THE ASSIST GROUP℠

Bridging the Gap, Payers' Link to the NICU
The Assist Group White Paper
October 22, 2012

Executive Summary

Preterm births are on the rise. According to The World Health Organization's *Born Too Soon: The Global Action Report on Preterm Birth*, 15 million babies are born too soon, 1 million die each year and preterm birth is the #1 cause of death in newborns. (who.int)

While preterm births are on the rise, technological advances have also increased the rate of survival for premature babies as well. In 1970 it was rare for an infant weighing less than 900 grams to survive. In 2011 there has been increased survival in infants that are less than 500 grams.

Although increased survival in preterm infants is very positive, it also presents enormous challenges. A large percentage of preterm infants require respiratory support. While necessary to ensure survival, ventilation and supplemental oxygen can be damaging as well. This paper will examine this phenomenon.

Management of Ventilation in NICUs

"Approximately 6,000 hospitals in the United States deliver more than 4.2 million babies each year. About 1,065 of these hospitals have neonatal intensive care units (NICUs)." (Goldsmith and Karotkin 8) Increased competition for facilities, pressure from physicians and an increase in the number of neonatologists are all contributing factors to the rise in number of facilities that provide NICU services. Additionally, NICUs can generate high visibility, good PR and profits, making them increasingly popular. (Goldsmith and Karotkin 10)

The question then becomes, "Just because you can, does that mean you should?" The use of respiratory support technology and pharmaceuticals is immensely complex. Although facilities may acquire the capabilities to run a NICU, inadequate or inexperienced staffing and improper use of these technologies may be detrimental to infants and families. Doctors Goldsmith and Karotkin, authors of Assisted Ventilation in the Neonate, 5th Edition, state "Survival is no longer the goal; survival without handicap must be our new paradigm." (Goldsmith and Karotkin xiv Preface) And while survival rates at some of the lower NICU level hospitals can be compared to the higher-level, university hospitals, morbidity outcomes are not reported. (Goldsmith and Karotkin 10) Meaning the possible long-term medical issues are not factored in. Complications may occur from all types of respiratory support and experts are needed to manage and evaluate the uses and durations.

Complications of Ventilation

Ventilator-induced lung injury (VILI) and bronchopulmonary dysplasia (BPD) can occur in infants that have been ventilated. Both VILI and BPD can be a leading cause of late deaths in infancy, secondary to prematurity. (Goldsmith and Karotkin 1) Additionally, "Neonatal respiratory conditions, both acute (i.e., respiratory distress syndrome [RDS]) and chronic

300 Union Boulevard Suite 515
Lakewood, CO 80228
assistgroup.com
877.631.9080

(i.e., bronchopulmonary dysplasia [BPD]), are strongly linked to hemorrhagic-ischemic cerebral injury and to long-term neurodevelopmental deficits in premature infants." (Goldsmith and Karotkin 484) Central nervous system injuries are also possible. The longer a neonate is on a ventilator, the higher the risk he/she will develop one or more complications. In addition to the impact on the patient and family, the costs of the diseases caused by ventilation can be substantial to insurance payers.

Given the correlation between ventilator use and a number of morbidities, it is essential that a neonatologist with respiratory expertise monitor the complex use of respiratory support.

Expert in Assisted Ventilation

As previously mentioned, NICU facilities and treating teams may possess the knowledge to use respiratory support to increase the survival rate of preterm infants, however the focus should be not just on survival, but survival without handicap. (Goldsmith and Karotkin xiv Preface) Because the risk of complications increases with the length of time an infant is on ventilation, realizing the optimal time to remove the patient from the ventilator takes respiratory expertise and experience.

It may not always be possible for payers to select the facility/treating team for their preterm clients, but it is possible for them to select an expert in respiratory care to for consultation to ensure the best possible clinical and financial outcome.

A NICU consultant can provide direct physician-to-physician communication with the treating team. What that means for payers: you receive a detailed, up-to-date, first-hand account of the insured's clinical picture. Beyond clinical reporting, the consultant (a board-certified, practicing neonatologist) can provide an in-depth, experiential personal perspective supported by evidence-based practice that includes prognosis and recommendations.

The Assist Group's Chief Medical Officer (also the overseeing physician of every CareAssist team) actually "wrote the book" Assisted Ventilation of the Neonate. Dr. Edward H. Karotkin has been a practicing neonatologist for over 30 years. He has participated in extensive grant funded research in ventilatory and respiratory issues related to neonates, with particular focus on the premature infant. Dr. Karotkin currently practices in a Level III/IV NICU and is a Professor of Pediatrics at Eastern Virginia Medical School. He is a featured presenter/speaker worldwide, has published numerous journal articles, and is the Chairman of the Board for Physicians for Peace, a medical mission whose purpose is to transform lives by training, supporting and empowering healthcare professionals working with the world's underserved populations. His vast experience has positively impacted the course of care for many CareAssist clients over the years.

Working with CareAssist, insurance payers:

1. Receive detailed, first-hand reports from the neonatologist that enable payers to forecast costs, make benefit decisions and feel confident the treating team is working toward the best clinical outcome.
2. Thoroughly understand the clinical status of the NICU patient.

THE ASSIST GROUP℠

3. Know that the consultant, an expert in respiratory support, will suggest acceleration of removal from ventilators when appropriate to optimize health and decrease morbidities (which may ultimately lower costs for payers).
4. Realize savings from costs avoided (daily NICU costs from decreased length of stay, procedures avoided, etc.).

The best quality of care is always the foremost concern for the consultant, but utilizing evidence-based care and experience also positively influences costs as well.

300 Union Boulevard Suite 515
Lakewood, CO 80228
assistgroup.com
877.631.9080

THE ASSIST GROUP℠

References

1. The Partnership for Maternal, Newborn and Child Health. "*Born too Soon: The Global Action Report on Preterm Birth*." May 2012. http://www.who.int/pmnch/media/news/2012/preterm_birth_report/en/index.html
2. Goldsmith, Jay P., MD, FAAP and Edward H. Karotkin, MD, FAAP. Assisted Ventilation of the Neonate, 5th Edition. St. Louis: Elsevier Saunders, 2011

300 Union Boulevard Suite 515
Lakewood, CO 80228
assistgroup.com
877.631.9080