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**Technology and Grieving:
A Relationship**

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Abstract

Since the 1940s, both end-of-life care and advancements in medical technologies have expanded exponentially. This article explores advancements in medical technologies and how these have altered the way that Western society grieves death. With the capabilities to prolong life, the family, the patient, and the medical team all grieve the end of life in different ways. Using a literature review and interviews with clinicians, this article provides a chronological analysis of palliative care, hospice care, and various medical advancements. These changes in medicine are then paralleled with alterations in the bereavement process. This article explores historical and anecdotal narratives of Western society's transformation of grief through the lens of medical advancements. We then consider the implications of these findings for the Christian community, especially the local church.

Keywords: bereavement, medicine, advancements

Introduction

There are few truly common experiences to all humans. Not everyone marries; not everyone has children; not everyone attends college. However, everyone gets sick and dies and has people they love get sick and die. This is an unavoidable certainty in life.

As one observes death or as one goes through the process of dying, various stages of bereavement occur. Within the literature, *bereavement* is defined as a multifaceted response of grief to the loss of someone or something that the individual had deep connection with. *Dying* is defined as the process by which one's life ends whereas *death* is the moment at which life ceases. The very definition of death has generated significant debate within today's medical community.

In recent history the process of dying has undergone extensive change and transition. This is manifested in several ways. Before the 20th century, death was generally attributed to infection, poor hygiene, disease, violence, epidemics, and other various crises. The dying process was short-lived or instantaneous due to a lack of medical advancements and technologies.¹ The young were especially susceptible and would often be the first within a family to die. In the late 19th century, one in every four children would die before the age of five.² In recent history, death has become a more prolonged process that occurs a majority of the time in older adults.³ The number of individuals in the United States that are over 65 has been increasing with a record 46 million in 2014, and that number continues to increase.⁴ Dying has transitioned from a short-lived experience, like infection, to a prolonged death, usually due to chronic illnesses.⁵

Death has transitioned from a reality of life to an anomaly. This transition from normalcy to abnormality has had large implications on the way that one grieves death. The grieving of death has started to occur months and, at times, years before the person has passed. A well-

learned nurse and physician can generally look at a patient with a chronic illness, observe their vitals, and give a fairly accurate timeframe for life.⁶

This anticipatory aspect of dying has changed the grief response for all concerned. As one recognizes the imminence of his or her death, the individual begins to prepare spiritually, mentally, and financially. Loved ones and friends often begin cycling through various stages of anticipatory grief.^{7,8} Acute grief at the actual passing will remain, but it will be preceded by other aspects of grief. Notably, the socially and economically disadvantaged are generally unable to exercise choice over their way of death.⁹

Furthermore, the culture of death has transitioned through recent history. Death has evolved from a process of being surrounded by family members in one's home to a much more bureaucratic and institutionalized process.¹⁰ Family members used to clean and prepare their family member's body for burial followed by very visible signs of mourning. Today most deaths occur in a hospital or nursing home, and the bodies of the dead are passed off to another institution prior to burial.¹¹ This may even include another intermediary such as a "transport" company. The institutionalization of death has removed family and friends from the involvement in the loved one's body past his or her final breath. One could suggest that in the United States we have separated the dying from the rest of society and created a culture in which death is avoided.¹² This culture retreats from the realities of death to move out of despair and into comfort as quickly as possible. The Christian implications of this are notable.

Methodology

Besides surveying the literature, we attempted to gain a better understanding of the impact that medical advancements have on the process of grief by speaking directly to healthcare

professionals. Prior to the interview, the healthcare professional signed a consent form to ensure the responses were kept confidential. The providers varied in age, race, gender, and specialization; however, all of the providers practice within the United States. The sample consisted of two ICU nurses, one pediatrician, two hospice nurses, one pediatric cardiologist, one pediatric hematologist oncologist, and one hospice bereavement coordinator. The individuals were purposely chosen as experienced providers who could give perceptions that spanned extended careers over many years. They were asked to reflect about the changes they have seen in medical technologies throughout their years of practice. Furthermore, they were asked about observations they had seen in both the patient and the caregiver's grief and to note any correlations.

History of Medical Advancements: 1940s – Present day

Individuals living just two generations ago would be amazed at the world of medicine today. Since the 1950s, medical technologies have advanced at an exponential rate, which has altered the very nature of dying. One's vital organs can now be nonfunctioning, yet machines can take the place of organs and medication can alter the chemistry of one's body in such a way that allows the person to continue living. The extension of life through medical technologies has had vast effects. The development of antibiotics, organ transplantation, hospice, palliative care, and other technological advancements has completely altered the way in which we die – and grieve.

Antibiotic Development

As the 20th century was ending, numerous “most important in the century” lists appeared. Every news source seemed to list the “top ten movies” or “top ten most important inventions” or

something similar. Among the lists was the “top medical advances”; on every such list near or at the top was the development of antibiotics.

From the 1940s to the 1970s, numerous classes of antibiotics were discovered that jump-started their commercial use.¹³ Antibiotics allowed for targeting many infections and pathogenic bacteria. Through intensive research, they could offer effective treatments for tuberculosis, bacterial meningitis, strep throat, and many other bacterial diseases.¹⁴ Prior to antibiotics, 90% of children that were diagnosed with bacterial meningitis died.¹⁵ Bacterial diseases, which had previously meant a death sentence, could now be treated through full dosages of antibiotics. Antibiotics completely reconfigured the morbidity and mortality of those with bacterial infections. As new classes of antibiotics were discovered and developed, infections could be managed and life could be extended.

Infections within industrialized countries have plummeted resulting in a shift in the leading causes of death to more chronic diseases, often instigated by the individual’s lifestyle. Usually, the sooner the medication is in the patient’s system, the higher the likelihood of effective treatment.¹⁶ Although infections still kill many individuals throughout the United States each year, the use of antibiotics has cured many from previously deadly diseases and has allowed the process of dying to be prolonged.

The accompanying increase in chronic illness as the cause of death is clear. This has placed greater emphasis on the patient’s daily decisions of health. As “self-induced” illnesses became more prevalent, the blame for death was placed upon the patient rather than the pathogenic agent.¹⁷ Logical or not, an individual diagnosed with a chronic illness may experience high-grief because he or she feels personally responsible for the disease. Those around the patient may share some feelings of blame or grief.

There has also been an age consideration. With the invention of antibiotics, the average age of death increased because children were able to survive infection. Before this development, younger children, who have weaker immune systems than adults, were more susceptible to death from pathogenic bacteria. Grief has shifted in correlation to the age of death increasing as people are grieving the death of the elderly more often than the death of children.¹⁸ Grief tends to be more severe for a young child as their life seems to be viewed as “cut short.”¹⁹ Since antibiotics allow for the life of a child to be extended, the death of a child within the current American culture is shocking and is perceived as unjust rather than commonplace.

As chronic illnesses have an extended timeline, the survivors begin to grieve the death of the loved one prior to the death.²⁰ Survivors may cycle through all the stages of grief prior to the loved one’s departure.²¹ Anticipatory grief seems to have different effects on different individuals. For some, as they move through stages of grief prior to the death of a loved one, they are able to feel peace as their beloved departs. However, for others the anticipatory grief does not alleviate the post-mortem grief and instead adds an additional layer of grief to the survivor’s grieving process.²² Prior to antibiotics, an infection would take the life of an individual rather quickly; therefore anticipatory grief was generally not a part of the grieving process.

In addition to antibiotics prolonging the process of death, death has become hidden due to a number of factors. The shift towards the death of the elderly has made death invisible, as these older individuals are less socially involved. As death has been hidden, the culture’s ability to understand grief has diminished resulting in grief characterized by a lack of social support, also known as disenfranchised grief.²³ Without a support network, the grief tends to be prolonged.

The extended time frame of grieving without a support network likely results in a grief of escalated severity.

It is evident that antibiotics have played a large role in the process of grief. Antibiotics have changed the grieving process by shifting the blame of death toward the patient, altering the average age for death resulting in an introduction of anticipatory grief, and by closing individuals out of a support network.

Extraneous Medical Technologies

It would be impossible to cover each type of medical advancement that has occurred since the 1940s; however, there are certain technologies that have become prevalent at the end of life. With these technologies, failure of one's vital organs no longer constitutes death. Through skillful surgical techniques and advanced machinery, biological malfunctions that were once lethal are now successfully repaired. As a consequence, these disciplines have redefined what it means to die.

Although each field has discrete impacts on grief, they are each following similar trends. With these techniques, loved ones grieve for an extended period of time as death continues to be pushed further away. As one grieves the death of a loved one, it is hypothesized that the blame for the death is shifted towards a lack of resources. Death is no longer viewed as a customary process of life, but instead death is blamed on not having enough time, expertise, or monetary funds. The caretaker's grief is complicated as they are left wondering if the life of their loved one could have been extended further.

Pulmonology In the 1940s and 1950s rows of iron lungs filled the hospitals due to an upsurge in polio.²⁴ Iron lungs enabled children and adults with paralyzed lungs to breathe

through negative pressure ventilation. However, in the 1960s the number of iron lungs had begun to decline as smaller ventilators with fewer anticipated risks began to develop.²⁵ Developers continued to struggle with volume-controlled ventilation, yet in the 1970s a second wave of ICU ventilators was established with patient-triggered inspiration. In the 1980s through the late 1990s, micro-processor driven ventilation began.²⁶ These machines were much more responsive to the patient's demands than any previous ventilators. From the 1990s to the present, there has been a continual growth in the ventilation industry. Most of the current ventilators have a plethora of modes for ventilation and can be adapted to the patient's own needs.²⁷ As ventilation technology progresses, the number of individuals that are supported by such systems at the end of life continues to increase.²⁸ Many individuals at the end of life cannot wean themselves off of the ventilators and the issue of dependency has significant consequences.

When patients are placed on ventilator support, their respiratory muscles tend to lose their strength, as they are not able to fully breathe for themselves.²⁹ The use of a ventilator creates an additional barrier for family members, as they also must feel some responsibility as to when to stop the ventilation process. The family may feel personally responsible for the death of their loved one and therefore their grieving process is exacerbated. It is evident that the additional choices involved in withdrawing support or placing the patient on support have a much more negative effect on a caretaker's ability to cope with death because they feel that their choice is more involved.³⁰ The change in the pulmonary equipment matched with the change in the American culture to postpone death, has created an increased resistance to ending life, thereby increasing the caregivers' bereavement following their loved one's death.

In addition to the loved one's grief increasing, the patient's own grief may increase as health choices tend to escalate the occurrence of respiratory ailments, most commonly chronic

obstructive pulmonary disease (COPD).³¹ If a patient has smoked for an extended period of time, for example, the blame for the illness might be placed upon the patient, which will generally result in more severe grief for the patient. An individual with COPD may differ from a terminally ill patient given that the illness can extend for a greater period of time. This extended time allows for greater anticipatory grief of the loved ones and a longer reflection upon death and continual seasons of loss.³²

Cardiology With the ability to extend life ever growing, cardiovascular diseases have become the leading cause of death within the United States.³³ Cardiology is a field that has seen extraordinary growth within recent years. In the early 1900s, various aspects of the heart were beginning to be uncovered, yet the implications of those findings were not fully recognized. Throughout the early 1900s, the number of deaths due to heart diseases escalated.³⁴ In 1948, investigators sought to better understand the cause of these deaths and initiated the Framingham Study, which gave insight into the risk factors for cardiovascular diseases in both men and women.³⁵ This study linked cholesterol and fatty diets with an increased risk for developing cardiovascular disease. In the mid 1950s, echocardiographs were successfully used to detect the movement of heart walls.³⁶ With a better understanding of the heart's anatomy and insight into the pathologies of heart disease, physicians in the 1960s performed the first successful coronary artery bypass.³⁷ This surgery completely revolutionized cardiology and is one of the most common procedures performed today. With an expanding knowledge base of the electrical signals within the heart, arrhythmias became a larger area of research. Electrophysiology gave way to the development of Automatic Implantable Cardiac Defibrillators (AICD) in 1980. Developments such as angioplasty, in 1977, and stents, in 1986, allow for better treatment for individuals with cardiovascular diseases today.³⁸

Similar to the changes seen in pulmonology, the current model for cardiology has a stronger emphasis on the patient's daily health decisions. Given the known link between coronary artery disease and obesity, patients with high fat diets are likely to be blamed for their own death.³⁹ Contrary to pulmonology, advancements in cardiology tend to involve more surgical techniques rather than extracorporeal machinery. Cardiovascular surgery, especially within older populations, tends to place less of a strain on caregivers, as they do not hold the guilt for the end-of-life decisions.

The recent availability of artificial hearts has generated further discussion on the ability to prolong life with a piece of machinery. With these devices, as well as traditional heart transplants, patients have reported grief and disillusionment as they transition from being previously sick individuals into a "healthy" society.⁴⁰ The potential for vital organs to be replaced with mechanical devices has generated much debate within the disciplines of both cardiology and nephology.⁴¹

Kidney Dialysis Dialysis treatments are one of the most time consuming of all medical technologies.⁴² Although there have been immense advancements, the strain that it places on a patient's daily life has had significant impacts on the patient's grieving process.

In 1943, Dr. Willem Kolff created the first "artificial kidney," yet it was not until 1945 that the intervention was successful.⁴³ Continuous modification and improvement increased its effectiveness and in the 1950s the question of indefinite dialysis was made.⁴⁴ In 1962, the first dialysis center was established, but the question of who would receive treatment posed an issue because the demand for dialysis was greater than the supply.⁴⁵ In the 1960s, the first chronic hemodialysis treatment began in an individual, which lasted for 11 years.⁴⁶

The reuse of dialysis machines posed significant issues due to infection with blood borne illnesses. There was a continual search for better dialysis membranes that would allow for the most effective treatment transitioning from cellophane in the 1940s, to cuprophane in the mid-1960s, to cuprammonium cellulose membranes in 1967, and cellulose and synthetic membranes in the 1990s.⁴⁷ These continual advancements have made it possible for individuals with renal failure to be placed on dialysis for extended periods of time. Though this advancement was very effective, the cost of dialysis created an ethical dilemma, as many individuals are unable to afford the weekly dialysis procedures.⁴⁸

The personal strain of continued dialysis has been significant. The amount of time that one must dedicate to ensure correct filtration often completely alters the framework of one's daily activities. Patients experience immense amounts of grief, as they feel deeply disconnected with loved ones as they approach death.⁴⁹ If prolonged dialysis is the only treatment left, some patients choose to refuse treatment and accept death.

Many times caregivers also experience immense "quasi-widowhood" as their loved one's life is radically altered.⁵⁰ Caregivers may view the dying individual as already dead to them given that they are uninvolved and debilitated. This is similar to the response of some family members to a patient with Alzheimer's disease. This brings about high levels anticipatory grief as the caregiver grieves the perceived loss of their loved one's life.

Organ Transplantation

Another of the remarkable feats of the medical industry in the 1960s was organ donation and transplantation. In 1962-1963, the first successful kidney, liver, and lung transplants from deceased donors were performed.⁵¹ Within the next ten years, growth continued with the first successful heart, pancreas, and bone marrow transplants.⁵² Ten years after the first successful pancreas transplant, in 1976, the immune suppression capabilities of cyclosporines were discovered, which prevented the rejection of the transplanted organs.⁵³ This had an astonishing effect and allowed for healing and restoration of bodies that had previously been seen as unrecoverable. These immunosuppressive drugs allowed the recipient to have a much longer survival rate than ever before. Diagnoses that had previously been terminal were treated successfully through medical intervention without long-term impacts. Not only were individuals able to get treatment and care for their ailments, but medical professionals were now able to provide a glimpse of hope for their patients whose vital organs were failing. Physicians were then able to take the functioning organs of the deceased and distribute them among patients in need of workable organs.

Within the past years there has been a continual flood of progress as organ transplantation has expanded beyond the thoracic and abdominal organs to include items such as skin transplants as well as the most recent consideration of performing a full human head transplantation.⁵⁴ Technology has progressed in such a way that the definition of death requires new consideration. With the constant shifting of the definition of death, it is possible that grief as an individual experience will also change.

Organ transplantation still has limitations given that the number of individuals in need of organ transplantation far exceeds the supply of functional organs; twenty-two people die each day in America waiting for an organ.⁵⁵ However, from 1988 to 2017, 683,000 successful organ

transplants took place within the United States, and in 2016 alone 33,600 patients had transplants that brought them new life.⁵⁶ Transplantation grants life for many who would have previously been denied a second-chance at life. This technology has transitioned the conversation of death in such a way that the death of a loved one is no longer viewed as a process of life, but is rather due to a lack of funds, poor timing, inadequate technology, or a failure of expertise. This view of death as a lack of resources has contributed to making death into an abnormality.

With the development of immunosuppressive drugs, organ transplantation shifted from a trial and error procedure to an effective treatment method for organ diseases. With a successful transplantation, both the patient and family members tend to be extremely grateful. Successful transplantation is known to extend the life of loved ones, at times more than twenty years. Physicians that perform the organ transplantation generally view the procedure as a deeply gratifying experience as well because they are able to “give life” to many whose lives would have otherwise been cut short. The immediate emotional responses from organ transplantation are generally very positive, yet the implications for the grieving process fluctuate between beneficial and toxic.

When one is waiting for an organ transplant, the family, friends, and patient are left in limbo, longing for a renewed body. There is anticipation and hope that the transplantation will be both available and effective. Despite advancements and the ability to use immunosuppressive drugs, organ rejection still occurs across the United States. When a patient’s body rejects the donated organ, the caretakers and the patient grieve, as a sense of hope is lost.⁵⁷ Many healthcare professionals and family and friends are not always able to comprehend fully the psychosocial impact of organ rejection on the patient. Due to the lack of understanding, the patient is likely to experience disenfranchised grief.⁵⁸ Organ transplantation grants patients and caregivers hope for

a renewed future. However, when one's sense of hope is lost due to organ rejection, the caregivers begin anticipating the loss of their loved one. Prior to organ transplantation, there was no potential for the false sense of hope that many of the patients and family members endure.

Organ transplantation has allowed biological malfunctions to be successfully treated, which again leads to the extension of life. Organ donation creates an interesting paradox of both extreme joy and extreme grief. When a patient dies waiting for an organ donation, the grief level that a family endures is high given that their loved one could have been saved. The death of a loved one is blamed upon not having enough expertise, time, or resources, rather than accepting death as a reality of life. On the contrary, a donor's family is given hope as the death of their loved one has the potential to sustain the life of another in need. The knowledge of their loved one's organs being used to sustain another's life provides both family and friends with a hope that the death of their loved one was beneficial to another's life.⁵⁹ Indeed, when one of us (JN) was serving as a hospital chaplain, an automobile accident supplied a transplant team with well over 20 tissues or organs that went to various recipients across the country. The donor's family expressed not only amazement, but also profound gratitude in the midst of their grief.

Thus, as death is encountered, organ transplantation can either complicate or alleviate the grief that a loved one endures. Prior to organ transplantation, there was no possibility that a dead body's organ would reap benefits to another's life. Now the death of a loved one has the potential to bring life through organ transplantation. Organ transplantation has changed the grieving process by introducing both positive and negative changes. Organ rejection brings added grief to the death of a loved one, and organ transplantation brings hope for new life because of the death of a loved one.

Hospice and Palliative Care

In the 1970s, Florence Wald's lectures at Yale on holistic end-of-life care spurred the growth of the hospice movement.⁶⁰ The idea gained its footings with the publication and republication of Kübler-Ross' book titled *On Death and Dying*.⁶¹ As people began to recognize the power that we had to extend life, the need for hospice became ever greater. In response to an ever-aging population coupled with protracted periods of illness, the need for end-of-life care became more prevalent. In 1974, the first hospice program started, and today there are over 6,100 programs dedicated to end-of-life care.⁶² Hospice provides end-of-life care to terminally ill patients with a prognosis of six months or less to live. During this time the hospice team offers palliative care ("comfort care"), expert medical care, emotional support, and spiritual support based upon the patient's desires. The hospice mission is not directed at eradicating illness but rather is targeted at caring for the patients and the families of patients. According to the Gallup poll, 88% of the American population would prefer to die at home, pain free, and surrounded by family members.⁶³ The hospice mission seeks to accomplish each of these three goals by providing comfort care to patients within their home.⁶⁴ The hospice network provides care for an estimated 1.6-1.7 million people within the United States each year, and that number is continually growing.⁶⁵

With the development of end-of-life care, there has been a greater emphasis placed on providing support for individuals as they enter the last stages of life. This support extends to family members as they grieve the death of their loved ones. This form of care has dramatically changed the way in which Americans can die. The hospice movement as a whole has provided an option of comfort and emotional care that had previously been neglected.

The fields of hospice and palliative care took roots when individuals began examining the process of dying from the patient's perspective. Palliative care manages the pain of the patient and has had large effects on the grief that a loved one endures. When the patient can no longer be cured, the caregiver begins anticipating the death of their beloved.⁶⁶ During this time, individuals begin experiencing high levels of distress given that there is nothing else that anyone can do to save their loved one.⁶⁷ However, when hospice care becomes available to these individuals, the amount of major depression seems to be reduced.⁶⁸ This lessening of grief is likely due to the care and consideration that the patient has during his or her final moments and based on bereavement counseling that is offered to the caregiver. Caretakers receive thirteen months of bereavement counseling after the death of their loved-one to help the survivors cope with their loss.⁶⁹ With the hospice movement, family members are more at peace about the way in which their loved ones have died given that the pain level was managed and knowing that their loved one had the best death possible; families thus receive comfort that had been previously missing.⁷⁰

In addition to bereavement care, hospice also seeks to move the place of death back into the home. The hospice movement seeks to align more closely with desires for death. This deinstitutionalization of death aligns more with the patient's desires to die at home, surrounded by loved ones.⁷¹ Movement back into the home places the family at the center of the dying processes. The central role of family members in the end-of-life care allows for better acceptance of a loved one's death. Hospice has changed the grieving process by placing an emphasis on the emotional care of the caregiver and the physical care of the patient. Hospice has given authority to both the patient and the caregiver as they decide on the last stages of life. Without hospice, the grief of terminal illnesses would be hidden and the end-of-life care would not be so peaceful.

Grief at the end of life would likely be more severe without the bereavement support and the management of pain at the end of life.

Discussion and Reflections

The literature review was supplemented by interviews with healthcare professionals. Although each had his or her own unique experiences, there were various trends in each of the responses. Each indicated an impact of technologies on physician-patient interactions. Not surprisingly, a general theme was that the advancements in medical technologies have removed some of the human components of medicine. Each professional described a technological world in which the physician's interactions with the patients were masked by technological advancements. These technologies are necessary to maintain the current healthcare standards, but if the practitioner is not intentional about connecting with the patient, the technology can inhibit relationships between the patient and the physician. These relationships become vital for end-of-life care, as the physician plays a crucial role in both the caregiver's and the patient's grieving process. Throughout the interviews, it was evident that each practitioner plays a crucial role in reassuring and comforting both the patient and the caregiver. If the practitioner remains disengaged, the grief that the patient and caregiver endure will likely be amplified.

The practitioner, regardless of field, indicated an exponential growth in the advancement of medical technologies. Each of the technologies that were described lead to either a better understanding of the anatomy of various organs or lead to improved end-of-life care. With the end-of-life care improving, the line for viability has stretched in both directions to include both elderly and neonates. The providers indicated a greater emphasis on extending life than on the

quality of the life that was being prolonged. All the practitioners saw both positive and negative aspects to this extension of life.

When health care providers argued the positive aspect of the technological advancements, they seemed to indicate that the technologies allowed for loved ones to have a better chance to say goodbye. This goodbye was crucial to one's initial grieving process as this gesture indicated an acceptance of the death and allowed the caregivers to be more at peace about the death. The technologies also allowed family and friends to claim that they did everything possible to preserve the life of their loved one. This is especially crucial for end-of-life care for pediatric patients as the caregivers wish to extend further the short life of their young loved one. Family and friends of both the young and the old tend to take comfort in the fact that the technologies were exhausted and nothing more could have been done to preserve the life. In the opinions of those interviewed, the most obvious of the positive effects is that the technological innovations do save the lives of many. Both children and adults that had previously been deemed unviable are given a second chance at life. This has the most profound impact on the patient and caregiver's view of the technological innovations. The option for death to be postponed gave families a deep appreciation for the advancements yet also had some negative consequences.

As family members approach the death of their loved one, they are in a highly compromised state. Many family members will follow the physician's suggestions and push for all the life-sustaining care possible. The main critique that the healthcare professionals stated is that many families do not know when they have done enough. After the death many times the caregivers will think back and wish that they had done something differently to further extend their loved one's life. If only they had gone to another facility or another provider or entered a clinical trial, things might have gone better. Dealing with this post-mortem doubt is a significant

challenge. At times, the technologies extend the dying process in such a way as to create more suffering and pain for the patient. The extension of life has created such a resistance to death that even when the patient is ready for his or her life to end, the family pushes back and asks for further treatment. This escalates the grieving process for the caregiver, as they feel a great sense of responsibility for their loved one's death.

To attempt generalizations about grief has the obvious difficulty that grief and grieving are highly individualized. This is true both for the patient and for the caretakers, professional or family. Other clear influencers of grief are religion, race, and culture. Yet, simply because there are significant difficulties does not mean that we should avoid opportunities to enter into this potentially extremely helpful world. If we feel compelled for any reason to try to be of aid to others in the grieving process, we must try to apply our best judgment to how help might be offered.

This paper is not the first to point out the inherent tensions between American appreciation of individualism and the demands and benefits of living in religious community, even in a local congregation. Though perhaps often unspoken, these two parts of our lives do not necessarily mesh well. When we consider grief and grieving, we come to see these tensions.

Although there are other religions that, perhaps, need a different examination, the background of each of us authors is Christian. Based on that, we would propose that if there is anything that should distinguish the Christian community, it should be our response to grief and to grief-producing events in our lives and in the lives of those we care about. This is not to minimize broad concern for the country and, indeed, the world, but it is to focus on where our logical first interests will be. We propose that it is worth looking at technology and grief through

Christian eyes. What do we see using the lens of Christianity and the Christian community when we view technology and grieving?

It seems to us that too often individualism wins out over community. This is a tension we must manage and it has its roots in a basic Christian event, baptism.

There are two powerful images and truths that occur simultaneously when one commits to be a follower of God as a Christian⁷². On one hand, when one commits one's life to God it is a deeply personal decision and act. An individual personally responds, personally repents, personally confesses, personally asks forgiveness, and personally submits to baptism. Even for those partaking in infant baptism there is a recognition that parents literally hand their child over (often to sponsors) as the infants are carried to the font.

On the other hand, we understand that submitting to these initiation events instantly unites a person with the Body of Christ. The Body of Christ community now has a new member. This community not only places some demands and responsibilities on the new member, but also supplies a rich set of blessings and mutual accountability. We suggest that at least a part of these blessings and accountability should be seen during the trials of illness and the end of life.

Unfortunately, it seems that during some of the most difficult times in a person's life the isolation becomes most profound. Part of that may be because of choices made by the person, but part of it is due to reluctance or inability of the community to rally and support the patient. We propose that the better we all are at recognizing the interdependence we have (even during the end of life), the more God-like we will be behaving.

Admittedly, this is tenuous ground. Life-threatening circumstances are indeed deeply personal for the patient and those closest. This is not a time for platitudes. But, it is also not a time for abandonment. We can love someone without trying to impose our will on him or her.

We can struggle with them in terms of treatment decisions without telling them what we would do. We can be advocates for them when they express a need that we might be able to help with. Mostly, what we can do is be present.

Families facing a decision to withdraw life support or to submit to a major surgical procedure generally do not need more information, certainly not information that a non-clinician can supply. But, they do need others watching, struggling, and grieving with them. They need non-judgmental Christian friends who, though they might not make the same decision, will support any decision made because they love.

This is a role that the Christian community needs to play more clearly. In some ways, it appears that the church may be better at dealing with acute grief than anticipatory grief. A sudden heart attack or vehicle accident elicits a spurt of appropriate grief that is necessary and helpful. But, as we move from fewer incidents of acute grief to more incidents of anticipatory grief, our view needs to broaden and include calm, supportive, and loving care to those whose problem may not go away for a long time. We must not add isolation to the existing grief. Sharing the grief (whether by a dedicated congregational care minister, a knowledgeable and helpful group within the congregation, or steady friends) dilutes the grief of the patient and those closest. This is a call of community.

Conclusion

Since the mid-20th century, stunning medical advances have been made. The overall results of these advances have been profound in the decrease in infections and amazing surgical options that could hardly be imagined 75 years ago. In the western world mortality that was prevalent in the young has been supplanted by mortality related to older age. This has affected

grieving at the end of life in that grief related to sudden death (as by infection) is now commonly paralleled by grief that is prolonged (as by debilitating illness). This shift from acute grief to anticipatory grief (by patients, caretakers, and medical professionals) has been significant.

We have surveyed the literature to note these trends and have supplemented that with interviews and perceptions by experienced medical professionals in several fields. Reflections and responses from practitioners generally paralleled accounts from the literature: medical advances have provided impressive technologic aid and prolonged lives, but have created difficult dilemmas for all concerned.

The response of the Christian community, particularly at a local level, should be one of supportive, compassionate, non-judgmental aid. Illness and death are common expectations to each of us, and we must take advantage of our believing communities to walk together through even the end of life.

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