Three Patients and Two Dr. Crippens

In this Bulletin, you’ll read a book review about “Three Patients – International Perspective on Intensive Care at the End of Life,” by David Crippen, MD, and his colleagues. If you were a section member a year or so ago, you read in this Bulletin an extensive discussion about the role of RTs in the ICU. That discussion was taken from Dr. Crippen’s widely popular CCM-L electronic bulletin board. The publication of this book is proof that Dr. Crippen is gaining a worldwide reputation as a leader in ICU Care.

There is only one way to explain the birth of this book. That is CCM-L (http://www.pitt.edu/~crip-pen/, an electronic bulletin board that is devoted to critical care medicine), and Crippen, one of the book’s editors. An avowed nonconformist and refugee from the 1960s, Crippen has connected ICU physicians from around the world by means of the Internet. He has single handedly, without commercial sponsorship, woven a network of international intensivists. Nothing like this has ever occurred before. All readers of this book are being treated to a unique experience.

Here’s a note of historical irony to Dr. Hoyt’s remarks: one of Dr. Crippen’s ancestors was Dr. Hawley Harvey Crippen. This man was the first person to be arrested via the use of wireless technology back in 1910. The earlier Crippen’s relatives were trying to save their son, Crippen had murdered and disposed of his wife in the new era of DRGs, capitation, and shrinking reimbursement, it is the hospitals and physicians who are seeking legal ways to discontinue or withhold futile care. This seems to imply that there has always been an economic foundation to the process of determining what constitutes “futile care.” If we are discussing the compassionate and just application of med-

Book Review: Exploring the
Moral Thicket of ICU Care

By Jeff Whitnack, RRT, RPFT

Three Patients - International Perspective on Intensive Care at the End of Life
by David Crippen, MD; Jack K. Kilcullen, MD, JD, MPH; and David F. Kelly, PhD
Kluwer Academic Publishers

In this book, three hypothetical patients are presented to ICU medical directors around the world. Each patient is presented in a way such that there is an escalating level of futility involved with any ICU admission for his care. The physicians are asked how they would treat each patient - with the resources they currently have at their disposal and with unlimited resources.

The patients include:

• A 57-year-old man with mild hypertension who is now on a ventilator for aspiration, ARDS, sepsis, and acute renal failure
• An 88-year-old man with DM, PVD, CAD, CRF, COPD, and dementia who is now intubated and on 100% O₂ and Peep Scwp with a $\text{S}_{\text{pO}_2}$ of 88%, blood pressure of 80/37, and white blood cell count of 38,000.
• A 42-year-old AIDS patient who is non-compliant with his medications (and drinks a liter of hard liquor per day).

Each patient, it seems (or their families) insist that everything possible be done. Not one has health insurance.

The physicians are from South Africa, Australia, the United Kingdom, India, New Zealand, the Netherlands, Russia, Hong Kong, Israel, Canada, and the urban United States. Each of these nations has specific health-related factors that come into play:

• For South Africa AIDS is endemic, affecting up to 80% of the population.
• For India, where all can be done but there is practically a “coin slot” on the ventilator.
• For Russia, where the possibility of using advanced technology (the unlimited resource option) brings an admission that the physician couldn’t resist that temptation.
• For “urban” US, where the physician comes from a closed ICU (representing < 10% of all ICUs in this country).

The four issues interwoven throughout the book are 1) patient autonomy, 2) beneficence (providing benefit), 3) nonmaleficence (doing no harm), and 4) distributive justice. Does patient autonomy imply not only the right to refuse treatment, but also the right to insist upon whatever aggressive therapies the patient may desire (and may have looked up on the Internet)? Could we provide more benefit by trying to ease suffering during the end of life as opposed to prolonging life by a matter of days or weeks? To what extent do patients, on the surface appearing calm and sedated, actually suffer as we apply futile resuscitation efforts in their last days? If we are to formally apply some legal formula for the just distribution of critical care resources, is this a decision best left for medical professionals? Or is it a political and ethical decision for the public at large? Those looking for easy and short answers to these questions will be disappointed because many of the authors take divergent viewpoints.

What I found interesting was how several authors pointed to a historical trend in the US. In the old fee-for-service era, when all provided technology and services were lucrative billed, it was families who were going to court to have futile life support terminated. Now, in the new era of DRGs, capitation, and shrinking reimbursement, it is the hospitals and physicians who are seeking legal ways to discontinue or withhold futile care. This seems to imply that there has always been an economic foundation to the process of determining what constitutes “futile care.” If we are discussing the compassionate and just application of med-

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Beginning this year, the Bulletin will be published on a quarterly, rather than bimonthly, basis. But that doesn’t mean we’ll be communicating with you less often than before. The plan is to increase communication to members via a monthly email which will feature items of interest to the section. If you’re already receiving email messages from the AARC, you will automatically receive these e-mails. If you aren’t getting AARC email, that means we don’t have your email address. To ensure you don’t miss out on these timely publications, send your email address to: mendoza@aarc.org.

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**BOOK REVIEW: EXPLORING THE MORAL THICKET OF ICU CARE**

ical technology and service, then “futile care” may be seen as one thing. If we are talking about the provision of billable medical services then “futile care” may be seen as quite something else.

If this book has any one failing, in my opinion it is that the issue of palliative care isn’t addressed adequately. I feel this issue warrants a full chapter at least. While “palliative care” is mentioned in passing by several contributors, a more in depth look at the international differences would have been quite revealing. In many countries palliative care is a specialty in itself. But in some default perspectives, “doing everything” usually means doing everything in regards to prolonging life. However, the term “doing everything” could just as easily mean doing everything to ensure a good death. Indeed, I recently received in the mail SCCM pamphlet, “ICU, Issues and Answers” which was meant for family members of ICU patients and answered the question, “What is meant by ‘doing everything?’” Here’s what it said:

‘Doing everything’ implies that any and all appropriate therapies will be utilized in order to preserve life.” The pamphlet goes on to describe how physicians aren’t required to offer therapies that would be medically ineffective. But what if we expanded our definition of “doing everything” to include effective and compassionate end-of-life care? And then let that expanded definition also affect how we present the options to patients and families? That care may not be “critical” in the technological sense, but certainly it is “intensive” from the standpoint of patient need and clinician time, energy, and professionalism.

In addition to the physicians featured in the book, several chapters are authored by non-physician health professionals. Particularly interesting to those in respiratory care is one chapter authored by an RT. “Advanced Medical Technology and End of Life, A Respiratory Care Practitioner’s Perspective,” by David Walker, MA, RRT. Walker eloquently describes a “day in the life” of a respiratory therapist. Another chapter, “End of Life Care in the Intensive Care Unit,” is by Gabriele Ford, CCRN, who paints a rather disturbing picture of what it is like to oversee the provision of futile care.

This is one of the most interesting and riveting books I’ve read in a long while. It is a book that deserves to be both read over again and passed around. No ready-made solutions pop out, but I assure you that your cerebral matter will be quite stimulated.

Consider the following from Dr. Crippen’s "Afterword":

End of life situations are a reality in intensive care. There is a population of patients who will die no matter what treatment is afforded them in an ICU. Sustaining these patients on life-supporting hardware results in pain, suffering, and discomfort, and the cost issue, if it exists, is not relevant. Technological life support for patients predicted to die does not equal comfort care, and comfort care is always the most desirable therapeutic conclusion.

AND . . .

Relatively few surrogates demand ineffective end of life care out of a desire to manipulate. Most surrogates who insist on medically inappropriate care do so because the physicians in charge have not properly educated them. When physicians are universally placed in positions of medical directorship for intensive care services, their expertise in end of life care will facilitate achievement of patient and family educational goals and expectations.

I feel that the respiratory therapy profession can have an important, and, at times, pivotal role in helping physicians achieve the above goal.

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CardioThoracic Interrelationships, Nebulized Flolan, and Bipap Post-extubation: A Brief Case Description of an Interesting Patient

by Jeff Whitnack, RRT, RPFT

Recently we nebulized prostacyclin (Flolan) for a ventilated patient in order to lessen his pulmonary artery pressure (PAP). The patient had elevated pulmonary artery pressure because, pre-surgery, his mitral valve was leaky. The increased pulmonary artery (actually pulmonary venous) pressure served to help compensate for this. By "clamping down" and raising the pressure in the pulmonary vasculature - postcapillary and in the large vessels - the left ventricle's ejected blood would tend to go more towards the systemic circulation and not "backwash" into the pulmonary circulation (mitral valve regurgitation).

So, the mitral valve was repaired/replaced. But things didn't just magically return to normal - the chronic compensatory mechanisms were still active. The pulmonary venous pressure was still raised. Did that high pressure on the pulmonary artery reading cause untoward orders for diuresis post-op? If so, I also would surmise that the right ventricle was conditioned to operating both with a large filling volume and against a high pressure. If this volume was lessened, the right heart may not have been operating on a portion of the Starling Curve upon which it was conditioned to operate. For instance, imagine you've been doing the fly's on the weight machine only with your arms outstretched and moving in less than halfway, then suddenly you have to do them with your arms only right in front of you - but still against the same pressure.

We nebulized prostacyclin and this seemed to dramatically lessen the PAP. If we had done this presurgery it may have worsened the mitral valve regurgitation. While this patient was on the ventilator, I performed some recruitment maneuvers. Setting up PCV+ as an alternate mode with an inspiratory pressure of 35cwp, I briefly switched and did an inspiratory hold. The systemic blood pressure per arterial waveform was not affected by this at all (essentially a Peep of 35cwp for about 20 seconds and repeated after a short drop). But what was dramatic was the lessening of the PAP reading. This can be a bit counterintuitive, as a raised intrathoracic pressure is commonly thought to also be transmitted to the pulmonary pressure (this is why a pulmonary artery wedge pressure is always read at end expiration). But in this patient's case the PAP went down quite dramatically with each such recruitment maneuver.

PVR is optimally balanced when FRC is also optimal. As FRC increases (i.e., as in severe asthma), the vessels adjacent to the alveoli are compressed and PRV increases. But as FRC decreases (as in this patient) the extra-alveolar vessels become compressed and PRV increases. As this patient already had significant PRV elevation via these larger postcapillary vessels, a recruitment maneuver, if successful in raising FRC, could also then reduce PVR, which is apparently what happened. The patient improved, eventually on \( F_{1O_2} \) of about 0.40, Peep 5cwp. He was extubated and placed on a cool mist mask of 50% \( O_2 \). However, his status deteriorated rapidly right after extubation and even a flush NRB mask couldn't get the \( S_{pO_2} \) much above 77-80%. Only applying nasal BiPAP relieved the crisis - and did so quite dramatically. IPAP was 20cwp and EPAP 10cwp. When the pressures were lessened the patient would stabilize for awhile but couldn't seem to recover from activity unless BiPAP pressures were increased. The patient stayed on the BiPAP for several days and was eventually weaned off and transferred to a floor ward.

For several days later I wondered to myself, "Why did that patient go into such rapid distress and then have it so immediately rectified by BiPAP application?" It just didn't fit the typical acute respiratory failure profile of successful BiPAP usage. I really don't know why, but I suspect that, because of his baseline raised PVR, the patient was "atelectasis intolerant" and he could not tolerate the usual degree of reduced FRC that post-op hearts normally have. Ordinarily we can just apply low-flow \( O_2 \), begin incentive spirometry, ambulation. But in this case the low FRC/high PVR situation could have been ameliorated...
THREE PATIENTS AND TWO DR. CRIPPENS

London, then sought escape by going on an ocean liner with his mistress (disguised as his 12-year-old son). The Captain grew suspicious (he saw the “father and son” holding hands and appearing amorous) and wired back to shore. This led to a spectacular arrest, when a member of Scotland Yard traveled on a faster ship and arrived in time to board and arrest the infamous doctor before he reached his destination.

The newspapers at the time had a field day, and the case was even part of the “inspiration” for the Alfred Hitchcock film, “Rear Window,” starring James Stewart, Grace Kelly, and Raymond Burr. (Prior to setting off to sea, Dr. Crippen had allowed his mistress to wear some of his wife’s jewelry, which got the neighbors talking; this led Hitchcock to make jewelry a key piece of the puzzle in his movie.)

Now at the turn of another century we have yet another Dr. Crippen making history via the use of a new “wireless” technology - the Internet. And the issue of death is involved. But instead of the sensational and criminal death of one person, we have the issue of death and dying in ICUs all over the world.

CARDIOTHORACIC INTERRELATIONSHIPS, NEBULIZED FLOLAN, AND BIPAP
APOST-EXTUBATION: A BRIEF CASE DESCRIPTION OF AN INTERESTING PATIENT

by robust BiPAP application.

This was an interesting patient. We helped him both on and off the ventilator - not just by assuring ventilation and oxygenation but also by improving his hemodynamic status.

* For a graphical representation, see Figure 2 in Murray JF. Circulation, In: Murray JF (ed). The Normal Lung. The Basis for Diagnosis and Treatment of Pulmonary Disease. Philadelphia, PA, WB Saunders Co., 1976, p. 131.)

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