

The Dilemma of the Alcoholic Patient: A Study in Resource Allocation

D. John Doyle

Originally written April 2004; Updated April 2012

CASE STEM (*from one of my old Medical Ethics exams*)

For the last 25 years, Mr. B has been a chronic alcoholic. Now, at the age of 45, he is in the end stages of alcoholic cirrhosis, complicated by esophageal varices (a bleeding condition resulting from dilated veins in the walls of the lower part of the esophagus). He is hospitalized vomiting blood and is admitted to the ICU. After transfusing six units of blood, the bleeding is still not controlled and it is clear that Mr. B is in a hepatic coma (caused by damage to the brain and system as a complication of liver disorders). At this point the ICU is filled to capacity. Because of an automobile accident, a 25-year-old woman has been admitted to the emergency room of the hospital. She is in need of an ICU bed, would appear to be salvageable, and cannot be safely transported to another hospital. They physicians in the hospital would like to remove Mr. B from the ICU and give his bed to the accident victim. Given the fact that he is in the end stages of alcoholic cirrhosis, he is very likely to die soon.

CASE DISCUSSION

At first glance, this would appear to be a case where one is forced to choose between two patients in a setting of limited resources. In fact, the situation is far more complicated than that, as this essay will explain.

Mr. B. might eventually be salvaged via a liver transplant (or even less heroic treatment), so I would not give up on him without a good reason and without making a very solid effort. Although he is currently in a coma, at the moment there is no substantive reason to believe that he will not recover from the coma should his clinical condition improve with appropriate treatment. In this context, it is not clear that the esophageal varices have been adequately treated. So far, the ICU folks only appear to have transfused six units of blood. In real life much more can be done. For instance, in such settings it is not uncommon to use an endoscope to directly inject the varices with a sclerosing agent or place a special rubber band around the bleeding veins. Acute bleeding may also be treated by balloon tamponade, using a Sengstaken-Blakemore tube inserted through the nose into the stomach and inflated with air to produce pressure against the bleeding veins. Octreotide (20 to 50 micrograms per hour) and vasopressin (0.1 to 0.4 units per minute) may be used to decrease portal blood flow and slow bleeding. Emergency surgery may be of value in patients for whom more conservative treatment fails. Portacaval shunts that pass blood to the vena cava from

the portal vein by a graft or even resection of part of the esophagus are two final treatment options, although these procedures have a high morbidity / mortality rate.

All this serves to emphasize that although Mr. B is said to be “very likely to die soon”, I am not at all convinced that, at this very moment, he is completely unsalvageable. At the relatively young age of 45 there is a reasonably good chance that he can weather the current clinical storm with the appropriate use of some of the interventions listed above. Nor is 6 units of blood a particularly extraordinary amount (my personal best is 142 units in one 12 hour marathon case).

Let us now consider the second patient. It is stated that the injured 25-year-old woman cannot be immediately safely transported to another hospital. However, without knowing the details of her clinical status and the extent of her injuries, it is impossible to know to what extent transportation to another hospital is a genuine safety issue. Remember that in real life “safety” is not a simple binary entity (safe vs. unsafe) – in the real world there are degrees of safety. Thus it may be clinically useful to distinguish between the case where transporting our woman to another hospital is very unsafe and the case where transporting our woman is only moderately risky. Finally, depending on the woman’s injuries, it is possible that she would be much safer to transport after first getting stabilized in the operating room.

In Greek and Roman drama, “*Deus ex Machina*” (literally, God from machine) was sometimes used to resolve a plot or free the protagonist from a difficult situation. In this

dramatic device God was lowered into the stage by a small crane. While this literary tool is not held in high regard by literary critics (see F.M.Dunn, *Tragedy's End---Closure and Innovation in Euripidean Drama---Oxford, 1996*), there may be such a device one can actually use in the current bioethical dilemma. I would maintain that the simplest way out of this resource dilemma might be to ask the anesthesiology service for assistance. Let me explain.

Anesthesiologists do much more than “put patients to sleep”. In Europe anesthesia departments are often known as departments of “anesthesia and reanimation”, emphasizing the role of the anesthesiologist as an expert in resuscitation. In fact, anesthesiologists run ICUs in many hospitals, particularly in Europe, because their basic skill set (airway management, fluid management, maintenance of homeostasis etc.) overlaps extensively with the skills needed for ICU management. In fact, some anesthesiologists maintain that “ICU care is simply anesthesia care in slow motion.”

In all hospitals with operating rooms, patients go to a Post Anesthetic Care Unit (PACU) postoperatively, although for large and complex cases (e.g., heart surgery) patients often go directly to an ICU for postoperative care. However, it is not always appreciated by outsiders that the level of care provided in ICUs and in PACUs are essentially identical. For instance, in many centers PACU nurses first trained as ICU nurses. (Their migration from the ICU to the PACU is often influenced by a better work environment, with fewer late shifts).

Although the demand for PACU resources can sometimes outstrip the supply, it is not uncommon that PACU space is available when ICUs are filled to capacity. Thus, when ICUs are filled, it is not uncommon for ICU patients to be cared for in the PACU (where they are sometimes referred to as "boarders"). And while there may be issues about whether the ICU physicians or the anesthesia physicians write the orders or whether the ICU nurses or the PACU nurses will be the ones caring for the patient in the PACU, it is common that the matter is settled after a short period of discussion. Perhaps the most common arrangement is for the ICU physicians and the PACU nurses to care for the patient until space once again becomes available in the ICU. Another common arrangement is to transfer to the PACU the ICU patient that is the easiest to care for, making ICU space available for a new admission.

My real-life solution to the dilemma, then, is to either transfer the injured 25-year-old woman to the PACU for ICU equivalent care or to transfer her to the ICU and take care of Mr. B in the PACU.

Parenthetically, it is interesting to note that in Canada, limited health care resources often mean that ICUs are chronically filled to capacity, although the limiting factor is more often a lack of ICU nurses than a lack of physical beds. In cities like Toronto, where this problem is especially severe, ambulances are frequently directed to avoid transporting severely ill patients to hospitals without available ICU space. Of course, the ambulance dispatch service must be informed about which hospitals are without available ICU space, and this is done via a city-wide coordination process. This

arrangement means that severely ill patients will not usually be transported to the nearest hospital, but rather to the nearest hospital with available ICU beds. (On some days all hospitals have their ICUs filled to capacity, and the ambulance dispatch service may face the dilemma of having to deliver a patient to a hospital not equipped to handle the patient, or having to transport the patient very long distances by air ambulance).

The above discussion notwithstanding, it can still transpire that there are simply inadequate resources to handle the needs of two very ill patients. This situation is a variation on “life boat ethics”, where individuals debate which swimmer to rescue when there is only one place left on the lifeboat.

A variation of the dilemma involves a severely overcrowded lifeboat in considerable danger of sinking. Each person in the lifeboat is a good person, and each person has an equal right to be in the lifeboat. Suppose that no one volunteers to exit the lifeboat to face certain death. Is it ethical for the people in the lifeboat choose at random who must leave? Is it ethical for those chosen at random be forced to exit the lifeboat if they refuse to cooperate? And is it ethical for one to lose one's right to life through an agreed upon random selection process?

In the realm of medical ethics, one of the earliest and best-known scenarios of this genre is in the 1906 play “The Doctor’s Dilemma” by George Bernard Shaw. In this work, the protagonist, Dr. Colenso Ridgeon, has a limited supply of a new antitoxin, which appears to cure tuberculosis. Should Dr. Ridgeon use it to save his colleague Dr.

Blenkinsop, a worthy and hardworking man with a dull and unexciting nature, or should he save Louis Dubedat, the brilliant artist with an unfortunate fondness for womanizing and thievery? He has to choose. But how, and on what basis?

One possible approach is consider which patient would be most likely to survive, using an appropriate prognostic algorithm (Champion Trauma Score, APACHE Score, Injury Severity Score, etc.) as the basis for predicting outcome. If it is clear that one patient has a good prognosis with good ICU care while the other has almost no hope despite aggressive ICU care, this might favor one over the other. Such a decision making model is based on a utilitarian model of medical resource allocation.

In a utilitarian model of medical resource allocation, medical goods and services are provided to those who are likely to benefit the most. This notion may be viewed either in terms of medical utility (who is most likely to obtain clinical benefit?) or sometimes in terms of social utility (who is most useful or valuable to society?). Based on the model of social utility, it would be appear to appropriate to transfer Mr. B. out of the ICU to make way for the injured woman, but the social utility approach to utilitarian medical decision making is rarely used by clinicians (although this approach was once considered appropriate for assisting in making decisions concerning organ transplantation). Rather, egalitarian influences have resulted in a clinical culture where the question of who is most likely to obtain clinical benefit is the usual basis for utilitarian medical decision making in contemporary medical practice. (Of course, in a purely egalitarian model that did not consider utility issues, it might be fair to simply decide randomly, such as by

flipping a coin.) For completeness, a libertarian approach could also be considered. In this setting access to the ICU would be granted to the highest bidder. Such an approach is, of course, ridiculous.

In summary, answering this dilemma on the basis of a clinical utility model requires more information than has been provided in the case, since the clinical details offered are sketchy. But given the possibility of using the PACU as an ICU, the whole scenario may be a pseudoproblem anyway.

Update for 2012. The description of ICU allocation in Toronto provided above is probably still to a degree true, but since I have been living outside Toronto for 10 years now, I would have to check again to be sure. Regardless, the described arrangement is a rational allocation of resources in the short-run; in the long-run resource allocation for health care is a slowly evolving process to be made by the electorate via the democratic process. (And, as John Kenneth Galbraith put it, "The long run is a misleading guide to current affairs. In the long run we are all dead.")