

# Quality Outcomes & Financial Justification on CLRT Through Protocol Implementation

## GOALS

- To use CLRT\* in an appropriate population of ICU patients
- To develop a model/process for improving outcomes
- To demonstrate positive clinical outcomes and financially justify CLRT

## OBJECTIVES

- Decrease hospital LOS
- Decrease ICU LOS
- Decrease ventilator days
- Decrease nosocomial pneumonias

## HOW WE HANDLED THE CHALLENGE

### STEP 1: SITUATION ANALYSIS

- Placement on CLRT was late
- Uncertain of outcomes
- No consistent protocol
- No internal monitoring
- Lack of staff education
- Concern about our nosocomial rates

### STEP 2: DEVELOP THE PLAN

- Establish a multidisciplinary team
- Literature review
- Evaluate patient population
- Protocol development
- Risk assessment tool development
- Approach nursing, RT & medical staff

### STEP 3: IMPLEMENTATION

- Education: nursing, RT & medical staff
- Daily pulmonary rounds
- APACHE® II Scoring
- Information gathering
- Physician order for CLRT

### STEP 4: MEASUREMENT

- APACHE II
- Hospital LOS
- ICU LOS
- CLRT LOS
- CLRT lag
- Ventilator days
- Ventilator charges
- ICU charges
- CLRT unit cost

### STEP 5: PROCESS ASSESSMENT

- Review of the practice
- Review of the data collected
- Risk assessment tool revision
- Protocol revision
- Continuation of educational efforts

\*CLRT=Continuous Lateral Rotation Therapy

## COMPARISON SUMMARY\*\*

	1994	1995	Days Reduced
ALOS In ICU	21.2	14.9	6.3
Vent Days	18.2	14.3	3.9
ALOS on CLRT Unit	19.2	14.8	4.4
ALOS In Hospital	37.9	26.2	11.3

\*\*Numbers reflect those patients in the Outcomes Project

## VENTILATOR RELATED NOSOCOMIAL PNEUMONIA (NP)

- **Definition of pneumonia:** CDC
- Ventilator associated NP info collected by hospital surveillance
- Same criteria used in 1994 & 1995

*"There was nothing different introduced except the Outcomes Project"*

## ICU/VENT/CLRT DOLLARS\*\* REDUCED IN 1995

- ICU charges averaged \$5,145 less in 1995
- Vent charges averaged \$1,402 less in 1995
- Cost for CLRT averaged \$649 less per patient in 1995

\*\*Numbers reflect those patients in the Outcomes Project

## VENTILATOR RELATED NOSOCOMIAL PNEUMONIA REDUCED

1994 vs 1995

There were 48 less pneumonias

## LAG TIME COMPARISON\*\*

(ICU Admission to placement on CLRT)

PRODUCT LAG	AVERAGE LOS
1-2 days	8.7 days
3-4 days	14.9 days
5-6 days	27.7 days
>7 days	28.6 days

\*\*Numbers reflect those patients in the Outcomes Project

## COST AVOIDANCE

- Cost avoidance related to each nosocomial pneumonia prevented = \$18,000<sup>1</sup>
- Total cost avoidance \$864,000  
(\$18,000 x 48 = \$864,000)

<sup>1</sup> Inman K.J., Preventing Nosocomial Pneumonia and Lower Respiratory Tract Infections with Continuous Lateral Rotation Therapy: An Evaluation of Cost Effectiveness in Critically Ill Trauma Victims. *Critical Care Medicine*. January, 1995

## CONCLUSION

By utilization of the new protocol/process we found that we began to use CLRT more appropriately, as evidenced by improved clinical and financial outcomes.

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