

# PULMONARY VEST THERAPY IN QUADRIPLLEGIC CEREBRAL PALSY

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## RESULTS: PNEUMONIAS

Total number of pneumonias decreased:

from **36** / year prior to VT

to **18** / year during VT

## **NEW AND UPDATED:**

Total number of pneumonias decreased:

from **52** / year prior to VT

to **27** / year during VT

## RESULTS: HOSPITALIZATIONS

### DUE TO PNEUMONIA

Number of hospitalizations due to pneumonia decreased:

from **9** / year prior to VT

to **3** / year during VT

## **NEW AND UPDATED:**

Number of hospitalizations due to pneumonia decreased:

from **13** / year prior to VT

to **3** / year during VT

# RESULTS: EPILEPSY

3 cases with epilepsy, during the year of VT, the seizure frequency decreased:

from **4** / month to **1** / month

from **9** / month to **2** / month

from **9** / month to **1** / month

## **NEW/ ADDITIONAL:**

3 additional cases, during the year of VT, the seizure frequency decreased:

from **3** / month to **2** / month

from **7** / month to **2** / month

No change in one case: **3** / month

# RESULTS: EFFECTIVE SUCTIONINGS

Average number of effective suctionings / month:

Before VT	During VT
<b>1</b>	<b>28</b>
<b>4</b>	<b>48</b>
<b>39</b>	<b>59</b>
<b>47</b>	<b>87</b>
<b>65</b>	<b>197</b>
<b>105</b>	<b>217</b>
<b>142</b>	<b>234</b>

## **NEW/ ADDITIONAL:**

For 3 additional cases the average number of effective suctionings / month:

Before VT	During VT
<b>15</b>	<b>52</b>
<b>143</b>	<b>199</b>
<b>175</b>	<b>233</b>

# NEW AND UPDATED

## Participant Characteristics

Characteristics	Place of Residence		P value
	Mark-lund (N=5)	Little Angels (N=6)	
Gender-- M/F, %	60.0/40.0	50.0/50.0	1.00*
Age	17.7 (9.44) Md=19.5 Range 1-28	14.6 (4.93) Md=16.0 Range 7-20	0.36**
Tracheostomy—No/Yes, %	0.0/100.0	33.3/66.7	0.46*
Epilepsy—No/Yes, %	40.0/60.0	33.3/66.7	1.0*
Pneumonias—Before/During	29 / 15	23 / 12	0.99***
Hospitalizations—Before/During	7 / 1	6 / 2	1.0*
Seizures—Before/During	167 / 56	257 / 79	0.67***
Effective Suctioning—Before/During	5,145 / 8,503	3,682 / 7,744	<0.0001* **
*Fisher's Exact Test **Mann-Whitney Test ***Chi-Square Test			

## Clinical Outcomes of Vest Therapy (VT)

	Before Treatment	During Treatment	P value
Pneumonias, N	52	27	0.012*
Hospitalizations, N	13	3	0.031*
Seizures, N	424	135	0.026*
Effective Suctioning, N	8,827	16,247	0.001*

\*Wilcoxon Signed Rank Test, one-tailed test

# **NEW ADDITIONAL:**

## **COST SAVINGS OF PULMONARY VEST THERAPY**

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**JONE EBEL RN; IRENE KASNICKA RN (CHICAGO, IL, USA)**

**Measurements:** The average hospitalization for pneumonia was 5 days, 4 of which were in the ICU. The daily hospitalization rates were obtained from the business offices of three regional hospitals, with pediatric ICU units, which serve our patients.

**Results:** During our one year study, the number of hospitalizations was decreased by 10. The average hospitalization charge was **\$8,225**. Thus, the **cost savings for 10 hospitalizations was \$82,550**.

The cost of a VT unit was \$15,000 and a total of 3 units were used. The VT units continue to be in use for the third year, without mechanical failure or maintenance requirements.

**Conclusion:** In the first year alone, there was a very significant cost savings. It should be noted that **these sums do not include hospital laboratory testing, pharmacy costs, nor physician costs, thus significantly underestimating the actual savings**.