

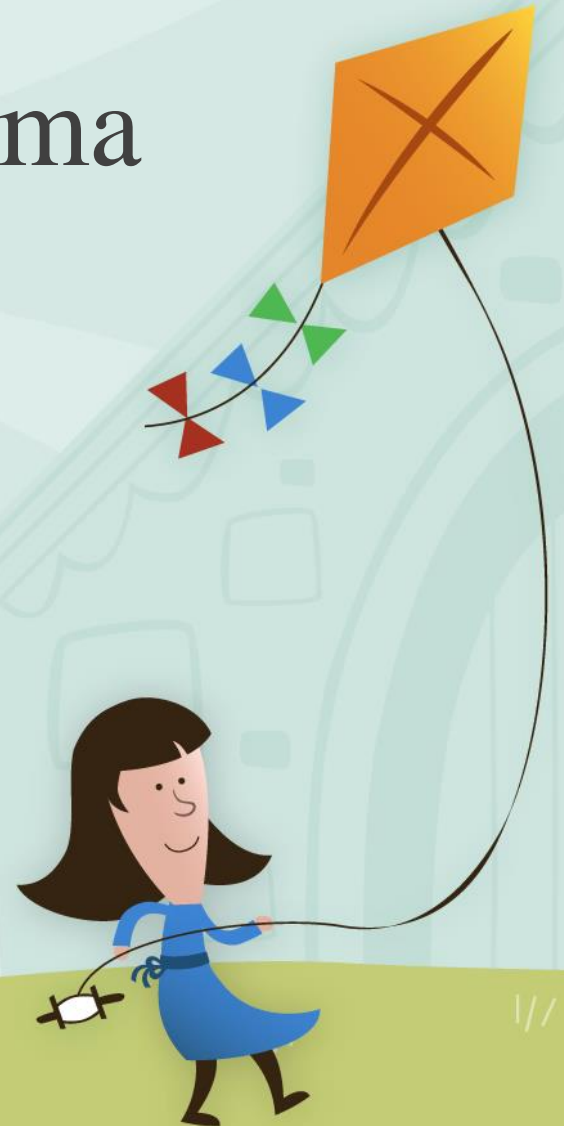
# Palliative Care in Pediatric Trauma

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# Goals of Presentation



Understand what Supportive Palliative Care is

Understand how it can be useful in Pediatric Trauma patients

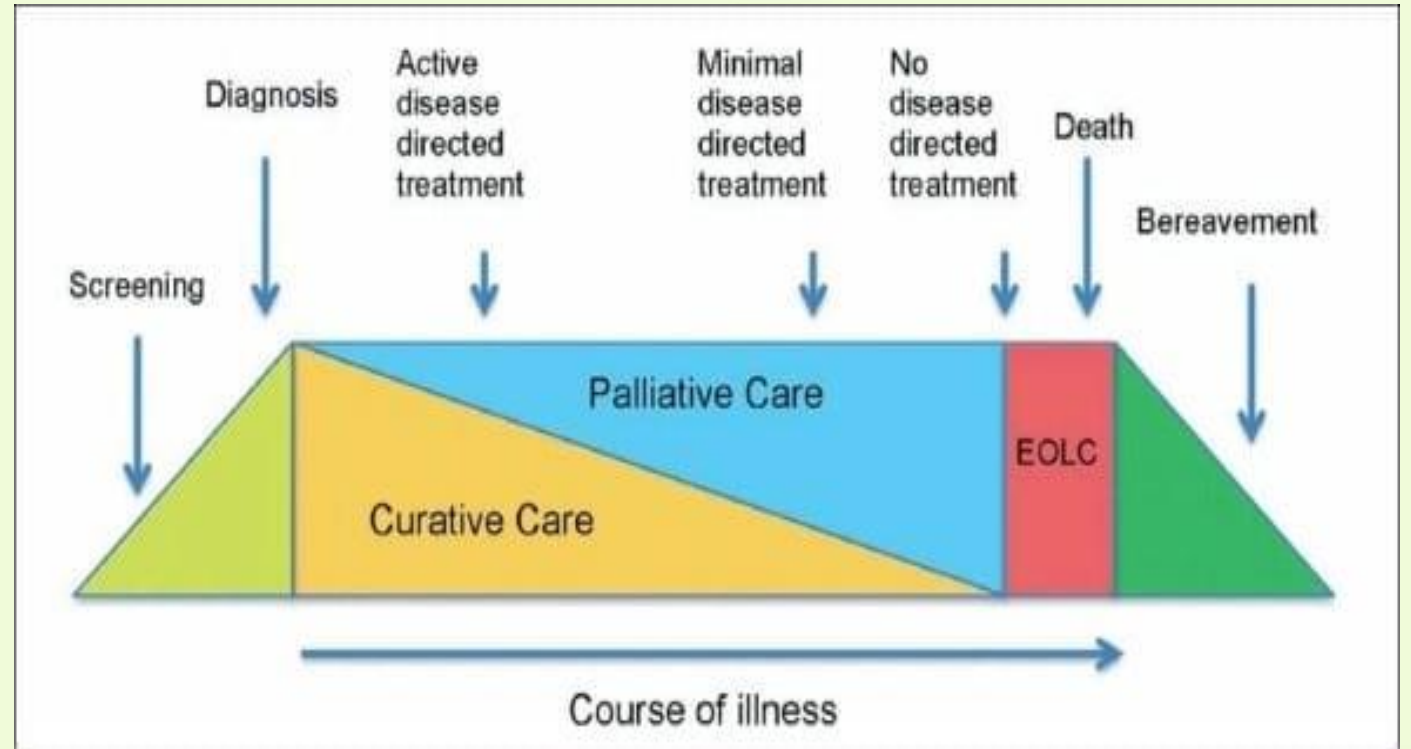
Know the team based efforts and their contributions during hospitalization and any subsequent follow up care



# What is Supportive Palliative Care? (SPC)

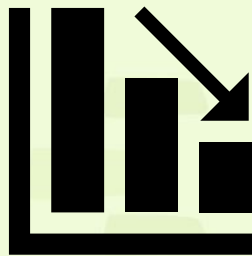
- **The traditional definition:**

- Supportive Care in the setting of **Life Limiting** or **Life Threatening Illness**
- This includes **all** Goal Directed Treatment (medications, surgery, chemotherapy, radiation, physical therapy, etc)



# How can SPC help in Pediatric Trauma?

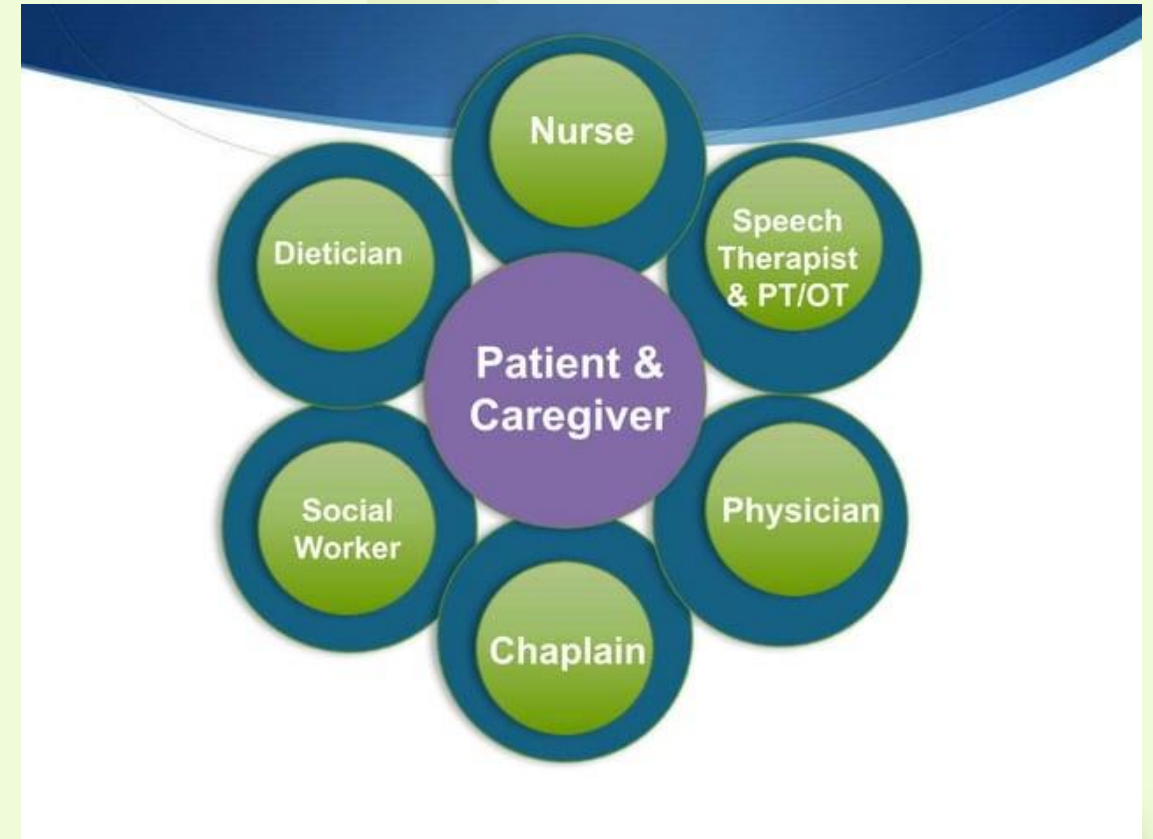
- Supportive Care in the setting of **Life Changing Trauma** (**Life Limiting**, or **Life Threatening**)
- This applies to **any Trauma** that **substantially impacts** prior level of functioning





# Supportive Palliative Care is a Team Effort!

- Patients, their family, and their friends
- Multidisciplinary Team:
  - Doctors, Nurses, Physical Therapy, Respiratory Therapy, Nutritionists, and many, many others
- **Best case scenario: Complete return to Previous level of functioning!!!**
- **Realistic Expectations for tomorrow, next week, next month, etc.**
  - **Especially if there are devastating/life changing injuries**





# Five Case Scenarios



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# Five Case Presentations

- 15 year old female, Auto vs Pedestrian Accident
- 2YOM Fall from 2 step slide at Daycare
- 6 month old Female NAT (Non-accidental Trauma)
- 14 year old male, self inflicted GSW to the head
- 13 year old male, Concussion/TBI



# First Case Presentation: Auto vs Pedestrian Accident

- 15 year old female, Hit in crosswalk by car going 30-40 mph, dragged underneath
- Multiple injuries including head, ribs, lungs, pelvis and extremities
- Emergent Surgeries required





# First Case Presentation: Auto vs Pedestrian Accident

- 15 year old female, Hit in crosswalk by car going 30-40 mph, dragged underneath
- Multiple injuries including head, ribs, lungs, pelvis and extremities
- What's her prognosis?
- What's her expected outcome?
- What challenges does she, and her family, face?



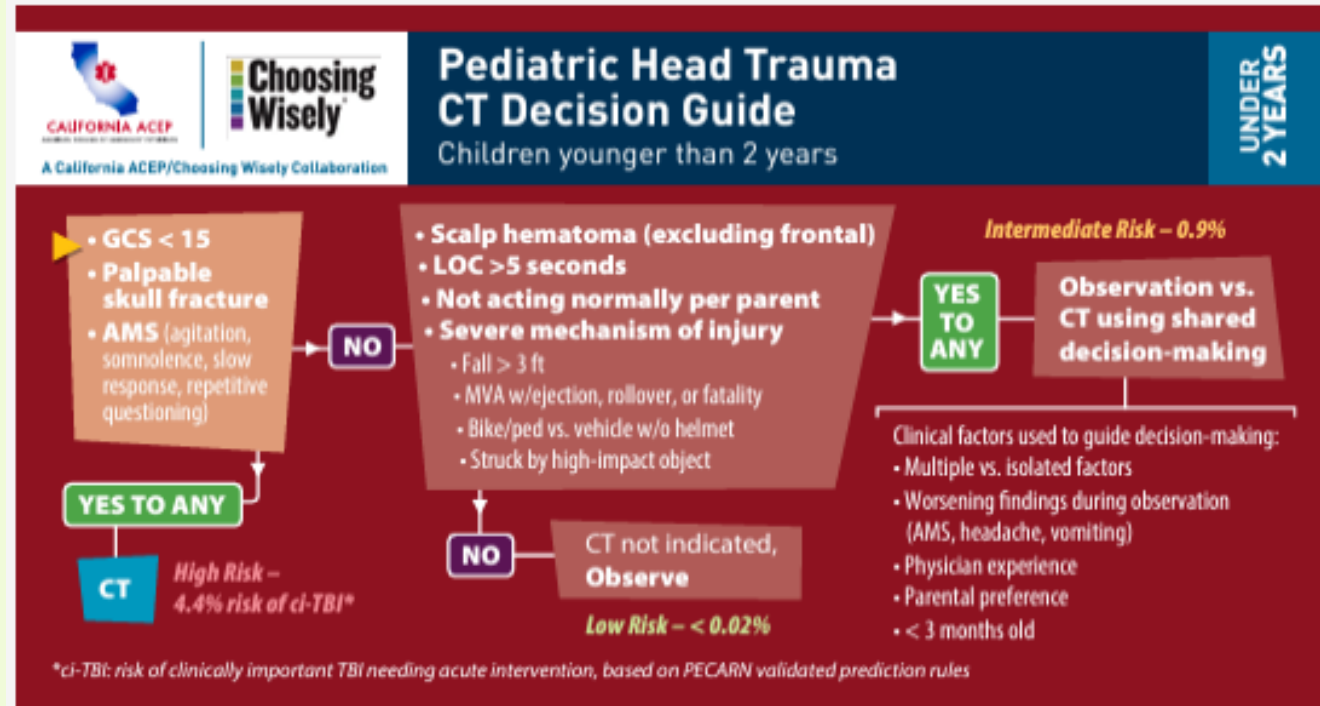
# MVA Incidences

- In 2022, 42,514 motor vehicle **fatalities** occurred across the United States
  - In total, 5.9M MVA's were reported to the police in 2022
  - Among all **non-fatal** MVA's in 2022, 1.67M caused injuries
  - In total, injuries resulting from MVA's caused \$481.2 billion in financial costs in 2022
- 1,910 (25%) of the 7,522 **pedestrians killed** in MVA's in 2022 were **hit and runs**
- MVA's are the **second leading cause of deaths** resulting from **unintentional injury** in the United States.
- Each year, ~ **626 child-pedestrian fatalities occur**.
  - Young children are at a higher risk for pedestrian injury and death
  - Parents often overestimate their children's traffic knowledge and skills.
  - <10 years they are unable to correctly gauge the speed of vehicles putting them at greater risk for injury and death.



# Second Case Presentation

- 2YOM Fall from 2 step slide at Daycare
- Irritable, Confused
- PCARN not applicable



## Second Case Presentation

- 2YOM Fall from 2 step slide at Daycare
- Irritable, Confused
- Brain Bleed on CT-→needs neurosurgical evacuation
- What's his prognosis?
- What's his expected outcome?
- What challenges does he, and his family face?

***And how can SPC help regardless of his outcome?***





# Pediatric Accidental Falls

- Pre-walking kids
- Toddlers
- Playground and Sports related
- In short falls, ground surface and fall height are significant predictors of injury risk.
- Short falls rarely cause injury
- A history of a short fall in a seriously injured child should raise the suspicion of child abuse.



# Third Case Presentation

- 6 month old Female NAT (Non-accidental Trauma)
- Pt comes in unresponsive, intubated in the ED
- Pt w/retinal hemorrhages and intracranial hemorrhages
  - What's her prognosis?
  - What's her expected outcome?
  - What challenges does she, and her family face?



# Incidence of Non-Accidental Trauma

- The fatality rate stemming from NAT in the United States (US) is estimated at 1.05 children per 100,000, which translates to approximately one to two deaths per day
- The youngest children bear the highest risk of mortality, with 66.2% of deaths occurring in children under three years old
- Children under 12 months of age are three times more likely to succumb to NAT compared to their older counterparts

- How would SPC needs differ if the patient makes a full recovery?
- A partial recovery?
- Death or severe outcome?

***And what are the unique challenges if the perpetrator is the father/boyfriend/family member/neighbor of the child?  
What support does the mom/parent need?***



# Fourth Case Presentation

- 14 year old male, self inflicted GSW to the head
- GCS 5 on arrival, intubated in the ED
- What's his prognosis, and how does that change your conversation with his family?





# Fourth Case Presentation

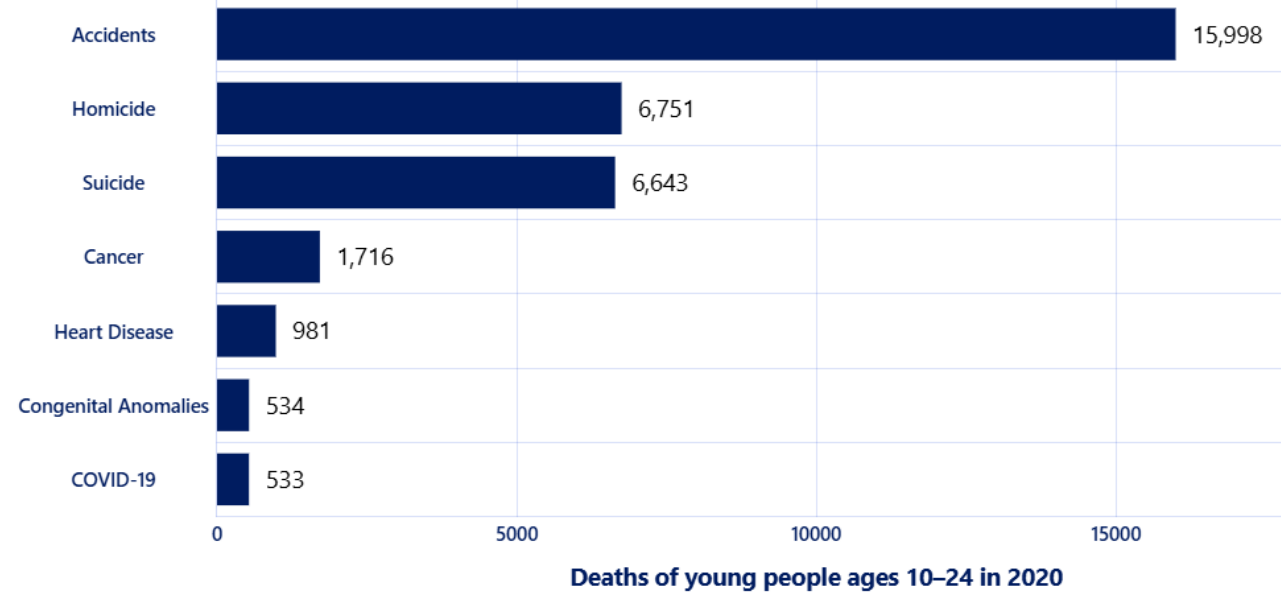
- What's his prognosis?
  - What's his expected outcome?
  - How does that change your conversation with his family?
  - What challenges does he and his family face?
- Full recovery (unlikely)
  - Mild TBI (also unlikely)
  - Functional Limitations
  - Persistent Vegetative State
  - Brain Dead/Organ Donor



# Pediatric GSW's

- an estimated **13,000** children are injured by GSWs each year
- Nearly **1300 children die** each year
- Boys, older children, and minorities are disproportionately affected

**Suicide is the third leading cause of death for young Americans.**



# Fifth Case Presentation

- 13YO Football Player
- Concussion/TBI



# Fifth Case Presentation

- Concussion/TBI
  - What's his prognosis?
  - What's his expected outcome?
  - What challenges does he and his family face?
- First or Subsequent Concussion?
- Return to Play
- Long term sequelae of Repetitive Head Injuries?





# Pediatric Concussions

- MVA's vs Sports
- Post-concussive syndrome
- 2<sup>nd</sup> impact syndrome
- Chronic traumatic encephalopathy

-2022: 2.3 million (3.2%) children  $\leq 17$  years had ever received a diagnosis of a concussion or brain injury.

-Diagnosis:

-1.0% among those aged 0–5 years

-2.3% among those aged 6–11 years

-5.9% among those aged 12–17 years.

-Higher for boys than girls overall

-Similar by sex 1.1 vs 1% aged 0-5YO

-3.7% vs 2.6% among those aged 6–11

-6.0 % vs 4.9% aged 12–17



Summary:

# What is Supportive Palliative Care (SPC)?

It helps my patient by...

It helps my patient's family by...

It contributes to overall team care by...



# Questions



# References

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