



## How Does This Thing Work? A look at TAC kids

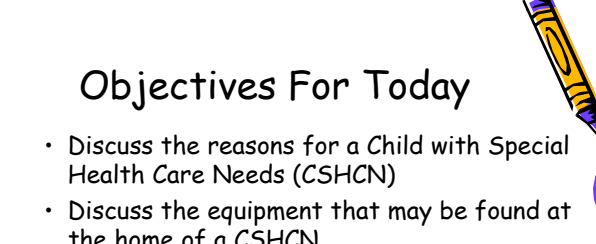
Kirk E. Mittelman, M.Ed., NREMT-P



TRAINING

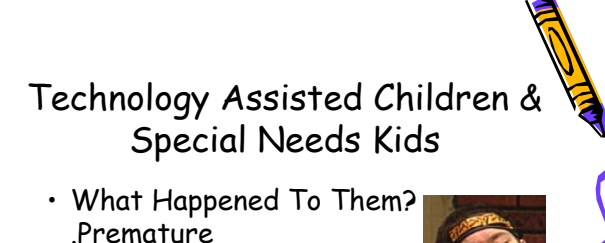

University of Utah

University of Utah Health Center



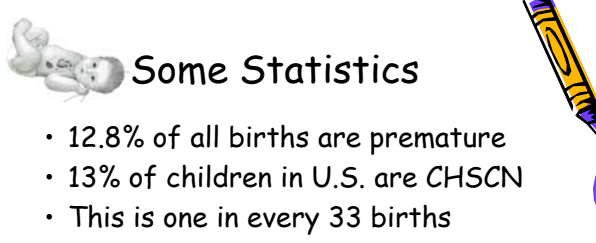


## Objectives For Today

- Discuss the reasons for a Child with Special Health Care Needs (CSHCN)
- Discuss the equipment that may be found at the home of a CSHCN
- Discuss possible complications found when called to a CSHCN
- Define the treatment possibilities for a CSHCN





## Technology Assisted Children & Special Needs Kids

- What Happened To Them?
  - .Premature
  - .Heart Disease
  - .Neurologic Disease
  - .Childhood Illness
  - .Something Just Went Wrong At Birth



## Some Statistics

- 12.8% of all births are premature
- 13% of children in U.S. are CHSCN
- This is one in every 33 births
  - 50% of these have disabilities that inhibit daily living
- Preterm infants are 3 times more likely to die within one year of life



## Most Common Birth Defects

- Heart Defects--1/100 babies
  - Leading cause of Neonate Deaths
  - These numbers dropping with research
- Cleft palate/palate—1/700
- Downs Syndrome—1/800
- Spina Bifida—1/2500



## Good News

- 80% of babies born after 26 weeks gestation survive
- 96% of those born at 28-31 weeks gestation survive
- 98% of those born 32-33 weeks gestation survive



## What Is A TAC Kid?

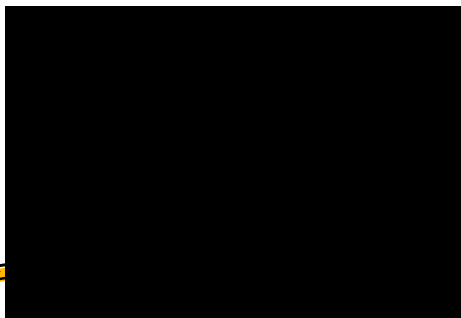


## Things U might see

- The High Tech Kid
- Tracheostomy Tube
- Central I.V. Lines
- Gastrostomy Tube
- Shunts



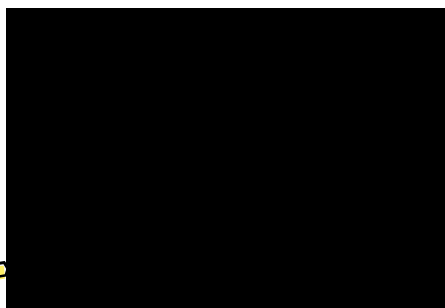
What was Travis' background?



### PARENTS & T.A.C.

- Parents of T.A.C. kids are experts on the condition of the child
- In general other parents may not have any medical training, but these parents are experts on their children and how to calm and treat them!

How Do The Parents Deal With The Added Stress?



### Spencer's Story



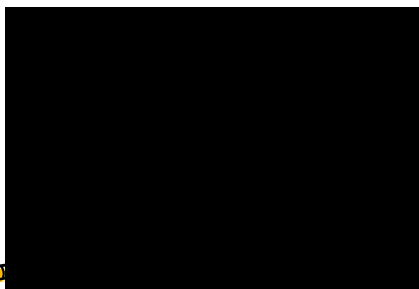
### A little trach talk...



### TRACHEOSTOMY TUBES

- LET'S LOOK AT ONE OF THE MORE COMMON ITEMS FOUND IN TAC KIDS AND EVEN SOME ADULTS.

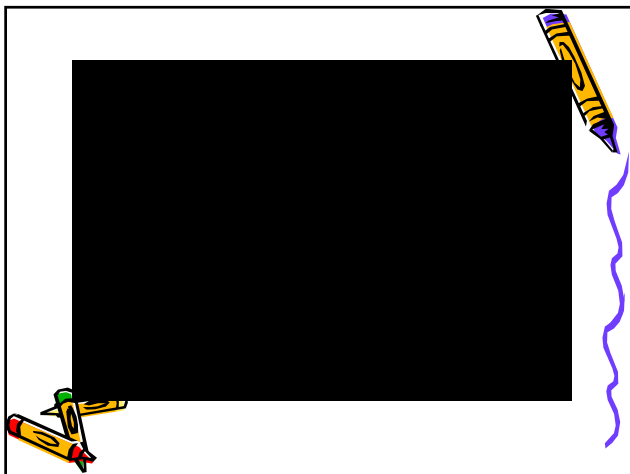
### What are Trach Tubes?



### What Problems U See

- Only a few life threatening ones
- Tracheostomy Tubes
  - Obstructions
  - Bleeding
  - Air leak
  - Dislodged Tube
  - Infection
- How do I ventilate the patient?





### When Do The Trach Tubes Get Changed?

A blackboard with a yellow crayon at the top right and two other crayons at the bottom left.

### Suctioning for TAC kids

A blackboard with a yellow crayon at the top right and two other crayons at the bottom left.

### CENTRAL LINES AND THEIR COMPLICATIONS

- The lines are very long
  - Tip may be near the heart
- Complications
  - Cracked line
  - Infection
  - Clotting off
  - Bleeding

An anatomical diagram of a child's chest showing a central line inserted into the vein.

## GASTROSTOMY TUBES

- A feeding tube placed directly into the stomach for the child who can not take food through the mouth.
- Same complications occur that happen with Central Lines



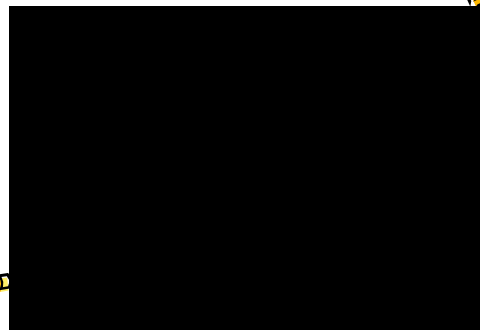
## GASTRONOMY TUBES



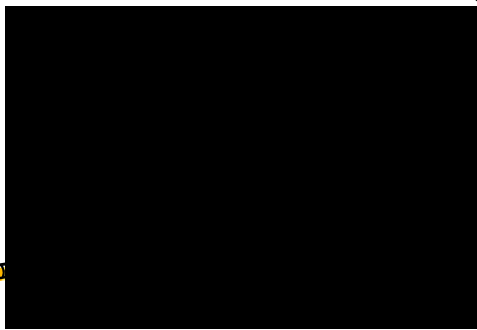
## SHUNTS

- A tube running from the brain to the abdomen to drain excess cerebrospinal fluid
- If you have complications, maintain patent airway and transport!

## Shunts and You



## HOW DO I DEAL WITH A TAC CHILD?



## But what if they have congenital heart disease?

- Some children have CHF @birth
- Some may develop CHF

## CHF Signs & Symptoms

- Tachypnea
- Crackles/wheezing on auscultation
- Decreased oral intake
- Tachycardia
- Delayed Cap Refill
- Peripheral Edema is Not Prominent

## Field Treatment Of CHF

- Give 'um lots of O's
- **Do not treat with aggressive fluid replacement!**
- Drive Fast!
  - You don't have much to offer here!

### Case History

- Mom has an cervical ablation
  - Reducing chance of pregnancy
- Mom
  - smoked pre pregnancy
  - Partook of Hops pre pregnancy
  - Both ceased when pregnancy found



### Case History

- Baby Azli
- Born 11-12-2009
- Weight: 2 lbs 15 oz
- Mom Induced at 32 weeks due to complications



### Case History for Today

- Baby Azli is now in Pediatric ICU
  - Currently is Intubated with a Chest Tube
- Pneumothorax
- Hip dysplasia
  - Unsure if from congenital defect OR
  - Developmental issues due to early membrane rupture @ 23 weeks



### Dealing with the emotions involved with pediatrics



## Parents of ALL injured Children Are Scared

- Let's discuss the effects an ill or injured child has on the family



## THE FAMILY HATES ME!

- When you care for an injured child or infant you must also care for the family of the child.
- Parent may be angry/hysterical toward the EMT
- Calm the Parent it Calms the Child



## MORE PARENT INFO HOW WILL THEY REACT?

- Parent is concerned about child
- Response is worsened by feeling of helplessness
- Encourage Parents To Help You!
- Have Parent Calm the Child



## WHAT ABOUT ME?

- How do EMS personnel react?
- Anxiety due to:
  - Lack of experience
  - Fear of failure
  - Identify with their own children
  - Afraid to hurt the child
  - Unable to calm the child
  - Unable to relate to the child
  - Reducing Anxiety

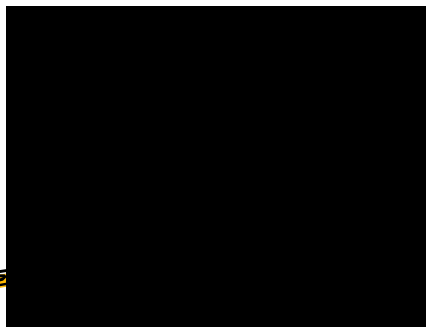


## Helpful Hints for Care

- EMS Providers Seek Relief!
- Remember most care for pediatrics is similar to adult care
- Get in some practice dealing with children
- Get down on their level



## Communication is Key



## Thank You

- Kirk Mittelman
- [www.mtnebotraining.com](http://www.mtnebotraining.com)
- [Kirk.Mittelman@hsc.utah.edu](mailto:Kirk.Mittelman@hsc.utah.edu)
- (801)581-8486

