

## Supplemental Information

**SUPPLEMENTAL TABLE 3** Primary Diagnosis

| Primary diagnosis                                      | No. Cases | Percent | Tracheal Tube Without iHMV | Tracheal Tube With iHMV | Percent Tracheal Tube With iHMV |
|--|-----------|---------|----------------------------|-------------------------|---------------------------------|
| Respiratory system <sup>a</sup>                        | 93        | 41.2    | 15                         | 78                      | 83.9                            |
| Neuromuscular, CNS <sup>b</sup>                        | 61        | 27.0    | 18                         | 43                      | 70.5                            |
| Syndrome, chromosomal abnormality <sup>c</sup>         | 34        | 15.0    | 18                         | 16                      | 47.1                            |
| Cardiac, heart disease, defect <sup>d</sup>            | 19        | 8.4     | 4                          | 15                      | 78.9                            |
| Neoplasms <sup>e</sup>                                 | 7         | 3.1     | 3                          | 4                       | 57.1                            |
| Inborn errors <sup>f</sup>                             | 6         | 2.7     | 2                          | 4                       | 66.7                            |
| Musculoskeletal, renal, infectious <sup>g</sup>        | 6         | 2.7     | 3                          | 3                       | 50.0                            |
| Total  | 226       | 100.0   | 63                         | 163                     | 72.1                            |
| Any syndrome, chromosome abnormality, genetic disorder | 74        | 32.7    | 20                         | 54                      | 73.0                            |

These data show the primary diagnosis for patients during the 2014 to 2018 period.

<sup>a</sup> Respiratory: bronchopulmonary dysplasia, congenital diaphragmatic hernia, alveolar proteinosis, surfactant protein C deficiency, airway disorders (congenital or acquired; i.e., laryngeal atresia or web, subglottic stenosis, tracheal stenosis or tracheomalacia) not associated with a specific syndrome, chronic respiratory failure following acute respiratory distress syndrome.

<sup>b</sup> Neuromuscular, CNS: cerebral palsy, anoxic or hypoxic injuries, spinal muscular atrophy, myopathies, myotonic dystrophy, CNS trauma, brain abnormalities or malformations, spinal bifida, unspecified CNS disorders, ROHHAD, Moebius, and Guillain-Barre syndromes.

<sup>c</sup> Syndromes and chromosomal abnormalities associated with upper airway obstruction or control of breathing: Trisomy 8, 12, 15; other assorted chromosomal deletions and abnormalities; Pierre Robin anomaly; congenital central hypoventilation syndrome; other syndromes (Pfeiffer, Treacher Collins, Opitz G/BBB, Nager, Apert, WAGR, OEIS, CHARGE, etc).

<sup>d</sup> Cardiac, heart disease, defect: tetralogy of Fallot, hypoplastic left heart syndrome, truncus arteriosus, atrioventricular canal, pulmonary atresia, double outlet right ventricle, transposition of the great vessels, tricuspid atresia, total anomalous pulmonary venous return.

<sup>e</sup> Neoplasms: brain tumors, neuroblastoma.

<sup>f</sup> Inborn errors of metabolism: mitochondrial defects, Sanfilippo syndrome, metachromatic leukodystrophy, Pompe disease, Morquio syndrome, cytochrome C oxidase deficiency.

<sup>g</sup> Musculoskeletal, renal, infectious: skeletal dysplasia, infantile myofibromatosis, autosomal recessive polycystic kidney disease, postinfectious (cytomegalovirus, adenovirus, mycoplasma, etc).

**SUPPLEMENTAL TABLE 4** Estimated National Tracheal Tube Home Population  $\leq 16$  Years of Age

| Year | Tracheal Tube Without iHMV | Tracheal Tube With iHMV | All    |
|------|----------------------------|-------------------------|--------|
| 2008 | 2971                       | 5596                    | 8566   |
| 2010 | 3404                       | 6463                    | 9867   |
| 2012 | 2939                       | 6396                    | 9334   |
| 2013 | 2988                       | 6349                    | 9336   |
| 2014 | 2921                       | 6644                    | 9565   |
| 2015 | 2859                       | 6775                    | 9634   |
| 2016 | 3157                       | 7595                    | 10 752 |
| 2017 | 3024                       | 8506                    | 11 530 |
| 2018 | 2839                       | 9024                    | 11 864 |

Estimates assume that prevalence nationally equals the prevalence in Minnesota.