are related to physical function
- The Palliative Performance Scale: a quick classification for functional status
- Widely used in Hospice and Palliative Care
Prognosis

• Based on Ambulation, Activity and Evidence of Disease, Self-Care, Intake, and Conscious Level
• 100 % is full ambulation with normal activity and no evidence of disease
• 0% is death
Prognosis

• 40% is mainly in bed most of the day and carries a median life expectancy of 41 days.
• 20% is bed bound with minimal intake and carries a median life expectancy of 6 days.
Prognosis

• Dementia is very difficult to determine prognosis
• Use the Functional Assessment Staging Scale or FAST
• Divided into 7 categories
• The first 5 are cognitive, 6 is ADL’s, and 7 is ability to speak
• 6 a-e and 7 a-f have sub categories
Prognosis

• Must have a FAST score of 7a to be appropriate for hospice
• This means patient’s speech is limited to only a few words
• 6 e is incontinence of bowel and bladder
• 7 f is can not hold up head
Tools for Prognosis

- Model for End Stage Liver Disease (MELD)
- Based on 3 factors
  1. Bilirubin
  2. INR
  3. Creatinine

Online calculator at http://www.mayoclinic.org/medical-professionals/model-end-stage-liver-disease/meld-model
Tools for Prognosis

• The Seattle Heart Failure Model
• Based on age, EF, blood pressure, weight, gender, NYHA class, treatments, and labs
• Well validated model to help predict median life expectancy based on clinical information
Tools for Prognosis

• Adjuvant Online [www.adjuvantonline.com](http://www.adjuvantonline.com)
• A suite of online tools to aid clinicians and patients have discussions about treatment outcomes for cancer
• It will estimate the risk of negative outcomes including mortality without treatments
• Forecast risk reduction with various treatment options
Tools for Prognosis

• BODE stands for Body mass index, airflow Obstruction, Dyspnea and Exercise capacity
• Predictive scale for 1 and 3 year survival with COPD
• www.thecalculator.co/health/BODE-Index-for-COPD-Calculator-907.html
Tools for Prognosis

- Recent Insights Into Life Expectancy With and Without Dialysis
- Jane O. Schell; Maria Da Silva-Gane; Michael J. Germain
- Good predictive model for end stage renal disease
Conclusion

• Medical Providers have a duty to prognosticate as accurately as possible
• Prognostication can be based on science
• Multiple tools exist to help with prognosis
• Prognostication is a skill that must be honed over time
References

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References

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• https://www.mypcnow.org/fast-facts