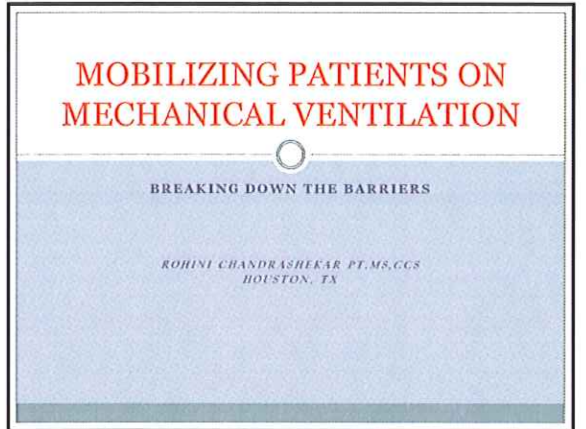
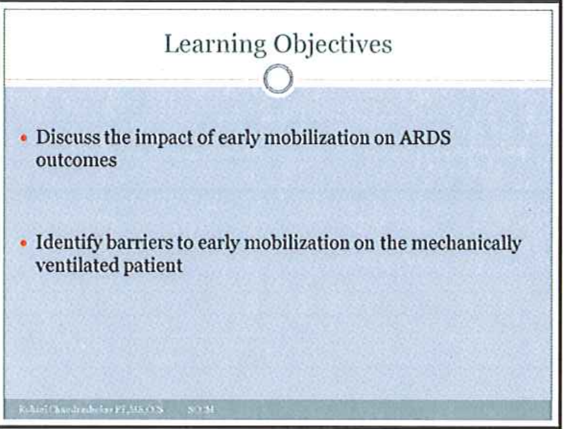
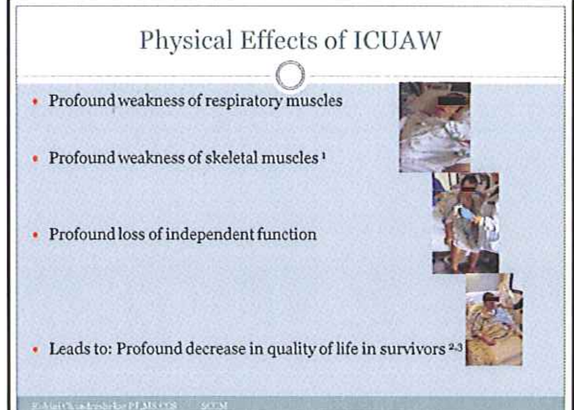
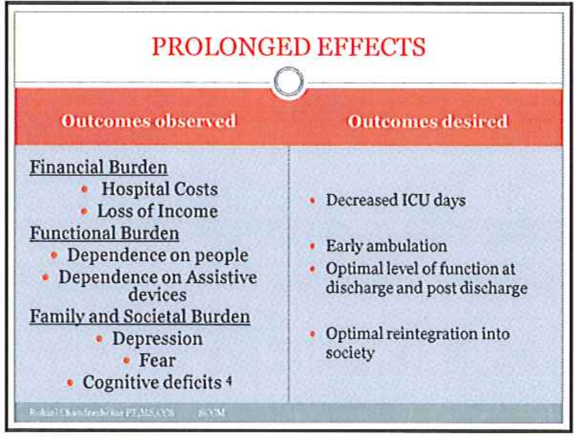




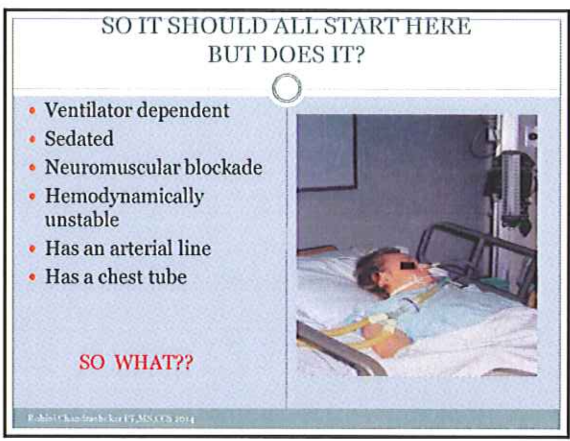


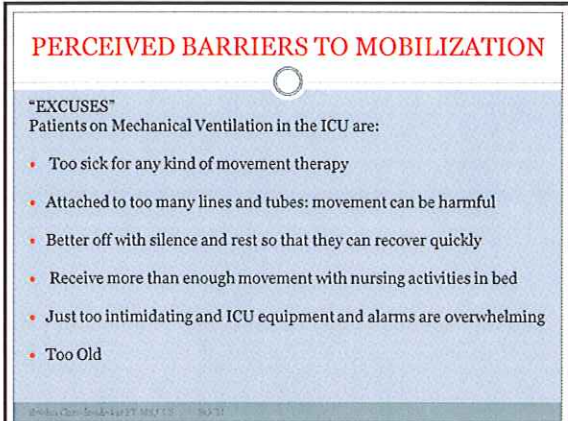


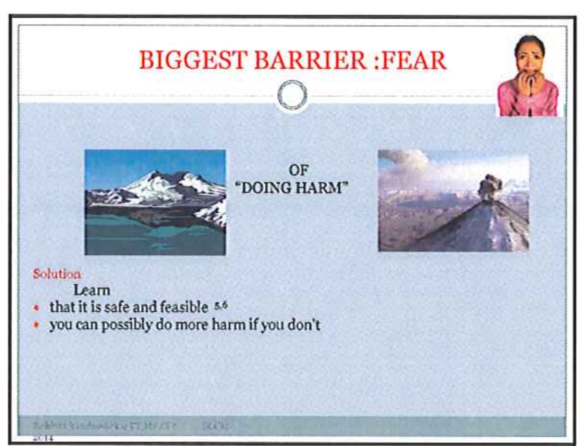
PROLONGED MECHANICAL VENTILATION

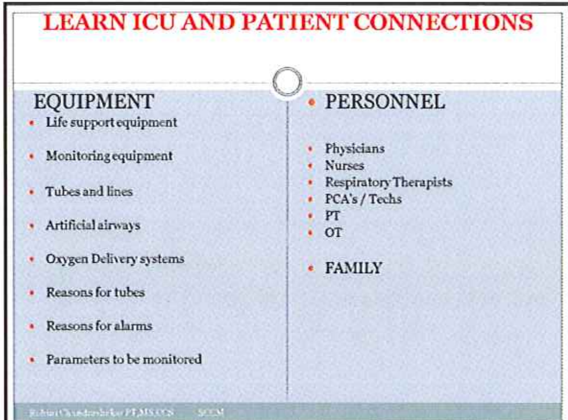
PATIENTS ARE ALIVE BUT ARE THEY LIVING?

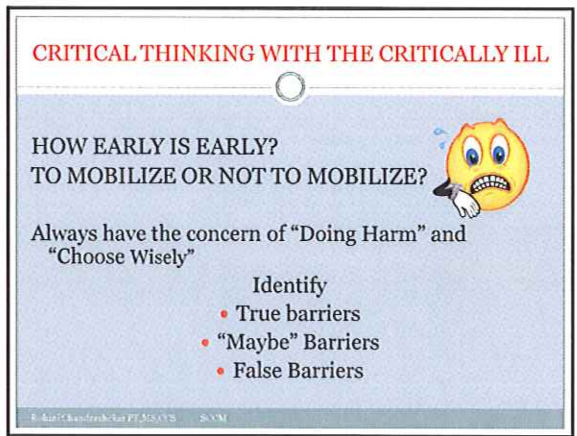
COX CE ET AL. EXPECTATIONS AND OUTCOMES OF PROLONGED MECHANICAL VENTILATION. CRITICAL CARE MED 2009;37:2888-2894

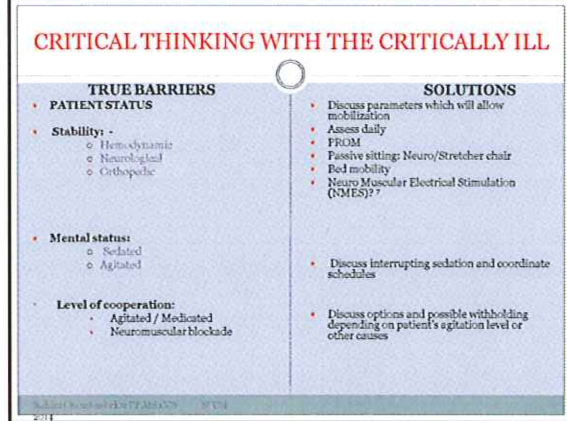


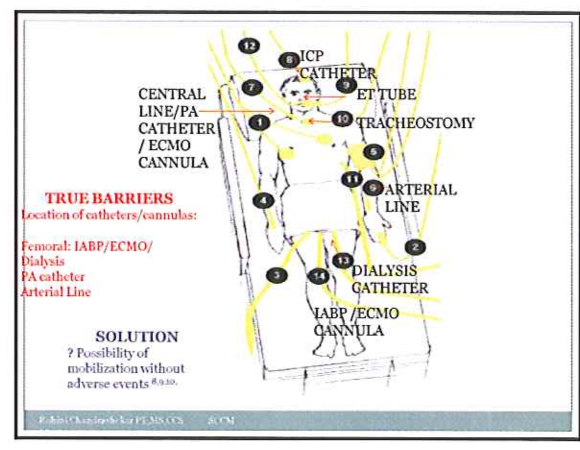

PERCEIVED BARRIERS TO MOBILIZATION
"EXCUSES"
Patients on Mechanical Ventilation in the ICU are:
Too sick for any kind of movement therapy
Attached to too many lines and tubes: movement can be harmful
Better off with silence and rest so that they can recover quickly
Receive more than enough movement with nursing activities in bed
Just too intimidating and ICU equipment and alarms are overwhelming
Too Old

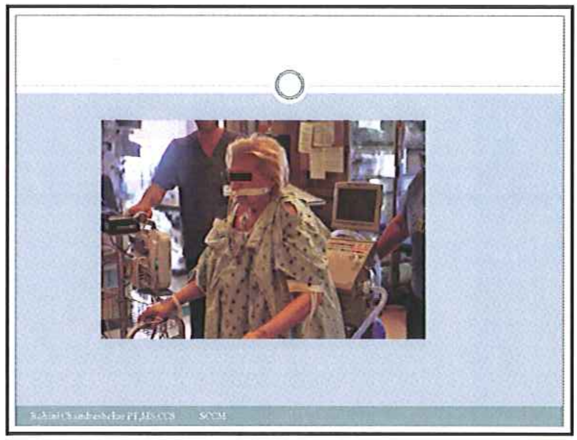

BIGGEST BARRIER :FEAR
OF
"DOING HARM"
Solution
Learn
that it is safe and feasible 5,6
you can possibly do more harm if you don't

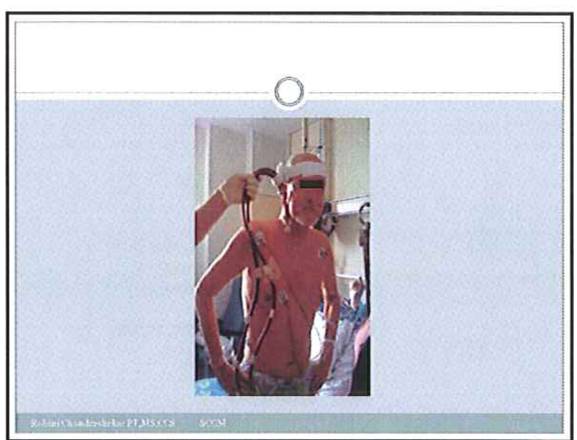

LEARN ICU AND PATIENT CONNECTIONS
EQUIPMENT
Life support equipment
Monitoring equipment
Tubes and lines
Artificial airways
Oxygen Delivery systems
Reasons for tubes
Reasons for alarms
Parameters to be monitored
PERSONNEL
Physicians
Nurses
Respiratory Therapists
PCA's / Techs
PT
OT
FAMILY

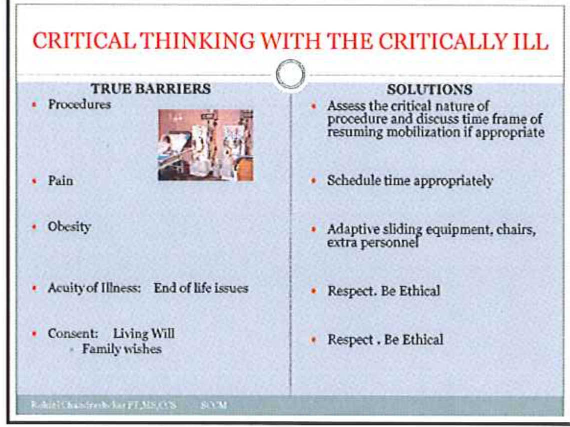

CRITICAL THINKING WITH THE CRITICALLY ILL
HOW EARLY IS EARLY?
TO MOBILIZE OR NOT TO MOBILIZE?
Always have the concern of "Doing Harm" and "Choose Wisely"
Identify
True barriers
"Maybe" Barriers
False Barriers

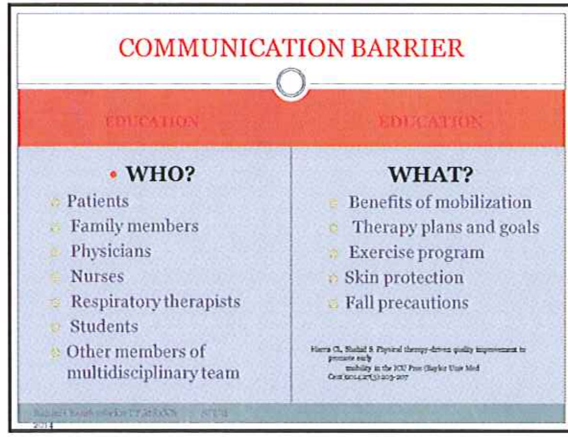

CRITICAL THINKING WITH THE CRITICALLY ILL
TRUE BARRIERS
PATIENT STATUS
Stability: -
Hemodynamic
Neurological
Orthopedic
Mental status:
Sedated
Agitated
Level of cooperation:
Agitated / Medicated
Neuromuscular blockade
SOLUTIONS
Discuss parameters which will allow mobilization
Assess daily
PROM
Passive sitting: Neuro/Stretcher chair
Bed mobility
Neuro Muscular Electrical Stimulation (NMES)? 7
Discuss interrupting sedation and coordinate schedules
Discuss options and possible withholding depending on patient's agitation level or other causes

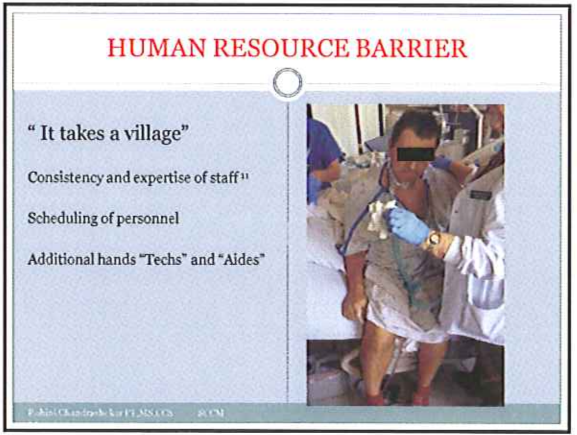

ICP CATHETER
CENTRAL LINE/PA CATHETER / ECMO CANNULA
ET TUBE
TRACHEOSTOMY
ARTERIAL LINE
DIALYSIS CATHETER
IABP /ECMO CANNULA
TRUE BARRIERS
Location of catheters/cannulas:
Femoral: IABP/ECMO/
Dialysis
PA catheter
Arterial Line
SOLUTION
? Possibility of mobilization without adverse events 8,9,10.

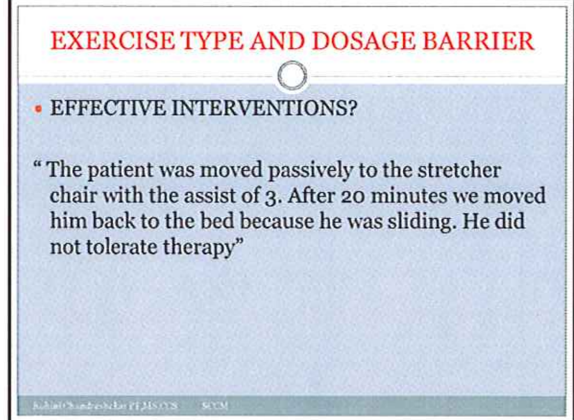


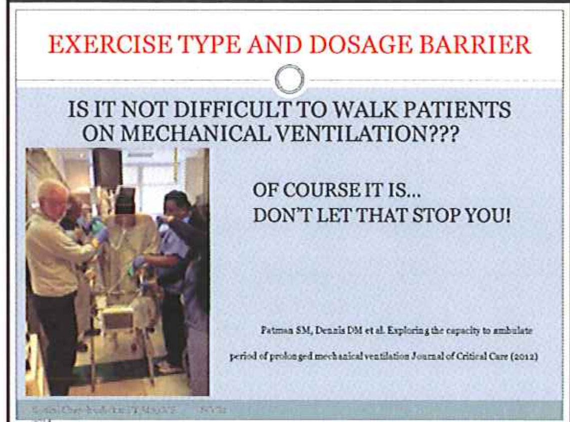


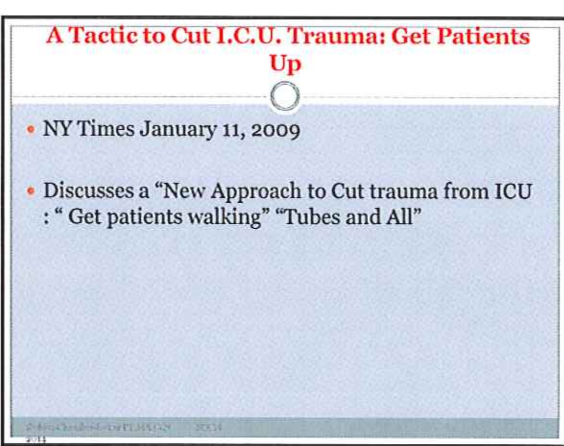

CRITICAL THINKING WITH THE CRITICALLY ILL
TRUE BARRIERS
Procedures
Pain
Obesity
Acuity of Illness: End of life issues
Consent: Living Will
Family wishes
SOLUTIONS
Assess the critical nature of procedure and discuss time frame of resuming mobilization if appropriate
Schedule time appropriately
Adaptive sliding equipment, chairs, extra personnel
Respect. Be Ethical
Respect . Be Ethical


COMMUNICATION BARRIER
EDUCATION
EDUCATION
WHO?
Patients
Family members
Physicians
Nurses
Respiratory therapists
Students
Other members of multidisciplinary team
WHAT?
Benefits of mobilization
Therapy plans and goals
Exercise program
Skin protection
Fall precautions


HUMAN RESOURCE BARRIER
" It takes a village"
Consistency and expertise of staff [11]
Scheduling of personnel
Additional hands "Techs" and "Aides"







OLD IDEAS ------ GOLDEN IDEAS

<u>Burns et al. Early ambulation of patients requiring ventilatory assistance. Chest 1975; 68: 608</u>

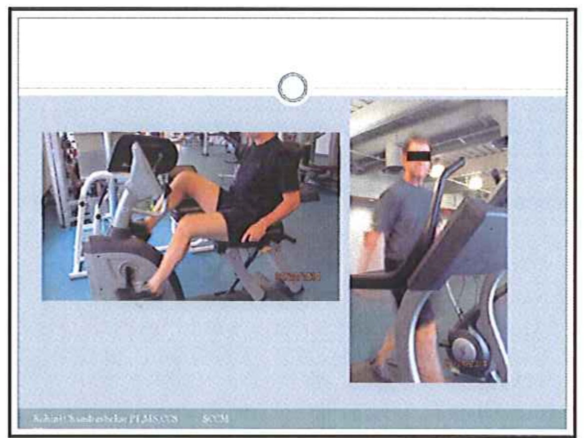
"It is our impression that with early ambulation, weaning has been facilitated and hastened, and the problems of prolonged bed and chair rest minimized"

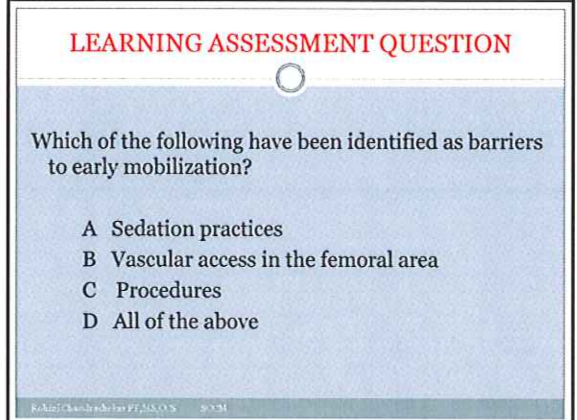
<u>Foss G. A method for augmenting ventilation during ambulation. Phys Ther 1972;52:519.</u>

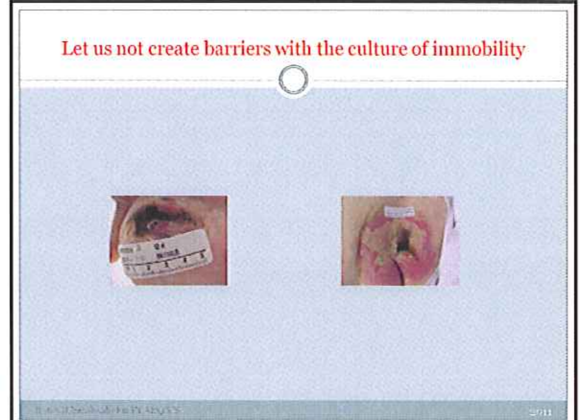
"The therapeutic value of this early ambulation has been well documented in our Intensive Care Unit by improved sense of wellbeing and the increased general strength the patient develops from physical activity"

REFERRAL THROUGH THE CONTINUUM BARRIER

- Step down unit / ward [13]
- Inpatient rehabilitation/LTACH
- SNF or Rehabilitation facility
- Home Health [14]
- Outpatient rehabilitation [15]







THANK YOU