The Judith Nan Joy Integrative Medicine Initiative

A New Model for Pediatric Care and Research

Russ Mason, M.S.

It is not often that a Presbyterian minister, a board-certified physician, and an award-winning research scientist unite to study complementary and alternative medicine (CAM) protocols with pediatric patients; but this is the case at The Judith Nan Joy Integrative Medicine Initiative at Children's Memorial Hospital in Chicago, Illinois. Since 1946, Children's Memorial Hospital has been a major pediatric teaching hospital. Affiliated with the Feinberg School of Medicine, of Northwestern University (The Feinberg School is also in Chicago although the University is in Evanston, Illinois), the hospital's full-time medical staff holds faculty appointments at the Feinberg School of Medicine.

The goals of the Judith Nan Joy Integrative Medicine Initiative are to create and maintain an optimum healing environment and to study safe, effective, nonpharmacologic treatment options for their young patients. The Initiative seeks to create a new model for pediatric health care by integrating conventional allopathic protocols with complementary therapies, such as touch healing, massage, and acupuncture. With oversight from an institutional review board, all integrative treatments are being done under research protocols, within the 300-bed Children's Memorial Hospital. The Initiative was launched in 2003 with a seed grant from Judith Nan Joy and the Audrey and Jack Miller Family Foundation.

One of the cofounders of the Initiative is the Rev. Patricia ("Pat") Megregian, M.Div., B.C.C., who works with patients as a certified energy healer. Another cofounder, David M. Steinhorn, M.D. (the medical director of The Bridges Program—Pediatric Palliative and End of Life Care; a pediatric intensivist in the Children's Hospital's department of pulmonary and critical care; and a professor of pediatrics at the Feinberg School of

Medicine), believes that, along with meticulous clinical care, the physician can also make a positive impact on patients on a "soul level." And the Initiative's full-time research director, Sheila Wang, Ph.D., is reframing the methodology of CAM research by studying mechanisms and evaluating environments and their influence on healing. All three of these key people share the view that it is not enough to treat the pediatric patient: Health care must also extend to the child's family and the healing environment.

Ms. Joy stated when the Initiative was launched: "I believe there are many alternative ways to relieve pain and treat illnesses along with traditional medicine. I have had great success with a variety of complementary therapies, and I am excited about the potential impact this program will have on the many sick children served by Children's Memorial." The enthusiasm she expressed is shared by Drs. Steinhorn and Wang, by Rev. Megregian, and by their support staff. (See box entitled About The Judith Nan Joy Integrative Medicine Initiative). It is clear that there was a synchronicity at work that brought them together at the moment the Initiative required them.

Spiritual Healing

Rev. Megregian's journey on the path that led to this project began as a teacher in a Presbyterian church in Deerfield, Illinois. She became an ordained minister. When she and her husband later moved to Buffalo, New York, she volunteered at Children's Hospital of Buffalo. Within a few months, she became a chaplain at the hospital and eventually became its director of spiritual care. It was at Children's Hospital of Buffalo that she met Dr. Steinhorn; and they began to discuss the meanings of childhood illness and childhood death, and what could be done for pediatric patients. These discussions focused on how the spiritual and physical aspects of care could be united in order to facilitate healing.

During her tenure in Buffalo, Rev. Megregian had a revelatory experience that changed her life. In the middle of the night, while praying for a dying young man, her hands become hot, and she could not remove them from the young man's body. The patient,

*Excerpt from *Carousel*, the magazine of Children's Memorial Hospital, Spring 2003.

who was not expected to survive, became conscious the next day and eventually recovered. It was the first time spiritual healing became real to her—she knew something very different had happened. As she states: “This was a window that was opened for me to see.”

When she discussed this experience with Dr. Steinhorn, they realized that—whatever had occurred—it was a form of energy healing. He encouraged her to study with Rev. Rosalyn L. Bruyere,[†] a well-known energy healer and teacher, who is a consultant in energy healing research at the Kennedy-Krieger Institute associated with the Johns Hopkins Medical School (Baltimore, MD). Rev. Megregian heeded Dr. Steinhorn’s advice and studied with Rev. Bruyere. During this period, Rev. Megregian also expanded her study of energy medicine by becoming a Reiki Master and by studying *t’ai chi*.

Reflecting on the integration of energy healing with her responsibilities as a spiritual director, Rev. Megregian stated:

I believe you are given a gift that says: “Look at what is possible! Now go do the work!” Energy healing is about what is *possible*. For myself, in order to be effective as a healer, I need to be skilled in specific energy healing techniques, to maintain an active spiritual life, to be physically fit, and to be emotionally clear. What that means, really, is that one becomes a *conduit*, to help whatever energy is needed for healing to happen, in whatever way it can happen. It is important to get the personality or ego out of the way. As well, a healer cannot be tied to the outcome; you have to allow whatever it is to happen. This is challenging because you must be totally present but not making assumptions about results. That way, free of mental influence, everything becomes possible.

Rev. Megregian and Dr. Steinhorn—still in Buffalo—were doing informal research in the pediatric intensive care unit, using energy healing, to see if it made a difference. Shortly after that, they independently left Buffalo and, ironically, both resettled in the Chicago region, where Dr. Steinhorn had been hired at Children’s Memorial by the department of pediatrics. Soon, a position for chaplain became available at the hospital and Rev. Megregian was hired.

During this period, Judith Nan Joy approached Children’s Hospital with the offer of a donation for the study of integrative medicine. Dr. Steinhorn and Rev. Megregian prepared a proposal, which Ms. Joy accepted, for the creation of an initiative that integrated research, education, and clinical services. One of the first activities conducted was preliminary CAM feasibility studies. Rev. Megregian said:

The feasibility studies posed such questions as: “Can we do CAM techniques at Children’s Memorial in Chicago?” “Will this be accepted by the parents, the hospital and the physicians?” We began

Rev. Patricia Megregian, M.Div., B.C.C., David M. Steinhorn, M.D., and Sheila Wang, Ph.D.

to examine variables such as pain, anxiety, mood, and tension, and whether energy healing or massage therapy could make a measurable difference. And we were able to show, in the feasibility studies, that, yes, they do make a measurable difference. . . .

One of the outcomes of these studies is that we have been working closely with the director of the Children’s Memorial Hospital Pain Management Services, Dr. Santhanam Suresh, [M.D., anesthesia attending] who feels that integrative medicine techniques may play an important role in pain management. He offers acupuncture in his clinic and one of our therapists is providing massage intervention to evaluate the effects of massage on chronic pain symptoms.

And, finally, with regard to the integration of her hands-on CAM work with her background as a spiritual director, Rev. Megregian notes: “There are many dimensions to healing. When a child is suffering, that is a spiritual problem. When you can relieve the physical suffering, then the child is helped spiritually. The two are intertwined.”

Physical Care

Dr. Steinhorn has worked with Rev. Megregian for 13 years. But even prior to meeting her, he had an interest in spiritual influences on health. He recalled:

This has been a process and evolution for each of us. I was one of the ICU “attendings” and she was the head chaplain, so we came from very different backgrounds. But the focus was on how to have a positive impact on the experience that patients and their families have in the hospital—whether [the patients] lived or died—and what we did, whether it was prayer or conventional medical care. . . . I have a long history—going back to my late college days—with an interest in personal growth and discovery. I was exposed to a wide variety of spiritual and mental disciplines that were available, including Transcendental MeditationTM, yoga, and other esoteric studies. Part of this learning experience was to examine myself as a common man in everyday life. This became important to me, because it taught that life is the teacher and will bring you the experiences you need; and it helps to have others along the way to help perceive what the lessons are that I need to be learning.

[†]The Rev. Bruyere is the author of *Wheels of Light: Chakras, Auras, and the Healing Energy of the Body* (New York: Fireside, 1994). She conducts energy healing trainings around the world and, in addition to her collaboration with the Initiative staff, works with researchers at the Kennedy Krieger Institute, to investigate the effects of energy therapy on children with developmental disabilities. Visit www.rosalynlbruyere.org/Bio.html for more information on Rev. Bruyere and her work.

About The Judith Nan Joy Integrative Medicine Initiative

Contact

Children's Memorial Hospital

2300 Children's Plaza, Box 73

Chicago, IL 60614

Phone: (773) 880-3088

Fax: (773) 880-3895

E-mail: integrativemed@childrensmemorial.org

Website: www.childrensmemorial.org/depts/integrated/overview.asp

Key staff members

David M. Steinhorn, M.D.—Cofounder, Medical Director of The Bridges Program—Pediatric Palliative and End of Life Care

Patricia Megregian, M.Div., B.C.C.—Cofounder and Certified Energy Healer

Sheila Wang, Ph.D.—Research Director

Lynne U. Morrison, M.A., L.M.T.—Research Complementary Therapy Coordinator, Certified Energy Healer, Licensed Massage Therapist

Suzanne O'Brien, C.C.H.—Complementary Therapy Practitioner, Certified Energy Healer

Liz Chazen—Research Complementary Therapy Practitioner, Certified Energy Healer

Richard Kamasinski, L.M.T.—Complementary Therapy Practitioner, Licensed Massage Therapist

Holly Luenemann, L.M.T.—Complementary Therapy Practitioner, Licensed Massage Therapist

Richard Blitstein, L.Ac., M.S.T.O.M., Dipl.Ac., C.H.—Research Acupuncturist

Stephen Bonzak, L.Ac., M.S., M.A.—Research Acupuncturist

As a physician, Dr. Steinhorn has established some meaningful personal goals. He affirmed that "one goal has been to remain within the mainstream of conventional Western medicine in terms of my scholarship, academic productivity, and clinical care, because being accepted as an academic physician makes me a 'member of the club' (so to speak)"—and then added "but this is the very club in whose activities I hope to be a force for change. So, I felt that the way I could have an impact over the culture of institutional-based medicine was by continuing to be a part of that institutional-based medicine, but bringing the perspectives, concerns, and humanistic leanings to the awareness of those around me who also practice in this environment."

Dr. Steinhorn's early work experience had been as a member of the bioethics consultation service for children at the University of Minnesota Hospitals and Clinics (Minneapolis, Minnesota). "I thought that bioethics and logical reasoning would allow us to make the most appropriate decisions and help families through the process of their [children's illnesses]," he recalled. He remembered becoming frustrated with bioethics because it "is a field that minces a lot of scholarly words and concepts, but it lacks the power to write the medical order that would ultimately [make an impact on] the patients and their families. I became disillusioned with bioethics, because it was a cerebral field and not well-inte-

grated with actual clinical medicine. And, from that, I moved toward coupling my interest in esoteric studies with my clinical practice."

Dr. Steinhorn then arrived at a new perspective about health care and about the vast amount of time that patients spend in their hospital beds. "In clinical medicine, we might spend 20 percent of the day actually doing therapeutic things, making medical decisions, assessing the patients interpreting tests, talking with families," he observed.

"What do we do with the other 80 percent of the time, when the patient is simply lying in bed?" he asked, and then reflected: "The nurse is doing some maintenance, but I came to the realization that we could offer other options that might be of benefit to the patient. So that became the basis for the inquiry into integrative medicine and how we could bring to the bedside modalities such as energy healing, massage, acupuncture—those sorts of semi-mainstream complementary therapies—and possibly [make an impact on] the patients and their families in the process."

This view provided common ground for his partnership with Rev. Megregian, as they speculated what might be most beneficial to patients. He recalled a pivotal conversation they had:

I can remember, for example, one night when I was in the intensive care unit, and Pat was also there as the chaplain. We were standing outside the room because the family wanted some time with their child. I asked her, "so what do you think is going on in there? What do you think that child's soul is doing? What do you think is being transacted in that room, because the child is not going to survive?" She had no immediate answer, but the posing of the question gave her permission to think about this, in a way I had thought about it for the longest time. She was emerging as a healer, so these were important discussions.

That was the beginning of our dialogue about something that is much more subtle in terms of the impact of illness on patients and the meaning of illness in the lives of children and their families. What is the soul exchange? That is, what is the exchange at the energetic level that is going on with the patient and his/her family?

I can provide the physiological and biological support for these patients, based on conventional Western medicine, but I also have a responsibility to the healing team, to give this soul—this individual—whatever else he/she may need and has not yet got in life; to continue the person's journey, or fulfill a purpose here, which may be to live or may be to die. If the person is to die, then, from a Buddhist perspective, how can we best help this soul transition to whatever comes next; and to give as much peace to the family that loses the child? How do we provide a context, and meaning, to this illness and this death?

While Dr. Steinhorn says that an obvious goal of the initiative is to try to save children's lives at all costs, he notes that, "often in the intensive care unit, you realize that this is an opportunity to touch the families and the patients at a level that is deeper than biology."

The parents of children who have died appreciate Dr. Steinhorn's efforts. As he explains, "there was one family, and it witnessed what Pat and I were doing—a 'laying on of hands,'—praying over their sick child. After the child died, the family told us that, while the family members valued the medical care, what gave them the great-

est sense of comfort was, after having done everything else, that we actually prayed with them for their child. That had a lot of meaning for them."

Dr. Steinhorn said that the general public is probably not aware of the extent to which physicians may engage in prayer as an agent of healing; "that physicians, in their hearts, pray or make some sort of spiritual or deep emotional connection on behalf of the patient's well-being." He said that he thought this happened more than most clinicians even realized. He noted that attention to patients takes on many forms and can be very subtle. He suggests that "if a clinician simply worries about the lab values and spends extra time assessing the patient and thinking about the fluid balance, this may communicate something at a much deeper level, maybe at a soul level, to the individual patient. And this may benefit the patient on a variety of levels." Dr. Steinhorn expressed the belief that such experiences make an impact on the clinician more than the public may realize, and more than the clinicians themselves may recognize.

Dr. Steinhorn expressed the hope that the Initiative program would become "a beacon for pediatric health care in this country," because, as he observes, "the care of hospitalized children goes far beyond biology and pharmacology" and has other aspects that create a mutually beneficial process for patients, their families, and health care providers.

Research

Because the Initiative is research-based, the work that is being done with pediatric patients is carefully tracked, studied, and evaluated. Dr. Wang said: "When I came to Children's Memorial Hospital, Dr. Steinhorn had established a scientific advisory board that included three very well-funded and highly esteemed physician researchers in the hospital, and the director of the Brain Body Institute at the University of Illinois, Chicago." She noted that "in the development of our research program, I have been working with a very competent scientific advisory board. As a result, we may be fairly unique in having a scientific advisory board that oversees the scientific agenda and the *quality* of the science being done."

Regarding the Initiative's research agenda, Dr. Wang stated that she had three goals in mind. She wanted to:

- Develop very well-controlled outcome studies to address the problem of a lack of adequate controls and to ensure that the studies were designed to answer questions about the efficacy of interventions being studied
- Develop research methodology for studying the mechanisms behind CAM therapies
- Create a model CAM research program that would develop experimental designs and methodologies that other scientists could use.

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"I have been personally interested in integrative medicine for a long time, particularly how events, stress, trauma, feelings, and experiences affect our physiology," Dr. Wang said. She added that her interest was in "how does what happens to us in our lives, in our environment, how we interpret it, what we believe about it and what meaning it has to us affect our health, our physiology."

When investigating two modes her research team is studying right now—energy healing and massage therapy—Dr. Wang said that it is important to investigate what makes these therapies work if the researchers find beneficial outcomes. She examines the mechanisms involved in what patients experience as well as "what they think, feel, and believe, and how that affects their physiology."

She explained that her mentor was John W. Mason, M.D. (professor emeritus, Yale University School of Medicine, New Haven, CT), a pioneer in the field of psychoneuroendocrinology, and said that she is using his integrative models for her work. "In my previous research work with Dr. Mason," she added, "I studied a variety of topics: the effects of stress on physiology and health; the relationship between psychiatric symptoms in post-traumatic stress disorder and multidimensional hormonal profiles; and the regulatory effects of attachment and bonding on brain development, physiology, and health."

Dr. Wang's study of CAM healing modalities is significant, because it reframes the way scientists have previously looked at how various therapies worked. "There is a need for a new methodology to be developed to look at mechanisms," she said. She explained why this is necessary:

It appears that most CAM interventions do not function the same way that medications do or, possibly, even herbs. Medications typically are thought to affect certain enzyme pathways—receptor pathways, neurotransmitter pathways, et cetera—and those are the mechanisms that are looked at in a fairly linear way. An SSRI [selective serotonin reuptake inhibitor], which selectively inhibits serotonin reuptake in the synapse, is an example.

And, much of the research on herbs tends to follow the medication trial model, which may not be appropriate for other CAM interventions. For these interventions, the mechanisms might be related to changing the *organization* of the physiology, and that is far more complex.

That is one of the reasons that, in one study, I will be looking at autonomic, hormonal, behavioral, and immune measures. I am not only looking at changes in those systems, but how those systems relate to each other. That is a very different level of research—to look at changes in how different components of a system interact with each other; and that has to do with organizational change.

Dr. Wang is directing three research projects this year. One will be focused on massage therapy for adolescents who are HIV positive, evaluating the therapy's effects on immune function after 12 weeks of massage, including a 3-month and 6-

month follow-up and using a relaxation-training comparison group. The active component of massage will be the actual touch and manipulation of tissues; everything else will be controlled for the relaxation group. In addition, the hormonal, autonomic, behavioral, and immune function profiles of the patients before and after the intervention will be compared to profiles of healthy adolescents to see whether they become more similar after the intervention.

The second study, funded by the Massage Therapy Foundation,[‡] involves evaluating the effects of gentle, 5-minute foot massage on heart rate, heart-rate variability, respiration rate, blood pressure, and oxygen saturation rates in pediatric patients on the intensive care unit. Dr. Wang states: "We feel that massage may stabilize the vital signs of traumatized children. In random order, we are administering three conditions to each patient and comparing their effects: a gentle 5-minute foot massage (not reflexology), a no-intervention condition, and a foot-warming condition to mimic some of the effects of the massage."

The third project will investigate the effects of energy healing on pediatric patients who are receiving stem cells. Dr. Wang said: "We are looking at the effects of energy healing on time to engraftment of the stem cells into the bone marrow, days in the hospital, frequency of infection and other complications, and use of pain medication. The study is designed to control for the time and attention that is directed toward the child with an 'enhanced interaction' comparison group."

Concurrent with Dr. Steinhorn's view that caring about patients may influence outcomes, Dr. Wang is looking also into the energetic component of *care* itself. "One of the biggest criticisms about CAM research," notes Dr. Wang, is that "the observation that results are often influenced by a placebo effect of someone spending time with the patient in a positive way. Part of my job is to determine whether the effects that are seen from CAM interventions with trained practitioners are different from the effects of 'time spent with a well-intentioned volunteer.'"

In the energy healing study with patients receiving stem cells, Dr. Wang explained that a volunteer who is trained to interact positively with children will spend the same amount of time with each patient in the comparison group (an "enhanced interaction" group) as the energy healer spends with each patient in the experimental group (an energy healing group).

The researchers expect that the intentions of both the volunteer and the energy healer will be similar. Thus, if a difference is discovered between the two groups of patients, the difference would likely be the result of the actual hands-on energy work. Dr. Wang said: "I am trying, as closely as possible, to control for the variables that critics would claim are responsible for the effects. In many previous studies, time and attention have not been well-controlled for. Actually, we think both groups will

have positive results, with the healers [providing] greater benefit than the well-intentioned volunteer."

Dr. Wang stated that the team has done extensive preliminary studies in the hospital. For these studies, parents were asked to rate their children's levels of distress, pain, tension, and bad moods, before and after energy healing and massage therapy interventions. She noted that the team found "very significant improvements in ratings in all categories after the interventions, which we feel justify further controlled studies."

Addressing the high levels of stress and anxiety that the *parents* experienced, Dr. Wang said:

We also offer massage and energy healing to parents. We have them rate themselves before and after massage, and we [find] that the parents rate themselves higher on distress, pain, tension, and upset mood than [they rate] their kids—and the kids are the patients! What this says is that, for the parents, their child's hospitalization is an extremely stressful experience. We saw tremendous reductions in all the categories after our interventions, and these findings were highly significant. And this points to our way of looking at healing, and the healing environment for the child; it includes the parents, and it includes the staff. What this means is that one way to optimize the healing environment for the child is to reduce the levels of distress, pain, tension, and discomfort for the parents.

What is a healing environment? It is not just a place where technological procedures are performed but rather a place that optimizes any potential for healing. Dr. Wang said: One of the questions we have discussed is: "How do we optimize the phenomenal technology that is offered in hospitals today?" Some of it is really quite miraculous, but how do we optimize it to create the best healing environment for the child?"

Dr. Wang explained that her team explored the quality of touch that children receive when they are hospitalized. She noted that there were no formal studies on this, but that "we are aware that much of the touch in hospitals is aversive and painful. Parents comment on this, because when an energy healer or massage therapist comes, the parents are gratified to see a positive, safe energy directed at their child, and the child knows that he/she will not be hurt."

Even so, often, when children are touched in a hospital environment, whether it is changing sheets or dressings or placement of intravenous lines, the experience can be painful and distressing to these patients. Dr. Wang's team is asking: "What about changing the baseline of the quality of touch in the hospital to be calming, nurturing, and safe?" She noted that, currently, energy healing and massage are interventions inserted into "the hustle and bustle of medical practice and not the other way round."

Another area for consideration is how the environment can affect genetic expression changes in organisms in a way that may be similar to that of a CAM intervention—at what Dr. Wang terms "whole system organization." Noting that there is interesting research being done in this area, she posits that environmental influences are not working through only one pathway. The team is beginning to develop a methodology related to a possible way to examine genetic expression changes as a result of some CAM therapies. "However," she cautions, "this is an area that still needs a lot of development—how one perceives an overall

[‡]The Massage Therapy Foundation is a 501(c) (3) organization, established to support scientific research, education, and community service initiatives that advance the knowledge and understanding of massage as a therapeutic modality. Visit www.massagetherapyfoundation.org/ for more information.

system when most researchers are used to focusing on data from only one part of the system. So now we are looking at: 'How do we study a *whole system*?'"

The research team has worked with more than 450 patients and done more than 2000 interventions since the Initiative was launched. With no reports of adverse effects, according to Dr. Wang, the team has "established that energy healing and massage therapy as practiced in this children's hospital, are safe. We have also established the feasibility of providing these interventions on very busy hospital units in coordination with doctors and nurses and hospital staff."

She was quite proud of this: "That is another point; to be able to say we can provide these interventions in the middle of a highly technical medical care environment. The interventions are very well-tolerated and well-received by patients and their families. In fact, 100 percent of survey respondents said they would recommend energy healing or massage therapy to a friend or to another patient."

An Integrative Future

Will the Judith Nan Joy Integrative Medicine Initiative become the "beacon for pediatric health care in this country" that Dr. Steinhorn hopes for? There is much that is special about this pro-

ject. Such research initiatives, particularly those involving pediatric patients, rarely have such a combination of interdisciplinary approaches to facilitate an understanding of what constitutes true healing.

To research the impact of CAM interventions beyond a mechanistic level establishes a promising new benchmark of inquiry and may lead to important understandings about CAM's various physiologic benefits.

For a physician to pray, or express deep care, for a patient is not something that is often mentioned in hospital-based medical practice, but at Children's Memorial it can happen. To treat pediatric patients and—by extension—their families may enable healing to occur on multiple levels, as Dr. Wang puts it, to effect an *organizational* change. To recognize an obvious opportunity for supportive CAM therapies while a patient is in a hospital bed is to offer more than conventional medical care. This may be, as Dr. Steinhorn intimates, the future of health care; not just for pediatric patients, but for all human beings. □

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