The Journal of Collegium Aesculapium

FALL 2017

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6 Life Lessons Learned from My Patients

by Elder Dale G. Renlund

Introduction

I am grateful to be with you this evening. Like you, I chose medicine as a profession. It is a noble profession that we worked hard to get into and even harder to stay in and competently help our patients and their families. Without question, medicine is also richly rewarding. I don't think I really appreciated how much I enjoyed my medical career until I was asked to leave it.

As you may know, in 2009, I was asked to be a General Authority, and I left the profession in mid-July. My wife and I began our full-time Church service in the Africa Southeast Area. Church matters were very busy in this area, with 34 countries and a Church presence in 25 of them. Travel was difficult and incessant. Everywhere I looked, there were problems to solve, people to counsel, and challenges to meet. And that was before I decided to learn French to communicate with a growing body of Saints in central Africa.

After about 3 years of being headquartered in Johannesburg, my South African visa expired. I needed to renew it to continue the assignment. As part of the process, I went to see a doctor to get a chest x-ray and physical exam. The internist took an appropriate history and as she discovered that I had previously been a cardiologist, she simply asked, "Do you miss your practice?" Until that point, I had never stopped to think, "Did I miss my practice?"

As I thought about the question, I unexpectedly became tearful. I did miss medicine, but I also felt conflicted. Service as a General Authority was so overwhelmingly gratifying, so why did I miss medicine? The internist looked puzzled and concerned. I reassured her this was just a temporary episode of nostalgia and that I was really doing fine. But in truth, I missed many aspects of practicing medicine.

Thinking about my medical career now, what stands out to me was the joy and satisfaction I received from being a physician. Yes, when the phone rang in the middle of the night, I did not relish the interruption in my sleep, but I relish and treasure today the wonderful aspects of helping people, being trusted to treat their ills, helping with their challenges, and addressing their concerns. In the process, I learned much from my patients.

When I was a medical student at the University of Utah, there was a noted hematologist named Maxwell Wintrobe, MD. He had been one of the candidates to become the chairman of medicine at Johns Hopkins Hospital. He did not get the position, and Dr. Wintrobe interpreted the choice of A. McGee Harvey as an anti-Semitic slight against him and looked for another place to go. He was hired by the University of Utah and came to Utah at a formative time in the school's history—the school was about to become a four-year institution.

Dr. Wintrobe became the chairman of medicine at this evolving institution. He was a productive researcher, excellent clinician, and intimidating educator. It was my opportunity to learn from Dr. Wintrobe when I was a third-year medical student, and he was in the latter part of his career. He had a reputation for terrorizing medical students. When I encountered him, he had reportedly softened some—all evidence to the contrary. As third-year students, we were required to present cases to him and he made it really uncomfortable for us. He asked challenging questions, disputed sophomoric assumptions, and attempted to spur critical thinking in us. On one occasion, one of my colleagues, another third-year student, presented a patient to Dr. Wintrobe. True to form, he asked a difficult question. The student tried to respond by quoting something from a text book. With a markedly raised voice and an intensely furious countenance, Dr. Wintrobe asked, "We see the patients first and then we write the text books—what did you learn from the patient?" That stunning question has stayed with me for 38 years. What did I learn from my patients?

My career involved the sub-, sub-, subspecialty of heart failure and heart transplantation. My research interests related to immunosuppressive drugs and trying different combinations of these drugs to decrease the risk of rejection of a transplanted heart and avoid the very frequent side effects. Tonight, I will share six life lessons that I learned from some of my patients. Their names have been changed to protect their privacy.

Lesson 1: An Eternal Perspective Brings Gratitude toward God

In the late 1980s, Mr. Brown came to a hospital in Salt Lake City with severe heart disease.[1] Despite the most advanced medications available, his heart could not adequately support his circulation. We determined that

he would soon die without a heart transplant. While he waited for a suitable donor heart, his condition worsened, and surgeons implanted mechanical pumps.

At that time, mechanical pumps were useful for only a short time. After a few days, other organ systems would begin to fail. All involved in Mr. Brown's care knew that if a donor heart did not become available soon, he would certainly die.

Fortunately for him, a suitable donor heart became available, and Mr. Brown received a new heart. Unfortunately, the heart did not work. Now his situation became dire. But just as I and others on the team were about to give up, another donor heart became available. This donor heart was marginal at best and no one in the United States would use it for any other recipient. The decision was made that this marginal heart was Mr. Brown's last hope and that we should attempt another transplantation.

Mr. Brown soon underwent the operation, and within hours he began to recover. The whole team silently cheered as the mechanical pumps were removed. Over the course of 10 days, he was ready to be discharged from the hospital.

The day before his anticipated discharge, I walked into Mr. Brown's hospital room and noticed that something was not right. He looked angry. He sat on his bed, gripping the hospital tray with his breakfast on it.

"Mr. Brown, what is wrong?" I asked. Through clenched teeth, he replied, "The oatmeal isn't hot, and the milk isn't cold!"

Think of it! Ten days before, Mr. Brown was near death. Now he was complaining about the hospital food. For that moment, he had lost sight of the bigger picture—of where he had been and of the future he now had. He would go on to live 18 years with an excellent quality of life and die of something unrelated to his heart.

At that moment in the hospital, however, Mr. Brown lost sight of the long-term perspective. It is easy to do. When our day-to-day challenges loom before us, it is natural to focus on the here and now. But when we do, we may make poor choices, become depressed, or experience hopelessness. Because of this human tendency, prophets have admonished us to remember the eternal perspective. Only then can we successfully navigate mortality.

An eternal perspective necessarily entails remembering God and His greatness towards us. King Benjamin admonished, "I would that ye should remember, and always retain in remembrance, the greatness of God . . . and his goodness and long-suffering towards you." He promised that if we do so, we will "always rejoice, and be filled with the love of God . . . [a]nd . . . not have a mind to injure one another, but to live peaceably."[2] What a remarkable blessing comes from having an eternal perspective and gratitude toward God!

Lesson 2: Live in Thanksgiving Daily

The next lesson comes from a man who lived in northern Utah. Mr. Olson was admitted to the hospital. He had been a brick layer and was in his early 60s. He had an ischemic cardiomyopathy and severe heart failure. He was listed for heart transplantation and over the course of eight months had a deteriorating course. Initially, we saw him once or twice a week as an outpatient, and later as a hospitalized patient. He developed a sense of humor that may have been appropriate for this setting, but most of us would call it "gallows" humor. He would always ask me when I was going to get a donor heart for him. He made various suggestions that would speed up the process, such as stealing motorcycle helmets or taking shots at people, but of course making sure that they were the right size and blood type. This type of self-centered humor was something that I saw on occasion but it never really set well. For Mr. Olson, it was his way of dealing with the frustration of waiting for a lifesaving donor heart.

One evening while he was in the intensive care unit, we received notification that a donor heart had become available. A young man who was just 18-years-old was involved in an auto-train accident, and this young man laid brain dead in another hospital. The family of this young man agreed to donate his heart, provided it was given to Mr. Olson. I remember going in to see Mr. Olson and telling him that there was a donor available, but the heart was his grandson's. He was shocked and so distraught. Initially he was opposed to being transplanted with his grandson's heart. After some reflection, though, and recognizing that his grandson was in fact dead, Mr. Olson agreed to be transplanted with his grandson's heart.

He underwent heart transplantation and in the process had a dramatic change of attitude. He developed a great reverence for his grandson and the opportunity his grandson gave him to extend his life. He said that he would get up every morning feeling extreme gratitude for the opportunity to see another day. He also sensed an obligation to his grandson to live the best life he could.

Mr. Olson's subsequent course was typical of many. He did very well over the course of more than a decade before he passed away. His quality of life during those years was very good. I couldn't help but imagine the reunion that took place on the other side of the veil as grandfather and grandson were reunited. The lesson that I learned from

Mr. Olson is that we should never take life for granted, the life God has miraculously given us. With that recognition, we have an obligation to those around us to make the best of each day we have.

Amulek taught us that we should "live in thanksgiving daily, for the many mercies and blessings which [God] doth bestow upon [us]."[3] What a great lesson for each of us, live in thanksgiving daily.

Lesson 3: Pray without Ceasing

In 1981, my wife developed ovarian cancer. She was treated with the standard treatment at the time, an initial operation, followed by chemotherapy, and then a second look operation. The initial operation was emergent, and I attended to my wife instead of going to my weekly outpatient resident clinic. A colleague kindly covered the clinic for me.

The next time I was in clinic, I had an interesting conversation with a patient of mine, Mrs. Jones. She was an 87-year-old, impoverished woman with Parkinson's disease and hypertension. She was always brought to clinic by her 65-year-old daughter, who also had Parkinson's. Mrs. Jones and her daughter inquired after my wife. When I told them that she had had a tumor, they asked, "was it malignant?" After I responded, "yes," they asked if my wife was Presbyterian. I said she was Mormon. Mrs. Jones said, "Well, I'll pray for her anyway!"

Nine months later, my wife underwent her second operation. There were no signs of cancer, so we were thrilled. During my wife's hospitalization, I went to my outpatient clinic, and one of the patients on that day was Mrs. Jones, accompanied by her daughter. As they had in every visit, they inquired after my wife. I told them the good news. Mrs. Jones exclaimed, "Glory Be!" Then, her daughter asked me, "Do you know what Mom has done?" "No," I responded, "what?" The daughter reported that during the prior 9 months, Mrs. Jones had prayed three times a day for my wife by name, that she would be restored to full health.

I was overwhelmed by their faith, by their persistence in prayer, and by their kindness. Mrs. Jones had prayed for my wife more than I had. Mrs. Jones surely trusted the Psalmist who said, "Evening, and morning, and at noon, will I pray, and cry aloud: and [God] shall hear my voice."[4]

Prayer changes who we are and what we can become. Through prayer we can be filled with God's love, we can become like Him, we can be purified,[5] we can be protected from sin,[6] and we can be healed. Mrs. Jones showed me how to pray without ceasing.[7]

Lesson 4: We Are Agents to Act, Not Objects to Be Acted Upon

The next lesson I learned came from my association with a young man called Jim. While serving a mission for the Church, Jim developed a severe, life-threatening cardiomyopathy, was released from his mission, and underwent heart transplantation. Early after transplant, he missed a crucial appointment. I confronted him in clinic: "Jim, why did you miss this appointment?" He lamely responded, "Well my mother forgot to wake me up and the alarm clock didn't go off."

Later Jim developed rejection episodes that seemed more severe than they should have been. On inquiry, I found out that he had stopped taking some of his medications. When I asked him why, he said, "My brother forgot to go to the pharmacy and pick them up for me." Fortunately, he recovered. After a year, Jim met and married a woman, had a child, and started missing appointments again. When asked, why he was missing his appointments, Jim said, "I was too tired to get up for the appointment because the baby kept me up at night." Sometimes, when his cyclosporine levels came back surprisingly low, he said, "My wife hasn't gone to pick up the medicine."

You can probably predict what came next. One day, Jim came to the hospital with severe rejection that we couldn't correct. Jim passed away, leaving a widow and a young daughter. When I reviewed Jim's medical course, it was obvious that Jim had behaved like an object instead of like an agent. He chose to be a victim, a hapless victim, instead of being an agent capable of acting and taking responsibility for himself.

The Book of Mormon teaches this eternal truth, that because of the Atonement of Jesus Christ, we are "free forever, knowing good from evil; to act for [ourselves] and not to be acted upon. . . . Wherefore, [we] are free . . . to choose liberty and eternal life, through the great Mediator of all men, or to choose captivity and death, according to the captivity and power of the devil."[8]

Sometimes we are like Jim and let conditions or circumstances act upon us instead of exercising our God-given agency. No matter what the situation, we always have a choice. We are agents to act, not objects to be acted upon.

Lesson 5: Heartache Can Be Turned to Joy through the Gospel of Jesus Christ

The next lesson comes from a patient named Robert. He had a heart transplant at Stanford University when

he was very young. When he was in his mid-20s, that transplanted heart developed allograft coronary artery disease and began to fail. We evaluated him and felt that he was a suitable candidate for a second heart transplant. He underwent transplantation and from the very outset was very grateful for the privilege of remaining alive.

Typically, a transplant recipient is not permitted to know the details of the donor. A recipient is permitted, however, to contact Intermountain Donor Services, and write a letter to the donor family. Robert did just that. He expressed his gratitude to the donor's family and in time learned that the donor had been a young man in his teens who had been involved in a motor vehicle accident. The donor family lived in southern Utah and had made an agonizing decision to donate their loved one's heart. For about a year or two, Intermountain Donor Services relayed messages between Robert and the donor family. Finally, the donor family consented to meet with Robert.

When they met, Robert felt impressed to share with them the restored gospel of Jesus Christ and the doctrine of eternal families. He told them that he couldn't bring their son back, but he could do something to help them understand where their son was. Robert bore his testimony to them that they could be together with their departed son again. The family was interested in this idea and wanted to learn more. Missionary discussions were arranged, the family was taught, and they joined the Church. Robert was thrilled to be present as his donor family was baptized and again as they later received their temple blessings.

I was caring for Robert during this time, but knew nothing about this gospel-related miracle. After I returned from spending five years in the Africa Southeast Area, I received a phone call from Robert, now age 40, fifteen years after his second heart transplant. He was getting married and asked if I would perform the sealing. I agreed and went to the Provo Utah Temple to perform the sealing in December 2014.

Robert was excited for me to meet his family again and his bride for the first time, but he was almost more excited to introduce me to the mother, sister, and brother-in-law of his heart donor. They had driven up from southern Utah to attend his sealing.

Needless to say, emotions ran high for us in that sealing. The mother of the donor experienced something very sacred in the temple that day. Her grief had become joy, her sorrow had turned to hope, her hope was centered in Jesus Christ and His Atonement.

C. S. Lewis wrote, that "mortals misunderstand. They say of some temporal suffering, 'No future bliss can make up for it,' not knowing that Heaven, once attained, will work backwards and turn even that agony into a glory. . . . the Blessed will say, 'We have never lived anywhere except in Heaven.'"[9] Truly, "God shall wipe away all tears from their eyes; and there shall be no more death, neither sorrow, nor crying, neither shall there be any more pain: for the former things are passed away."[10] This was a poignant lesson for me: heartache can be turned to joy through the gospel of Jesus Christ.

Lesson 6: There Is Only One True Way

The last lesson comes from a patient who was transplanted at the Veterans Administration Hospital in Salt Lake City. In 1987, as the transplant program was beginning at the VA Hospital, a young man in his early 30s called Johnny was transferred to the hospital in horrible heart failure. His circulation required a balloon pump to stabilize him. He was from a city in the western United States and had a live-in girlfriend with two children. He worked as a maintenance worker for the city. He was quiet and reserved and had difficulty engaging in conversation. I attributed this slowness of thought to the low flow of his cerebral circulation.

I could tell he was not extraordinarily intelligent and there was some concern on the part of other cardiologists that transplanting Johnny was inappropriate. They expressed concerns that Johnny would not be able to manage a complicated medical regime. As I visited with him and asked about his girlfriend and the children, he became more animated. It was clearly a topic he was interested in. I observed that he could understand what was going on and he clearly understood the commitment he was making to care for himself after transplantation. So contrary to the advice of others, Johnny was transplanted.

After the transplant, knowing that others would criticize the decision if Johnny did not follow the treatment regimen, I read him the proverbial riot act, making sure that he understood when to take his medicines and the consequences if he did not. I specifically told him he would die if he did not comply. I also told him that he should never do anything that he wasn't told to do by Mary Beth, the nurse coordinator, or by one of the transplant cardiologists.

About two months after his transplant, Johnny developed a moderate episode of rejection for which we brought him into the hospital for treatment. With a shamed countenance, he confessed, "Dr. Renlund, I know why I'm rejecting." I said, "Why?" He said, "Well, two weeks ago, one evening, I forgot to take my clonidine." Clonidine is a drug that was being used to treat his cyclosporine-induced hypertension. Clearly missing clonidine one night had no impact on whether he would reject his transplanted heart. But Johnny did not know that. He

was a simple man and didn't really comprehend the differences among his medications; he was just determined to do what he was asked to do. He was exactly obedient and missing a dose of clonidine was a rare exception for him. He considered it a personal failure.

Some months later, Johnny was admitted again to the hospital with an infection. After I had written appropriate orders to deal with this, I had gone home. Later that evening, a resident called me and made a good suggestion. Given that Johnny had just recently been taken off of his prednisone, it might be appropriate to give him some stress steroids. I thanked the resident for the input and asked that he prescribe some hydrocortisone for him. I would have prescribed it intravenously, but the resident decided to prescribe oral hydrocortisone.

When I came the next morning to round on Johnny, I found all these hydrocortisone pills on his table. I said, "Johnny, what are these?" He said, "Well, these are the pills that were prescribed by the resident." Astonished, I critically demanded, "But why didn't you take them?"

He said, "Because neither you nor Mary Beth told me that I should." Johnny had clearly gotten my earlier message.

With this attitude, Johnny did very well over the course of decades. He married his live-in girlfriend, adopted her children, and was the employee of the year several years in a row in the city where he worked. He had an excellent outcome because he realized he did not know as much as his caregivers and that he needed to trust and follow their directions. In this regard, Johnny was brilliant.

In contrast, I worked with many patients who were extremely intelligent. These patients presented a different challenge. It was surprising to see how many of them tried to negotiate various aspects of their care. They would negotiate how frequently the biopsies would be done, how frequently the doctor visits should occur, and the dosages on their prednisone. With very little medical knowledge, these patients pushed to see how far they could go to get their own way. I guess they thought they were Frank Sinatra and could do it their "way."[11] I have seen this attitude lead to morbidity and mortality among these patients.

It is interesting to contrast the meekness and humility that Johnny had with these other patients. As important as our physical health is, our spiritual health is more important. Whose way will win out in our lives? Some say to God, "I will do things Thy way." Others say, "I will do things my way." When we say, "We will do things Thy way," we are saying we will trust God and meekly follow Him and treat the commandments as the protection they were intended to be. C. S. Lewis, the Christian author said, "There are only two kinds of people in the end: those who say to God, 'Thy will be done,' and those to whom God says, in the end, '*Thy* will be done.'. . . No soul that seriously and constantly desires joy will ever miss it. Those who seek find. To those who knock it is opened."[12]

The Lord, through Isaiah said, "For my thoughts are not your thoughts, neither are your ways my ways, saith the Lord. For as the heavens are higher than the earth, so are my ways higher than your ways, and my thoughts than your thoughts."[13] The Savior also said, "I am the way, the truth, and the life: no man cometh unto the Father, but by me."[14] Just as doing "my way" medicine leads to morbidity and mortality, doing "my way" in life leads to spiritual morbidity and mortality. There is only one true way, God's way.

Conclusion

As physicians, our patients usually come to us to learn from us about their medical conditions and their health. But as physicians, we can learn much from our patients, life lessons that will make us more compassionate, more understanding, humble, and able to facilitate their emotional, spiritual, and physical healing. This was my experience in medicine. I am grateful for my patients who taught me much about life and spiritual truths, whether they intended to or not. These spiritual truths are universal and eternal.

Notes

1. See, Dale G. Renlund, "Maintaining an Eternal Perspective," *Ensign* Mar. 2014, 56–59.
2. Mosiah 4:11–13.
3. Alma 34:38.
4. Psalms 55:17.
5. Moroni 7:48.
6. Matthew 26:41.
7. 1 Thessalonians 5:17.
8. 2 Nephi 2:26–27.
9. C.S. Lewis, *The Great Divorce* (New York: HarperCollins Publishers, 1946), 69.
10. Revelation 21:4.
11. "My Way," performed by Frank Sinatra, lyrics by Paul Anka.
12. C.S. Lewis, *The Great Divorce,* 75.
13. Isaiah 55:8–9.
14. John 14:6.

Building Harmony *between the* Spiritual *and* Temporal

by Presiding Bishop Gérald Caussé

Valerie and I are honored to be among you at this beautiful reception. I thank Dr. Doty for his invitation and for his remarkable work within Collegium Aesculapium. I met him when he served in the Missionary Department and was in charge of the physical well-being of our missionaries worldwide. He is someone who always gains the confidence of those around him, both because of his medical expertise and his gifts in dealing with people.

This evening I realize that I am in the presence of remarkable men and women who have devoted their lives to serving others. President Russell M. Nelson, whom we love and honor as an Apostle and as one of your own, declared: "I worked with doctors all over the world and in different political regimes and administrations. I think the thing that motivates men and women to be doctors is the desire to help others."

I love the motto of Collegium Aesculapium, which is: "Emulating the Great Healer—Teachers that heal and Healers that teach." You indeed are a group of medical professionals who have chosen to pattern their lives after the Savior's example.

As we all know, each man and woman is made up of two elements—the physical body and the spirit—and these two parts of every human being have a very intimate and reciprocal relationship. By experience, you know that our physical health has a beneficial influence on our spiritual wellness. Conversely, spiritual strength is fertile ground for the healing and strengthening of the body. In fact, the constant interaction between body and spirit, between temporal and spiritual, is an essential and needful aspect of our mortal condition.

As explained in Doctrine and Covenants, the harmonious relationship of the body and the spirit is key to man's

happiness. We read: "For man is spirit. The elements are eternal, and spirit and element, inseparably connected, receive a fulness of joy. And when separated, man cannot receive a fulness of joy."[1] The scripture refers to the joy we will all experience at the time of our resurrection, when our spirit and body are united again. I believe it also applies to our mortal existence and the joy and fulfillment we may experience when there is full harmony between the spiritual and temporal sides of our lives.

In the Christian world, some believe that our bodies are a hindrance to the elevation of our spirits. Those with this view feel that we should keep our lives free from the contamination of carnal elements, which they see as fundamentally evil.

Certainly, as Alma explained to his son Corianton, "All men that are in a state of nature, or I would say, in a carnal state, are in the gall of bitterness and in the bonds of iniquity; they are without God in the world, and they have gone contrary to the nature of God; therefore, they are in a state contrary to the nature of happiness."[2]

But modern revelation, as indicated by Hugh B. Brown, also clarifies that "matter is not essentially evil but . . . its purpose is to serve [the] spirit. . . . There is a beneficent and eternal relationship between spirit and element."[3] In fact, we believe that the spirit cannot be made perfect without the body. Joseph F. Smith said: "The spirit without the body is not perfect, it is not capacitated, without the body, to possess a fullness of the glory of God, and, therefore, it can not, without the body, fulfil[l] its destiny."[4]

God and His Only Begotten Son, Jesus Christ, are both immortal and glorified beings, endowed with a body of flesh and bones. And it is in the same condition of the perfect and everlasting union between body and spirit that we, too, can one day become exalted beings. The purpose of our lives, therefore, is not to rid ourselves of the physical desires but to bring them in harmony with and in the service of our spirit.

Jesus Christ's earthly ministry encompassed both the temporal and spiritual aspects of our lives. He was not content with performing a spiritual ministry only and teaching His disciples gospel doctrines. Healing the sick and relieving physical suffering were also a central part in His mission. In the New Testament we read: "And Jesus went about all Galilee, teaching in their synagogues, and preaching the gospel of the kingdom, and healing all manner of sickness and all manner of disease among the people."[5]

The story of healing the man with the palsy is one of many episodes of the Savior's life that evidence the constant interaction between healing the body and the spirit. The sick man was lowered down from the roof, lying on a bed, and placed before Jesus. "And when he saw their faith, he said unto him, Man, thy sins are forgiven thee. And the scribes and the Pharisees began to reason, saying, . . .

Who can forgive sins, but God alone? But when Jesus perceived their thoughts, he answering said unto them, . . . Whether is easier, to say, Thy sins be forgiven thee; or to say, Rise up and walk?" Then he commanded the man with the palsy to arise and take his bed and return to his house. The man rose up, took up his bed, and left, "glorifying God."[6]

Christ healed bodies out of love and compassion for the sick. But each of His miracles was also a tangible demonstration of His spiritual power to purify and bring peace to the conscience and soul of man through His Atonement.

I would now like to comment on how building harmony between the spiritual and temporal aspects of our lives can make us stronger, "that which is spiritual being in the likeness of that which is temporal; and that which is temporal in the likeness of that which is spiritual."[7]

1. *Our spirituality has a beneficial influence on our temporal well-being.*

To suffocate, to feel oppressed, to be a bundle of nerves, to have a knot in the stomach, to jump for joy, or to be tickled pink—all of these expressions rightly evoke the constant interrelationship between the spirit and the body. Our inner thoughts, feelings, and emotions translate most often into physical sensations— whether positive or negative.

I have also found that what is good doesn't remain only good; it may often become beautiful. The goodness of our feelings is eventually reflected in our physical appearance. Those with pure and charitable hearts have a lovely countenance that is charming, attractive, and draws people to them. I am not speaking about beauty as defined by the world, which values only the perfection of the outward form and disregards the inner spirit. Rather, I am speaking of the beauty people radiate when the goodness of the inward spirit is in harmony with the outward appearance.

Last summer our family spent a few days at the Domaine des Ecureuils. It is a bed and breakfast establishment situated in the heart of a beautiful park in Dordogne, a picturesque region in southwest France. When we arrived, we were captivated by the beauty that flowed from the old stone structure, surrounded by majestic trees and flowerbeds filled with fragrant flowers. We immediately felt peaceful and happy—as though we were in the middle of a little paradise.

The next day, in looking more closely at the place where we were staying, I began to see some imperfections. Many walls were falling apart, the alignment of stones was imperfect and rickety, here and there the vegetation had come out of the pots to climb along the walls and stairs. Despite everything, a peaceful spirit and an amazing light flowed from the scene—making it a harmonious, almost idyllic setting. The true beauty was not in the perfection of the physical forms; rather, it was in the purity, the harmony, the radiance, and the light that emanated from them.

The spiritual indeed can often transcend the physical and compensate for its imperfections. I recently heard the remarkable account of the life of the French writer, Jacques Lusseyran. "Born in Paris in 1924, the first seven years of his life were full of light and joy. He said: 'My parents were heaven, . . . [and through them,] I knew very early . . . [that] another Being concerned himself with me. . . . [That Being] was light, and light had cast a spell over me. I saw it everywhere. . . . Nothing in the world, not even what I saw inside myself with closed eyelids, was outside this great miracle of light.'"

Then one day at school, Jacques fell while running out to recess, striking the corner of the teacher's desk. The violent blow caused serious injury to his eyes, leaving him completely and permanently blind.

"Being blind was not at all as I imagined it," he wrote. "[People] told me that to be blind meant not to see. Yet . . . I saw. Not at once, I admit. . . . [At first] I still wanted to use my eyes, . . . and there was anguish, a lack, . . . a void. . . . [But in time] I was aware of a radiance. . . . Light was there [along with joy,] . . . and I can say without hesitation that from that time on light and joy have never been separated in my experience."

Because of his blindness, as Jacques grew he acquired what he called a "sense of human beings." This sense helped him see men through the tone of their voices. "The consciences of my companions seemed to lie wide open before me [when they spoke]," he wrote.

This became vital when he was 15 years old and the Nazi regime occupied Paris in June 1940. Although very young, he and his friends formed an underground resistance movement and chose Jacques to be their leader.

Of that time he wrote, "Every day, including Sunday, I got up at half-past four before it was light. The first thing I did was kneel down to pray [saying]: 'My God, give me the strength to keep my promises. . . . Now that twenty young men . . . are waiting for my orders, tell me what orders to give them. By myself I know how to do almost nothing, but if you will it I am capable of almost everything.'"

All who were nominated to join the movement had to first meet with "the blind man." Jacques would listen not so much to their words as their souls. He said: "Suddenly to hear in their voices . . . the note of confidence . . . filled me with an assurance which was very like love." In one year, this organization of 20 grew to over 600.

There was just one man he admitted to the movement of whom he was not absolutely sure, and it was that man who later betrayed them. Jacques and his companions were arrested by the Gestapo in 1943 and spent the remainder of the war as prisoners. For the last year, he was shipped to Buchenwald with 2,000 other Frenchmen. Only 30 of those 2,000 were alive when the camp was liberated.

Jacques was 20 years old.

He had suffered through one of the darkest periods in modern history and had been on the brink of death. Nevertheless, he wrote, "I have not a single evil memory of those three hundred and thirty days of extreme wretchedness. I was carried by a hand, . . . covered by a wing. . . . I [became free] to help others. . . . I could try to show [them] how to go about holding on to life, . . . turn them toward the flow of light and joy which had grown so abundant in me."[8]

Jacques was among those of whom Isaiah spoke: "The people that walked in darkness have seen a great light."[9] All can learn to live by that light, for as Christ has taught, "If your eye be single to my glory, your whole bodies shall be filled with light, and there shall be no darkness in you; and that body which is filled with light comprehendeth all things."[10]

My dear friends, like Jacques we all can find within our own selves the spiritual resources needed to develop and magnify our physical abilities. Nobody is immune from sickness or physical adversity. However, strengthening our spirituality has a beneficial influence on our physical well-being; it can invigorate our natural senses and compensate for many of our physical imperfections.

2. *Our physical appearance and behavior directly influence our spirituality and that of those around us.*

The popular belief is that the "clothes don't make the man." However, our physical appearance—the manner in which we take care of our bodies, the way in which we dress, and how we behave—all have a significant influence on our spirituality and thus impact those with whom we associate.

It is no coincidence that we have everyday guidelines in the Church to help us preserve our spirituality through our physical appearance. For example, missionaries and Church university students are subject to codes pertaining

to the way they dress and their physical appearance. The youth of the Church are encouraged to follow the principles found in *For the Strength of Youth,*which deal with multiple practical issues such as dress and appearance, language, music and dancing, and physical health.

In his first epistle to the Corinthians, Paul wrote: "Know ye not that your body is the temple of the Holy Ghost which is in you. . . . Therefore glorify God in your body, and in your spirit, which are God's."[11] To glorify God in our bodies is to put our external appearance and behavior in tune with our highest spiritual desires. By so doing, we allow the Spirit of God to reside in us. The Spirit enlightens us, and we become lights for others. Often a single look, an attitude, a facial expression may light the flame of the gospel in the hearts of those around us.

Recently, I was touched by the personal story told to me by our faithful home teacher, Brother Shawn Packard. Shawn grew up in a family of Church members who were less active, and during his youth he almost never had the opportunity to attend church. After he graduated from high school, he began attending the University of Utah, living the carefree lifestyle of a worldly young man. He was happy to get a part-time job cleaning windows in an office building every night. The building was located on South Temple Street, right across from the Salt Lake Temple. While he was cleaning the windowpanes, Shawn often had a view that looked down over the temple, and he started observing and paying attention to the individuals who came out of the temple. He became impressed with the countenances of those individuals. They were all dressed in their very best Sunday clothes and had peaceful expressions on their faces. They seemed filled with joy and light. Often, he found himself stopping for several minutes to contemplate the beautiful temple and the happy young couples and families he saw, and he asked himself what they were doing inside the temple that made them so joyful when they came out. He felt that the building was unique, peaceful, and sacred.

In contrast, Shawn got in the habit of going to a student nightclub certain evenings of the week. Frankly, this club was not a calm or serene place. The ambiance was often rowdy, filled with the odor of alcohol, and dominated by the boisterous conversations of its patrons. One evening while he was sitting at a table with some of his friends, they came up with the idea to pin a photograph of the Salt Lake Temple on the wall. Then they started throwing all sorts of garbage at the image, accompanied by their insults and hateful words. Shawn began to feel extremely uncomfortable. Something inspired him to stand up and leave that unhallowed environment. When his friends asked him why he was leaving, without hesitation he said, "Someday, I hope to have a family. And if I am ever blessed to have daughters, I hope that none of them will ever marry guys like you!" One more question came: "Where do you think you are going?" He turned back to the group, pointed to the picture of the temple on the wall, and said, "I'm going there." Then he left the club while they hurled insults and jeers at him. When he got into his car, he breathed in deeply, and at that very moment he knew that this was going to be a turning point in his life. He knew exactly what he needed to do and where he needed to go. Within a few weeks, he came back to the Church and decided to serve a full-time mission.

Today, Brother Packard is the happy father of a family deeply anchored in the gospel. When his friends ask what gave him the courage to leave his previous lifestyle, he replies without hesitation, "It is the spirit that I felt when I looked at the house of the Lord and watched the beautiful people who came out of it."[12]

The physical image and appearance that we present to the world is not insignificant. It directly influences our spiritual life and the lives of the people with whom we associate.

Because of the constant interaction that exists between the temporal and spiritual aspects of our life, it is no surprise that our religion not only teaches the great principles of the gospel but is also involved in the most practical aspects of our daily lives. As Brigham Young stated, "The religion of Jesus Christ is a matter- of-fact religion, and taketh hold of the every-day duties and realities of life."[13]

Our teachings include many commandments and principles that are temporal in nature, such as the Word of Wisdom; tithing; the law of the fast; the need for education, employment, and self-reliance; emergency preparedness and food storage; and many others. Doctrine and Covenants 88 even includes counsel on how we should manage our sleep, stating, "Cease to sleep longer than is needful; retire to thy bed early, that ye may not be weary; arise early, that your bodies and your minds may be invigorated."[14]

Allow me to emphasize three other temporal responsibilities that should be part of the daily life of every Church member, all of which have a spiritual bearing.

1. *Taking care of our Heavenly Father's creations*

As children of our Heavenly Father, we are stewards of His magnificent creations. We have a responsibility to take care of the earth on which we live and preserve it for future generations. The Lord said: "For it is expedient that I, the Lord, should make every man accountable, as a steward over earthly blessings, which I have made and prepared for my creatures. I, the Lord, stretched out the heavens, and built the earth, my very handiwork; and all

things therein are mine. . . . But it must needs be done in mine own way."[15]

Notably, Church members are counseled to "use the resources of the earth sparingly and reverently. Adopt lifestyles and personal habits that respect the [Lord's] creation. . . . [And] make [our] own living space more beautiful and inspirational."[16]

2. Taking care of our health

We must do everything possible to take care of our bodies and promote our physical and mental well-being.

Because our body is the temple of our soul, "maintaining the best possible physical health has been a gospel idea throughout the ages—from the strict dietary laws of ancient Israel . . . to the Word of Wisdom in this dispensation and the counsel of today's prophets and apostles." By maintaining good physical health, we "become more self-reliant and better prepared to progress personally, strengthen the family, and serve in the Church and community."[17]

The Church handbook clearly states: "The Lord has commanded members to take care of their minds and bodies. They should obey the Word of Wisdom, eat nutritious food, exercise regularly, control their weight, and get adequate sleep.

They should shun substances or practices that abuse their bodies or minds and that could lead to addiction. They should practice good sanitation and hygiene and obtain adequate medical and dental care."[18]

3. Taking care of the poor and needy

Caring for the poor and needy is not optional, nor is it merely an accessory in the Church of Jesus Christ. It is an indispensable part of the mission of the Church and an essential responsibility for each of its members.

The goal goes well beyond simply making monetary and physical resources available to the poor and needy. It contemplates their spiritual progress and eternal salvation. It is difficult to blossom in the gospel when a person's thoughts and efforts are consumed with the worries of providing for the basic needs of his or her family. Temporal concerns—particularly oppressive ones—can preoccupy our minds to the point that they take precedence over spiritual goals, thus affecting our ability to reach our potential as sons or daughters of God. Brigham Young offered this sage counsel: "Prayer is good, but when baked potatoes and pudding and milk are needed, prayer will not supply their place on this occasion. Give every duty its proper time and place."[19]

I am grateful to belong to a church that does so much for the poor and needy throughout the world. We have a sacred obligation to reach out to those who are less fortunate. The scriptures say: "For if ye are not equal in earthly things ye cannot be equal in obtaining heavenly things."[20]

I would like to take a moment to thank you, LDS doctors and other medical professionals, for your outstanding support of the humanitarian work of the Church. Each year, there are hundreds of LDS volunteers who travel to the four corners of the earth to do such things as help improve the quality of dental and eye care, provide training to local medical personnel to decrease the death of newborns and their mothers, and support immunization campaigns in countries where disease claims the lives of too many children.

Let me share one example of these humanitarian projects. Janvier Kilangalanga, the individual in the suit shown in this picture, is an ophthalmologist who oversees the National Vision Program for the Democratic Republic of Congo. His greatest desire was to learn a new technique called "small incision," sutureless cataract surgery, which allowed for quicker recovery and better outcomes for cataract patients. Dr. Jesse Hunsaker, a volunteer with LDS Charities' Vision Initiative, met with Dr. Kilangalanga, and together they developed a plan to train physicians in the Congo. It is estimated that over 10,000 cataract surgeries have now been performed by local ophthalmologists trained in this procedure, which also has utilized equipment donated by LDS Charities.

Brothers and sisters, your support to the Church's humanitarian endeavors has changed the future for hundreds of thousands of men, women, and children. We could not do this work without you! We can never thank you enough.

I testify that an intimate and reciprocal link exists between our body and our spirit, between our temporal well-being and our spiritual lives. My brothers and sisters, one of the objectives of our earthly existence is for our spirit to take control of the carnal and physical elements of our lives so both can work together to serve higher and eternal purposes. It is one of the conditions we must fulfill to inherit eternal glory. When we create harmony between the temporal and the spiritual in our daily lives, they strengthen each other, help us be happy, and facilitate our progress towards eternal salvation and exaltation.

I conclude by affirming that you practice a wonderful profession that draws its purpose and strength from the love of one's neighbor. You truly are teachers that heal and healers that teach. Through your actions, you emulate the Great Healer, even the Lord, Jesus Christ, of whom I testify, in the name of Jesus Christ, amen.

Improving Moral Decision-Making in Young Adults by TREATING ADHD

"Morals excite passions, and produce or prevent actions. Reason of itself is utterly impotent in this particular. The rules of morality, therefore, are not conclusions of our reason."

—David Hume, 1748[1]

by Richard Anderson, MD, PhD and Gregory Mattingly, MD

In 1902, British pediatrician George Still described in *Lancet* 43 children who were inattentive, impulsive, hypermotoric, and showed impaired decision making.[2] He attributed this cluster of symptoms to a defect in "moral control" due to "potential biological defects." While medicine has advanced, Dr. Still's description remains intriguing for its prescient connection of impaired decision making with biological factors that might impede cognitive processes required for making moral decisions. In the ensuing century, while it has been called different names at different times, we now recognize that **attention deficit hyperactivity disorder (ADHD)** is a common illness affecting 1 in 10 children, 1 in 12 teenagers, ***and 1 in 20 adults***.[3]

The classic triad of hyperactivity, impulsivity and inattention captures many of the core ADHD symptoms but fails to capture deficits in decision making, self-regulation, and emotional control, which collectively account for much of the social, educational, occupational, and emotional impairment of the disorder.

Emerging adults are especially vulnerable to the consequences of ADHD.[4] They make fundamental life choices about education, occupation, where to live, and choosing a spouse. Latter-day Saint young adults make additional choices about serving missions, marrying in the temple, and maintaining Church standards and activity. For LDS and non-LDS young adults alike, these decisions affect the rest of their lives. **ADHD is a neurodevelopmental disorder that disrupts brain regions responsible for our most human of thoughts, emotions, and behaviors.** As a disorder, it degrades our ability to make a choice and then to self-regulate the choice—in essence it compromises our capability to accept Elder Dallin H. Oak's 2007 prophetic challenge to choose between "Good, Better, Best."[5] **ADHD can limit young adults in some of the most important *areas* of life, during one of the most important *times* in life.**

Primary care physicians treat more mental illness than psychiatrists, but because adult ADHD has received clinical attention relatively recently they often have had little opportunity to learn to diagnose and treat this common condition. In a recent survey, primary care physicians in CME conferences reported they knew more about rare medical conditions (such as pheochromocytomas and sarcoid) than about adult ADHD, even though adult ADHD patients presented nearly daily in their practices.[6] At the conclusion of a one-hour lecture on adult ADHD, virtually all physicians reported their knowledge about adult ADHD increased more than any other topic covered in the conference. The take-home message, of course, is that we should use our CME to learn more about "horses" than "zebras."

Neurobiology of ADHD and Executive Function

Few psychiatric illnesses have been examined as closely for their neurobiological substrates as ADHD. ADHD involves multiple brain regions, including the dorsolateral and medial prefrontal cortices, the orbitofrontal cortex, anterior cingulate and other parts of the striatum, among other regions.[7] Neurotransmitters involved in ADHD include dopamine, norepinephrine, glutamate, acetylcholine, and orexin.[8]

Recent landmark studies have dramatically advanced our understanding of the pathophysiology of ADHD. Nora Volkow demonstrated alterations in dopamine transporter activity in ADHD brains,[9] Philip Shaw and colleagues have reported delayed maturation in the prefrontal cortex with ADHD,[10] Stephen Faraone and others have examined genetic heritability and environmental factors in the disorder.[11] Current research shows ADHD to be a highly genetic condition (exceeded only by bipolar disorder among mental health diagnoses), affecting cortical and subcortical regions that coordinate planning, problem solving, decision making, and emotional regulation. ADHD has an overall genetic heritability of approximately 75%, i.e. 3 out of 4 times there will be a genetic family history. Environmental factors influence development of the illness, with epigenetic changes predisposing to ADHD occurring when children are exposed to environmental stressors such as prenatal nicotine exposure, lead exposure, certain drugs of abuse, or severe psychosocial trauma.[12, 13]

Sustaining or modifying behavior in order to achieve a goal requires measurable cognitive skills, collectively referred to as **executive functions**.[14] Primary executive functions include attention, working memory, vigilance, and inhibition. These lead to more complex behaviors like planning, problem solving, regulating emotions, motivating, and making decisions, including moral decisions.[15] Primary executive functions are measured with neuropsychological tests such as the Digit Symbol Substitution Test (working memory), the Wisconsin Card Sorting Test (set shifting), and the Stroop Test (inhibition and choice).[16] Ignoring inappropriate distractions, completing tasks when tired, avoiding perseveration on the random or wrong, controlling emotions when provoked—essentially to make choices, including *moral* choices, requires these cognitive abilities. *Executive functions are among the most human of mental behaviors and are among the most subtle and fragile aspects of mortal brains and minds.* ***They render possible capabilities and potentials both uniquely human and of divine origin.***

In recent years PET and fMRI have made possible the direct visualization of functional activity in specific brain regions while performing cognitive tasks. Figure 1 shows an fMRI coronal section through the **anterior cingulate**—a midline structure that modulates executive functions needed for decision making. In this study, the anterior cingulate activity of normal adults was compared to ADHD adults while they were given Stroop Tests.[17] (The Stroop Test is a test of executive functions involved in making choices.) As expected, ADHD adults had lower Stroop scores than non-ADHD controls, but importantly, the anterior cingulate of ADHD adults failed to activate when choice was required. Instead, their brains resorted to slower, less direct circuits to make decisions for the test (see figure 1). In a subsequent study when given ADHD medication before being scanned, adult ADHD brains showed a trend toward normalization of anterior cingulate function.

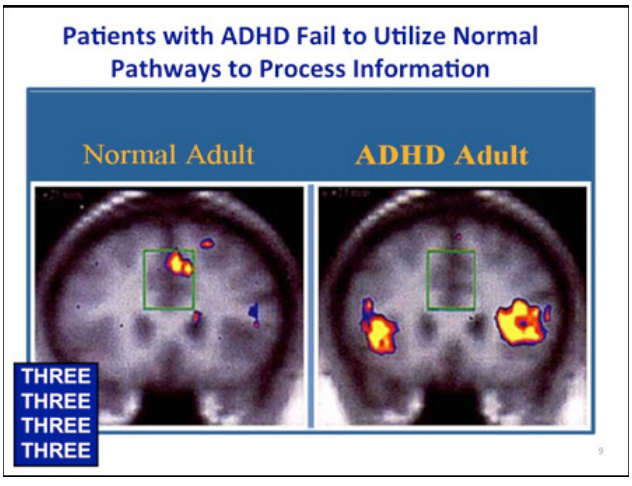

Figure 1

Some would consider executive functions very close to character traits, i.e., thoughts and behaviors resulting from the necessity of making moral choices. We often assume such choices have more to do with our character than our brains. But is that correct? Surely there are interconnections between *brain, mind*, and *spirit*. **Because untreated ADHD impairs uniquely human processes—the ability to reason, choose, and self-regulate—it leads to uniquely human consequences.** Untreated ADHD can produce behavioral and emotional chaos which can delay or altogether prevent character and spiritual development.[18] Such a disorder seems to blur our LDS conceptualization of agency and choice.

Consider the case of Elder Smith on P-Day. He has ADHD and remembered to take his medication the morning he received an unexpected phone call from his district leader, asking him to give up his P-Day to help other elders move furniture. Frankly Elder Smith didn't want to help; he had planned to visit the Arch in downtown St. Louis. Following the phone call, mixed thoughts and feelings descended: while he had a basic desire to be helpful, he expected his Brazilian visa to arrive

any day and feared he would miss his only opportunity to visit the St. Louis Arch, a Midwest landmark. But under the influence of ADHD medication his brain recruited basic executive functions (planning, prioritizing) in his prefrontal cortex to weigh alternative choices amid mixed motivations. He initially experienced frustration, which shifted the decision process downstream to emotional centers in adjacent limbic regions. Before starting ADHD treatment, Elder Smith likely would have let frustration and impulsivity turn emotion into inappropriate behavior. This time, however, input from his medial prefrontal cortex modulated limbic centers, allowing him to control frustration and continue to think. The tipping point in his decision making came from retrieving a forgotten emotional memory, unexpectedly activated in his right temporal lobe. He recalled, somewhat guiltily, that a certain sister missionary had also planned to visit the Arch that P-Day, and they had tentatively planned to meet there, even though such rendezvous were against mission policy. Although earlier in the week he felt a measure of guilt about this "date," he had forgotten about it until his district leader called. His fresh guilt on recalling his slightly less than pure agenda shifted decision making thoughts back to his medial prefrontal cortex, where weighing alternative motivations, he reached a decision: Elder Smith called his district leader and accepted the assignment to move furniture. This decision signaled dopaminergic reward circuitry in his nucleus accumbens to give him a "warm feeling" that he had made the right choice. He also felt an assurance that he was *capable* of making and acting on moral choices, without the emotional frustration that troubled him prior to treatment. After many more such choices, Elder Smith will have strengthened certain neural pathways, making future choices easier. If he allows it, he will benefit from this decision the rest of his life.

Was this a spiritual or a neurochemical experience? Possibly both. It is reasonable to assume **our spirits use many aspects of our mortal bodies to receive guidance from the Holy Ghost in making correct choices.**

We are taught by President Russell M. Nelson, MD, that mortal bodies are imperfect.[19] They can and do have weaknesses. While it is relatively simple to separate issues of agency and character from medical problems "below the neck," "supratentorial" problems appear different. If a demented patient tells a lie, for instance, is that moral indiscretion? Probably not. Is a 12-year-old who forgets his morning ADHD medication and impulsively lies about it evidencing a character flaw, or should such untruth be excused as psychopathology? **Are such choices determined by *character* or by *ADHD*?** It seems reasonable to hope for some process that might perhaps insulate our spirits from the influences of neurodevelopmental illnesses such as ADHD and the poor moral decisions we make because of them (and for which we might otherwise be held accountable). In young adults, untreated ADHD all too often leads to consequences that change the direction of their entire life journey. Which raises the question: if untreated ADHD leads to psychosocial impairment, can such impairment eventually lead to genuine character flaws that might not have developed had ADHD been identified and treated? However you personally answer such questions, it seems clear that treating neurodevelopmental illness to improve the ability of our patients to make good moral choices **is a goal particularly worthy of LDS physicians.**

Symptoms and Consequences of ADHD across the Lifespan

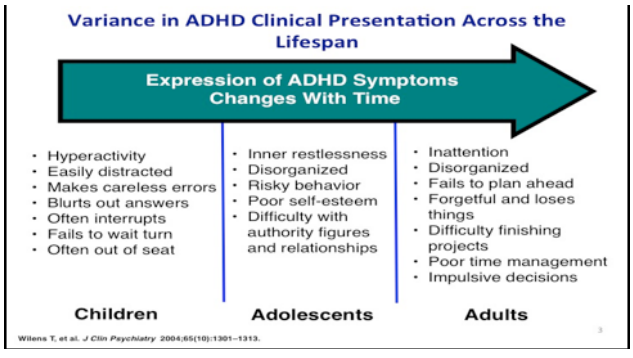

Figure 2

The statistics for untreated young adult ADHD are fairly grim—ADHD is an illness whose symptoms migrate throughout development, as do the deficits that follow (see figure 2). *Untreated ADHD children* are hyperactive, easily distracted, and interruptive. *Untreated adolescents* are frequently bored, engage in risky behaviors, and struggle with self-esteem. *Untreated young adults* are disorganized, make impulsive life decisions, and fail to plan ahead. Longitudinal studies suggest that young adults with untreated ADHD drift toward lower occupational and economic status, are less likely to finish college or stick with a job, are at twice the risk to separate in marriage, and have rates of substance use three times higher than the general population.[20, 21] They have lower self-esteem, have difficulty finding purpose in life, have higher rates of incarceration, and are more likely to commit suicide.[22] What begins simply as a genetic possibility gradually, insidiously, disrupts cognitive processes, ***processes that should have resulted in the growth of reasoning, agency, and moral choice, but instead yield impulsivity and emotional frustration that can cascade into personal chaos.*** ADHD is a disorder of chaos, where butterflies flap wings at home and a tsunami erupts at school.

Maturational Delay

Neurodevelopmental studies by Shaw et al. demonstrate a 2- to 3-year delay in maturation of the prefrontal cortex in children and adolescents with ADHD compared to non-ADHD controls.[23] Prefrontal regions in ADHD young adults continue to show the effects of this delay (see figure 3). Because the prefrontal cortex and associated circuitry mediate high-level decision making, **it is not surprising that untreated ADHD young adults have difficulty with choices of *all* kinds: academic, pragmatic, ethical, and moral.** Additionally, in early adulthood as ADHD brains continue to mature at delayed rates, and as young adults face the growing demands of living in an adult milieu, the collective increase in stress heightens the risk of secondary stress-related diagnoses.

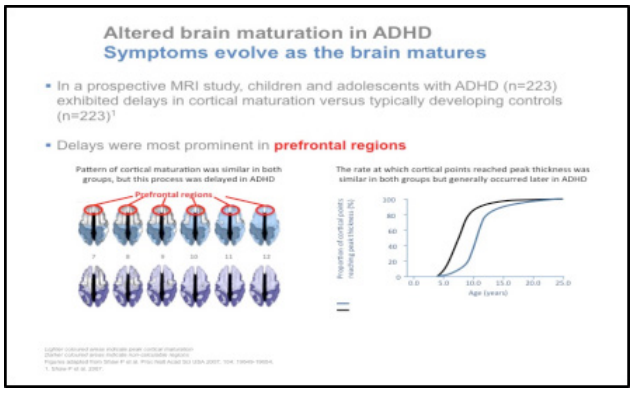

Figure 3

Can Treatment Make a Difference?

Can the functional deficits of untreated ADHD be mitigated in young adults previously untreated with treatment, or is it too late? Undoubtedly the best treatment is to redouble our efforts to diagnose the disorder in childhood, and treat aggressively until they *are* young adults. Research indicates, however, that treating symptomatic ADHD at *any* age has benefit, and when started in young adulthood, it decreases psychosocial impairment, increases the likelihood of completing college, and lowers rates of drug and alcohol use disorders.[24, 25] If necessary, beginning treatment as a young adult is by no means hopeless.

Studies in Denmark have shown that untreated ADHD in young adults is associated with significantly increased morbidity and mortality.[26] Utilizing the Danish birth registry, Dalsgaard and colleagues found that on a nationwide basis adults with ADHD in Denmark had a **325% increased mortality rate** compared to non-ADHD individuals within the same population. These investigators also found ADHD treatment in adolescents and young adults reduced visits to emergency rooms in Denmark—*nationwide they found a 25–37% decrease in emergency room visits among ADHD individuals receiving treatment versus those not receiving treatment.*[27]

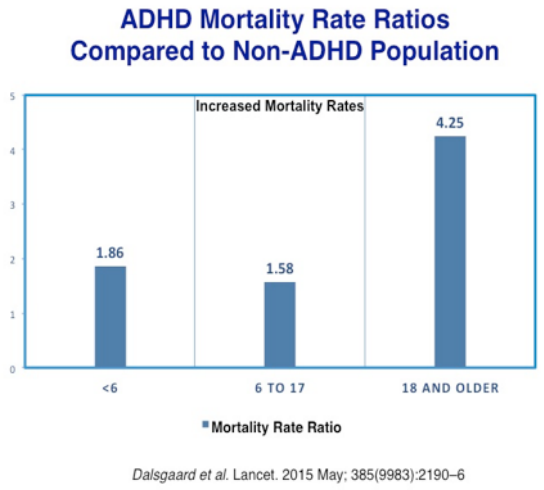

Figure 4

ADHD in Young Adult Latter-day Saints

What is the prevalence of ADHD in young adult LDS populations? We don't really know. The prevalence of depression in the LDS population has been examined to some extent—the best data coming from LDS researchers. Generally, Latter-day Saints enjoy lower rates of depression and substantially lower rates of substance use disorders than the general US population.[28]

But the prevalence of ADHD in LDS young adults has not been specifically examined (or at least reported). Certainly, pertinent questions might be posed. Does untreated ADHD have a measurable impact on spiritual growth? Are there differences in the abilities of treated and untreated ADHD young adults to acquire the cognitive skills needed to self-regulate and to make good decisions, including moral decisions? Do such differences themselves differ between LDS and non-LDS young adults? Finally, if differences occur, might they inform us about the impact ADHD can have on moral development?

The demanding environment of full-time missionary service presents an opportune setting in which to assess the impact of ADHD in LDS young adults and its potential effects on self-regulation and the capacity to make moral decisions. As LDS physicians know well, missionaries face challenging expectations and unfamiliar stresses. Many cognitive and emotional skills are required for mission success: maintaining mission focus, planning, prioritizing, problem solving, and inhibiting unwanted impulses, all while growing in character and testimony in the process.

Missionary Study

During 2011–2013, a self-administered, 20-item instrument of psychosocial function—the Functional

Assessment Screening Tool (FAST)—was administered to 473 full-time missionaries, ages 18–25, serving in the Midwest.[29, 30] Sampled missionaries also completed a scale of psychopathology (Missionary Outcome Questionnaire) and were individually rated by their mission presidents for overall missionary function on a 7-point scale. The **primary outcome measure** in this naturalistic observational study was the percent of missionaries who completed missionary service versus missionaries who returned home early. Missionaries with and without ADHD, treated and untreated, were compared to missionaries with other mental health diagnoses or no mental health diagnosis. **Secondary outcome measures** included the incidence of mental health diagnoses in the mission sampled (96% completion rate) and the strength of correlations between missionary functionality as measured by the FAST score, mental health diagnoses, and psychological health (MOQ score).

Results of Missionary Study

Of 473 missionaries sampled, 43% (N=208) had a mental health diagnosis, and 21% (N=52) of the missionaries reported current ADHD with 43 taking AHDD medication. In all, 9% (N=43) of missionaries required an early return for any reason, and 4% (N=11) of early return missionaries had no mental health diagnosis. Of those missionaries with a mental health diagnosis, 15% (N=32) required early return, and **21% (N=11) of missionaries with ADHD required early return.** In this study, no unmedicated missionary with ADHD completed their mission. (See figures 5–10.)

Conclusions from Missionary Study

A significant percentage of in-field missionaries in the Midwest had a mental health diagnosis. Mood disorders were most common, followed by ADHD, then anxiety disorders. Most missionaries with mental health diagnoses

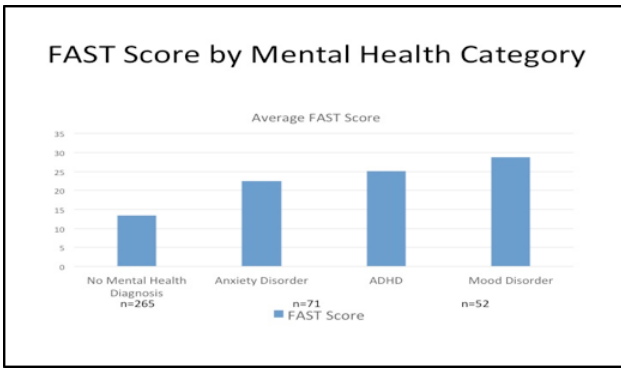

Figure 5

FAST Score by Diagnosis

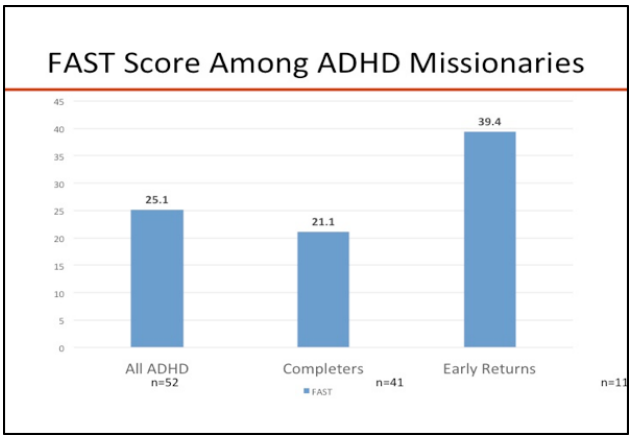

Figure 6

Mission Completion Rate of ADHD Missionaries

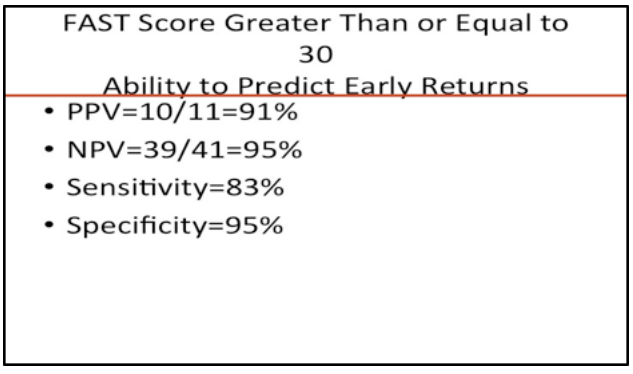

Figure 7

FAST Screening Predicted Mission Completion

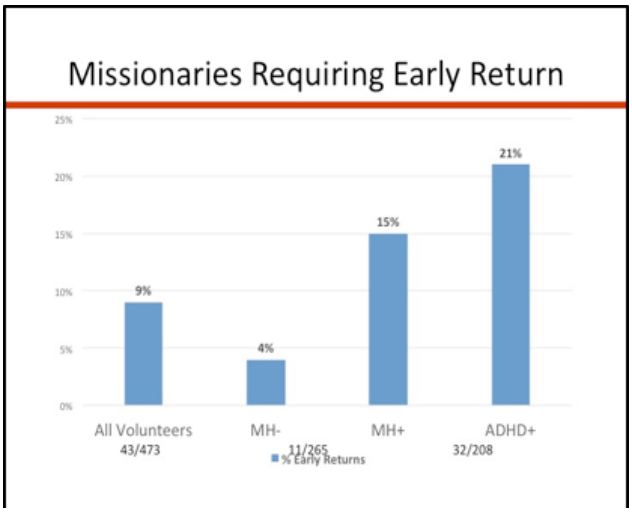

Figure 8

Early Return in ADHD Missionaries

Figure 9

Missionary FAST Scores

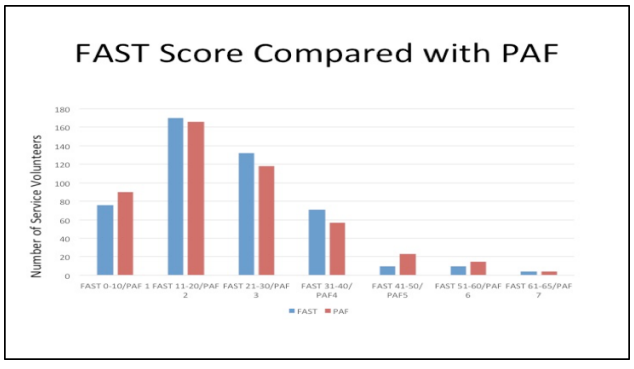

Figure 10

FAST Score Predicted Mission President's Rating of Function

successfully completed their missions. The highest rate of non-completion was seen in ADHD missionaries (21% required early return). Level of functional status as recorded on the FAST correlated highly with mission president ratings of function (p= .82). The FAST was highly predictive of mission completion, with 83% sensitivity and 95% specificity. (The FAST is currently in use in online missionary training, so hopefully larger data sets will be generated.) Further study of ADHD in serving and prospective missionaries, as well as missionary function, executive functioning, and decision making is indicated.

Diagnosis and Recognition of ADHD Symptoms

ADHD is a pervasive condition that starts in childhood (although often unrecognized until adulthood) and involves 18 core symptoms. (See table 1.)[31] Nine symptoms involve inattentive symptomatology, nine hyperactive/impulsive. Because longitudinal studies suggest ADHD adults have difficulty remembering symptoms from early childhood, DSM-5 diagnostic criteria have been modified to allow for symptom onset before age 12 when diagnosing adults.[32]

Of course, there is no "test" for ADHD (or for any psychiatric diagnosis, for that matter), although frequently patients ask for one—diagnosis is clinical. Much as an internist combines information from physical exams, CXR, and CBC to make a diagnosis of pneumonia, establishing a diagnosis of ADHD requires combining sources and types of information, assessing symptom severity and functional impairment over time and setting. Figure 11 outlines an algorithm which can help primary providers in developing a differential diagnosis for adult ADHD.

Table 1—**DSM-5 ADHD Symptoms by Type**

Attention	Impulse Control	Psychomotor Indicators	Executive Function
• Fails to attend to details or makes careless mistakes in schoolwork • Difficulty sustaining attention • Does not seem to listen • Easily distracted • Loses things • Forgetful	• Difficulty engaging in leisure activities quietly • Talks excessively • Blurts out answers • Difficulty waiting turn • Interrupts others	• Fidgets with hands or feet • Leaves Seat • Hypermotoric: acts as if "driven by a motor" • Runs about in situations in which it is inappropriate	• Does not follow through/fails to finish work • Difficulty organizing tasks and activities • Avoids tasks requiring sustained mental effort

As time is usually at a premium in primary practice, an algorithmic approach not only increases diagnostic accuracy, it is time efficient.

Begin with a careful history. Mental health information is often subjective, making it important to question collateral sources of information: spouses, family, friends, teachers, coworkers. In our practice new patients complete screens and scales in the waiting room. We start with a general medical data sheet which asks for demographics, past and present illness, hospitalizations, current and past medications and responses, history of other psychiatric treatments (e.g. psychotherapy, ECT, TMS, ketamine), drug sensitivities, social and family history with particular attention to education and employment, how past mental health diagnoses were arrived at. New adult patients additionally complete the ADHD-RS, a scale comprised of the 18 DSM-5 core symptoms, a screen for bipolar disorders (MDQ), a depression screen (PHQ-9), and a 20-item Functional Assessment Screening Tool (FAST), which assesses current psychosocial function, including the ability to accomplish daily activities.

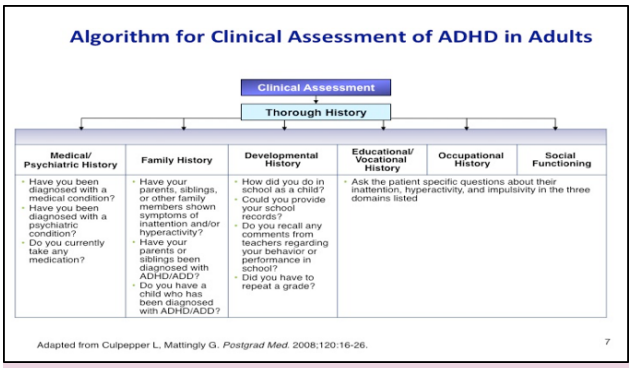

Figure 11

Why Use Rating Scales?

Just as it is essential for an internist to know a patient's blood pressure when treating hypertension, ADHD rating scales are similarly useful in managing ADHD patients. A variety of sensitive and specific ADHD rating scales are available, which patients generally can complete in the waiting room.[33,34,35,36]

The **ADHD-RS (ADHD-Rating Scale)**, the **Vanderbilt** and **Conner's Rating Scales** have been shown to be consistent measures of core ADHD symptoms and are *sensitive to treatment effect.* Rating scales of executive function include the **BRIEF (Behavior Rating Inventory of Executive Function)**, which is impaired in ADHD individuals.[37]

Challenges to diagnosing adult ADHD include: 1) preconceived patient bias: "I took a test online so I know I have ADHD," 2) retrospective identification of childhood symptoms that can be inaccurate, 3) comorbidity, and 4) adults who adopt compensatory behaviors that can mask symptoms.

Clinical Tip 1

To count toward diagnosis, ADHD symptoms should be "global and pervasive," meaning severity must be sufficient to have caused significant functional impairment in more than one setting, observed by more than one person, over an extended period of time.

Goals for Treatment

Effect size is a statistic that allows efficacy comparisons between studies examining different treatments, using different measures, and using differing protocols. Assuming interval-level data, effect size is calculated as the mean difference between treatment and control groups divided by the pooled standard deviation. **The higher the effect size, the greater the difference between treatment and control group,** and the more effective treatment is presumed to be. By way of contrast, antidepressants typically have effect sizes of about .4, and antibiotics have effect sizes of about .5.

ADHD medications have some of the highest effect sizes of any medical intervention. Stimulant effect sizes in treating ADHD typically range between

Clinical Tip 2

ADHD rating scales should:

1. *Quantify symptom severity and impairment during interviews.*
2. *Have validated sensitivity to treatment change and should reliably track improvement.*
3. *Allow collateral sources to provide input (teachers, family, friends).*
4. *Increase the value of doctor–patient time.*
5. *Be time efficient.*

Which scale is best? The one you actually use.

Clinical Tip 3

Oppositional thoughts and behaviors can trouble ADHD individuals of any age. Difficulties shifting from preferred to non-preferred tasks and impaired recognition of the impact of their behavior on others are common in ADHD young adults. Therapeutic approaches that teach patients to "unstick" when locked into ineffective behaviors, that develop abilities to appreciate the emotional impact of their behavior on others, and that improve their ability to transition smoothly from preferred to non-preferred tasks can lessen oppositional patterns and improve the emotional functioning of ADHD young adults.

.8 and 1.8. Response to specific medications is highly individual. A patient may respond well to a methylphenidate preparation but fail to respond or have adverse effects to amphetamines.[39] These patients may do better with atomoxetine, the (only) non-stimulant with an FDA indication for ADHD adults. Atomoxetine may be combined with stimulants, allowing for lower stimulant dosing.

Studies highlight that it is easy for clinicians to settle for partial improvement while still leaving patients with ongoing symptomatology. In clinical research, response is usually defined as a 25–30% symptom reduction. Patients and clinicians may be tempted to be satisfied with 30% improvement, although evidence is clear that such minimal improvement leaves patients with significant functional impairment. For most patients, further improvement is possible with careful tracking of symptoms and attention to dosing.

Comorbidity

Numerous studies in the United States and other countries have found that ADHD at all ages and particularly in adults presents with a constellation of comorbid challenges and disorders. Children with ADHD frequently have associated learning disorders or developmental disabilities, including difficulties with sensory integration, working memory, speech and language delay, and difficulties with reading comprehension. A baseline battery of neurocognitive testing to detect specific learning challenges is highly recommended in children, adolescents, and young adults with ADHD and severe learning difficulties. This may prove of great benefit by the time such students reach college age.

Emotional Impulsivity and Poor Frustration Tolerance

Many ADHD young adults struggle with poor frustration tolerance. These symptoms often present as impatience and irritability out of proportion to the situation, leading easily to emotional fragmentation, or "meltdowns."

Meltdowns may last only minutes but they disrupt function far longer. During such times of emotional dysregulation the ability to make reasonable decisions is impaired, negative emotions reinforce negative self-talk, and there is often a feeling of losing control. Such thoughts and emotions all too often lead to impulsive, poor choices, and subsequent questionable or inappropriate behavior.

Comorbid Mood and Anxiety Disorders

Of young adults with ADHD, 43% of patients have anxiety disorders and 37% have mood disorders. Comorbidity worsens prognosis: one diagnosis usually complicates the other. One particular concern is the possibility of **bipolar disorder comorbid with ADHD**. Sorting this out can be challenging, and psychiatric consultation should usually be sought, if available. A high number of patients diagnosed with ADHD as children will be diagnosed with bipolar disorder as young adults. As may be imagined, this epidemiologic confluence presents challenges when the Missionary Department reviews the applications of prospective missionaries. Epidemiologically, it is likely that some ADHD prospective missionaries will be re-diagnosed with bipolar disorder later in life; statistically some will be missionaries at the time. **It is possible to have *both* ADHD and a bipolar disorder** and also possible that stimulant medication for ADHD will *not* disrupt treatment for bipolar disorder. Unfortunately, that is not always the situation. In some patients, ADHD stimulant medication can provoke mania, hypomania, and even depression. A diagnosis of bipolar disorder or emerging bipolar disorder should be considered for all patients taking stimulants. How to distinguish between ADHD symptoms and bipolar mania? Geller et al. at Washington University found that when children and adolescents with ADHD were compared to those with bipolar disorder, five screening questions emerged as the

best way to differentiate ADHD patients from those with bipolar disorder:[45]

1. Racing thoughts
2. Decreased need for sleep
3. Elated mood
4. Grandiosity
5. Hypersexuality and hypersexual behavior

The co-occurrence of autistic spectrum disorder and ADHD in young adults should always be considered. Approximately 50% of young adults in the autism spectrum will have comorbid ADHD. These patients tend to be exceptionally sensitive to adverse effects of traditional ADHD medications, and should be started on very low doses to minimize tics, twitches, insomnia, agitation or emotional fragmentation.

Prioritization for Treatment among Comorbid Conditions

The old adage "treat mood and anxiety first" before treating comorbid ADHD has long been considered the recommended standard of care. Recent findings by Chen et al. from a nationwide longitudinal study of ADHD and comorbid major depression (MDD/ADHD) may cause clinicians to rethink this strategy.[33] Their study identified 1,891 patients with MDD/ADHD and compared them with 1,891 age and sex matched patients with major depression only. Patients with *combined* MDD/ADHD had a **232% increased risk of treatment resistance to antidepressants compared with patients with major depression *only.*** Further, individuals receiving consistent treatment for ADHD had a significantly lower risk for developing resistance to antidepressants in the future. When ADHD is comorbid, concomitant treatment of ADHD often yields the best therapeutic response. **Treating mood or anxiety may be only half a solution,** particularly with young adults with histories of risky or impulsive behaviors because of ADHD. Concomitant treatment of ADHD can allow young adults who in the past may have been derailed by risky and inappropriate behaviors to regain their capacity for self-regulation—and thereby be able to make and stick to moral decisions that help them listen to the Spirit and avoid destructive mistakes of the past. In such sensitive times of life, clear focus and clear resolve are needed—capacities that ADHD treatment may help troubled young adults return to a path of stability in other life areas.

ADHD young adults with a history of substance use disorders should be carefully monitored for potential misuse or diversion of stimulants. Numerous studies have shown that either long-acting stimulants or non-stimulant medications help stabilize emotional impulsivity and can, with care, be used.

Clinical Tip 4

Young adults with comorbid ADHD and autistic spectrum disorder may appear distracted with their obsessive tendency to perseverate on idiosyncratic tasks. Parents sometimes refer to this as hyperfocusing, but it is actually a symptom of ASD, not ADHD. If medication seems required, try SSRIs or low doses of high potency atypical antipsychotics (e.g. risperdone).

Immediate Release, Sustained Release, and Delayed Release: Choosing between Medication Options

Stimulants are considered the first line of pharmacologic treatment option for adults with ADHD; however, treatment has progressed from what initially was simply a decision between short-acting methylphenidate versus short-acting amphetamine, each of which required dosing several times per day. Various strategies have been developed by pharmaceutical manufacturers to avoid intraday dosing. Early modifications involved slow-release wax matrix technologies that were quite unpredictable. Next came sustained-release medications involving beaded technologies with a percentage of the medication released in immediate release beads and another percentage of beads coated with a pH sensitive layer preventing release until reaching the less acidic environment of the small intestine. The OROS release system has been very successful, although generic manufacturers of Concerta do not generally use this expensive technology in generic preparations of methylphenidate. The pro-drug Vyvanse is lisdexamfetamine attached to a lysine molecule, which together is too large to cross the brain barrier. Enzymes in the bloodstream gradually and smoothly cleave the lysine, leaving lisdexamfetamine to pass

Clinical Tip 5

You will see higher serum levels with lower doses of short-acting stimulants (e.g. methylphenidate IR and dextroamphetamine IR) than with higher doses of long-acting stimulants. Our brains do not enjoy rapid shifts in the serum concentration of stimulants!

Table 2—**FDA-Approved Medications for ADHD Adults**

Medication	Adult Dosing	Generic Available	Comments
Atomoxetine (Strattera)	40–100mg once daily dosable a.m. or p.m.	Yes	Non-stimulant selective SNRI; dosed once daily either a.m. or p.m.; low abuse potential
Dexmethylphenidate XR (Focalin XR)	10–40mg a.m.	Yes	May need to divide dose
Lisdexamfetamine (Vyvanse)	20–70mg a.m.	No	Pro-drug; effective 10–14 hours
Mixed amphetamine salts XR (Adderall XR)	10–20mg a.m.	Yes	Higher than recommended doses may be required; abuse potential
OROS methylphenidate HCl (Concerta)	18–54mg a.m.	Yes	Generic versions do not use OROS delivery system; activity 8–10 hours
Mydayis (Mixed amphetamine salts)	12.5–50mg a.m.	No	Triple bead system; activity 16 hours

into the brain. Several triple bead release preparations are currently in development and designed to extend clinical efficacy of both methylphenidate and dextroamphetamine for up to 16 hours.

In the Pipeline

A number of new molecules are currently in development for the treatment of ADHD. A partial list includes: dasotraline, viloxazone, centanafadine and edivoxetine, and molindone-XR for aggression associated with ADHD, and the long half-life stimulant mazindol.[34]

Summary

Our understanding of the neurobiology and symptomatic expression of ADHD has advanced dramatically in the past decade. Associated with these advances are new options to individualize treatment. Optimal treatment begins with measuring and tracking ADHD symptoms with the goal of treating to full symptomatic remission. Individual clinical presentation and patient response guide a clinician's choice between chemical classes of medications: methylphenidate, amphetamine, or non-stimulant. A developmental understanding of the functional difficulties encountered by ADHD patients throughout the lifecycle, coupled with more consistent use of ADHD rating scales will enable clinicians to provide optimal treatment to each patient.

Takeaways

1. ADHD is a neurodevelopmental disorder with measurable symptoms, affecting 4.4% of young adults.
2. ADHD causes functional impairment in educational, occupational, social, and spiritual spheres.
3. ADHD is a highly genetic condition.
4. ADHD impairs some of our most human capacities and can interfere with moral choices. In young adults it may delay, or even prevent, aspects of character development.
5. ADHD is diagnosable and treatable in young adults.
6. Untreated ADHD impacts the functional capacity of full-time missionaries.
7. Diagnosis and treatment of ADHD should be methodical and utilize standardized metrics.
8. ADHD is often comorbid with other mental health conditions.

Conclusion

In a lecture to Harvard University at the turn of the century, Williams James, founder of American psychiatry stated to his colleagues, "We have business with God." He further noted that "Empiricism is not skepticism, and the value of saintliness may be tested by the human value of its fruits."[35] **As Latter-day Saint physicians, we must be men of science who have business with God.** We should use empiricism, as Alma recommended,[36] combining the strength of evidence-based medicine with the strength of faith to help our patients heal from disorders that threaten their ability to self-regulate, arrive at moral decisions, and rejoice with God.

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Roger and Nancy Hiatt: Modern-Day Pioneers

by ???????

On March 8, 1929, the youngest of ten children was born in the home of William Henry Hiatt and Gracie Darling Shelton Hiatt. He was named Roger in honor of a family favorite LDS missionary who had served in the Mount Airy, North Carolina area some time before. Both the Shelton and Hiatt families had a long tradition in The Church of Jesus Christ of Latter-day Saints, tracing back to the earliest days of the Church. In fact, Roger's grandfather Jesse Lafayette Hiatt was one of five brothers who, along with their mother, Mary Hiatt, joined the Church in the 1850s in North Carolina. Three of the brothers then made the 2,000-mile trek to Utah while Jesse Lafayette and one brother remained behind. In the summer of 1938, William and Gracie loaded little Roger and five of his older siblings into a converted school bus and made the 2,000-mile journey to Utah themselves to be sealed in the Manti Utah Temple, as there was no temple closer to them at that time. During the month-long trip, the family stayed with Hiatt relatives in Payson, Provo, and Salt Lake City. While in Salt Lake, William and Gracie took the children to obtain patriarchal blessings from the presiding Patriarch of the Church, George F. Richards. Although just 9 years old, Elder Richards invited Roger to receive his patriarchal blessing, as it would likely be decades before he would have the opportunity again.

A short nine years later, Roger would make a journey of 600 miles west to pursue professional education in Memphis, Tennessee, at the Southern College of Optometry. Upon his arrival in July 1947, Roger found the only LDS congregation of about 80 people meeting in a converted house on Barrett Street. The closest temples to Memphis were still 1,500 miles away, in Utah and Arizona. Yet he attended church faithfully, and he held several callings while excelling in his professional training. Once he had completed optometry school, Roger joined the navy in 1951 as a medical officer to pay off loans from relatives and save money for his future. After completing nearly three years of service in the San Francisco area, Roger enrolled at Brigham Young University to complete his undergraduate education and received his bachelor of science degree in April 1954 in preparation for postgraduate education in medical school.

Although he was from North Carolina and had spent years on the West Coast, Roger's choice for medical school seemed obvious to him: The University of Tennessee in Memphis. On January 1, 1955, he enrolled in professional school in Memphis as he had nearly eight years before. Again, he located the only LDS congregation there, now a ward of over 200 people meeting in a converted Presbyterian church on the corner of Autumn and Dickinson Streets. Again he attended faithfully while pursuing his medical studies year-round until he took a quarter off of school to return home to Mount Airy, where he worked as an optometrist with Dr. Green in the summer of 1956. It was there that he fitted an attractive history

teacher, Nancy Ann Beamer, with some new glasses. That appointment proved to be the beginning of something very special, as he baptized her into the Church in April 1957 and later marry her on June 29, 1957 in the same Mount Airy Ward building.

The newlyweds attended the Memphis Ward together, and Nancy taught high school history until Roger's graduation from medical school as valedictorian of his class in April 1958. Wanting to be closer to their aging parents, Roger and Nancy moved to Richmond, Virginia, to complete internship and residency training in ophthalmology. After the birth of their two daughters, Annita and Miriam, Roger and Nancy retraced the route Roger's parents had taken 20 years earlier, driving more than 2,000 miles each way to be sealed in the Manti Utah Temple in 1961, still effectively the closest temple to them. After the birth of a son, Roger, Jr., the family moved to the Washington, DC area to complete a fellowship at Children's Hospital under the tutelage of the world's first pediatric ophthalmologist, Dr. Frank D. Costenbader.

Having completed a fellowship under the direction of such a renowned pioneer, Roger and Nancy could have settled almost anywhere in the United States. There was still a strong pull to remain close to their hometown and elderly parents. Yet both felt the profound impression to return to the city of their beginnings as a couple. In July 1964, they returned to Memphis, Tennessee, and the solitary ward meeting in the converted meetinghouse. Few could have dreamed that, in the ensuing twenty years, the Church would grow from one ward to two, then a stake, then two, and then three with Roger presiding over the Memphis Tennessee Stake for a decade. While president of the Memphis, Tennessee Stake, Roger and his counselors set long-term goals for the Church in that area. They envisioned the construction of a stake center (now on Walnut Grove Road), the division of the stake (twice), and most ambitiously, the completion of a temple in the greater Memphis area. This final goal likely would have seemed impossible to most people, as there were only 16 temples in the entire world at that time. Nevertheless, imagine the excitement when the Washington, DC Temple was dedicated on September 17, 1974, putting a temple just less than 1,000 miles from Memphis! At last, a temple existed right where they had been living a decade before. While Nancy cared for their three growing children, Roger organized biannual stake youth trips to Washington, DC so their children, along with hundreds of others from the Memphis area, could perform baptisms for the dead.

Nine short years later, Roger had the privilege of offering the closing prayer at the dedication of the Atlanta Georgia Temple on June 1, 1983, cutting the distance to the nearest temple in half to only about 400 miles. After Roger was released from the stake presidency in 1984, it was Nancy's turn to serve on the stake level as stake Relief Society president, and Roger was called to be the stake patriarch. Both served faithfully in their separate capacities as they had for decades until Roger and Nancy were called together to preside over the Philippines Baguio Mission, beginning in July 1994. Months later, the Nashville Tennessee Temple was announced on November 9, 1994. Although this development would reduce the trip to the temple to 200 miles, it seemed to eliminate the possibility of building a temple in Memphis anytime in the foreseeable future. However, community opposition gathered against building a temple in the Nashville area, and no site suitable for a traditional temple could be secured for several years. Meanwhile, just prior to their release from missionary service, the St. Louis Missouri Temple was dedicated on June 1, 1997, reducing the trip to the temple from Memphis to about 300 miles each way.

October 4, 1997, proved to be a pivotal date for Roger, Nancy, and all the Saints living in the Memphis area. On that date, President Gordon B. Hinckley announced the concept of building smaller temples in remote areas where Church membership was insufficient to support construction of a traditional larger temple. He emphasized that these temples would be placed on the grounds of existing meetinghouses when possible to contain costs and maximize use of property. Immediately, this opened the door for the Nashville Tennessee Temple to proceed, as a meetinghouse in Franklin, Tennessee, just south of Nashville, already existed on property large enough to accommodate a small temple as well, thus overcoming the obstacle presented by property zoning and community opposition. In addition, the Memphis Tennessee North Stake Center had been built several years previously on property large enough to accommodate a smaller temple as well. President Denton of the north stake would later remark that he had been quite reluctant to recommend such a large piece of land for the stake center but felt inspired to do so without knowing of the potential of building a temple on that site in the future. Thus, on September 17, 1998, the Memphis Tennessee Temple was announced! As construction timetables proceeded, the Memphis Tennessee Temple was dedicated on April 23, 2000 and was the first temple completed in Tennessee—one month before the Nashville Tennessee Temple was dedicated.

Years later, Roger and Nancy would serve together once more. This time, they served as counselor to the temple president and assistant to the temple matron from 2012 to 2015. Imagine, what once was an experience reserved only for members living 2,000 miles away had become a reality for Roger and Nancy right in their own backyard. What a testament of faith to them and to all those who have lived and served in the Memphis, Tennessee area!

Reminiscences of an Area Medical Advisor

BY DAVID R. HAYMOND

It goes without saying that the experiences of each AMA serving for The Church of Jesus Christ of Latter-day Saints will be unique, with the major variables being the area where you serve and the professional training and experience that you bring to the assignment. Following are some observations and anecdotes from three separate missions that we served, the first as humanitarian missionaries in Albania, and the next two as AMAs in the British Isles and in Peru and Bolivia. The *we* references throughout refer to David Haymond and my wife, Joan. I was raised in Springville, Utah, got a BS in chemistry from BYU, an MD from the U of U (1961), a rotating internship at Letterman US Army Hospital in San Francisco, and 1 year of a surgical residency at Madigan US Army Hospital in Tacoma, Washington. I then did general practice for 14 years, 3 at Dugway Proving Ground for the army, and 11 years in American Fork, Utah. At this point we did a midlife career change, switching to psychiatry, including returning to the U of U for a 3-year psychiatry residency. From 1988 to 1994, I worked at Utah Valley Regional Medical Center. During this period, missionaries who had to leave the mission field for psychiatric reasons were referred to our hospital for treatment, starting me on a path that would continue through the remainder of my professional career—that of caring for LDS missionaries. Working in this environment gave me many opportunities for growth, the greatest of these understanding the huge advantage of combining the guidance of the Spirit with my medical knowledge in trying to help the Lord heal his children. What a marvelous improvement this increased awareness has made in my job satisfaction.

An anecdote from the UVRMC experience is as follows: most of our missionary patients were either unable to or chose not to return to their full-time missions, but there were exceptions. I'll always remember two young sister missionaries who were admitted the same week. They came from two different European missions, and both were considering suicide with diagnoses of obsessive-compulsive disorder. At about this time it was being recognized that specific antidepressants were showing success in treating OCD. We started these two sisters on the antidepressant in addition to other therapies. With the amazing motivation and spirit that they brought to treatment, they gradually recovered and were both able to return to their missions. Their families were obviously overjoyed. We received letters of thanks from their families as well as notification of the successful completion of their missions.

HUMANITARIAN MISSION TO ALBANIA

After six years working at UVRMC, we received an unexpected call from the Humanitarian Missionary Office asking us to serve a humanitarian mission in Albania. They wanted us to follow up on the very successful work begun by Dr. Thales and Sharone Smith. Albania in 1994 was a newly opened country for missionary work and was a satellite zone attached to the Switzerland Zurich Mission. While not acting officially as an AMA in Albania because of our remoteness from Zurich, I was asked by our mission president to look after the health issues of

our 25–30 young missionaries. In this role, I arranged an understanding with two different army hospitals to cover our emergency problems and handled the routine health issues myself. Examples of the types of challenges we covered were: 1) a senior missionary sister fell and fractured her wrist. We escorted her to the pre-arranged army hospital where a young orthopedic officer set and casted the wrist (unfortunately the care was not adequate and required further care when she returned to the United States; and 2) Laceration of the ankle of a young sister missionary, which was inflicted by a beer bottle thrown at her by an intoxicated man; I was able to close the wound with steri-strips.

When routine illnesses required medications, I was able to get the medications from a newly opened Italian pharmacy; a copy of my Utah medical license was adequate to acquire the medications.

AMA CALL TO THE BRITISH ISLES AREA, 2004–05

After submitting our mission application, we received a phone call from the missionary medical offices requesting us to accept an AMA calling; they gave us a choice of locations that would open soon, and we chose the British Isles Area. The area was comprised of seven missions located in England, Wales, Scotland, and Ireland. We found a comfortable semidetached cottage in the very old village of Whittle-Le-Woods, one mile from the Preston England Temple and MTC campus. The MTC census averaged 50–75 missionaries from all over the world; each newly arriving group would be prepared in 19 days to serve in our 7 missions.

Anecdotal examples from the British Isles: 1) As AMA we assisted greeting the newly arriving missionaries at the front door to check medical documents. One day our usually very proper young female receptionist approached me giggling and excited. She told me that Donny Osmond (who was very popular in England) was on the phone wishing to speak to me. When I took the phone, I found a polite and respectful Donny Osmond, concerned that his newly arrived son had left his immunization record at home and asking how he could get it to us. We gave Father Osmond our FAX number and assured him that his son would be just fine. It was very entertaining to hear our receptionist relate this incident around the MTC over the ensuing days and weeks; and 2) A tiny young sister missionary from India arrived carrying all of her belongings in a case the size of a lunch box; she spoke adequate English but was very shy and frightened. Over the next 24 hours, it was discovered that she had never been out of her small rural village and was totally unacquainted with indoor plumbing, washers and dryers, and other modern conveniences. In my interview, she was tearful and dejected, fearing that she would be unable to learn missionary skills. At this point, our loving MTC president and wife interceded, assigning as her companion a tall, capable US sister (Elder Marvin J. Ashton's granddaughter) and took her shopping for a wardrobe, and other necessities. Under this loving friendship and mentorship, the little sister from India blossomed into a happy missionary. Via occasional contacts with her mission president, we learned that she became a very effective missionary in London.

3) A young elder from Eastern Europe arrived, unable to even say "hello" in English. The MTC president considered asking for a transfer to his home country, but the elder pleaded for a chance to learn English, the request backed by several of his friends. His request was granted.

Over the next 17 days, we all observed him in a quiet corner of the cafeteria, studying from a dictionary and scriptures, while the other missionaries were relaxing and having fun. On the 17th day of each rotation the missionaries-in-training all came together for a testimony meeting. When it was time for this Eastern European elder to come to the front and speak, he bore a strong, emotional testimony. I'll never forget his concluding remarks. While all in the room were openly weeping, he said, "It is a miracle that I am standing here bearing my testimony in English, and the second miracle is that you are understanding me." We all knew that we had observed a miracle of the Spirit.

Most of our medical contacts with our missionaries began with a phone call from their mission president or mission president's wife and could usually be resolved with a talk by phone with the missionary. Occasionally, however, in the British Isles the mission president would ask us to make a long-distance house call. At their request, we would head for the requested site in our little Vaux Hall coupe to see what we could do. Examples of these calls are as follows: 1) A mission president asked us to drive to the hospital in Middlesbrough, on the Northeast coast, where one of his elders was gravely ill. He was comatose and having seizures. The tentative diagnosis was that the condition was due to E. coli toxins from food he had bought from a street vender. When we arrived several hours later, we found the elder still having seizures, despite treatment. We met with his doctors and found the hospital and care to be of high quality. We were also able to meet with the elder's family. Despite the terrifying condition we observed their son to be in, they were calm and expressed great faith that he would be healed. The miraculous rest of the story reflected the solid faith of the family and that of their son's companions. Briefly, the elder stopped seizing, eventually regained consciousness, became intimate friends with his doctor and nurses, and taught them the gospel of Jesus Christ. After six weeks in the hospital, the elder was given a medical release and returned to his home

in the south of London. When he spoke in sacrament meeting after coming home, his doctor and one of his nurses, who had witnessed the miracle of priesthood blessings and reported that they were being taught by the missionaries, attending the meeting. Nothing is impossible with the Lord.

2) We were asked by a mission president's wife to see an elder with a severe rash. We drove to his flat, barely 30 minutes from the MTC, where we found an extremely itchy, scratchy, uncomfortable elder. Over two weeks of progressive symptoms, despite trying many creams and lotions, he was near the end of his endurance. The rash covered all of his trunk, his upper arms and legs, was fiery red, and had some small papules. He denied any change of cosmetics or soaps. They had spent the past week vainly searching for bedbugs or other biting critters. We sent photos to our consulting dermatologists in Salt Lake City without clarification. On our third visit to the elder's flat, we sat down with him and his companion and reviewed every facet of their schedule. We again noted that the companion had no sign of the rash. We finally discovered that the companions washed their laundry separately, and that the itching elder was very compulsive about cleanliness. A few weeks earlier, he had increased his laundry detergent from 1/4 cup to a full cup in each batch. He had not mentioned the change earlier because he had continued the same brand of detergent that he had used for years. We prescribed that the elder wash all of his clothing twice with clear water alone, and then go back to 1/4 cup. Over two weeks, the rash cleared completely.

3)The Leeds mission president phoned one day to inform us that one of his elders had been inspired to start a new church. He had openly discussed this plan with his companions and with his mission president, not appearing to see any contradiction between his proposal and with his status as a missionary of the LDS Church. At the president's request, we drove to the Leeds mission office to examine the elder. We found this young native of Scotland to be friendly and talkative, discussing willingly his plans for a new church. I could detect no signs of paranoia or hallucinations. The mission president had concluded that the elder could no longer continue serving as a missionary, an opinion shared by the Area office. They also agreed that Joan and I should transport this elder to his home. After giving him a precautionary light dose of an anti-psychotic medication, the three of us headed north toward his home. When we approached his home area in southern Scotland, I had the unsettling realization that my plan to have him guide us to his home could be a problem for this compromised young man (these were the days before GPS). But, not to worry, he guided us directly to his home. We were met at the door by his mother, expecting us because of a call from the elder's mission president. She greeted us cordially, grateful to us for getting her son safely home. She admitted that she had concerns about his ability to complete his mission, because before the mission he had had some problems. At that time, he had been given a preliminary diagnosis of schizophrenia, but since she had not agreed with the diagnosis, she had not mentioned it on his missionary application.

AMA CALL TO PERU AND BOLIVIA, 2006–08

After completing our British Isles mission, we made it known that we were not available for another mission call because we were caring for my 90-year-old mother. The medical missionary office remained discretely diligent, however, phoning me every 3-4 months and inquiring, "How is your mother doing?" In mid-2006, my sister asked to take care our mother, giving us a good opportunity to serve again. We chose the Peru and Bolivia (South America West) Area, having a desire to live in South America and to learn to speak Spanish. We got a good start on the Spanish with weekly tutoring at the Provo MTC, but in Lima we associated primarily with English-speakers and consequently we never did become Spanish speakers. We chose a newer, very nice, three-story apartment building, which was already home to two other senior missionary couples. The building was in a gated area approximately 100 meters from the Lima Peru Temple. We were comfortable there and felt safe. We loved being neighbors with the other two couples, and a fringe benefit was they have become some of our dearest friends even today. My wife and I were assigned to the Lima East Mission and also were asked to serve in the priesthood and Relief Society presidencies at the MTC, thereby allowing us to spend all day each Sunday learning with and teaching the wonderful missionaries. We were also asked to attend the temple weekly with the missionaries. We typically spent one other day each week at the MTC, doing sick calls and consultations for the MTC president.

One day weekly we spent at the Area office, a beautiful new building on the same campus as the MTC. Here, as in England, we were responsible for reviewing the medical portion of the missionary application forms submitted by prospective missionaries from the Area before the applications were sent to Salt Lake City. We read chest x-rays, checked immunization and health histories, and performed other duties. In the British Isles, the most common reason for holding up the missionary applications was obesity. In Peru and Bolivia, obesity was certainly not a common concern, but history of tuberculosis in the applicant or family or positive TB skin tests were common problems. A marvelous fringe benefit from this weekly work at

the Area office resulted from the fact that our assigned office was across the hall from the Area President's office. We enjoyed each of the three Area Presidents we served under: President Dunn and President Nash, but we got closest to President Walter Gonzales. He would regularly drop in while we were working, asking about our life in South America, about our families, and other things. President Gonzales on one occasion asked for me to study a problem with missionary nutrition. He explained that in the Area, most of the elders' and sisters' daily meals were prepared for them by *pensionistas*, usually sister members who frequently also provided rooms for the missionaries. President Gonzales explained that the missionaries were asking for more fresh fruits and vegetables with their meals, but the pensionistas were saying that increasing prices were making that impossible to do. President Gonzales wanted suggestions on how to get better diets for the missionaries without seriously straining the Church's budget. I started researching online and found that the new Harvard Food Pyramid was stressing beans as a healthy, inexpensive source of protein. When I reported this information back to President Gonzales, he implemented the change, reducing meats and adding beans to free up more funds for the fruits and vegetables. I found it ironic that in a part of the world where many of our types of beans originated (as in lima) we needed Harvard to help us re-introduce them.

Typically 2 days weekly we did sick calls for the four Lima missions at the Lima East Mission offices. The office was located in the heart of the business district of Lima, a city of 12 million people. We traveled downtown during the morning rush hour, a 45 minute ride, in small jitney busses. With the heavy, chaotic traffic, any form of travel was scary, but we soon grew to appreciate these little busses; they stopped at our corner every 10 minutes, were very cheap, and were much less frightening than our alternative—the taxis. Returning by jitney in the afternoons we were surprised and pleased to find that the driver's call for our stop was "Templo Mormones."

A typical AMA phone call would come from a mission president's wife. In a recent change, the wives had been called and set apart to be the first link in the missionary medical safety net, thus sharing an immense part of the load with both the AMA and especially their husbands. Her call to the AMA would include a description of the situation, her assessment, and the ability to answer questions for further details. She could give medications as instructed (no prescription needed in Peru and Bolivia) and would provide follow up for the AMA. This increased responsibility for the wives was truly inspired. They have so much love for their missionaries that they are extremely conscientious about this increased responsibility, and everyone is benefitted.

ANECDOTAL EXPERIENCES FROM PERU AND BOLIVIA

1) Our first medical foray outside of Lima began when a mission president informed us that two elders had been struck by a taxi while walking on the side of the road in a city high in the Andes, Cajamarca. The mission president was involved in another challenge in the other end of his mission and asked if we would fly to Cajamarca to assess and resolve the situation. The city was nestled among several peaks, with the landing pattern requiring the small jet to bank on its side to squeeze between two of the peaks. We went directly from the airport to the hospital and found the two elders sitting up in bed in a small two-bed room. They described painful lower-extremity injuries and had been told that neither had fractures, but neither were able to walk comfortably. We met with their doctor and reviewed the x-rays and other tests with him. Conferring with their mission president and the field representative in Salt Lake City, we arranged for the elders to be transported to their mission home in Trujillo. One elder was able to resume missionary work while the other required medical release and returned to the United States for treatment.

2) We were notified by the Piura mission president that one of his elders had suffered a spontaneous pneumothorax while serving in Tumbes, the northernmost city in Peru. Through his mission president and the field representative in Salt Lake City, I was requested to come to retrieve the elder and to bring a duck valve to use for his transport to Lima. I flew to Piura and was driven to Tumbes. I took the valve to the hospital where I assisted his doctor switch him from the drainage valve to the duck valve. Since it was not considered safe for the elder to fly with the pneumothorax, the mission president had made reservations for the elder and I to have beds on a super-deluxe bus for the 18-hour ride to Lima. The ride was very long but actually quite pleasant, with seats that made into full-length beds, hot meal service, and entertainment. The entertainment was provided by our elder and his duck valve, getting its name from the fact that every time he inhaled deeply it made a loud quacking sound. We both couldn't help laughing every time he quacked. The elder went directly to a hospital in Lima where he had surgery to repair his lung. He had a pneumothorax prior to his mission and was therefore given a medical release after his lungs were safely healed for flying.

3) We were contacted by the mission president in Santa Cruz, Bolivia about a problem he was having with a local doctor treating his missionaries. The mission president had arrived in the field only a month earlier and had inherited a situation where a local doctor had been making house calls on his missionaries—and even taking them to the hospital for procedures—without approval by their president. Ordinarily, we would attempt to resolve the problem by

phone, but I had the strong feeling that we should go to investigate the problem personally. We received clearance and flew immediately to Santa Cruz. We interviewed the intrusive young doctor, as well as the older physician who had served them for years. We learned that the new doctor was a pathology resident and was receiving fees for delivering our missionaries to other physicians. After we had brought resolution to that problem, the mission president's wife asked me to check her. She had been feeling weak and dizzy intermittently for several days. Her problem was immediately apparent as we discovered her heart rate was greater than 200 and irregular; atrial fibrillation. I consulted the missionary cardiologist in Salt Lake City and was directed to give her digitalis. We obtained the digitalis from a local pharmacy and started her treatment. She improved enough to be transported to Salt Lake City, but they were unable to truly stabilize her for several months. Ultimately, they were transferred to Las Vegas to complete their mission presidency assignment. I am convinced that I was guided by the Spirit to make that long-distance house call to Santa Cruz.

4) During the early summer in 2007, heavy flooding in parts of Bolivia caused flare-ups of mosquito-born illnesses, including an epidemic of dengue fever. At least 25 of our missionaries were diagnosed with severe cases of dengue fever. Approximately half were treated symptomatically in the mission home, but at least 12 required hospitalization for the more dangerous hemorrhagic form of the disease. We felt helpless trying to handle this bewildering epidemic, relying heavily on calls to Dr. Bruce Woolley and speaking to the hospital staffs of the treating hospitals. We did push the use of long-sleeved shirts, insect repellants, and mosquito netting for sleep for the missionaries in the affected areas. There were a number of deaths in the country, but all of our missionaries were blessed to survive.

5) At approximately 6:00 p.m. on August 15, 2007, Joan and I were in our third-floor apartment in Lima when the floors began shaking and rolling. We had to hang on to the walls to keep from being thrown down. Our first experience with an earthquake was at the time not terrifying, more like fascinating. I watched the solid cement floor rippling beneath us and recall thinking scientifically that "cement can't do that." We discussed trying to get outside, but the cement staircase seemed less safe, so we continued to hang onto the kitchen door frame, watching the clock until the quake subsided 45 minutes later. We had a few objects fall from the shelves, but otherwise could see no damage in our apartment. We later learned that the earthquake was centered 90 miles South of Lima and measured 8.1 on the Richter Scale. There was no damage to the buildings in Lima, but in the cities of Pisco and Ica, near the epicenter, there was almost total destruction. Because of power outages, downed phone lines, and highway destruction we were unable to make contact with the Lima South Mission president for almost 24 hours. He eventually reported that during the time of the Quake all of his missionaries in the area were in the stake center in Pisco for zone conference. He explained that at every previous zone conference he had only 4–6 missionaries at a time come into the stake center for individual interviews, leaving the remainder out working. He didn't know why he had deviated from that routine this time. Three weeks after the quake, Joan and I accompanied a group of welfare counselors to Pisco to a meeting in the stake center for us to assess and counsel with members who were dealing with their losses. We literally met with the members in the only building in Pisco that was not damaged. Approximately 75% of the structures were totally destroyed, including two large Catholic cathedrals, and the other 25% of the structures were not usable. Large fishing boats were in the center of town as a result of the tsunami. In Peru, the quake caused 519 deaths, 1366 people injured, and 58,881 houses destroyed.

6) Another tender mercy associated with the quake was related to us by one of the office elders in the Lima East Mission. He told us that his grandmother had saved the lives of his family. He explained that his grandmother had died the day before the quake and that because of the custom to bury their dead within 24 hours, his entire family was at the cemetery when the quake hit; none were injured. Their home was demolished.

CONCLUSION

My wife and I agree, that with the exception of raising our five children, our three medical missions were the most exciting adventures of our lives.

The **service** opportunities were the most concentrated, and satisfying.

The **growth** that we experienced, both individually and as a couple, was amazing.

The **spiritual** experiences and growth were frequent and awesome.

The **physical** challenges were unexpectedly difficult, but we learned that we were more durable than we thought.

The **financial** costs were less than expected; during two of our missions we spent less than we do at home, and our investments thrived during each of our times away.

The **family separation** was very hard; we missed a number of new baby arrivals, and one grandson's wedding, but as the Lord has promised, the health and well-being of our families was very good—they were protected. We were a little surprised, and a little disappointed, at how well they all did without us. Our children assure us that our missions helped their children to focus on serving missions, and most have done so, and continue to serve.

One final and emphatic conclusion: **mission presidents and wives** are our **heroes.**

About the author: Frederick G. Williams, Gerrit de Jong Jr. Distinguished Professor of Luso-Afro-Brazilian Studies at Brigham Young University, is a grandson twice removed of Frederick G. Williams, and served as president, with his wife as matron, of the Recife Brazil Temple. He currently is a sealer in the Provo Temple.

by **Frederick G. Williams***

The Medical Practice of Dr. Frederick G. Williams

Editor's note: The following comes from a forthcoming BYU Studies publication titled The Life of Dr. Frederick G. Williams: Counselor to the Prophet Joseph Smith, *written by his great-great-grandson. A thoroughly researched documentary history of Frederick G. Williams and his immediate family, this book provides an intimate look at many significant events in the Ohio, Missouri, Illinois, and pioneer Utah periods of Church history. The book and its accompanying documents also contain more detail about Dr. Williams's medical practice, including a list of 307 of his patients.*

In the early nineteenth century, the medical profession was still rather primitive, but as the following information about Frederick G. Williams's practice shows, he was one of thirty practitioners in Kirtland's Geauga County. He conscientiously followed the methods and medications set forth in the medical treatise of Dr. Samuel Thomson. A frontier family doctor, Williams regularly assisted with childbirths, set broken bones, and treated various wounds and diseases, as the following materials intriguingly bring to light.

Frederick Granger Williams (1787–1842) was an important figure during the early days of the restoration of the gospel and the organization of The Church of Jesus Christ of Latter-day Saints. He served as a missionary on the original mission to the Lamanites (1830–1831), was a personal scribe to the Prophet Joseph Smith for four years (1832–1836), was Second Counselor in the First Presidency for five years (1833–1837), and for twelve years was the principal doctor for the Saints in Ohio, Missouri, and Illinois, until his death in 1842.

Dr. Williams, as Oliver Cowdery wrote in a letter to Dr. Sampson Avard, was a botanic physician and followed the theories of Samuel S. Thomson.[1] This is confirmed by Williams himself in his medical advertisements: "Vegetable Medicine, F. G. Williams, (Botanic Physician) Dr. Williams respectfully informs his old patrons and the public generally, that he keeps constantly on hand Dr. Samuel Thompson's [*sic*] Vegetable Medicine."[2] Nothing, however, is known about his medical practice until the early 1830s in Kirtland, where he is referenced in letters, journals, and biographies written and preserved by members of The Church of Jesus Christ of Latter-day Saints. Dr. Williams's first biographer, Nancy C. Williams, tells us that Frederick was persuaded to study medicine around the time of the death of his sister-in-law Lovina, which came soon after she had given birth. Frederick's younger brother, William Wheeler Jr., married Lovina Dibble in 1814. "March 23, 1816, a child was born to Lovina and William which died soon after birth and Lovina survived the baby by a mere four days."[3]

> Lovona's [*sic*] sad death in childbirth, stirred Frederick, who had long wanted to become a doctor, to begin his earnest research into the medical profession. No doubt the anxiety for Rebecca's safety, for she was then with child, spurred him on in his studies. They had selected a place for clearing to build a home a few miles south and east of Newburg, called Warrensville. This land was heavily timbered and he found in clearing it that his health was failing. Perhaps this had much to do with the necessity to give up farming as a profession and caused him to turn to the study of medicine.[4]

Nancy Williams indicates that Dr. Frederick G. Williams had been assisted in his medical research by Doctor Ezra Graves, after whom Frederick had named his second son.[5] There is a corroborating nineteenth-century reference to Dr. Ezra Graves, who lived at the time in the same Ohio area as the Williamses. Speaking of the township of Bedford, Cuyahoga County, Ohio, the writer states: "Dr. Ezra Graves, who used to practice medicine here, was in Canada during the war of 1812, when he was required to swear allegiance to the crown or leave the country. He chose the latter course, and told his wife that she could stay there or go to the United States with old Ezra, just as she pleased. Said she: 'I'll go with old Ezra,' and she came."[6] On April 30, 1810, Frederick had purchased 161 acres in Warrensville (next to Bedford) from his father for $402.[7]

Paying Taxes as a Physician

Because the first time doctors had to register with the state of Ohio was in the late 1880s (and Williams died in 1842), there are no early government documents attesting to Dr. Williams's medical practice. Nevertheless, there are two extant tax records for physicians and attorneys that list Dr. Williams among the tax-paying physicians. The first is found in the *Auditor's Tax Duplicate*, Geauga County, Ohio, for the year 1836. The page is unnumbered, but follows page 342. Williams is one of thirty doctors listed in the county, and their incomes appear to be rounded approximations. Eight had declared incomes of $300 and paid $1.50 in taxes; ten (including Dr. Williams) had incomes of $200 and paid $1.00 in taxes; three had incomes of $150 and paid $0.75 in taxes; and nine had incomes of $100 and paid $0.50 in taxes. There was no distinction made between botanical and orthodox physicians.[8]

As stated, the earliest extant references to Frederick's medical practice come from biographies and histories written primarily by members of the Church living in Kirtland. The first comes in 1830, presumably some fifteen years into his medical career, and is found in Joseph

1 Oliver Cowdery to Dr. S. Avard (in the original, the name is spelled Avord), December 15, 1835, Oliver Cowdery Letterbook, Huntington Library, San Marino, Calif., microfilm of holograph, L. Tom Perry Special Collections, Harold B. Lee Library, Brigham Young University, Provo, Utah.

2 *Kirtland (Ohio) Northern Times,* October 2, 1835, 3. Also found in the issues dated October 9, 1835, and December 2, 1835.

3 Nancy Clement Williams, *After 100 Years* (Independence, Mo.: Zion's Printing and Publishing, 1951), 48–49.

4 Williams, *After 100 Years*, 50. The only source Nancy C. Williams gives for Dr. Williams's medical training and practice is a description of the rural doctor's life from Elliot Howard Gilkey's *Doctors of Ohio.* She knew Dr. Williams's son, however, Dr. Ezra G. Williams (also a surgeon), who in 1889 became her father-in-law. He had been a frontier doctor in Quincy, Illinois; St. Louis, Missouri; and Salt Lake City, Utah. For a short time after her marriage to Frederick G. Williams (Ezra's eldest son), Nancy, a young sixteen-year-old bride, went to live with her in-laws in Ogden, Utah. Her husband had assisted his father medically and became a de facto rural doctor himself in the Mormon colonies in Mexico, where he went to live with his two wives in 1889. Although Frederick G. Williams (II) undoubtedly received some help from his father, he was most likely trained on the job. Nancy herself would have been a witness to his activities and perhaps assisted as a midwife and with other duties and practices. Her father-in-law died in 1905, her husband in 1918.

5 Williams, *After 100 Years*, 52.

6 Gertrude Van Rensselaer Wickham, ed., *Memorial to the Pioneer Women of the Western Reserve,* 5 vols. (Cleveland: J. B. Savage Print, 1896–97), 4:679.

7 The property was found in lot 41, range 11, of township 7. See Land Records, Cuyahoga County, Ohio, Deeds and Mortgages, vol. 1, 46–47.

8 *Auditor's Tax Duplicate*, Geauga County Courthouse, Chardon, Ohio. A similar tax record for 1837 also lists Dr. Williams among physicians and attorneys paying taxes in the county.

About Frederick Granger Williams

Source: Wikipedia

Frederick Granger Williams (October 28, 1787 – October 10, 1842) was an early leader of the Latter Day Saint movement, serving in the First Presidency of the Church of the Latter Day Saints from 1833 to 1837.

Williams was born at Suffield, Connecticut, to William Wheeler Williams and Ruth Granger. He married Rebecca Swain in December 1815. By 1828 he was living in Chardon, Ohio, and he moved to Kirtland in 1830. While in Ohio, he associated himself with Sidney Rigdon and the Disciples of Christ. When Oliver Cowdery and other early Latter Day Saints were traveling through Kirtland, they taught and baptized many in Rigdon's congregation, including Williams.

On July 20, 1832, Williams was appointed scribe to Joseph Smith and joined the church's leading council the next year. He was a member of the committee appointed to publish the Doctrine and Covenants, a portion of the church's canon, as well as the church's first hymnal, compiled by Smith's wife, Emma, under the auspices of F.G. Williams & Co. in 1835.

In 1837, Williams was elected a justice of the peace in Kirtland, appointed an officer in the Kirtland Safety Society, released from the First Presidency, and moved to Far West, Caldwell, County, Missouri. Although there is no record of an excommunication, Williams was rebaptized in August 1838. He was excommunicated in absentia in March 1839 while Joseph Smith was in Liberty Jail, but was restored to fellowship at a church conference presided over by Smith in April 1840. Williams died at Quincy, Illinois.

As Smith's scribe and counselor, Williams became a close friend and confidant of the prophet. Joseph and Emma Smith named one of their sons Frederick Granger Williams Smith (June 20, 1836 – April 13, 1862).

The lineage of Williams continues in The Church of Jesus Christ of Latter-day Saints. Williams's great-great-grandson, and namesake, Frederick Granger Williams, served as president of the Recife Brazil Temple (2009–12) and is currently a professor at Brigham Young University in Provo, Utah.

Smith's history of the first mission to the Lamanites: "This much accomplished, the brethren bound for the borders of the Lamanites, bade an affectionate farewell to the Saints in Kirtland and vicinity; and, after adding one of their new converts to their number—Dr. Frederick G. Williams—they went on their way rejoicing."[9]

Medical Advertisement: Kirtland, Ohio, 1835

We are fortunate that Dr. Williams's 1837 medical ledger has survived, and also copies of newspaper advertisements, which identified him as a Thomsonian botanical physician and listed the common diseases of his day together with their vegetable (herbal) cures as Dr. Williams prescribed them. The medicines he sold are listed as powders, pills, elixirs, cordials, drops, and ointments. Near the beginning, the advertisement also reveals that at that particular time (the last months of 1835) the doctor did not travel to visit his patients, but rather invited them to come to his residence for medical attention, where he kept a supply of organic medicines and herbs. The advertisement reads:

9 Joseph Smith Jr., *History of The Church of Jesus Christ of Latter-day Saints*, ed. B. H. Roberts, 2d ed., rev., 7 vols. (Salt Lake City: Deseret Book, 1971), 1:125 (hereafter cited as *History of the Church*). Williams is addressed as "Dr." or "Doctor" in *History of the Church* a total of eighteen times. He is referenced many more times with the title of president, brother, or simply by name.

VEGETABLE
Medicine,
F. G. Williams,
(BOTANIC PHYSICIAN.)
DR. WILLIAMS respectfully informs his old patrons and the public generally—that he keeps constantly on hand DR. SAMUEL THOMPSON'S VEGETABLE
M E D I C I N E,

In all its variety, and will furnish to those who may favor him with their attention, at his residence, unless otherwise employed.

From a long experience of the use of Dr. Thompson's Medicine, and the unvaried success which has attended his practice, he feels that a lengthy commendation would be useless. He does not offer his services as a travelling physician, in consequence of other business, but will be ready to give advice, and furnish medicines to those who may favor him with a call, and attend on patients who may wait upon him at his residence.

The following is a list, in part of the different kinds of medicine kept for sale, with a short statement of their qualities and effects:

Vegetable Elixir. —Excellent for pain in the stomach and bowels, and Rheumatic complaints.
Pills. —For head-ache, billious complaints, costiveness, dyspepsia, and difficulties in the stomach and livers.
Vegetable Powders. —Useful for a cold and foul stomach, violont colds, cough, sore throat, and to relieve from threatened fevers.
Vegetable Bitters. —For jaundice, loss of appetite, sickness in the stomach, head-ache, &c.
Botanic Ointment. —A certain cure for humors, corns, stiff joints, shrunk cords, stiffness in the neck, rheumatic complaints, swelling in the throat, chilblains, chapped hands, weakness and pain in the back, sores, ringworms, cuts and burns.
Olive Ointment. —Very useful for salt rheum, as many can testify.
Health Restorative. —Excellent to remove obstructions in the kidneys, for strangury, diabetes, and various female complaints.
Cough Powders. —Good for [w]hooping cough, and ulcers in the throat.
Peach Cordial. —One of the most valuable restoratives in dysentary, after the cause is removed, to give tone to the bowels and affect a speedy cure: it is also a sovereign remedy for all bowel complaints that have become torpid in consequence of taking drastic purges, diarhea, or from any other cause.

A CERTAIN CURE FOR THE
I T C H,
however inveterate.

A few applications will entirely remove this troublesome disease, and by keeping it on hand, and occasionally applying a small quantity to the wrist, will prevent those who are exposed, from taking this disagreeable disorder. Travellers will find it their interest to furnish themselves with this valuable ointment. Price 25 cts.

—

COUGH DROPS AND PILLS.

Consumption is easily overcome in its infancy: it rapidly arrives, if neglected, at an unconquerable and terrific maturity. An obstinate, violent, and convulsive cough, is the invariable forerunner, when neglected, of the

PULMONARY CONSUMPTION,

which may be nipped in the bud by the timely administration of these medicines, which have been known to cure persons supposed to be far gone in consumption, and exhibiting all the appearance of approaching dissolution.

—

A SAFE AND SURE REMEDY FOR
THE PILES.

The proprietor begs leave to recommend, (which he does with the fullest confidedce,) one of the most valuable remedies known for this troublesome and painful complaint.

This remedy is perfectly innocent in its application, to all conditions, ages and sexes.—Full instructions will accompany each packet which consists of one box of ointment, and a phial of drops. Price 37½ for the whole, or 25 for the ointment alone.

—

VEGETABLE ANTI-BILIOUS
P I L L S.

The convenience of a cheap remedy, in the form of Pills, suited to the commencement of most of the indispositions to which we are liable, needs no comment.

Many diseases, in the forming stage, are arrested, by the exhibition of proper cathartic medicine, and the consequent suffering and expenses are thereby avoided.

All that pills can effect, in preserving or restoring health—*and that is much*—may be expected, and will be derived from the timely use of these pills.

They are peculiarly excellent in every variety of head ache, proceeding from a foul, acid, and billious state of the stomach; and in all feverishness of the system, dependant on the same cause. In short, for every derangement of

the stomach and bowels, requiring cathartic medicine, the Vegetable Anti-Bilious Pills admit no competitor.[10]

—

NERVE POWDER.

One of the most useful remedies for cramps of the stomach, and debility of the nerves; it is also good in hysterical, and hypochondriacal affections, and convulsions: it may be taken in all cases with perfect safety, without producing the least unpleasant sensation, or any deleterious effects upon the system.

—

FEVER & AGUE.

A specific and lasting cure of intermittent fevers, of Fever and Ague, But a short time has elapsed since this most remarkable medicine has been brought before the public, as a certain and most effectual cure for this truly dreadful disease, the Fever and Ague. It is hailed by those who have tried it, and is justly regarded as the "friend to the afflicted:" for what an amount of time, and money, and comfort does it save to such of the suffering? The unparallelled and universal success which has ever attended a punctual and regular use of the Tonic Mixture, in all cases of Fever and Ague, warrants the proprietor in engaging to refund the price to all those who have taken the medicine in strict accordance with the prescribed directions, without having been perfectly cured.

The following is one of the many who cheerfully testify to the wonderful benefits they have received from his most effectual remedy.

—

I hereby certify, that I have taken Dr. Williams' Vegetable Ague Drops, after having been afflicted more than 7 months, and after trying many of the popular medicines for the same, and found immediate relief, and an effectual cure. I am happy to add, that my system is not in the least impaired from any effects produced by said medicine.

FRANCIS BARLACOME.
Kirtland, September 25, 1835.[11]

Dr. Williams Grew His Own Medicinal Herbs

As was common with nineteenth-century households, there would be a garden near the home for kitchen vegetables and spice herbs. In the case of a botanical doctor like Frederick G. Williams, there would also be a herbarium where he would raise his own plants for medicinal purposes. In a work largely prepared by D. P. Hurlburt but published under Eber D. Howe's name, *Mormonism Unvailed* (Painesville: Telegraph Press, 1834), there is a passage, although critical in tone, confirming that Dr. Williams had not one, but two, herb gardens, one on each side of his Kirtland home. The reference comes with the mocking of the revelation received by Joseph Smith Jr. in Kirtland on February 27, 1833, commonly referred to as the "Word of Wisdom," which speaks of things that should not be ingested and those that should, including the "wholesome herbs God hath ordained for the constitution, nature, and use of man."[12]

> We are next told that every wholesome herb, God ordained for the use of man!! and we should infer that the writer or the recording angel had been inducted into the modern use of herbs, by the celebrated Doct. F. G. Williams, who is associated with the prophet and the nominal proprietor of a monthly paper, which is issued from the Mormon kennel, in Kirtland. F. G. Williams is a revised quack, well known in this vicinity, by his herbarium on either side of his ho[u]se; but whether he claims protection by right of letters patent from the General Government or by communion with spirits from other worlds, we are not authorized to determine, but should conclude he would be adequate to dictate the above mockery at revelation and rigmarole, in relation to food for cattle, &c.[13]

Medical Advertisement: Quincy, Illinois, 1839

An announcement of Dr. Williams's medical practice four years later in Illinois discloses that he diagnosed the patient's condition by an examination of his or her urine. The notice also makes reference to the American Indians' knowledge of useful medicinal roots, which botanical doctors often noted. The advertisement first appeared in the *Quincy (Illinois) Whig* on Saturday, August 24, 1839. At the end of the notice was the date when it was first published and an indication that it was to run for six months: "aug 24—6m."

10 I am indebted to Dean Morris, herbal specialist in Springville, Utah, for supplying the spectrum of herbal treatments for bowel activity from mildest to strongest: aperants or apurants, bulk fiber, laxatives, cathartics, and purgatives. See 10th *U.S. Pharmacopeia*, *King's American Dispensatory*, and John Gerard's *Herbal*.

11 The advertisement appeared in three of the extant four issues of the *Northern Times*: vol. 1, no. 27 (Friday, October 2, 1835); no. 28 (Friday, October 9, 1835); and no. 36 (Wednesday, December 2, 1835). Vol. 1, no. 42 (Wednesday, January 13, 1836), is missing pages 3 and 4 where the advertisement would normally appear.

12 Doctrine and Covenants 89:10.

13 Eber D. Howe, *Mormonism Unvailed: Or, a Faithful Account of That Singular Imposition and Delusion, from Its Rise to the Present Time* (Painesville, Ohio: By the author, 1834), 229–30. This quotation has an obvious typographical error in the original that I have corrected with a bracketed *u*. Undoubtedly, Howe meant "house" and not "horse."

F. G. WILLIAMS—*Indian and German*
ROOT DOCTOR.

Who distinguishes disease by an examination of the urine. Office on Hampshire street, opposite the American Tavern.

Dr. W. would notify the citizens of this county, and the public at large, that he has located himself in the town of Quincy, Ill., and is now prepared to attend to all who may favor him with their patronage, by practising on the Indian and German System of distinguishing disease by an examination of the urine, and that he will always apply vegetable medicine which are perfectly free from all those deleterious effects which are always the result from the use of mineral medicines. Dr. W's medicines are procured from the field and the forest, carefully selected and prepared in such a manner that he can recommend them to the afflicted to operate in harmony with all the laws of animal life, removing disease by restoring all the execrations and secretions of the system, dislodging all the worn out matter which by its being retained in the system, produces disease and death his medicines are peculiarly calculated for the cure of liver complaints, dyspepsia, fever, fever and ague, affection of the lungs and kidneys, weakness of the stomach, loss of appetite, indigestion, costiveness, nervous affections, coughs and colds, rheumatism, impurities of the blood, fever sores, ulcers, white swellings, cancers, general female debility, and the whole train of diseases that effect the human frame. He will warrant a perfect cure in all cases of cancers, white swelling, fever sores, ulcers and scroffula, in all their various forms, together with every old sore of any kind whatever. His charges will always be moderate, and the terms for medicine cash or good notes, with approved security.

N.B. In all inward complaints patients are requested to bring or send some of their urine in a clear vial, taken immediately after rising in the morning.

Dr. W. has settled his present location on the Mississippi, that people living at a distance may be benefited by his remedies, which may be sent any distance on the river by water conveyance. All those living at any considerable distance from Quincy, who wish to try the virtue of Dr. William's vegetable remedies can send any number of cases by one person, and save a vast expense and time. aug 24—6m[14]

14 The 401 words in 54 lines of the advertisement appeared in the Quincy *Whig* twenty-five times in succession from August 24, 1839, to February 8, 1840 (the newspaper incorrectly printed February 7 on its masthead), with no variations except its location on the page.

Known Medical Procedures Performed by Dr. F. G. Williams

Doctor Williams's medical ledger lists names of patients (often with the date of the service), the fees charged, and if the fees were collected; he (or his wife, Rebecca, who may have kept the books at times) also adds a brief comment, especially if the form of payment was in goods or services.[15] There is virtually no mention, however, of which diseases were treated, which medications were prescribed, or which medical procedures were performed. For that information, we must rely on his medical advertisements, on Thomson's *Materia Medica*, and on the written accounts of others.

1. Assisting with Childbirth. Dr. Williams assisted Mary Bailey Smith, Samuel Smith's wife, in the delivery of her first child on October 27, 1835:

> *Tuesday [October] 27 [1837].*—In the morning I was called to visit at Brother Samuel Smith's His wife was confined and in a dangerous condition. Brother Carlos went to Chardon after Dr. Williams. I went out into the field and bowed before the Lord and called upon Him in mighty prayer in her behalf. And the word of the Lord came unto me, saying, "My servant Frederick shall come, and shall have wisdom given him to deal prudently, and my handmaid shall be delivered of a living child and be spared." The doctor came in about one hour afterwards, and in the course of two hours she was delivered, and thus what God had manifested to me was fulfilled every whit.[16]

Although there is no section specifically labeled childbirth in Thomson's *Materia Medica*, there is ample information given to aid the physician. Under "Red Raspberry" we read:

> Rasberry leaves may be used freely as a substitute for imported tea, (thea Chinensis) with no apprehensions of danger. It is the best thing for a woman in travail of any article I know of. In such cases it should be given in strong tea, with a little of No. 2, sweetened. It will bring on the labor pains regularly, and reduced the irregular pains to order and regularity, thus affording

15 Frederick G. Williams, Medical ledger, Church History Library, The Church of Jesus Christ of Latter-day Saints, Salt Lake City. The most common forms of payment were promissory notes, sundries, and cash. Named payments in goods and services included copies of the Book of Mormon, wood, stones, leather, crockery, a sink, a sofa, three mats, a barrel of flour, a quart of linseed oil, a coffee pot, general labor, the mending of a gig, working on a wall, blacksmithing, and shoemaking.

16 *History of the Church*, 2:292.

> rest to the patient in the intervals. If the pains are untimely, it will quell them. If timely and lingering, give more of the tea, with a larger quantity of No. 2, and umbil, or nerve powder. This will assist the natural functions of the body, and thus hasten the labor. And if this is given, in the intervals the patient will be quiet, and rest in the same proportion as the labor pains were severe. Thus the woman's strength and courage are kept up, and she is ready to meet the next attack, thus continuing till the child is born. (605)

The section continues with a discussion on what to do in case of complications.

In the lengthy section titled "Human Systems" (211–484), which includes the muscles, bones, veins, organs, and so forth, there is a very detailed description of female anatomy (including illustrations), explaining each part and, whenever pertinent, noting the differences that exist when in a state of pregnancy, together with graphic descriptions of the reproductive organs (317–23). There is also a detailed section on the "Human Foetus" (323–29).

In the section entitled "Diseases and Herbal Treatments" (691–824), the volume includes a treatment called "Women's Friend":

> Take of poplar bark five pounds; unicorn, cinnamon, golden seal, and cloves, each half a pound; four ounces of cayenne and eight pounds of sugar. Let them all be made fine and well mixed. This is an excellent article in female weaknesses, to prevent abortion and to be used at the cessation of the menses.
>
> A teaspoonful may be taken in a gill of hot water. (707)

There is also a section entitled "Remedies Worthy the Attention of Females" (737–39), which includes "Mother's Relief," a treatment that "will strengthen and invigorate the constitution before childbirth so that the mother will pass the time of labor with little danger, and will be less liable to take cold after confinement" (737). Also listed is a treatment for "Falling of the Womb, or Prolapsus Uteri" (738); a treatment "To Prevent Sore Nipples or Breasts" (739); and another to treat hysteria: "Hysterics usually occur in women over fifteen years of age. . . . Sometimes the patient laughs and cries in the same breath; beats her breasts and shrieks, although not entirely deprived of consciousness" (810–11).

2. Setting Broken Bones. Dr. Williams set the broken arm of the ten-year-old step-son of Ebenezer Page in June 1838 in Far West, Missouri.

> The following June he [Ebenezer Page] married Hannah Peck, a poor widow, who lost all she had in Jackson Co., Missouri, at the time the church was driven from Independance. She had four boys, the eldest was about ten years old. A short time after their marriage, while at meeting, the oldest boy fell and broke his arm. Brother Page then called on F. G. Williams to go with him home to dress the boy's arm. After it was done the stepfather told him he could not remunerate him, but was obliged to call him in. The doctor replied that he was aware of the fact, and should make no charge, but would have charged two dollars had he been in good circumstances.[17]

In Thomson's *Materia Medica,* the author devotes a section to the human skeleton and lists the body's many bones (230–31); he focuses specifically on setting a bone in the foot (744), but not in an arm.

3. Stitching Wounds. Doctor Williams's medical practice included sewing up wounds, as we learn from Hyrum Smith's accident with an ax. Joseph recorded:

> [Wednesday, February 10, 1836.] At four o'clock, called at the school room in the Temple to make some arrangements concerning the classes. On my return I was informed that Brother Hyrum Smith had cut himself. I immediately repaired to his house, and found him badly wounded in his left arm, he had fallen on his ax, which caused a wound about four or five inches in length. Doctor Williams sewed it up and dressed it, and I feel to thank God that it is no worse, and I ask my Heavenly Father in the name of Jesus Christ to heal my brother Hyrum, and bless my father's family, one and all, with peace and plenty, and eternal life.[18]

In Thomson's *Materia Medica*, the author has this to say about sewing up wounds:

> Take according to the size of the wound, one, two, or three threads of sewing silk, (the white is best) about six inches in length, well waxed; place the thread through the eye of a darning needle, if there be no surgeon's needle at hand; pass the needle through from within the lips of the wound under the skin, and have it pass up through the skin about half an inch back of the edge of the orifice, being particular to include the full thickness of the skin, which is from

17 Ebenezer Page, "For Zion's Reveille," *Zion's Reveille* 2, no. 13 (April 15, 1847): 55.

18 *History of the Church*, 2:393–94.

> an eighth to a quarter of an inch, in the different parts. Draw through the ligature, until the middle of the thread rests in the middle of the wound; then detach the needle, and thread it with the other end of the silk; then commence in the wound below the skin and bring it out in the same manner on the opposite side. The stitch being complete, the tying of the ends of the ligature in a single or sliding knot completes the work. The second or third stitch may be taken in like manner, if necessary. (778–79)

There is a caution about how tight the stitches should be and what to do should the wound become inflamed: "[The stitches] should never be tighter than barely sufficient to cause the edges of the wound to touch each other gently. The strips of sticking plaster and the bandage should take off from the rest of the wound all pressure or excessive confinement of the sore. If the parts become swelled or inflamed, the stitches should be cut immediately; or as the parts adhere together so as not to need them, the thread may be cut and drawn out" (779).

4. Treating Burns. Another procedure performed by Doctor Williams, according to his first biographer, was the dressing of burns and peeled skin caused by hot tar, as in the case of Joseph Smith in Hiram, Ohio, in 1832. We read in Nancy C. Williams's biography that Frederick and his wife, Rebecca, attended to Smith's wounds all night: "One vivid tragic memory Rebecca left to her descendants was when on the 24th of March, 1832, the mob tarred and feathered him [Joseph Smith]. She related how she and the Doctor worked all night over his bleeding body and how in places, in removing tar, the skin peeled off with it. The babies and Emma were also cared for by them."[19]

In Thomson's *Materia Medica*, the author provides the following guidance for burns: "BURN OINTMENT. Take of beeswax and Burgundy pitch and melt them together; then mix sweet oil until the compound has the consistency of ointment. APPLICATION. This salve will ease the pain of a burn almost immediately on its application, for which purpose it is very valuable. It is also good for fresh cuts, or wounds and bruises of the flesh" (732).

5. Treating Cholera. Probably the most feared disease Doctor Williams treated was cholera, as in the outbreak that occurred in Missouri during Zion's Camp in 1834. The writer quoted below is James Henry Rollins, a resident of Missouri and a member of the Church. Among those who perished in that outbreak was Algernon Sidney Gilbert, who had established a store in Missouri, as he had with his partner, Newel K. Whitney, in Kirtland. Williams later handled the estate of Sidney Gilbert and treated the widow Gilbert as his patient.

> I will now pass over the interval from May 1832 to June 1st 1834, at which time the first heralds of the Camp of Israel, namely, the two men, Amasa Lyman and Almon W. Babbitt, came to the hill farm, which was occupied by Sidney Gilbert. They told of the near approach of the Camp, also, of the escape from the mob at Fishing River. A day or two after this the camp arrived. Joseph the Prophet and William his brother, with Dr. F. G. Williams and several others, stayed at our place, and, the majority of the camp going down Bush Creek some three-fourths of a mile from us to the farm of John Burk, where many were stricken with Cholera and died. There were five died at our house, namely: William Weeden, a brother Judd, Jessie Smith a cousin of Joseph, Sidney Gilbert and Phoebe Murdock. During this time of sickness I was sent by the Prophet and Dr. Williams to Liberty for medicine and by Joseph the Prophet to brother Partridge's, Morley's, and other places with dispatches or word to other brethren who lived at a distance from the camp of Israel. Having a pony to various places where I was sent during the time of this terrible scourge.

Rollins speaks of how quickly the disease overtook people, seemingly healthy one moment and dead the next:

> George A. Smith and Jessie Smith both being my age were out in the road with myself trying to get a ball from a pistol which had got wet at Fishing River. We were all three very merry and were laughing a great deal, when Jessie said: "We ought not be here making so much noise while there are so many of our brethren sick and dying, we don't know how soon some of us may be taken." We then opened the gate and went into the east door of the house. In a short time after entering the house this noble boy was stricken with Cholera. Joseph and his brethren worked over him, but, fever took hold of him, and with all their attention it seemed to avail nothing, and he died, laying on the floor of our largest room. We wrapped him up in his bed clothes and carried him through a terrible thunder storm and laid him in a grave that had been dug, covering him with his mother earth. The same as the other two who had died previous, without any coffins. Joseph took the

19 Williams, *After 100 Years*, 65.

death of the noble boy very hard, as he undoubtedly had been entrusted with his care by the boy's parents. At this time Joseph was reprimanded of the Lord for trying to stay His hand and I think the Lord told him at this time that he would smite him if he tried more to stay his decreed afflictions as promised, before they arrived. About this time the camp was disbanded and I bade goodbye to Joseph and his brethren as they took their departure for Kirtland and its vicinity.[20]

Joseph Smith Jr. adds:

> The cholera continued its ravages for about four days, when a remedy for the purging, vomiting, and cramping, was discovered; viz., dipping the persons afflicted in cold water, or pouring it upon them, and giving them whisky thickened with flour to the consistency of starch.[21] Whisky was the only kind of spirits that could be procured at this place. About sixty-eight of the Saints suffered from this disease, of which number fourteen died, viz.: John S. Carter, Eber Wilcox, Seth Hitchcock, Erastus Rudd, Algernon Sidney Gilbert, Alfred Fisk, Edward Ives, Noah Johnson, Jesse B. Lawson, Robert McCord, Elial Strong, Jesse J. Smith, Warren Ingalls and Betsy Parrish.[22]

Dr. Williams also treated cholera victims in Cleveland, with the blessing of the leaders of the Church: "*August 21 [1834].*—Doctor Frederick G. Williams returned from Cleveland and told us concerning the plague, and after much consultation, we agreed that Dr. Williams should go to Cleveland and commence administering to the sick, for the purpose of obtaining blessings for them, and for the glory of the Lord. Accordingly, we (Joseph, Frederick, and Oliver,) united in prayer before the Lord for this thing. Now, O Lord, grant us these blessings in the name of Jesus Christ. Amen."[23]

The author of Thomson's *Materia Medica* devotes considerable space to his "Philosophical Theory" of the causes of "The Asiatic Cholera" and the reason for its transmission to the settlements along the Mississippi, Ohio, and Missouri rivers in 1832 (752–59). In another section, he describes the symptoms of the disease:

> VOMITING AND PURGING—Cholera Morbus. The attack of this disease is generally sudden. In some cases it is brought on by pain, lassitude and acid erectations; at other times it commences by vomiting and purging, the purging not usually commencing first. The matter ejected, besides the undigested food, if any, is bile, varying in color from its natural yellow to a green, brown or black, and mixed with mucus. After continuing a considerable time, the discharges assumes, perhaps, the appearance of the washings of fresh meat. It is frequently attended with spasm in the abdomen and extremities, and the patient's strength is soon exhausted. In violent cases, collapse succeeds, and unless relief is obtained, death in a few hours puts an end to the sufferings of the patient. (803)

Thomson next offers his treatment for the disease. "TREATMENT. This disease may generally be relieved by a single dose of composition or hot drops. If this does not answer, bathe the feet in hot water and take an emetic, or a thorough course of medicine (Nos. 1 through 6), if required, which is generally effectual" (803). He then lists the treatment used by the regular practitioners, for the sake of comparison: "Regular Treatment.—Bleeding, blistering, calomel, opium, and carbonate of iron, ice water internally, and ice externally." The dreaded water-borne disease of cholera continued to plague people living on the Mississippi and trekking west along the rivers of the Great Plains.[24]

6. Treating Venereal Disease. Although the reference is veiled in a euphemistic phrase, Doctor Williams, it would seem, treated some patient (or patients) for venereal disease, which he listed as "Bachelor Delight" in his medical ledger, page 33. There are a total of twenty-five separate billings, totaling $41.87, which was paid off on August 1, 1839, with the notation "Sundries to balance."[25]

In Thomson's *Materia Medica*, the author shares the particulars of his first case of venereal disease, in which his patient was a woman:

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20 "Reminiscences of James Henry Rollins," typescript, 4–6, Church History Library.

21 Could this have been Dr. Williams's own remedy for cholera?

22 *History of the Church*, 2:119–20.

23 *History of the Church*, 2:146.

24 See Patricia Rushton, "Cholera and Its Impact on Nineteenth-Century Mormon Migration," *BYU Studies* 44, no. 2 (2005): 123–44.

25 Judging by the euphemism Bachelor Delight, it is rather obvious that Dr. Williams was treating venereal disease, which he listed separately in its own account and not as part of the regular entries in the ledger under individual names (to maintain confidentiality?). Since there are no names listed, we can only wonder if these cases involved just Mormons or if they included non-Mormons as well. Judging by the large number of entries, twenty-five, it was either recurring in a few individuals or affected several people or some combination of both. Since the relatively high balance of $41.87 was paid off late in 1839, should we assume these entries are all related to cases in Missouri, a frontier state? I wonder if one of the reasons Dr. Williams was rarely maligned by the non-Mormons or apostates (as were Joseph and Sidney) was because those individuals knew the doctor had incriminating information on them.

> While practicing in Exeter, I had a patient (a woman from Portsmouth) who had the venereal, in consequence of a bad husband. She had been attended for nearly a year by the doctors in Portsmouth, who had filled her with mercury for the purpose of curing the disorder, until the remedy was worse than the disease. Her case was alarming and very difficult; she was brought on a bed, being unable to sit up, and seemed to be one mass of putrefaction. I proceeded with her in my usual way of treating old disease where the system has become generally disordered, by giving medicine to promote perspiration, steaming to throw out the mercury and to restore the digestive power, and in three weeks she returned home, entirely cured. (526)

He goes on to state: "This disease is very easily cured in its first stages, by a common course of medicine, being nothing more than a high stage of canker seated in the glands of the organs of generation; and if not cured, communicate with the glands of the throat and other parts. Under the fashionable treatment, there is more difficulty in removing the mercury from the body of one in this situation, than in curing a dozen who have not taken the poison" (526).

In the section entitled "Venereal Disease—Syphilis," Thomson explains the disease:

> Syphilitic poison being applied to a part which is soft or covered with a mucous membrane, or otherwise where a puncture of the skin exists, produces an ulceration or inflammation of the part to which it was communicated. This disease may remain local, or it may run into a constitutional affection. When local, it shows itself in form of inflamed ulcers, ash color, and with a disposition to spread rapidly over the adjacent parts.
>
> When constitutional, the fluids throughout the whole system are tainted, and other parts of the body besides the genital organs are liable to break out in obstinate ulcers, or a sort of scrofulous affection; and in this form of the disease, unless arrested by efficient medical treatment, it sooner or later proves fatal. (821)

Thomson then proceeds with the treatment and the procedure for administering the antidote: "Courses of medicine should be used two or three times in the course of a week, and the tincture of lobelia taken at intervals, to keep the stomach sickened. The evacuation of the bowels should be regular and daily. This course will generally relieve all distress. Then make a wash of the lobelia and yellow lily root. This tea may also be used as injections for the penis or per ani with good success."

In the section under "Ointments for Piles, Poultice and Wash for Venereal," Thomson supplied further details for dealing with syphilis, and how the treatment may be delivered:

> Simmer together two ounces of the toad lily root (*Hermercallis flava*) two ounces of green emetic (*lobelia inflata*), and a piece of white vitriol (*sulphate of zinc*), about the size of a walnut, finely pulverized, in half a pound of fresh butter; strain off, and you have an excellent remedy for syphilitic sores.
>
> A wash may be made of the same articles that will destroy the irritation at once. It may be injected in form of decoction into the penis in bad cases with great advantage. (733)

Other Medical Procedures and Medications

In addition to the above conditions and diseases known to have been treated by Dr. Williams, there is in his medical ledger, under Samuel McBride on page 83, a reference to vaccination and, on page 170, several entries for Hyrum Kimball in 1840 that hint of several more medical procedures and instruments—including syringes, teas, washes, and astringents—all of which are likewise found in Thomson's *Materia Medica*. For vaccines, Thomson writes under "Kine Pox—Variolae Vaccinae": "Vaccination ought not to be performed during the progress of the eruptions, or in a bad state of health" (784). Under "Enemas, or Injections," he writes:

> When the uterus or urinary passages are affected, injections may be given to these parts by means of the appropriate syringes. The quantity to be used as an injection of the bowels should be from a gill to a pint. Syringes of all sizes, and for all the different purposes, should be kept on hand for every practitioner. (698)

Prominent Patients of Dr. Williams

Among the 307 persons listed in the medical ledger under Dr. Williams's care, the youngest identifiable patient is Henry Wood, a twelve-year-old boy, and the oldest is John Young, a seventy-four-year-old man. Most of the leadership and prominent members of the Church were under his care, among them the special witnesses of the Book of Mormon, including two of the Three Witnesses (Oliver Cowdery and David Whitmer) and four of the Eight Witnesses (Jacob Whitmer, Joseph Smith Sr., Hyrum Smith, and Samuel H. Smith).

Dr. Williams also cared for the majority of the members in the original quorums of the General

Prominent patients of Frederick Granger Williams

Oliver Cowdery	Parley P. Pratt	Edward Partridge
David Whitmer	Luke Johnson	John Smith
Jacob Whitmer	William B. Smith	John Corill
Joseph Smith Sr.	Orson Pratt	Titus Billings
Hyrum Smith	John F. Boynton	James Foster
Samuel H. Smith	Lyman E. Johnson	Salmon Gee
Joseph Smith Jr.	Leonard C. Rich	Henry Harriman
Sidney Rigdon	Zebedee Coltrin	Albert P. Rockwood
David W. Patten	Lyman R. Sherman	Newel K. Whitney
Orson Hyde	Sylvester Smith	W. W. Phelps

Authorities. These included two members of the First Presidency (Joseph Smith Jr. and Sidney Rigdon); eight members of the Quorum of the Twelve Apostles (David W. Patten, Orson Hyde, Parley P. Pratt, Luke Johnson, William B. Smith, Orson Pratt, John F. Boynton, and Lyman E. Johnson); four members of the seven presidents of the First Council of the Seventy (Leonard C. Rich, Zebedee Coltrin, Lyman R. Sherman, and Sylvester Smith); and the first Presiding Bishop of the Church, Edward Partridge.

Other early General Authorities under Dr. Williams's care included John Smith, Assistant Counselor in the First Presidency; John Corill and Titus Billings, counselors in the Presiding Bishopric; and James Foster, Salmon Gee, Henry Harriman, and Albert P. Rockwood, presidents of the First Council of the Seventy. Also included are well-known people such as storekeeper and bishop Newel K. Whitney and hymn-writer and newspaperman W. W. Phelps, plus a variety of lesser-known tradesmen, bishops, and high councilors.

There were twenty-one named women under Dr. Williams's care in the ledger, of whom six are listed as widows, nine as married women (generally identified by the title *Mrs.*), and seven as single women (usually identified by their first names). It would appear, however, that not all of Dr. Williams's female patients are identified by name, and we assume his service to them appears under the husbands' names. For example, we know Dr. Williams treated Mary Bailey Smith in childbirth. Her name, however, does not appear in the ledger, but that of her husband, Samuel H. Smith, does.

Conclusion

Frederick G. Williams became a doctor during a period of transition; he practiced before modern science had given physicians a basis for proven treatments against disease. Nevertheless, he was said to be successful at treating cholera. This, perhaps, because the Thomsonian treatment, unlike the "heroic," included steps to rehydrate the patient with herbal teas. We now know that the primary cause of death from cholera is dehydration, even though the bacterium that causes the disease is transmitted from contaminated water.

Since the days of the first Greek practitioners of the healing arts, doctors could do little more than diagnose illness, stitch up wounds, and set broken bones. At the close of the eighteenth and beginning of the nineteenth centuries, there was not only a proliferation of medical quackery in vogue but also, happily, a rapid and steady increase in scientific knowledge and the dissemination of sound medical treatments. However, when Dr. Williams began his practice, the orthodox doctors still relied primarily on toxic chemicals such as calomel and on bloodletting, two procedures that were more harmful than the illness itself and that often inflicted death. The milder herbal treatments of the Thomsonian physicians may not have always been any better grounded scientifically, but they at least posed no added health risks. Dr. Frederick G. Williams may not have devoted himself full time to a career in medicine until later in his life, perhaps as late as 1839 in Quincy, Illinois. In Kirtland he had had a sufficient patient base among the members of the Church to succeed at making a living solely from medicine, but his many other Church-related responsibilities took precedence. Frederick most likely practiced medicine on a need-only basis, while he engaged in other pursuits to provide for his family, such as farming, clerking, and teaching.