Supplementary Material

This is a survey to determine ventilation practices in the neonatal intensive care units of USA and Canada. Ventilation practices vary widely between different NICUs and also among different providers in each NICU. These data will help us understand translation of technological advances into day-to-day practice of Neonatal ventilation.

The survey will take you about 10 minutes to complete.

Your participation in this survey is completely voluntary; your completion of the survey signifies your consent to participate. There are no direct benefits to you in participating in this study. You will not be compensated for your participation. You can skip questions that you do not want to answer or stop the survey at any time.

The survey is anonymous; no one will be able to link your answers back to you. Please do not include your name or other information that could be used to identify you in the survey responses.

This study has been approved by the IRB of Women and Infant Hospital of RI.
Questions? Please contact Ashish Gupta, MD. Fellow in Neonatal-Perinatal Medicine at 201-744-0694/ akgupta@wihri.org/ guptad rashish@yahoo.com

1. Which conventional Ventilator(s) do you use in ELBW infants? (Check all that apply)

☐ Avea
☐ Bird VIP
☐ Draeger Babylog 8000
☐ Draeger VN500
☐ Puritan Bennet
☐ Maquet Servo-i
☐ Maquet Servo-n
☐ Draeger Evita XL
☐ GE Carestation
☐ Hamilton G5
☐ Other (Please specify)
☐ Not Sure
2. Which mode of ventilation do you use most often in ELBW Infants?
   - Pressure-controlled/pressure-limited
   - Volume targeted Ventilation (e.g. Volume Guarantee, PRVC, Volume control)
   - Equally Often

3. How often you use volume-targeted ventilation?
   - Never
   - rarely (<15 %)
   - Occasionally (15-30% of the time)
   - Often (31-50% of the time)
   - Most of the time (>50%)

4. If you use volume targeted ventilation in your center, when is it used?
   - Acute phase
   - Weaning
   - Both
   - N/A

5. When you use pressure controlled ventilation, do you/your center measure tidal volume?
   - Always
   - Sometimes
   - No

6. When using pressure controlled ventilation, do you/your center record tidal volume in your medical record/flow chart?
   - Always
   - Sometimes
   - No
7. When using volume-targeted ventilation, what is the lowest tidal volume you most commonly use? (The question applies to any patient with any diagnosis, other than pulmonary hypoplasia or diaphragmatic hernia)

- 3 ml/kg
- 3.5 ml/kg
- 4 ml/kg
- 5 ml/kg
- 6 ml/kg
- 7 ml/kg
- do not use

8. When using volume-targeted ventilation, what is the largest tidal volume you most commonly use? (The question applies to any patient with any diagnosis)

- 5 ml/kg or less
- 6 ml/kg
- 7 ml/kg
- 8 ml/kg
- 9 ml/kg
- 10 ml/kg
- 11 ml/kg
- 12 ml/kg or more
- do not use

9. When using volume-targeted modes, what tidal volume would you choose initially for the following patients in ml/kg?

- one day old 500g, 24 week baby with RDS
- six weeks old former 600g 24 week baby with severe BPD
- One day old 3500g term baby with MAS
- One day old 2800g term infant with CDH
- 2 day old 1200g 32 week baby with RDS
10. Which modes of synchronized ventilation do you use most often during the acute phase in preterm infants with RDS? Please rank them in order of frequency (1 - most frequent, 2 second, etc)

- [ ] Assist/control A/C
- [ ] SIMV
- [ ] SIMV with Pressure Support (SIMV +PS)
- [ ] Pressure support ventilation (PSV)
- [ ] Neurally adjusted ventilatory assist (NAVA)
- [ ] High frequency Ventilation (HFOV / HFJV / HFFI)
- [ ] Other


- [ ] Assist/Control A/C
- [ ] SIMV
- [ ] SIMV with Pressure Support (SIMV +PS)
- [ ] Pressure Support Ventilation (PSV)
- [ ] Neurally adjusted ventilatory assist (NAVA)
- [ ] High Frequency Ventilation (HFOV / HFJV / HFFI)
- [ ] Other

12. If you use volume targeted ventilation, please specify the main reasons to do so. List as many as you wish.

13. If you do not use volume targeted ventilation, please specify the reason. List as many as you wish.
14. Total Number of Beds in your NICU
   - <20
   - 20-40
   - 40-60
   - >60

15. Primary Practice Location.
   - North East (ME,NH,VT,MA,CT,RI,VT,MA)
   - Mid Atlantic (WV,VA,DE,MD,NC,DC,PA,NJ)
   - Great Lakes (OH,MI,IN,IL,WI,MN)
   - North Central (IA,MO,KS,NE,SD,ND)
   - North west (MT,WY,ND,WA)
   - South Central (TX,OK,AR)
   - South East (SC,GA,FL,AL,MS,LA,TN,KY)
   - South West (AZ,UT,CO,NM,NV)
   - West (CA,AK,HI)
   - Canada

16. How long have you practiced Neonatology? (Excluding Training Experience).
   - <5 years
   - 5-14 years
   - 15-25 years
   - >25 years

17. What is your primary practice environment?
   - Community level 2 NICU
   - Community level 3 or higher NICU, no residents or fellows
   - Community level 3 or higher NICU with residency program
   - Academic level 3 or higher NICU with residency but no fellowship program
   - Academic level 3 or higher NICU with residency and a fellowship program