

## Supplemental Tables and Figure

**Table 1: Evolution of antibiotic resistance of 2 *Pseudomonas aeruginosa* strains**

<b>Antimicrobial susceptibilities</b>	<b><i>Pseudomonas aeruginosa</i> #1 (mucoïd strain) (Day 0) MIC (mg/ml) (Interpretation)</b>	<b><i>Pseudomonas aeruginosa</i> #1 (mucoïd strain) (Day 15) MIC (mg/ml) (Interpretation)</b>	<b><i>Pseudomonas aeruginosa</i> #2 (non-mucoïd strain) (Day 0) MIC (mg/ml) (Interpretation)</b>	<b><i>Pseudomonas aeruginosa</i> #2 (non-mucoïd strain) (Day 15) MIC (mg/ml) (interpretation)</b>
Amikacin	<8 (Sensitive)	64 (Resistant)	16 (Sensitive)	32 (Intermediate)
Aztreonam	0.5 (Sensitive)	8 (Sensitive)	16 (Intermediate)	4 (Sensitive)
Cefepime	16 (Intermediate)	32 (Resistant)	4 (Sensitive)	16 (Intermediate)
Ceftazidime	4 (Sensitive)	6 (Sensitive)	8 (Sensitive)	2 (Sensitive)
Gentamicin	>8 (Resistant)	>32 (Resistant)	>8 (Resistant)	>256 (Resistant)
Meropenem	0.125 (Sensitive)	>32 (Resistant)	8 (Resistant)	>32 (Resistant)
Piperacil/Tazobactam	2/4 (Sensitive)	32 (Intermediate)	≤2/4 (Sensitive)	4 (Sensitive)
Tobramycin	>1024 (Resistant)	>1024 (Resistant)	>8 (Resistant)	>1024 (Resistant)
Ciprofloxacin	<0.5 (Sensitive)	2 (Intermediate)	<0.5 (Sensitive)	2 (Intermediate)
Doripenem	Not done	>32 (Resistant)	Not done	>32 (Resistant)
Ceftolozane/tazobactam	Not done	0.5 (Sensitive)	Not done	1 (Sensitive)

**Table 2.** Ceftolozane/Tazobactam Desensitization Protocol at Children's Hospital of Michigan

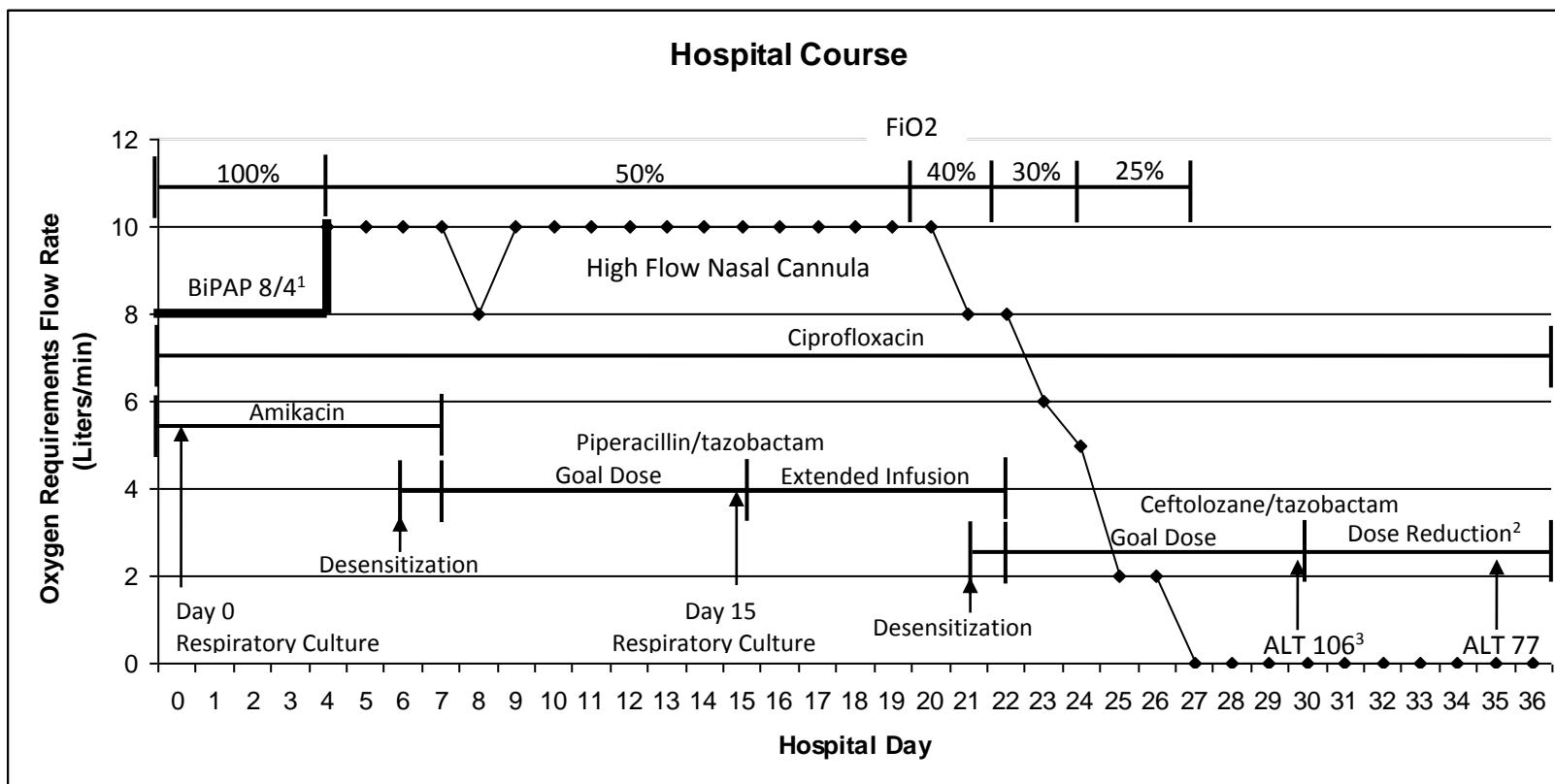
<b>INFUSION TIME</b>	<b>DOSE</b>	<b>CUMULATIVE DOSE</b>
15 minutes	0.15 mg	0.15 mg
15 minutes	0.30 mg	0.45 mg
15 minutes	0.60 mg	1.05 mg
15 minutes	1.2 mg	2.25 mg
15 minutes	2.5 mg	4.75 mg
15 minutes	5 mg	9.75 mg
15 minutes	10 mg	19.75 mg
15 minutes	20 mg	39.75 mg
20 minutes	40 mg	79.75 mg
20 minutes	80 mg	159.75 mg
30 minutes	150 mg	309.75 mg
30 minutes	200 mg	509.75 mg
60 minutes	400 mg	909.75 mg
60 minutes	600 mg	1509.75 mg

This constitute the first total dose of C/T infused over 6 hours.

Subsequent dose of C/T 8 hours later: 1500mg every 8 hours infused over one hour.

**Figure 1.**

**Timeline of Hospital Course, Treatment and Treatment Effect**



<sup>1</sup>Upon admission to Hospital Day 4, patient was placed on Bilevel Positive Airway Pressure (BiPAP) with inspiratory positive air pressure of 8 cmH<sub>2</sub>O and expiratory pressure of 4 cmH<sub>2</sub>O.

<sup>2</sup>Ceftolozane/tazobactam dose was reduced from 1500 mg q8h to 750 mg q8h due to interval development of transaminitis. (increase alanine aminotransferase, normal range 12-78 units/liter).

<sup>3</sup>Patient's ALT increased to 106 units/liter on Day 30 of treatment from baseline value of 51 units/liter on Day 23 and improved to baseline after dose reduction.