ON THE NATURE OF TUBE FEEDING: BASIC OR MEDICAL CARE?

A Paper Presentation
62nd Annual Meeting of the Evangelical Theological Society
Atlanta, GA
November 18, 2010

Erik M. Clary, M.Div., M.A. (Christian Ethics, Bioethics)
Southeastern Baptist Theological Seminary
Wake Forest, North Carolina
erik.clary@sebts.edu
About the Author – Dr. Erik M. Clary

Prior to embarking upon graduate studies in Christian Ethics, Dr. Clary served ten years as an experimental surgeon, faculty researcher, and Associate Director of Endosurgical Research at Duke University Medical Center in Durham, North Carolina. Dr. Clary holds D.V.M. and M.S. degrees from Kansas State University (1991) and is the author of several scientific publications. A recent graduate of Southeastern Baptist Theological Seminary (M.Div., M.A. (Christian Ethics), 2008) and Trinity International University (M.A. (Bioethics), 2009), Dr. Clary is presently engaged in further study and research in the field of bioethics. He lives with his wife of 17 years, Ashlyn, and daughter, Brianne, in the Raleigh-Durham area, where they are active in the ministries of Cross Culture Church.
Abstract

In the debate over the ethics of withholding artificial hydration and nutrition from patients with severe cognitive impairment, one question that frequently arises concerns the matter of categorization—specifically, is tube feeding basic or medical care? Among those who have argued the “basic care” view is Pope John Paul II, who in a 2004 allocution remarked, “the administration of water and food, even when provided by artificial means, always represents a natural means of preserving life, not a medical act.” In this paper, the nature of tube feeding is considered in light of evidence and arguments that have accumulated in the literature since this method of care was first reported in 1951. First, it will be argued that the question of categorization involves an empirical judgment that is distinct from, though not irrelevant to, the ethical question of when, if at all, tube feeding may be withheld. Second, it will be observed that the empirical evidence reveals tube feeding to bear the hallmarks of medical care. Out of a concern, then, for both accuracy of ethical judgments and effectiveness of communication when engaging those familiar with this method of care, it is recommended that the language of “basic care” be avoided in reference to tube feeding.
ON THE NATURE OF TUBE FEEDING: BASIC OR MEDICAL CARE?

In the often passionate debate over the issue of tube feeding for patients with severe, irreversible cognitive impairment, one question that frequently arises concerns the matter of categorization—specifically, is tube feeding basic or medical care? Among those who have advanced the “basic care” view is Pope John Paul II, who in a 2004 allocution remarked, “the administration of water and food, even when provided by artificial means, always represents a natural means of preserving life, not a medical act.” Similarly, one of the more experienced and articulate bioethicists of our day, Gilbert Meilaender, comments that the provision of nutrition and hydration by artificial means to those too helpless to nourish themselves constitutes not medical care but rather, “the sort of care that all human beings owe each other.”

With striking imagery, special education teacher Mary Porta encapsulated the basic care view during the Terri Schiavo fiasco by displaying at rallies a giant, five-foot Styrofoam spoon. Tube feeding a debilitated patient, in Ms. Porta’s view, was no different than spoon-feeding a child.

So, are we to grant to John Paul, Meilaender, and Ms. Porta their view concerning the nature of tube feeding? If so, then the question really becomes one of when, if at all, is it morally permissible to deny a person basic care? If, however, there is a categorical distinction to be made

---

1 This paper is a mildly revised version of my like-titled essay recently published in Ethics & Medicine: An International Journal of Bioethics 26, no. 2 (2010), 81–92.
between feeding a person orally and delivering nutrients tubally, then the issue becomes one of discerning when medical treatment may ethically be foregone.

In this paper, I shall address the question of whether tube feeding is best considered basic or medical care in light of evidence and discussion that have accumulated in the literature since this method of care was first reported in 1951. Let me be clear: It is not my intention to answer the ethical question of “When, if at all, may tube feeding be foregone or withheld?” My concern, rather, is to clarify the situation from which that ethical analysis must proceed, understanding that a failure to accurately define the situation jeopardizes the truthfulness, value, and relevance of one’s ethical judgments.

When Ms. Porta argues by illustration that tube feeding is no different than spoon-feeding, or when John Paul II asserts that it is a “natural means” and not a “medical act,” they are both advancing propositions that are foundationally questions of empirical fact. No doubt, they both seek to advance a particular position on the question of moral obligation to tube feed, but they do so operating from what I will argue is a flawed “situational perspective.” On the question of whether their final conclusions on the ethics of tube feeding are correct despite this misstep, again, I offer no particular judgment as such goes beyond the purpose of this inquiry.

So, in seeking to clarify the situational perspective, I shall begin with a brief review of the empirical evidence and then proceed to a discussion that engages arguments frequently offered in defense of the basic care view.

**The Experience of Tube Feeding**

Prior to the advent of modern medicine, people who lost the ability to breathe or eat and drink simply did not survive. Much has changed in the last century as severely debilitated patients can now be maintained for extended periods of time with assisted ventilation and tube feeding. Tube
feeding was initially developed in the 1950s as a means of sustaining premature infants, but over
time its use has greatly expanded to other areas of medicine, including geriatrics, traumatology,
and surgery. In particular, tube feeding has become a common tool for use in the management
of patients with severe cognitive impairment.

Methods for providing nutrition and hydration to the incapacitated patient may be divided
into two general categories: enteral and parenteral. Parenteral techniques involve the injection of
liquid and nutrients directly into a vein, and largely for reasons of safety and expense, it is
generally reserved for those patients who are not candidates for enteral feeding.

The simplest method of enteral feeding is naso-gastric feeding, which employs an
indwelling tube that is inserted through the nostril, down the back of the throat, through the
esophagus and into the stomach. In patients with diminished swallowing and cough reflexes,
which includes most patients with severe cognitive impairment, there is significant risk of the
tube being misdirected to the airway (trachea) and thus for the feeding preparation to be
inadvertently delivered into the lungs. Even where proper placement of the tube is clinically
verified, pulmonary complications remain a concern as the chronic presence of a tube within the
region of the sphincter that separates stomach and esophagus has been shown to facilitate reflux
of stomach contents back towards the throat where they can then be aspirated into the lungs,
leading to the life-threatening condition known as “aspiration pneumonia.”

Furthermore,

repeated gastric reflux also causes erosion of the inner lining of the esophagus, which can be quite painful and a cause of internal bleeding and obstruction. Other reported complications of naso-gastric feeding include nasal bleeding, sinus infection, tube occlusion, and patient agitation that leads to self-removal of the tube, the prevention of which often requires the use of physical restraints.

In an effort to avoid many of the complications of naso-gastric feeding, clinicians have often opted for a gastrostomy tube, which is positioned directly across the abdominal wall and into the stomach, thus bypassing the face, throat and esophagus. Traditionally, placement of a gastrostomy tube was a major surgical procedure that required general anesthesia, thus entailing significant risk to physiologically unstable patients, but in 1980, Michael Gauderer and his colleagues at Case Western School of Medicine described a minimally-invasive, endoscopic technique performed under light sedation. Referred to by the acronym, “PEG,” this technique quickly became the procedure of choice for feeding tube placement.

With the risks of major surgery and the need for advanced surgical expertise removed from the treatment algorithm, gastrostomy has become a very common procedure. According to the CDC’s annually published National Hospital Discharge Survey (NHDS), the number of gastrostomies performed in the United States has more than quadrupled since the PEG procedure was first introduced. In 1980, 33 thousand gastrostomies were performed; in 1990, that number

---

had increased to 115 thousand, and by 2005, the last year for which data is currently available, the number was 145 thousand. Of those 145 thousand patients, three-fourths were sixty-five years or older. Most often, it is patients incapacitated by cerebrovascular disease ("stroke") or dementia who received gastrostomy tubes.

Even as percutaneous gastrostomy has lessened the frequency of procedural complications, mortality as a direct consequence of the intubation procedure has not been completely eliminated. And beyond the peri-operative period, there remain significant concerns related to the use, management, and overall benefit of percutaneous gastrostomy (PG) tubes. Over the past two decades, several clinical investigators have undertaken an evaluation of the practice of tube feeding, resulting in a number of published reports. In 1999, Thomas Finucane and his colleagues from the Johns Hopkins Geriatrics Center conducted an extensive review of the published literature pertaining to tube feeding in patients with advanced dementia. The results of the Finucane analysis and similar investigations have led many clinicians to reconsider the value of tube feeding and, more generally, their overall approach to treating patients with advanced dementia, severe stroke, and other diseases characterized by severe cognitive impairment.

---


As to some of the more important findings of Finucane et al., first, they noted that in no study was tube feeding demonstrated to reduce the risk of aspiration pneumonia. In three case-control studies, tube feeding was actually identified as a risk factor for pneumonia and death. Although a number of patient factors may contribute to this phenomenon, animal studies implicate the gastrostomy itself as a cause of impaired function of the sphincter that prevents gastric reflux. The propensity for gastric reflux in humans may be mitigated by slowing the rate of administration, altering the composition of the infusate, and by placing the patient in a semi-erect posture during tube feeding. Yet, even with such care, aspiration pneumonia post-gastrostomy remains a significant concern and has led some clinicians to recommend additional surgery in an effort to improve the competency of the gastroesophageal sphincter.

Secondly, Finucane and his colleagues discovered that contra the general presumption that artificial feeding will improve nutritional status, the data reveal an inconsistent relationship between tube feeding and body mass. In some cases, they observed, tube feeding improved body condition, but in many chronically ill patients, nutritional therapy was unable to reverse the patient’s catabolic state. Even where body condition was stabilized or improved, they noted, the complications generally attributed to malnutrition were not reversed. Specifically, tube feeding did not appear to promote the healing of pressure sores or prevent new ones from occurring. Some investigators have actually reported a predisposition of tube-fed patients to develop

---


pressure sores. They theorize that the combination of immobility resulting from patient restraint and increasing edema and urine soiling attributable to improved hydration status create conditions under which sores are more likely to develop.¹⁴

Thirdly, the Finucane analysis found insufficient data to support the contention that administration of artificial nutrition and hydration, or “ANH,” improves the general comfort of patients in the last stages of terminal disease. They cite, for example, one prospective study of communicative, non-intubated terminally-ill patients led by Robert McCann of the University of Rochester School of Medicine and Dentistry. McCann discovered that few of these patients experience hunger or thirst, and those that do can be successfully relieved with small, orally-fed portions of food and fluid or with ice chips and lip lubrication.¹⁵ Robert Sullivan made a similar observation while treating a patient who declined food and water by all means in the latter stages of terminal cancer.¹⁶ Sullivan was motivated by the experience to delve into the scientific literature, where he found corroboration of his clinical observation and biochemical studies to help explain the phenomenon.¹⁷

Intuitively, one might expect tube-feeding to enhance survival time, but in their review of the literature, Finucane and his colleagues found no evidence to suggest that tube feeding

¹⁷ Concerning the absence of hunger in cancer patients whose body stores have been chronically depleted, Sullivan came across studies in fasting subjects that linked an elevation of ketones in the bloodstream, which occurs as carbohydrate reserves are depleted, to the depression of hunger and the development of a euphoric sensation. Administering carbohydrates to the chronically fasted subject will elicit a strong sensation of hunger.
prolongs the survival of demented patients. As a matter of explanation for this seemingly non-intuitive finding, they offered several possibilities drawn from various clinical reports. First, they observed that careful hand-feeding will sustain many demented patients as long as tube feeding. Second, they noted that the intubation procedure carries a significant risk of mortality, with estimates in the peri-operative period ranging from six to twenty-four percent. Muriel Gillick, a physician at the Hebrew Rehabilitation Center for the Aged in Boston offers a more direct explanation, commenting that the swallowing dysfunction that may prompt placement of the feeding tube is simply an indication that the patient has entered the latter stages of dementia, which, as he notes, is a uniformly fatal disorder.

There are many published clinical reports documenting the mortality rates in patients receiving feeding tubes. One large study, which included over 81,000 Medicare beneficiaries receiving gastrostomy during hospitalization revealed a fifteen-percent in-hospital mortality rate and an overall mortality rate of sixty-three percent at one year following feeding tube placement. For most patient mortalities that occur following gastrostomy, it is the underlying disease that is stated as the cause of death, yet in one study of nursing home patients managed with PEG tubes, aspiration pneumonia attributable to gastric reflux was responsible for 13% of deaths.

---

21 Kaw and Sekas: 741.
Medical Treatment or Basic Care?

In considering the experience of tube feeding, then, some observations are in order. First, tube feeding is an intervention often directed at patients with incurable, naturally lethal disease that requires the involvement of medical personnel in placing the tube, directing its use, and managing associated complications. Second, substantial risks to the health of the patient attend tube feeding. In some cases, tube feeding may not only fail to achieve the putative goal of prolonging the patient’s life, but it may inadvertently hasten death. Though it is often assumed that artificial feeding will serve to nourish the patient and alleviate her suffering, experience suggests otherwise in many cases.22

As the experience of tube feeding has developed and been reported over time, this mode of care has become increasingly recognized within the medical community as futile when applied in the management of patients with incurable, naturally lethal disease—witness for example, the conclusions of Dharmarajan et al., drawn from their recent meta-review of clinical studies dealing with tube feeding in patients with advanced dementia:

Although tube feeding may not be totally futile in all cases, an analysis of the benefits and risks seldom leads to a definite positive result in cognitively impaired individuals . . . In view of the fact that outcomes do not necessarily improve, it is prudent for the health provider to exercise caution in decisions regarding PEG placements in dementia.23

---

22 These two assumptions underlie John Paul II’s argument for viewing tube feeding in principle as “ordinary and proportionate, and as such morally obligatory,” (“Care for Patients in a ‘Permanent’ Vegetative State,” 739).

In a similar vein, physicians Lawrence Schneiderman and Nancy Jecker employ the concept of futile care in asserting that “healthcare professionals have no business attempting treatments [tube feeding included] to keep [permanently unconscious patients] alive.”

The discussion over the futility of artificial feeding simply highlights a significant shift that has occurred within the medical community towards viewing it as a form of medical treatment. Some may wish to argue that this shift largely reflects a change in medical priorities or worldview assumptions that deemphasize the traditional sanctity-of-life ethic. Though these factors may certainly be operative in the thinking of some, the empirical warrant in support of the shift is compelling in and of itself. This conclusion is attested by the fact that among physicians strongly inclined to implement artificial feeding in dying patients, there is little to no objection to classifying artificial feeding as medical care, but instead, their disagreement with those who view tube-feeding as optional therapy comes primarily over how to balance burden and benefit.

While physicians, then, have moved towards consensus in classifying tube feeding as medical care, resistance towards such a conclusion persists outside of the medical profession—witness, Ms. Porta and her giant spoon. Yet, given the current facts concerning tube feeding, it strikes many as incoherent to hear this method of care likened to spoon feeding, which is a most natural act indicated in times of both health and sickness, and generally regarded as both safe and beneficial. Although the spoon is artificial in that it is a fabrication of human design, its use is natural as it simply facilitates the delivery of food and liquid to the orifice designed for their

---


25 See, for example, Mark Siegler and Alan J. Weisbard, “Against the Emerging Stream: Should Fluids and Nutritional Support Be Discontinued?,” *Archives of Internal Medicine* 145 (1985), 130.
bodily entrance. Contra tube feeding, there is with spoon feeding no penetration of tissue or body cavity, no implantation of a foreign conduit, and no bypassing of any portion of the digestive system. Spoon feeding can be administered by virtually anyone and without specialized instrumentation — unlike tube feeding, which requires the input of both professional expertise and medical resources across its spectrum of usage. Risks to the recipient that may be associated with spoon feeding are simply those inherent to the natural processing of ingesta and not the spoon itself, whereas the risks of tube-feeding are directly related to the implantation, use, or continued presence of the feeding device.

So, if tube feeding bears the hallmarks of medical therapy and physicians are largely agreed on such a designation, then on what basis do others argue to the contrary? Some ethicists may grant that tube feeding has a medical aspect to it, yet still argue for its categorization as basic care. Such arguments often turn on the observation that a layperson can operate a feeding syringe or that what is being provided the recipient is essentially the same as that delivered through oral feeding.26

That virtually anyone can attach a dosing syringe to a feeding tube and push on the plunger is truly not a matter of debate; however, to argue that this fact somehow mitigates

26 Patrick G. Derr, “Why Food and Fluids Can Never Be Denied,” Hastings Center Report 16 (1986), 30; Eugene Diamond, “Nutrition and Hydration: Patients in a Persistent Vegetative State,” Origins 33, no. 43 (2004), 743; Kevin McMahon, “Should Nutrition and Hydration Be Considered Medical Therapy?,” Origins 33, no. 43 (2004), 745; Meilaender, “On Removing Food and Water: Against the Stream,” 11 The attempt to retain the category of basic care while acknowledging the necessity of a medical procedure is reflected in Kevin McMahon’s chosen term for tube feeding: “medically-assisted supply of food and drink.” It strikes this author as disingenuous at the least to imply, as does McMahon by his choice of terms, that the patient is receiving a normal meal (“food and drink”). That which is infused through the tube bears no resemblance whatsoever to “food and drink,” be it on the basis of visual appearance, physical consistency, nutrient and foodstuff composition, rate of administration, smell, or taste experience (or lack thereof). In common usage, the terms “food” and “drink” also imply an active reception and not passive administration. Furthermore, to say that artificial feeding is “medically-assisted” is a gross mischaracterization as it implies something less than total dependence, which is actually the case.
against viewing tube feeding as medical care reveals a naïve understanding of medicine in general, and tube feeding in particular. The logic of this argument, which may be termed the “lay-infuser objection,” is that if it can be demonstrated that a layperson can administer a particular treatment, then that treatment is not properly considered medical in nature. Yet the reality is that there is much more to the practice of medicine than the mere administration of treatments. Even if the procedure of inserting the tube, which no one debates constitutes anything other than a medical act, is considered separately from the tube’s subsequent usage, the latter cannot be completely divorced from medical concerns. After tube placement, there are many issues specific to this form of feeding that require medical supervision and care, including the decision of what to infuse and at what rate, how to prevent or address tube dysfunction, skin infections, self-removal of the tube, and how to recognize and treat life-threatening complications that include aspiration pneumonia and dislocation of feeding contents into the abdominal cavity. As with any prescribed treatment, the supervision of a physician is critical for tube feeding, regardless of who actually administers the feeding.

As with the lay-infuser objection, the argument concerning the nature of the substance being infused—specifically, as life-sustaining nourishment—suffers, I believe, from a myopic perspective. First, there is the problem of an exceedingly narrow understanding of what constitutes disease and therapy. Those who advance the “infusate objection” base their case on a distinction between life-sustaining and therapeutic interventions. For example, Kevin McMahon states that “Food and fluids are not themselves therapeutic. Apart from the treatment of some eating disorders, they address no pathology.” Similarly, Meilaender argues that “All living

---

27 McMahon, “Should Nutrition and Hydration Be Considered Medical Therapy?,” 745.
beings need food and water in order to live, but such nourishment does not itself heal or cure
disease.”²⁸ According to their logic, if a patient’s inability to eat arising from esophageal cancer
is treated by surgically excising the obstructing tumor, this constitutes medical care, but if,
however, it is treated by delivering food through a surgically-implanted conduit that bypasses the
obstruction and a portion of the digestive tract, this somehow falls into a completely different
(i.e., non-medical) category. What is determinative in this manner of classification is whether the
primary disease is being directly addressed by the intervention. Such an understanding of what
constitutes disease is atomistic as it ignores the reality of secondary pathologies, which may very
well be a greater threat to the preservation of life than the primary disease. In the previous
example, the primary disease is esophageal cancer, yet the tumor itself is unlikely to kill the
patient. Left untreated, the patient would likely die from organ failure secondary to the
electrolyte disturbances and cellular dysfunction that arise from an inadequate intake of fluid and
nutrition, which itself is secondary to the obstruction caused by the mass. It may still be said that
the cause of death in such case was the primary disease, but only in the sense that it stands at the
head of a chain of related pathologies.

Another problem with the infusate objection is the failure to keep in focus the central
object of medicine, which is the patient. As noted above, the classification system for artificial
feeding used by McMahon and Meilaender appears focused more on the primary disease of the
patient than on the patient herself. Although elimination of primary disease is generally ideal,
intervention at that level may not always be feasible or in the patient’s best interest; in such
cases, intervening at the level of secondary disease may be indicated. Whether the treatment

addresses primary or secondary disease, the ultimate concern is that it restore the patient to an acceptable state of health. For the patient with esophageal cancer, the provision of nutrients and hydration through a surgically-implanted tube is, in fact, therapeutic as it addresses secondary disease.

**Conclusion**

In conclusion, I have noted that a consensus has developed within the medical profession towards viewing tube feeding as medical care, primarily in response to the empirical evidence. The more common objections to viewing artificial feeding as a medical treatment, I argued, fail largely on account of a faulty conception of medicine and disease. When advanced in the face of a mountain of contradictory evidence, the effort to retain tube feeding in the category of basic care is apt to be perceived as either irrational or as an effort to force an unwarranted moral conclusion.

Most clearly stated, tube feeding is medical nutrition and hydration with the term “medical” addressing not only the manner of delivery, but also the goal of intervention and the attention required to identify and address complications arising from the tube’s presence and use. Whether or not tube feeding is obligatory in particular cases, or even as a general rule, such a conclusion should not drive the determination of how the nature of tube feeding is to be classified since that would be putting the cart before the horse — specifically, the moral judgment before ethical deliberation. The determination of how to classify tube feeding involves an empirical judgment, and the evidence at hand clearly supports viewing it as medical care. The
question of whether or not tube feeding may be rightly withheld in a particular case involves a moral judgment that requires an elucidation and application of the relevant moral norms. In arguing this position, it is my intention to help eliminate a serious obstacle for many well-intentioned individuals who seek to secure a fair hearing of their views on the matter of tube feeding. There may very well be good reasons for insisting on the moral obligation to provide ANH to patients affected with advanced dementia, persistent vegetative state, and other severely-debilitating diseases, but if the argument is founded upon or linked in any substantive way to the proposition that ANH constitutes basic care, it will be difficult to sustain when pitched to those familiar with this mode of care.

Illustrating how an ethical analysis of tube feeding, understood as medical care, may be conducted within a traditional sanctity of life position are physicians John Dunlop and Robert Orr. See John T. Dunlop. 2006. “The Feeding Tube Dilemma: Key Questions,” The Center for Bioethics & Human Dignity, http://www.cbhd.org/resources/endolife/dunlop_2006-01-27_print.htm (accessed April 5, 2008); Robert D. Orr and Gilbert Meilaender, “Ethics & Life's Ending: An Exchange,” First Things, no. 145 (2004). Meilaender, in his exchange with Orr, does not rest his case on the categorization of tube feeding as basic care even as he questions the notion of tube feeding as medical treatment; rather, he argues that the withholding or withdrawal of tube feeding in cases where death is not imminent appears to be aiming at death, and thus a violation of the prohibition against the taking of innocent human life.
Bibliography


Parke, Priscilla C. “Naso-Gastric Tube Feeding for Premature Infants.” *The American Journal of Nursing* 51, no. 8 (1951): 517.


