

Technology & Clinical REPORT

Winter 1998

Vol. VI, No. 2

Advances in
pulmonary management of
the critically ill infant

 **bunnell**
INSPIRED INFANT CARE

Inside this Issue

**Regular Patient
Box Maintenance
is Critical**

**Service Contracts
Make \$ense**

**Case Studies
Wanted**

Up,Up and Away!

Use of the Life Pulse High Frequency Jet Ventilator continued to grow in 1997 with reported usage up more than 25% from 1995 levels! The increase is the result of individual hospitals using the system more frequently as well as a greater number of hospitals joining the Bunnell family. In fact, Life Pulse systems are now present in well over 25% of the level III NICUs within the United States!

Improved Technology

Continuous improvements in our technology are partially responsible for this growing surge in demand for the product. Unquestionably, the 1996 introduction of the Life Port adapter made a profound difference in the use of the system. The ability to put patients on

the Jet quickly and easily has encouraged clinicians to use the Jet earlier and more often. This unique adapter is now used in 95 percent of HFJV applications!

Of course, the primary reason for this continuing growth in the use of HFJV has been the increase of

gies that incorporate HFJV. Early results of some basic research using various modes of ventilation on surrogate animal lungs by Dr. Richard Bland's team at the University of Utah are providing some additional tantalizing clues as to the physiologic basis

Whether we are conducting training at a hospital or lecturing at a national conference, our message has been the same: oxygenate with PEEP, ventilate with PIP and avoid hyperventilation in preterm infants.

knowledge about the pulmonary physiology of the sick infants and the effects of mechanical ventilation on lung function. While anecdotal evidence regarding the effectiveness of various ventilation strategies has long been pervasive amongst early users of HFJV, studies such as the multi-center trial headed by Dr. Kezsler, have demonstrated the effectiveness of, and the necessity for using optimized lung volume and ventilator strate-

gies for the benefits of HFJV.

Conventional Ventilation is not enough

What is now clear and being accepted by most in the field is that conventional ventilation and oscillatory ventilation, despite recent advances in technology and therapeutic approach can not adequately address the needs of many of the sickest children. Jet pulse technology at high frequency rates, when applied in tailored

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strategies that stress optimized PEEP, can be the answer for these children. Higher levels of PEEP during HFJV can be used safely to improve oxygenation while avoiding hyperventilation. Tailoring strategy to specific pathophysiologies has been a central focus of Bunnell's educational effort for more than three years. Whether we are conducting training at a hospital or lecturing at a national conference, our message has been the same, oxygenate with PEEP, ventilate with PIP and avoid hyperventilation in preterm infants. As demonstrated by the continuing increase in demand for our HFJV products, our ongoing commitment to education and our support of clinicians is paying big dividends, both for our company and for your patients.

In the final analysis though, it all comes back to you! Conscientious professionals doing what is best for your patients. We are honored to be part of your team and we celebrate your victories. We can only be successful by helping you to be successful.

So, if you have a problem, call us. If you need information, call us. If you need equipment or supplies, call us. When you have successes, call us. If you want additional training, call us. 1-800-800-4358, we always enjoy hearing from you!

Bunnell Incorporated recommends that the Jet and Patient Box receive preventive maintenance annually to ensure safe and reliable operation. We strongly recommend that hospitals that currently do not have a service contract request a copy of the contract so it can be reviewed.

You would spend approximately 80% of the cost of the service contract when you pay for annual preventive maintenance and the cost of a rental replacement while your equipment is in for service. For only \$36 more per month, you can eliminate

any costly unplanned expenditures.

Service Contracts make sense: preventive maintenance, repairs (both parts and labor), software upgrades, loaners while your equipment is being serviced, and emergency loaners delivered within 1-4 hours nationwide are all covered by the service contract. Why risk equipment down time when you can guarantee coverage for the entire year.

Contact Ken Hekking @ 1-800-800-4358 to request a copy of the Service Contract or for any additional information.

Regular Patient Box Maintenance is Critical

The Patient Box contains the pinch valve, which is the active mechanism for creating high frequency breaths. Regular maintenance is essential to ensure proper performance. At 420 breaths per minute the valve cycles 25,200 times each hour or 604,800 times a day. Regular maintenance can reduce valve noise and vibration decreasing the rate of wear on the pinch tubing and reducing the chance of premature circuit failure.

If our Patient Box is noisy or if you have had pinch tubing wear through, the pron pad in the valve probably needs to be replaced. We rec-

ommend the pron pad be replaced once a year and with frequent or prolonged use more than once a year.

If you have any questions about this information or if you would like to schedule your Patient Box for preventive maintenance, please call our customer service department at 1-800-800-4358.