Integrative Medicine in America

PROCEEDINGS

Convening of Participants In the 2012 Mapping Project

MARCH 12, 2012

HOTEL SOFITEL LAFAYETTE SQUARE

WASHINGTON, DC

The Bravewell Collaborative

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OPENING REMARKS

CHRISTY MACK
President, The Bravewell Collaborative

I would like to take a moment for all of us to reflect on the work that we do, why we are here, and to revel in the community that we have created.

This historic gathering would never have been possible without the efforts of everybody who is here, and also not here, to bring this field forward.

The response to the mapping report has been overwhelmingly positive. More than 300 stories have appeared about it, both in print and online for a combined reach of more than 98 million media impressions. Stories in places like *Consumer Reports*, *American Hospital News*, *The Huffington Post*, and MedScape are raising awareness. I just want to read a short clip from *Consumer Reports*:

> "Integrative medicine, which combines conventional care with complementary and alternative therapies, has become an established component of some health care systems, hospitals, and medical and nursing schools, this according to a survey of 29 US integrative medicine programs, treating a total of about 19,200 patients each month. The survey was conducted by The Bravewell Collaborative, a non-profit foundation dedicated to advancing integrative medicine through education, research, and practice.
>
> "Allaying concerns that complementary medicine may include a hodge podge of techniques, the survey revealed that interventions for specific conditions were remarkably consistent among diverse sites. Analysis also showed a strong correlation between the treatments offered for related ailments, such as heart disease and high blood pressure, and fatigue and sleep disorders, suggesting that treatment norms are emerging in integrative care."

One of the things the mapping team heard when they were making site visits was that you wanted to know what other people were doing. Today, you will be participating in small group discussions and sharing your own best practices with others in the room. We are going to take those small group discussions and then make the transcripts available to you sometime over the summer. Everyone will have the benefit of what was shared during each of the sessions. We think sharing best practices is one way to move this field forward.

You will also be participating in two brainstorming sessions, which we hope will generate some great ideas for how you can use your combined power to advance integrative medicine. One way to look at this is to ask yourself what is the combined future of the 29 centers represented in this room? How can we work together to benefit the whole field? Bravewell is very interested in your answers to these questions.

KEYNOTE ADDRESS

ERMINIA (MIMI) GUARNERI, MD
Founder, Scripps Center for Integrative Medicine

Good morning. It is so amazing to be in this room, to see so many people from so many wonderful medical centers and institutions coming together to celebrate *Integrative Medicine in America*. 1*

Many of you know that I come from an interventional cardiology background. I am not ready to throw western medicine out. Western medicine is there for acute care. I am the first one to say that to everyone who walks through the door, whether it is surgery, trauma, the need to go into a fancy 64 slice CT scanner, or whatever it is, we are grateful for acute care and diagnostics.

As a cardiologist, integrative medicine gave me a whole new way to look at the world. If we look at 2010 alone, this applying of acute care to chronic disease and, even worse, to prevention, has led to pharmaceutical sales of $310 billion. It doesn't work. The system is broken. You cannot take the same model that you use when someone is in the middle of a heart attack and give it to someone who is trying to prevent having an event.

This is the light bulb that needs to go off if we are going to transform the $2.5 trillion that was spent in 2010. We are spending the money, but we are spending it incorrectly. We can never have a tipping point unless we have everyone in this room and hundreds more saying we have a different way of doing this, and our focus is health, and health is the key. It is the key to an economic strategy, if nothing else, and doing what is right for the patient.

Most of us are seeing every day in our practice addictions to alcohol, and to food, and to drugs, and to the Internet, and to sex, and to credit cards. You realize that is what we are treating. My cardiology practice is an addiction treatment center. The cure for that is not Lipitor. The cure for that is peace inside. It is finding peace inside so that the fix isn't from that donut, from that bottle of alcohol, from the 20 friends in this pack of cigarettes. That is what integrative medicine gives me. That is the hope that I have for the future.

Near and dear to my heart is the INTERHEART study: 30,000 patients, six continents; 95 percent of cardiovascular disease was declared preventable.

1 * The complete report *Integrative Medicine in America* is available at http://bravewell.org/content/Downlaods/IMinAm.pdf

Today, we celebrate *Integrative Medicine in America* because this document sends a big word out there to the community that we are here to transform the system. We are going to come from a different foundation and a different base. We are not throwing out what we learned in western medicine, but we are also not applying only that to chronic disease management and certainly not to prevention.

We are making health our mission. We will continue to make it our mission. No other foundational group in this country has the tools to do this, other than the leaders in this room. The Milken Institute tells us that just a little bit of prevention will save $1.1 trillion. Just imagine what we could do if we became the model for the entire country. I see that. My vision is that the docs I work with every day, who are in their silos, are going to wake up and say, "What happened while I was sleeping?" That is what I see.

KEYNOTE ADDRESS: MAPPING DATA PRESENTATION

DONALD ABRAMS, MD

Integrative Oncology, Osher Center for Integrative Medicine, UCSF

Thank you. I have the distinct pleasure of sharing some of the highlights of the mapping study that you all participated in. If you haven't reread the report recently, 60 plus sites were identified from within the Bravewell Clinical Network, members of the Consortium of Academic Health Centers for Integrative Medicine, and others that were suggested by leaders. Twenty-nine were chosen to represent the field.

The criteria for becoming a site that we surveyed was that it be directed by a physician, other doctoral level provider, or nurse; be in operation for at least three years; have significant patient volume; and have made prior clinical contributions to the field. Sites that were only delivering non-conventional, non-western care were not included in the survey. The directors responded to a REDCap-based questionnaire, and site visits were also made by the study team to collect the qualitative data that you see, which I think adds so much to the report.

It turns out that of the 29 centers, 27 were affiliated with a specific hospital, 26 with a healthcare system, 25 with a medical school, and one center was affiliated with a nursing college. Twenty-six (26) of the 29 centers offer consultative care; 18 offer comprehensive care, which is taking care of a particular issue from the diagnosis through resolution; 13 centers offer primary care. Additionally, 15 of the centers offer inpatient services at the hospital with which they are affiliated.

Research and education are a big part of the centers. Twenty-five (25) centers reported being involved in research, and 25 in provider education. We take care of the full spectrum of life from adults to pediatrics and even obstetrics and gynecology. I, personally, was surprised that so many centers are seeing children. It took us a while to do so at the Osher Center, but 62 percent are seeing children, and end of life care is also involved. Definitely, the full spectrum of life is served at our centers.

Who are the practitioners? All but one center employ physicians. Acupuncturists are very frequent, as are massage therapists, meditation instructors, dieticians, nutritionists, and yoga instructors. The full list of who works in our different centers can be found on page 20 of *Integrative Medicine in America*. I think it is interesting. You can see there is a wide array of people serving and assisting at the centers.

Remember, we looked at 29 centers, we asked about treatment of 20 medical conditions, and we listed 34 different interventions to choose from. There are a lot of potential numbers here. One of the questions we asked was, of those 20 conditions, which ones are you having the most clinical success in treating at your site? The top five were chronic pain, gastrointestinal disorders, depression/anxiety, cancer, and stress.

Chronic pain: The Institute of Medicine just did a report on chronic pain and the cost to this nation. I can't remember exactly how many billion, I think it was $650 billion dollars for chronic pain, and 75 percent of our sites say that chronic pain is one of their most successfully treated conditions. BraveNet, our practice-based research network, just did a pilot study on an integrative approach to chronic pain and found that not only were we successful in chronic pain, but we also relieved depression, anxiety, and stress. That is the benefit of the integrative interventions—we don't just target one endpoint.

Second, behind chronic pain, was gastrointestinal disorders, which was colitis, irritable bowel, GERD [***gastroesophageal reflux disease***], hemorrhoids. Next, was depression/anxiety and then cancer and stress were equal. This is not necessarily that we are having success treating cancer, but treating people with cancer, alleviating symptoms and helping people to progress into the survivor stage.

For each of the 20 conditions, at least two centers reported having success. That is one of the reasons we are all together today. If you have success with asthma and hypertension, maybe you can share how that happens so that other centers can also have that success. I was personally surprised at some of these at the low end of the list—under 20 percent reporting—but perhaps that is because there is so much evidence of success in the top five that some of these others didn't get marked as much.

I also was quite interested to see the most widely used interventions. Food and nutrition was very widely utilized, followed by supplements and yoga. I found it interesting that in the 20 conditions, food and nutrition was listed as the number one intervention in 14 of the conditions. Yoga was ranked number one in six conditions. Massage was ranked number one in two conditions—acute pain and headache, where it tied with food and nutrition. Meditation was ranked number one in fibromyalgia, where it was also tied with food and nutrition, yoga, and supplements. Food, nutrition, and yoga are highly ranked as the most widely used interventions for the 20 different conditions that we asked about.

This is another way to look at the data. Comparing chronic pain, nutrition, yoga, and massage, you can see that not all conditions are treated the same. We use different interventions for treating different conditions. I think that is a good thing. People can say, oh, this is a shotgun approach and the centers are doing the same thing for everybody, but we don't. We do discriminate. We use different interventions. For example, supplements are widely used across most of the conditions that we mentioned, whereas, yoga,

although, again highly ranked as the number one intervention, is not something that is frequently used in allergies, for example, but is used in other conditions. I think, again, the discrimination here is very interesting and exciting.

We looked at this concordance, the conditions that were treated the most similarly (see page 46 of *Integrative Medicine in America*). The closer this is to 1.0, the more concordant that the interventions are. Heart and hypertension, obviously. Heart and diabetes, very close. Hypertension and diabetes. The operative states, pre- and post-operative. Sleep fatigue and depression/anxiety are also treated similarly, as is stress and depression and stress and fatigue.

Fortunately, on the other side of the coin, we treat allergies different from acute pain. That is very good news. Obesity is treated differently from acute pain. Acute pain seems to be the outlier in this study.

Concluding our information, insurance covers integrative medicine consultation at most of our centers, also nutrition, and increasingly acupuncture, but many of the other things that we do at our centers are not covered by insurance.

Hopefully, if we can make a difference for our patients, it would be to create the database that allows the insurers to say that we are going to cover this intervention.

I think the conclusions from our study are numerous. Integrative medicine is now an established part of healthcare in the United States with increasing acceptance and demand. Integrative medicine is truly integrative because we do use all of these modalities in the care of the entire patient.

Integrative medicine is being practiced in diverse sites with high concordance for specific conditions, suggesting that practice is—this is a carefully chosen word—evidence-informed. Prospective outcomes data and cost-effectiveness data should be collected. That is something we are eager to do. Systems to further identify and share best practices among centers and practitioners should be developed. Here we are today.

With that, I will end. Thank you for your participation. Thank you to Bonnie Horrigan, Connie Pechura, and Sheldon Lewis, my co-authors; to Mike Acree, Senior Statistician at the Osher Center, for helping us crunch the numbers; and to The Bravewell Collaborative for your vision, courage, and continued support.

PATIENT CARE DISCUSSION: CANCER

MODERATOR: DONALD ABRAMS, MD

Integrative Oncology, Osher Center for Integrative Medicine, UCSF

Participants:

- Margaret Chesney, PhD, Director, Osher Center for Integrative Medicine, UCSF
- Mimi Guarneri, MD, Founder, Scripps Center for Integrative Medicine
- Mikhail Kogan, MD, Medical Director, GW Center for Integrative Medicine
- Richard Lee, MD, Medical Director, Integrative Medicine Center at MD Anderson Cancer Center
- Arti Prasad, MD, Founding Executive Director, University of New Mexico Center for Life
- Molly Roberts, MD, Physician, Institute for Health and Healing, California Pacific Medical Center
- David Spiegel, MD, Director, Stanford University Center for Integrative Medicine

DR. ABRAMS: This is one of my early patients at the Osher Center. She is a 57-year old woman who had an abnormal chest x-ray prior to a hip replacement for her pre-op film. It was felt that she had pneumonia, but ultimately she was found to have a left upper lobe non-small cell lung cancer. She was treated with upfront chemotherapy, and then underwent resection of her left upper lobe 14 weeks before I first saw her.

She was told that her disease was stage 1A—very early—and that she was cured, with a very low likelihood of recurrence. However, a friend of hers with breast cancer had been told the same thing and had recently died with brain metastases. So the patient came to see me for information on how to live a long and happy life. That was her objective. She was also concerned by persistent post-operative pain. She described it as if a shovel or meat cleaver was stuck between her ribs. She said that she felt disconnected from her body. "This isn't a part of me anymore," she said.

She has a history of a congenital hip dysplasia, she did smoke for years, but she quit nine months prior to her diagnosis. She has hypertension, and she gained 15 pounds while on chemotherapy. She was born in Detroit, as the eldest of five children. She has elderly, unwell parents in northern California, for whom she provides some caregiving. Her husband is obese and retired. She has no children. She is a retired insurance executive. She was not raised with religion, nor does she currently have a religion or a spiritual belief system.

Her diet is Western, and she drinks wine. For activity, she said she is trying to exercise, but this is limited by her chest pain. Her current medications for her pain are gabapentin and ibuprofen. She is on atenolol and lisinopril for her hypertension. She takes an antacid. For supplements, she is on a multivitamin, vitamin D, vitamin E, calcium, and selenium.

Regarding her prior experience with complementary therapy, she has done guided imagery in the past, hypnosis, meditation, reiki, massage, and yoga. On examination, she is a well-developed, well-nourished woman, who appears to have some pain on changing her posture. She was wearing a wig, despite her scalp hair regrowing after her neo-adjuvant chemotherapy. Her tongue is pink and without coating, which may be of interest to Traditional Chinese Medicine practitioners. Her chest exam reveals a healed left thoracotomy scar and drain sites.

Neurologically, she is a little labile at times, tearful about her fear of recurrence, her loss of her friends, and her aging parents. So what would you do for this lady at MD Anderson?

DR. LEE: She has chronic pain, and she clearly is experiencing a lot of stress and psychosocial distress, both related in terms of fear of recurrence, but also body image issues. She has talked about being disconnected from her body. There are also some general health issues, such as her diet and exercise. We would probably also think about her list of supplements.

There are several options for her pain, which may be neuropathic pain. We would want to think about mind-body approaches, such as relaxation or hypnosis, or we could also consider acupuncture and massage. We would discuss these options with her to see how she would like to proceed.

Regarding the stress, there is a psychotherapist in our center who specializes in body image issues, mostly with breast consultations.

She would definitely benefit from some mind-body techniques that she can learn. We provide two different clinical services. One would be group classes, which are free. We have group classes in different types of meditation such as Tibetan meditation, yoga meditation—Kundalini included—mindfulness, and moving meditations like qi gong. We also have Dr. Alejandro Chaoul, who does our research and also has a clinical practice, and can meet with patients one-on-one once a week so that they can get more intensive training in Tibetan meditation technique. He also incorporates some hypnosis.

Thinking about diet and exercise, you mentioned she gained 15 pounds, so we would analyze where she is at with her body mass index. She is on a Western diet, which we would want to address. We would begin by having her fill out a three-day food diary. We have a

full-time dietician, who would review her three-day food diary and then they could meet on a continual basis, depending on her needs.

Regarding exercise, it looks like she may be just post-op from her surgery, so she would get an initial assessment for physical therapy first to figure out how much exercise is safe for her to do. Then, gradually, she would get rehabilitation to recover from the surgery, but we would also push her toward a regular exercise pattern, eventually to 150 minutes of exercise per week.

DR. ABRAMS: What would you do at Scripps?

DR. GUARNERI: She is 14 weeks post–left upper lobe lobectomy, with thoracotomy pain, and deep emotional, mental, and probably spiritual pain, even though she describes herself as not being spiritual. If she walked into my room with this consultation, I would immediately do Healing Touch on her. I would reconnect her to her body. She is describing it; she is saying, "I am not in my body." I would do chakra connection, to reconnect her to her body, balance her core system, and probably go into her heart on an emotional energetic level. I would work very deep on the healing. Then I would have her work with the Healing Touch practitioners one to two hours, a couple of days a week. We use a lot of essential oils at our center, which really do help in an amazing way to balance people emotionally. Then, I would see her back relatively quickly. This would not be a, "Come and see me in three months." This would be, "Come and see me in a week after you have had a few healing sessions."

My intuitive sense of this woman, and this is not a judgment, is: This is not a time for "Take this supplement," or "eat this diet." I will come back to that.

This is similar to when my cardiac patients come out or surgery and they have a midline sternotomy scar, and they are nowhere connected to their body. Yes, I am thinking of carboplatin and neuropathy. But to me, that is the second layer for this lady. Right now, it is about support, it is about connection, it is about love, love, love.

DR. PRASAD: I actually work pretty much along the same lines as Dr. Guarneri. I would not do anything for this lady in the first visit, except that I will be there with my presence, I will be listening to her, talking to her, and developing a relationship. I would like to understand how her life has changed since her diagnosis and treatment. I would like to get some details of her diet and physical activity, and would also like to know what is sustainable in her life. What is her motivation, what can she keep up with, because it looks like there is a lot going on with her physical, emotional, and spiritual stress at this time.

I would probably get some lab work on her during this first visit, including a complete blood count, liver function, vitamin D level, and thyroid level. She is 57, she is beyond her menopausal age, but it is possible that she might still be having some hormonal imbalance.

Then I will talk to her about the anti-inflammatory diet. I would cover it just briefly, and spend time talking with her about energy medicine and about healing work. I may talk to her about stress management and supplements, but probably not at that first visit. I will just introduce them, but not have a detailed discussion.

DR. SPIEGEL: I agree about the distress, but I see it a little differently. This woman is looking into the abyss. She is a smoker, she has got cancer, she does not believe that she has been cured of the cancer, and she may be right about that, unfortunately. Her existential anxiety is the real deal. She has no children, she has a husband who is in bad health—he is obese and retired, and she has ailing parents.

She is looking at death. A lot of her concerns need to be addressed in terms of dealing with her anxiety about dying. We have support group programs where we help people talk together about their fears of dying and death.

Obviously, you have to rule out the possibility that her very negative view of her current condition might be related to depression. I certainly would want to evaluate that and see if she needs treatment for depression. She may just be realistic, or she may be depressed. I frankly think that the core of her distress is that she has good reason to fear she is going to die soon, and is not comfortable at all with the thought that her life is going to end soon. That needs to be addressed.

DR. ABRAMS: I find that interesting, because Stage 1 lung cancer is such a luxury for me, as a practicing oncologist at a county hospital where almost everybody presents with Stage 4.

DR. CHESNEY: Just to underscore what I am hearing: She has had a long, happy life, so she is saying, "I want to live, and I am not happy." My feeling working with people like this is that she can't do meditation right now. She doesn't have the inner strength to pull that together for herself. It would pull her deeper into a black hole.

I do think that we need to talk more about psychotherapy or stress management. There are cognitive aspects, if a person is hurting at the level that she is, that may not be addressed if she were just to do mindfulness—the idea of pushing the intrusive thoughts away and bringing yourself back to your breath. We jump over all of the cognitive behavior therapies—strategies of coping—because we say they are not complementary, but they are not incorporated into conventional care either. We would have to help her come in touch with her fear, from a psychotherapy standpoint.

DR. SPIEGEL: Certainly, I would want to assess and see how depressed she is. If she is, we might do some interpersonal or cognitive behavioral psychotherapy; we might use an antidepressant. She is also dealing with her identity as a cancer patient, hopefully one with a good prognosis. She has got to be worried about relapse, and we have lots of support groups available.

DR. ABRAMS: I find that a lot of my cancer patients get depressed in support groups, especially if it is a lady like this who might be cured, going to a support group, losing members of the support group who are dying.

DR. SPIEGEL: That is a concern that we have tried to address since we started doing this 35 or 40 years ago. We actually studied how people reacted to good or bad news about other patients in the group. We found that participants change what they talk about so they don't get demoralized when there is bad news.

There are badly run support groups that let people stir the pot but don't resolve the problems. Even people like this woman, who hopefully has a very good prognosis, is dealing with fear of relapse. She is also at high risk for another primary, and she has got to be worried about whether or not that is going to happen.

The idea that somebody else could recur is something that occurs to every cancer patient. They all think they are going to die of cancer, even though more than half of them won't. Actually, they can find themselves encouraged by the fact that they are doing well in comparison with the others. They can see how you deal with the possibility of death in someone else, not just in yourself, so they understand better how family and friends are dealing with their illness. I find that, generally, they don't get demoralized by it. If that is happening, it is probably the problem of the group leader more than anything else.

DR. ABRAMS: A nurse reviewed 150 patient charts of patients I saw in consultations and said, "Your patients are really stressed." Obviously, I must be writing that in my notes for the nurse to appreciate that. I often tell patients that while I don't believe that stress in and of itself causes cancer, stress is not good for cancer patients, because of epinephrine or adrenaline, which is lymphocytic toxic, and cortisol, a steroid hormone that is an immune suppressant.

Researchers conducted a study in mice with breast cancer, where half of the mice were confined for three hours a day in a space that was equivalent of stress, and the other half weren't. At the end of three weeks, they found that the primary tumors were the same, but the stressed mice had increased size and number of metastases.

I wouldn't tell that to this lady right now, concerning stress. I would try to help with guidelines for stress reduction. I recommend Belleruth Naparstek's CDs for guided imagery.

At the Osher Center at UCSF, I virtually co-manage all of the patients I see with our Traditional Chinese Medicine practitioner. There are a number of factors about this patient that would be amenable to changing how her chi flows.

DR. KOGAN: I see a quite interesting disconnect here. It appears that her lifestyle in general is not very healthy. Yet, she has pretty extensive experience with CAM. So before I even suggest anything, I would like to explore the effect those modalities had on her.

I definitely would get her on a table very quickly—whether I would offer her a combination of bodywork and energy, or whether we would use osteopathy or another approach, like acupuncture to treat the pain. I would begin with the pain, to determine whether the pain is purely from the surgery or whether there is a substantial psychological component. I would like to make her feel better before I go deeper into analyzing her fears.

Acupuncture could be extremely effective for her pain, because it appears that there is a neuropathic component, especially if there was a response to gabapentin. I would not prescribe gabapentin for this lady unless it was clear that she felt better, mostly because there are side effects with this drug. She just had chemotherapy. I don't know how much brain fog she has, and Neurontin can worsen this side effect. I would get her off of the lisinopril right away. We would not assess for micronutrients on the first visit but would talk about supplements with her later.

In summary, I would go after the pain, and would try to build her up at the same time, whether it is from an energetic component being more of what she has experienced with the reiki. Our reiki practitioner is also a speech therapist, so she often does psychotherapy at the same time. We have a psychiatrist who works with the reiki therapist at the same time in one room, because the reiki stirs up a lot of verbalization of the inner process. This patient could be a good candidate for this approach because it will speed up her processing on multiple levels.

DR. ABRAMS: How do you credential your reiki practitioners?

DR. GUARNERI: You can call it biofield therapy.

DR. KOGAN: They are credentialed as volunteers, and they can be paid for coordination of volunteers. The volunteers themselves *are* volunteers, but we have six or seven very active reiki practitioners in the hospital. A majority of patients they see are the cancer patients.

DR. ABRAMS: Dr. Roberts, what would you do?

DR. ROBERTS: In a first visit, I focus on where the energy is. If the energy is in the physical direction, we head in that direction. If it is in the emotional, we head in that direction, if

it is in the spiritual—even though she says she doesn't have a spiritual practice, I define spirituality as connections—we head in a spiritual direction. It starts with the connections to yourself: "Are you in right relationship with yourself?" Right now, she is not. Then, from there, it goes out in ever widening circles: "Are you in right relationships with the people that you love? Are you in a right relationship to the people that you don't love? Do you have a community? Is it a place where you can be vulnerable and fall apart, or do you need to be the strong one in the group?"

Then, the big picture question is: Who are you, what is your place in the world, what brings you joy, and meaning, and purpose? And whenever I talk to somebody on the first visit, I bring up end of life issues. Is there a fear of death? Is there anything going on with that that needs to be discussed?

I talk about going into the psychological aspects because I used to be a psychotherapist. We can talk about the emotional and the relationship aspects, we can talk about conflict resolution. Or we can head in the physical direction and delve into nutrition. I tend to take a bird's eye view of everything that is going on, and weave in the allopathic and the holistic ways of looking at it, and then the spiritual. So, I let them know right off the bat, at the very first visit, here are all the things we could talk about. Now, where do you want to head?

Who knows where she would head, but my guess would probably be the spiritual. Once I define it as connections, it doesn't have that tendency for a push-pull with religion. Whatever is up for people is up for healing, and so, if we follow the energy, we are most likely to find the inroad to healing.

I would probably hook her up with our psychotherapist, so that she could do not only counseling, but also some EFT [***emotional freedom technique***], to help clear some of the trauma.

We do have a cancer support group. I have had some of the same comments from patients that I am hearing here. Some people get a lot of benefit out of it, while others find it scary. We have a lot of classes. Maybe I would suggest both exercise and healing harp, where she would make music, though I don't know if physically she could reach her arms out. 5Rhythms might be nice, to use her body for joy and for expression. We also have mind-body skills groups and i-Rest, yoga, and tai chi. I would wonder about exploring the concept of where is the joy in her life. And is there grief around the impending loss of her parents because they are elderly, or is it just hard having to take care of them while they are ill.

On a physical level, I would probably get her to work with our Feldenkrais practitioner, because her body is now working a little differently. He also does body work and craniosacral therapy. He is a jack of all trades. Not everybody likes acupuncture because some people hate needles a lot. We have a few lymph drainage practitioners, which may

help, and Jin Shin Jyutsu to help her nervous system settle down. I might suggest seeing a functional medicine coach, if she was interested in that.

I would probably recommend some books for her to read. One was written by a friend of mine, Dr. Lee Lipsenthal, called *Enjoy Every Sandwich: Living Every Day As If It Were Your Last*.

DR. ABRAMS: He is our friend, too. I recommend Lee's book, too.

DR. ROBERTS: I also recommend *Living Consciously and Dying Gracefully* by Nancy Manahan and Becky Bohan.

DR. ABRAMS: Do you know *Leaves Falling Gently* by Susan Bauer-Wu and Joan Halifax? It's a great book. It's about 110 pages, and it's about facing serious and life-limiting—not life–threatening—disease with mindfulness, compassion, and connectedness. It's like a little how-to book. I recommend that and Lee's book together. Lee's book is much more personal and from the heart, and Susan's is more of a how-to book for people that don't want to take an eight-week mindfulness course.

DR. ROBERTS: There is also Jean Shinoda Bolen's book *Close to the Bone: Life-Threatening Illness as a Soul Journey*.

DR. ABRAMS: After religion and spiritual belief, the three questions that I ask at the end of my interview session, before I examine the patient, are: What brings you joy? What are your hopes? And from where does your strength come? This woman might be a person who, when I ask, "What brings you joy?" would say, "At this time, nothing." I have people who say that. But then, I have people who are much sicker than she is who list 50 things. And then, some people just cry.

DR. ROBERTS: If people say, "Nothing brings me joy," I ask, "What used to bring you joy?"

DR. ABRAMS: Not much any more is often what I hear.

DR. ROBERTS: If something used to bring them joy, then pull it back up as a strength.

DR. ABRAMS: At the end I try to wrap up the joys, hopes, and strengths and give it back.

DR. ROBERTS: I was just on a Caring Bridge with a friend of mine who is dealing with cancer, and she was talking about losing her faith and losing her spirituality because of being in so much pain. A lot of times, when you are ill, everybody is trying to find a reason for it, and so, they blame the person: You didn't eat right, or you smoked. I used to do

retreats for families going through cancer, and people said, "If I can say that this is why you got it, then it helps me feel like I won't get it."

DR. ABRAMS: So what do you tell them?

DR. ROBERTS: I say that you have some people who smoke until they are 100 years old, like George Burns, and never get cancer. And you get other people, like Christopher Reeve's wife, who didn't smoke and she did get cancer. We are a mixture of nature and nurture, we are a mixture of our minds, our bodies, our genetics. All of that plays into this alchemy of health or illness. Everybody has got their points of strength, and everybody has their points of weakness. Some people will get back pains, some people will get cancer. If you caused that, then you also caused the beautiful parts of your life. If that is a point of weakness for you, how do we shore that up with your strength, so that it is not causing you as much pain and difficulty?

DR. ABRAMS: I had lunch yesterday with my aunt, uncle, and cousin. My cousin just got thyroid surgery, and she's 50. And my uncle, 89, has prostate cancer, and they were both suggesting that it was because my aunt had radioactive iodine for her thyroid years ago that they both got cancer. I said my tendency is to not try to figure out why, because we waste a lot of energy trying to think about why. We need to take the cards that we were dealt and play the hand forward. Psychologically, is that fair, to tell people that? Or do we want to encourage them to try to figure out the why?

DR. SPIEGEL: I agree. We see it also with trauma victims, rape victims, who will blame themselves for something they couldn't possibly have foreseen, and it's because in general, people would rather feel guilty than helpless. We say, "Look, what we have to do is face your vulnerability; we all have that vulnerability." I like what you said about how friends will use blame to offload their own anxiety by saying, "Well, it happened to you because you did X, and I didn't do X, and I am fine." Dealing with vulnerability and uncertainty is really the issue, rather than having some certainty that you made this or that happen.

DR. ROBERTS: Usually when they come in groups, I spend some time turning to the spouse and having that discussion, because there is so much that they are fearful of, that they haven't said out loud. And I can't tell you how often it has been healing for them to just be able to say I am scared. It is like they have been holding onto yes, it is all good. And that would be the other thing I would say. I may talk about joy, but I would also talk about grief, and I think that needs just as much attention for them to clear that, that it is okay to have those "negative" emotions, and to allow the shadow and the light to come forward.

One other comment that I wanted to make, and I wanted to find out if anybody else is finding this. I have been doing nutritional testing, and there is one section of the nutritional testing that talks about toxic load. I am finding that depending on where people live, their

toxic load is higher or lower. If they live out in Fairfax or Sebastopol, they have hardly any. If they come from Canada, they have hardly any toxic load.

DR. ABRAMS: What are they measuring?

DR. ROBERTS: They measure several things, but one is gasoline additives. They measure styrenes and things like that. I just wanted to bring that up, because it is something that I have been noticing for a while now. I thought everybody had high toxic loads. And then I started realizing that it is geographic. The company we use is Nutrival.

DR. ABRAMS: Does insurance pay for that?

DR. ROBERTS: They do. Medicare pays for it.

DR. KOGAN: Medicare pays for the entire genomic testing—the whole panel.

DR. ABRAMS: And is there something you can do about it? Chelation therapy, what do you do?

DR. ROBERTS: Yes, part of it is looking at where they are living, what they can do to help their environment. But it also looks at mitochondrial function, it looks at nutritional status, it looks at whether or not they have got any bacterial, yeast, or something like that going on in their belly that might be blocking their nutrition.

DR. ROBERTS: It looks at lead and mercury in the red blood cell.

DR. GUARNERI: I use MetaMatrix; it is a different company. And of course, this is the whole functional medicine approach. Functional medicine is about assimilation, and toxins, and so on. Of course, you always use foods to turn on your phase 2 enzymes to help clear toxins. Or you might even talk about putting someone in a sauna to remove toxins from fat tissue. It just depends on what the body burden is, as we say.

I really believe—you know this better than I, I am a cardiologist—but when you look at the people who have BRCA genes, before the industrialized revolution, before the '60s even, they had much lower levels of breast cancer. And now, all of a sudden, you combine that with all of the current environment we are living in, and we see the levels of breast cancer just soaring. There is a big difference between pre– and post–the 1960s.

DR. ABRAMS: I attribute that to diet, personally.

DR. GUARNERI: You have to look at the whole thing, because what kind of soup are we living in? I agree with what you are saying. Unfortunately, what we tend to do is we say,

well, we measured this toxin and it doesn't cause X. But we haven't mentioned that toxin in combination with this toxin, in combination with that toxin. It is the whole body burden. I think this is where functional medicine is leap years ahead of anything that we are doing in our Western training.

DR. LEE: We do not utilize any of these.

DR. ABRAMS: I guess as oncologists we give them enough toxicity to begin with.

DR. KOGAN: There is genetic testing also. If you can't offer it, even just starting with MTHFR [***methylenetetrahydrofolate reductase***] is a good start. That is Quest level testing.

DR. ABRAMS: And your lab knows where to send it?

DR. GUARNERI: You are looking for the "snips," [SNPS, or ***single-nucleotide polymorphisms***] right, and the hypomethylated?

DR. KOGAN: You can do the "snips," the whole gamut of the "snips,"—they're genomic. But then, you need a special set-up for that.

DR. LEE: Can you explain a little bit more? What is your approach in terms of the lab testing?

DR. KOGAN: I will give you a really good example. We just saw a woman with breast cancer, 31 or 32. She had four or five rounds of chemo, was basically not doing very well, with small kids. We did this Genova test and she had a very specific abnormality that basically screws up estrogen metabolism. I am not an expert. I actually have a naturopath who was specializing in this, and so she would go see the naturopath. But basically, the approach from there was to completely minimize estrogenic exposures, give her foods and detox processes that are going to optimize the correct processing. Whether it is going to help or are we too late, I don't know.

DR. ABRAMS: You mentioned a naturopath, how many NDs are working at your sites? That was one of the things I was surprised at on the list that was rather low.

DR. KOGAN: Maryland is just about to pass a law. It's all about licensure.

DR. ABRAMS: At our university, when naturopaths used to come to work at Osher, I just didn't know if we should push that button with the university.

DR. GUARNERI: We have it now.

DR. CHESNEY: It is interesting about the toxins, because we had a lecture in our mini medical series, and looking even at the Bay Area, down towards Salinas. And it is amazing the pockets of heavy toxin exposure, this toxic load idea is really something that is worth exploring. I was struck, given that we are in California where there is all this attention to the environment, there were areas that are just very dangerous.

DR. KOGAN: Right here, a few miles away, the whole city of Georgetown gave everyone free filters. When a patient comes from Georgetown, I am at the point where I don't even need to check. I haven't seen a person from Georgetown yet that has no toxic load. They all come back with a really high spread, despite all the filtering of the water and everything that is now in place. I agree 100 percent. How to deal with this, that is a whole different thing.

DR. SPIEGEL: One other thing we would definitely do that hasn't been mentioned is hypnosis. It is very helpful for pain control, and it is highly effective. And for someone like this whose pain is also so linked in anxiety about the procedure and what it means, it could be very helpful in controlling her pain. We do a lot of that ourselves.

DR. GUARNERI: We would do the same. We do it with Healing Touch simultaneously.

DR. ABRAMS: So everybody has a hypnotherapist? How many people have a hypnotherapist? Would biofeedback be useful for the lady?

DR. SPIEGEL: It tends to be more for stress tension.

DR. ABRAMS: You can't get it reimbursed except for incontinence at our place.

DR. KOGAN: I would resource her first. I am just using different words, I think, than Dr. Roberts, but it is basically the same thing. I would try to, whether it is a spiritual resourcing for her, or just get herself to go to get a haircut more often.

DR. CHESNEY: You need to—I liked your word—reconnect her to her joy. The husband, being able to say she's afraid and he can say he's afraid, because we all live in so much fear, but we are not allowed to talk about it. And to be able to do that in a safe place, with someone, to be able to talk like that, that I will be with you. She needs to hear that, because she is thinking she is supposed to be the support to the parents and the support to him. And he is complaining because he is retired and this isn't want I thought our retirement would be like. I can feel her walking around her world, and it is just draining everywhere.

DR. ROBERTS: Do you all know about CaringBridge? CaringBridge is great. CaringBridge is a free service online that people can sign up for when they get ill. And they just tell all their friends and compatriots about it. Anybody can write on it.

DR. CHESNEY: Then you don't have to tell 10 people, or wonder, "Who did I forget?"

DR. ABRAMS: When patients want me to look at their CaringBridge, I just make it a rule, I can't do that.

DR. ROBERTS: One of the things that happens for people who are ill is that some people will step up to the plate, and other people will disappear. CaringBridge gives people a chance not to disappear. They can write a word of encouragement at two o'clock in the morning on that.

DR. ABRAMS: So you recommend people to sign up if they haven't done it? You use that as a resource?

DR. ROBERTS: That is one of the first things I recommend. What starts to happen is they will read it at two o'clock in the morning when they are struggling and suffering, and they read over all of the words of love and encouragement people wrote.

DR. ABRAMS: What if she said she doesn't want anybody to know? I have a friend with lung cancer who doesn't tell people, because she doesn't want people to treat her differently. I said, "You would be depriving yourself of a support group of people that care about you." But this particular friend says, "I don't want to be treated differently. I don't want people to feel sorry for me. I want people to treat me the way I am."

DR. ROBERTS: I would wonder about whether it is that she doesn't want to be seen differently by the people around her, or if she doesn't want to be seen differently by herself. This is an identity she doesn't want to take on and I might explore that with her.

DR. SPIEGEL: Again, the support group can be a place where people begin to go public with that identity. She can do it there and not anywhere else, and see what it is like, and see how other women have dealt with it, and what a difference it has made when they finally were able to acknowledge it for themselves—but also move beyond it—and a support group is a great place to do that. Everybody has the same unhappy secret.

DR. CHESNEY: So many of us have unhappy secrets. I think it is really important to try to help someone share. Eventually, you do have to share, and then you have to deal with the family's responses to the "not sharing," and it becomes much more complicated.

DR. ROBERTS: I would say the same thing about grief. People's grief gets medicated away. If you can deal with the grief, there is a time for grief. If somebody is sick or dying, it is important to have that emotion while it is going on, because there is going to be a whole slew of people around you to support you. But what happens is it gets medicated away with an antidepressant or benzodiazepine, which is even worse in my view. Then later on

when they are feeling the grief and everybody has moved on, they don't have the support to deal with it.

DR. LEE: When you see these cancer patients, what is your interaction with the rest of the oncology team that is helping take care of the patient? Is there a strong interaction in terms of your treatment plans?

DR. PRASAD: We do the required referral process when the patients come to our center, so the oncologists know that they are coming, even if they are self-referred.

After we do our consultation, we dictate an electronic note—we have electronic records, and that goes directly into the chart, so the oncologist can see it. But if we have any particular questions about the chemotherapy regimen, or if we are prescribing something that may interact with a drug that we don't know about, we can send messages and charts to the oncologist and hope that they respond to us. Sometimes they do, and sometimes they don't.

We try to stay in connection with the oncologist, if these patients are going back and forth between the oncologist and the integrative medicine center. If I have questions and I know that I have sent a message and they are not responding, I will write something that I give to the patient and ask them to give it to the oncologist—and then I do get a response back.

DR. KOGAN: Three of our practitioners go to the breast cancer center, so they actually spend a day a month collectively—half a day every other week. We have a really tight connection with the breast cancer center. A lot of their patients get referred to us, so our communication is very thorough through electronic medical records.

Outside of that, unfortunately, a lot of the patients are self-referred, and a lot of them don't want us to tell their oncologists that they are coming to our center. We have a special box on the intake form, where it says: Would you like us to contact your provider? Pretty frequently, people say, "No, we would not want you to contact our provider." So of course, we would not.

Often when I see this, I start exploring why. Very frequently, after a while unfortunately, it ends up being that they go to another oncologist. That is actually quite common. We have several oncologists in the area that are much more open to what we do, and they like working with us. I can't work with an oncologist who is not going to recognize what we do. In my opinion, it is actually a very negative influence on the patient, because they are going to be in between this.

There needs to be a resolution, and the patient needs to decide how they want to create their team in a situation like this. I wonder how other people do this because it often ends up being an unpleasant situation between an oncologist and the integrative center.

DR. ABRAMS: I take it as an opportunity to educate the oncologist. If I send a letter, then the oncologist knows everything that we have talked about, and they might learn something that would be of benefit to them. It is a teaching moment. Interestingly, we have done an analysis of cancer patients being seen in the Bravewell clinics, and cancer patients are more likely to have been referred by a physician than non-cancer patients. In my practice, more of my patients are coming from my colleagues across the street at the cancer center. As they see how their patients are doing, being co-managed, they tend to send me more patients.

DR. CHESNEY: Should we talk about supplements?

DR. ABRAMS: It is interesting because she wrote she wanted to live a long and healthy life. Many of my patients say they want to pep up their nutrition and supplements as their goals and objectives. My area of expertise is nutrition and supplements, so it was very interesting for me to hear everybody else talk about the other things that you are talking about.

If I can take a moment, I don't think people that are eating well need a multivitamin, because they have a lot of toxic agents. I would check for 25-hydroxy D. I would guess probably 1000 international units is not enough for her. Low vitamin D predisposes people to a number of cancers, not necessarily lung. I would aim for 40 to 60, not anything above that.

I would tell her to stop her vitamin E, because generally vitamin E is a single isoform. If you are going to take E, you should have mixed tocopherols and tocotrienols, but I don't think there is any evidence that vitamin E is of any benefit. I would put her on Omega 3s. I would have her take calcium/magnesium because I think magnesium is important. I don't think she needs selenium. So my baseline for most people is vitamin D, Cal-Mag, and Omega 3s. I put most people on a medicinal mushroom blend as well. For lung cancer, sometimes I give astragalus. Michael McCulloch at the Pine Street Foundation showed that among cancer patients in China receiving cisplatin, those who got astragalus did better than those who didn't.

Thank you very much for all of your input. I certainly learned a lot.

PATIENT CARE DISCUSSION: DEPRESSION

MODERATOR: DANIEL MONTI, MD

Director, Jefferson-Myrna Brind Center of Integrative Medicine

Participants:

- Sandi Amoils, MD, Medical Director, Alliance Institute for Integrative Medicine
- Courtney Jordan Baechler, MD, Vice President, Penny George Institute for Health and Healing
- Martin Ehrlich, MD, Medical Director of the Continuum Center for Health and Healing
- Kathleen Guidotti, MPH, Complementary Integrative Therapist, 11th Street Family Health Services, Drexel University
- Maryanna D. Klatt, PhD, Associate Professor, Ohio State University College of Medicine
- Henri Roca, MD, Medical Director, Greenwich Hospital's Integrative Medicine Program

DR. MONTI: This is a case from my practice. I will go over the highlights of the case as it is presented, but it is really meant to facilitate a discussion about how we, as a group of integrative medicine practitioners, would address some of the issues. I am happy to share with you some of the things that our team at Jefferson did with the case, but this is meant to be an interactive discussion.

This was a 54-year-old gentleman, Caucasian male, who came into the office and his primary complaint was that he felt that he was depressed. He described his mood as feeling just sort of blah when I asked him to be a little more specific. As we went through the review of systems, he talked about low energy and low sex drive. He had also gained some weight over the past year, so he is overweight—not morbidly obese—but could use some help losing weight.

He had some anhedonia, although he was still functioning and working, but there was a decrease in pleasurable activities. He was noticing that his concentration wasn't as good as it had been even though he was able to work. He is a contractor and does very high-end woodworking. He was reporting difficulty with sleep and mostly difficulty falling asleep.

He wasn't feeling suicidal or homicidal. He was not happy with the way he was feeling, but not hopeless. There were no perceptual disturbances or evidence of any kind of formal thought disorder.

He went to his primary care physician initially, who started him on low-dose citalopram, which didn't have much effect. He had been on it for about two and a half to three months by the time he came into the office. He didn't have any major medical problems. He had some GERD, for which he was taking Nexium.

He had no previous psychiatric history. When probed, he did have times when he hadn't felt great and had stressful times in life, but never had a serious depression, was never treated for any type of major mental disorder, and never had any period of time where he wasn't functioning in his life.

He is self-employed and does fairly well and has for most of his life. This case presented about two and half years ago when we were in the midst of the financial downturn and he was experiencing the hurt and stress from that. He has been married for over 25 years. They do not have children. He also notes that with the decline in his mood over the past several months that he and his wife had grown apart to some degree.

They split a bottle of wine at night with dinner. That had been going on for well over a year. When they started drinking wine, it was a glass or two and then it was the whole bottle. He is not using drugs currently, though he did smoke marijuana regularly when he was younger. Because he noticed this weight gain with everything else going on, he thought it might be good to go on a diet. He is a rather proactive guy. He went on the South Beach diet. He did lose some weight. He reports that he actually gained more back with eating more animal products than he had previously, so that he was on the diet he was accustomed to plus extra animal products. He lives close to the New Jersey shore, so he says that he eats fish almost every day in addition to that and washes it down with a liter of diet cola, which he felt was very healthy because he was drinking the diet rather than regular.

He did not have any prior CAM experience, but was interested in learning to meditate. He heard that might be helpful and inquired about our MBSR [***Mindfulness-Based Stress Reduction***] program. He has no religious affiliation and did not grow up with one.

We did some basic labs—a metabolic profile, hepatic panel, thyroid screen, sex hormones, and vitamin D. His vitamin D was borderline—in the 30s—but not terrible, probably because he works outside. His LDL was 106, a little off. His total testosterone was 120; his free testosterone level was 1.8. Again, this is a guy who came in with the mindset of "I don't like the way I have been feeling. I don't like the way I have been functioning. Can you help me?" He was the ideal candidate for an integrative medicine approach, which is why I

thought he was a nice case for us to discuss and certainly not like every case that comes in the door.

Let's talk about other things that people would have liked to know that I maybe didn't put in because we had very clear guidelines of what to put in this write-up of the case. Also, what are the things people would think of, in terms of the workup and treatment plan for this patient? Is there anything else that people might want to have known about this person that isn't here?

[*Participants in this session asked a number of questions that elicited more information about the patient.*]

DR. MONTI: He doesn't exercise per se, although he is physically active. With regard to stress, he has some of the usual traumatic events, but there was no major abuse growing up. There was a period of time where about 20 years ago he and his wife thought they might like to have a child, but it just never happened so they never had the stresses of then having children that many people have. There were no big traumas that stood out. It was sort of usual life stress. The big one in the last couple of years had been thinking about: "Am I going to be able to make enough money to support my wife and me?"

He and his wife as he described had a very good relationship, but it was suffering over the past year and that did coincide with his declining mood. That was stressful. They weren't fighting, but he described it as their being less connected. They weren't doing as much together. She is a pottery maker and had been working more. They had dinner together at night, but some of the spark felt like it was gone over the past year.

He didn't describe actual erectile dysfunction, more a decrease in libido. All of these symptoms really were in the past year. It was hard to discern where they all started.

His life is pretty much his work and his marriage. He has a few friends at work; they are mostly people who have worked for him and clients. When he talks about his social life, he and his wife had some social organizations in the community that they live in, which is a smallish town, but had been less involved with those over time. He has one sibling, who lives far away. Both of his parents are deceased. His wife also is somewhat disconnected from her family. There isn't much family around and they have no pets.

He reports that she has increasingly over the last few years been unhappy with herself. She has gained weight, feels somewhat unattractive, and has started drinking a bit more in the past year.

Again, he lives near the shore. He does carpentry work on boats and also furniture and things like that. They are very connected to the shore community. I am talking about

clinical anhedonia versus decreased pleasure in activity. This guy doesn't have a wide range of affect. He will get a little smile when he thinks he is joking but even in those moments he is not that kind of a person. There are things that he likes to do. He likes to be by the water. He likes what he does professionally, which is a real plus for him.

The primary care physician told him he should see a specialist. How would you proceed with this patient?

DR. ROCA: Before I decide that, I like to retell the story to the patient and give the patient the benefit of what I think may be going wrong. From my perspective, everything that has ever happened to that individual over the course of their life from conception leads to the point at which they present themselves. I would say the increased stress most recently during the downturn has clearly put on him more stress than he might have conveyed to you.

Ultimately, I would say that probably increased the production of his stress hormones, which actually may have triggered his hypogonadism. That predisposed him, from the beginning, for depression for a number of reasons: 1. The hypogonadism, 2.The increase of the corticotropin releasing factor that can lead to depression, and, 3. He used up so many of his nutritional resources, creating a deficiency.

Those factors add to the possibility that mercury may have an impact. There may be biochemical reasons why he ultimately couldn't meet the challenge. That would be the perspective under which I would create an intervention.

DR. EHRLICH: There are certain simple things that come right across in your history. The diet coke and the three years of reflux, for example. There is a new book on reflux called *Dropping Acid*. The new theory on reflux has to do not necessarily just with reflux, but that there is a molecule sitting in the GI tract from the pharynx down, which catalyzes the reaction. Anything with a pH below 5—soda, particularly diet sodas, which have a pH of 2—can trigger these reflux symptoms.

The concordance of the weight gain in both husband and wife and the increased wine at night and the collective depression between the two of them pops out at me as something to work with.

You don't want to be simplistic as if this is just a problem of andropause, but it could explain many of the symptoms and potentially be something else to work with.

He is coming to you because he is interested in integrative medicine, and in mindfulness-based stress reduction and in meditation—this is a tremendous moment and opportunity

to turn him on to something that could make a radical change for him. Just listening to him well and picking up on his own interests would be most productive.

DR. ROCA: In working with his stress, if we are going to normalize his neurotransmitter levels, either by medication or by supplements, we need to do some sort of cognitive work to take advantage of the plasticity and actually create a resiliency to ultimately not have this happen again.

DR. AMOILS: In our practice, what we would say to him is that he has reached a point in his life where he can really transform himself and turn around his health. We will tell him there are things we can do for you and things that you can do for you. That is what we will teach you and help you accomplish.

In our system, we work through an expanded medical diagnosis, which has been beautifully done for us here. We will walk through how stress has affected him. We will show him what he has done and where he is at and why he is feeling like he is feeling. Then we will talk about what can help him come back to a life where he isn't so stressed.

We will look at the whole lifestyle situation with eating, the diet, drinking, and how we can optimize that as well as his immune function. Then we will look at his neurotransmitters and what we can do there. We have been doing quite a lot of urinary neurotransmitter levels on patients. I have had some incredible results in helping to choose what drug to use sometimes, not necessarily always a supplement.

We have a big team of people who work in our office. We will look at the bioenergetics of a person. Does he need to have some acupuncture? Does he need massage? You have to find the things that are going to work for the patients, so that you can really turn the key for them and put them on the right program.

DR. ROCA: The things that speak to that here are trying to increase serotonin. That may not have happened. Is that the functional component of his depression? Is it true he is under the increased stress from work? Is it more an anxiety driven stress, or he is self-medicating with alcohol and that has led to deficiency in neurotransmitters?

That is how I would use that neurotransmitter test to help identify which supplements would be the most appropriate ones to help him over the hump, even as we work with stress management. We may have to increase the relaxing neurotransmitters. That may be the key.

DR. AMOILS: Especially because he struggles to fall asleep. Once he is asleep, he stays asleep?

DR. AMOILS: I don't always go directly to the neurotransmitters. I would try to do some mind/body work and lifestyle changes first. It is really about engaging patients and telling

them life has been a journey. This hasn't happened overnight. We are not going to give you a pill to fix things. This is about looking at everything in your life and creating what is going to make you feel better. There is this confluence of events that have happened in his life. That is maybe what needs to be addressed, but it is finding what will make him feel better. Every patient is different.

PARTICIPANT: There was something you said that was poignant in acknowledging what we can do and what he can do. We are discussing a lot about what we can do. You mentioned that he was very clear about what he was willing to do. I am interested in meditation, and in addition, obviously, to the clinical side, to encourage him to do the practices that he is willing to reach out to.

Then I would be encouraging for empowerment and accountability, working at more of a psychosocial level, developing more behavioral health so he can clearly define what was pleasurable to him. He seemed to have a certain level of contentment with how his life had been going up until he felt that there was a downfall, and he needs some goal setting; meditation practice would provide him with insight to what is and isn't pleasurable so that he can then learn the flip side, the accountability for what he can do for himself. That empowerment alone can have a clinical effect.

DR. KLATT: We are building a new hospital at Ohio State, and the construction company that is building it has mandatory yoga and meditation before any of the workers start. I would share that with him that, hey, meditation is not just for touchy-feelies. It was mandated by the construction company because it is related to safety standards.

DR. MONTI: Fortunately, in this guy's case, he was looking forward to formal meditation, which is great. I also appreciate the comment that sometimes you have to be simplistic. He would have been overwhelmed if I had thrown the kitchen sink at him.

We did talk a little bit about diet. I did a full diet history—including snacks, lunch, dinner, how much wine are you drinking. He was skeptical about diet and a dietary approach after his experience with the South Beach Diet. The two things that I did focus on were the soda and the alcohol. He wasn't so inclined to give them up, but agreed to give the wine up to start with. He did eventually give up the diet soda too.

He and his wife decreased how much wine they drank at night. I did start right with HRT [***hormone replacement therapy***], and I believe it provided such an immediate effect for him that he became an engaged patient. Once he felt the results of that, he was much more willing to make some of the other modifications.

I never went down this road of neurotransmitters. I actually think that I have something to learn in that regard because I feel a little unsure of what to do with that approach and that technology.

DR. BAECHLER: I agree with you. Just to make a contrary statement, I tend to be cynical with neurotransmitter testing and find it not all that helpful in many cases. I found that on most of those neurotransmitter tests everybody had low serotonin levels pretty much across the board. Occasionally, there were some slight variations and the companies recommended supplements to use, which were extremely expensive. I didn't find any real lasting success with it. I find it is much easier to go directly to what the patients are saying and to their lifestyle. It is confusing if I start getting caught up in these test numbers, and it is expensive.

DR. AMOILS: That is why I said I don't go directly to them, but if you can't get things to work, it is really helpful for some patients that I haven't been able to help. I have been surprised at what it has done.

DR. BAECHLER: Things have changed with bioidenticals now. So many of them are available as a prescription. You can't fine-tune them as well as you might with a compounding. There are quite a range of transdermals one could use for women and men with gels and transdermal systems. They have gone away from compounding because they needed to be simpler to use.

DR. AMOILS: It is less expensive for the patients because it is covered by insurance.

DR. ROCA: He had a problem with sleep and with alcohol. If, for example, it would have been difficult to get him off of alcohol, my hypothesis would be that he was actually self-medicating. For sleep and to help him get off of alcohol, you could give him something that was going to activate the GABA receptors, as a way to help him ease off of the alcohol and also relax him.

DR. MONTI: I was a little more allopathic. We tried different things for sleep once we removed the alcohol and he was feeling better overall. Mood was better, but not 100 percent. I actually put him on Remeron at night. We tried melatonin. We tried some herbal compounds. Our Chinese medicine person gave him herbs when he did a consult. The situation got a lot better with the HRT, but he still didn't quite feel like he was there.

PARTICIPANT: Was exercise encouraged at any point?

DR. MONTI: What he was willing to do, but didn't actually do, was take a yoga class. He has this perception that because he has a somewhat manual job that he is getting enough physical activity. I don't think he fully believes that he needs to exercise more. I did my best

with that. He did do the MBSR program and felt that it helped him a lot. Then his wife did it several months later and felt that it helped her a lot.

I did warn him that Remeron would increase his appetite, but he did cut out some of the junk food—particularly starchy foods. He was eating a lot of carbs. I always try to think about a replacement: Stop eating so much carbs, but replace it with more vegetables, and then have a discussion about what really would be a vegetable you would eat as a snack. Do you like carrot sticks? Do you like celery? What do you like? By just getting him to do some of those things, the weight just poured off of him.

DR. BAECHLER: I have a question about Remeron. How did you come to that medication? Did you go through some other conventional sleeping medications?

DR. MONTI: No. I didn't. If I was going to give him a pharmaceutical, given that he still had some depressive symptoms and that he didn't respond to an SSRI, I didn't want to go down the road of giving him an anxiolytic like a benzodiazepine-type drug or an Ambien-type drug if I could avoid it. Something that I felt comfortable with for the whole symptom complex was Remeron. It is an antidepressant, but it is rather sedating if you use enough of it. Most people are just too tired on it and getting fat, as you mentioned, because you are tired and hungry. If you use it thoughtfully at night, even when it was in its heyday, I would combine it sometimes with an SSRI and then use the Remeron as an augmenter. For me, it is usually used as an augmenting agent. For him, I just used it as his sleep aid, which I do from time to time. Regarding supplements, what would people have used?

DR. EHRLICH: Rhodiola. It is great for stress, too.

DR. MONTI: Dr. Amoils said vitamin D. I put him on 5,000 units a day.

DR. ROCA: The question might be generalized, because I don't know if I would have used these for him, because the issue was not so significant and the testosterone replacement did the trick.

DR. MONTI: Mostly.

DR. ROCA: Somebody who has stress and increased evening cortisol, and that is the reason they cannot go to sleep, then I use Magnolia and Phellodendron. It is a product called Relora. In order to help boost their production, if the issue is a serotonin issue, then I will use 5-HTP, magnesium, B6, B12.

DR. BAECHLER: Theanine would have been great. Do we need to do cortisol levels? Do we need to do serotonin?

DR. ROCA: You can take their history and see if their history is compelling. The first intervention is not loading them down with pills. That is just overwhelming and you don't know what is working. The goal is to get them to a better place of their life. Clearly, the testosterone would be the first target.

I also look at B vitamins and look at the methylation system and now I've started to do more detailed genetic testing because there are some people who have other genetic inefficiencies. You can actually tailor the way you are going to jump into those systems and see if you can focus supplementation. When you do that if it is a genetic issue, then you are pretty much telling them you are going to need to be on this forever.

DR. EHRLICH: What genetic testing do you use?

DR. ROCA: There is a comprehensive genetic profile. The person that I am most familiar with, who does this out of her lab, is Amy Yasko. It comes from the DAN tradition. You can use it to try to get into the depths of why a person tends to have anxiety or depression or addiction or even psychoses.

DR. BAECHLER: It is amazing what a difference it can make.

DR. EHRLICH: There is genetics and then there is epigenetics. There is genetics, and then there are all of the things that we eat and our environment and how it really has a profound effect on our genes. Genes aren't our cellular destiny.

DR. ROCA: My history would have started with what was going on with your mom when she was carrying you. At delivery, that is where I want to start.

DR. BAECHLER: I am the same way.

DR. ROCA: I want to know which genes were turned on and which ones were diminished. Usually if mom was stressed, then the child tends to have those genes turned on. They will have anxiety symptoms throughout the rest of their life, which only become unmitigated when life's circumstances are so extreme.

PARTICIPANT: I have a little bit of a hard time with some of that, but I think as long as it is part of your story that you are gathering then you are helping the individual to be able to deal with what is here now. I have spent a lot of time working with in utero characteristics, and I feel like we are getting away from the societal part of all of this. We all have these different pressures. Some of us had different experiences as children in utero, but what do we do now since we cannot change it? How do we move forward today? Otherwise, I feel like it is another excuse to say my mom was really stressed while she was pregnant with me

and that explains my high anxiety levels. I don't think that is what you are proposing, but I do think that it needs to be part of the story and then what is the plan.

DR. ROCA: Telling the story back to the person, the goal is, first of all, to help the individual understand where I am coming from and they always get to correct it as I go, so that I have really heard what they are talking about on a deep level. It also helps them understand why they may have had challenges all throughout their life. It gives them the opportunity to identify things that cannot be ignored. If they want to move into a better place of health, they need to find that and work around it. You cannot just ignore it. You cannot just take a pill for it. You actually have to find ways on a more global perspective of working around it.

DR. BAECHLER: I think from a resiliency standpoint, there are other people who have had similar circumstances, but had different capabilities to get through that model. They may have the same kind of genetic expressions.

DR. EHRLICH: I would like to hear a little bit from the non-MD yoga and mindfulness people because we have been overwhelming the discussions.

PARTICIPANT: In terms of what did happen with this gentleman and the behavior modification of consuming alcohol and how that reflected the social situation with his wife—because she clearly is having her own unique experience and then the interplay between the two—there is a behavior that they could participate together in. Although, the chemical level can be very important, what they know is their more immediate experience of what is happening to them right now.

It offered the insight and the opportunity for them to see that it is not just about "me," but about "us." For me, that was the most glaring thing—how they interacted. Also, that they had the opportunity to have their own unique experience—for instance, they both went through the MBSR program and how that encouraged their interpersonal and intrapersonal relationship. That probably would have been my focus based on my background, long story short.

PARTICIPANT: I would have been really interested to have them go to the MBSR together, but you can't control that. Maybe this yoga class, even though they didn't do it, would have been great going forward.

DR. AMOILS: I would have encouraged them to do some form of physical activity together, like a walk after dinner.

DR. MONTI: We accomplished a walk when it was warm, but where we live, it is not so often warm. Great discussion!

PATIENT CARE DISCUSSION: INPATIENT CARE

MODERATOR: PATRICIA VITALE, LICSW

Interim Executive Director, Penny George Institute for Health and Healing

Participants:

- Kevin Barrows, MD, Director of Clinical Programs, Osher Center for Integrative Medicine, UCSF
- Beth Borg, RN, MHA, Clinical Operations Administrator, Integrative Medicine Program, Mayo Clinic
- Lisa W. Corbin, MD, Medical Director, Integrative Medicine at University of Colorado Hospital
- Laura Fletcher, MA, LPC, Director, Integrative Medicine Center at MD Anderson Cancer Center
- Joyce Frye, DO, Assistant Professor, University of Maryland School of Medicine
- Sherri Peavy, MBA, Director, Northwestern Integrative Medicine
- Julie Sonnenberg, MA, LPC, Practice Manager, University of New Mexico Center for Life

MS. VITALE: First let's look at the case. This is a 30-year old male who came in with a history of esophageal leiomyoma and was admitted to our hospital for a procedure. It was a benign scenario—he was coming in to have it removed because it was interfering with his ability to swallow and ingest anything other than soft foods.

The surgery had some complications. Post-surgically, on day six, we got our first referral. That is often one of the challenges that we have: At what point in the process of the patient's admission to the hospital do we get a referral? He was found in that surgery to have a large lead posterior wall to the esophagus. The lab results also showed that he had life-threatening high potassium levels, due to apparent acute multifaceted kidney injury. He was also on ongoing potassium supplementation.

Past medical history: He had degenerative disc disease in his back and back pain, bipolar disorder, some suicide attempts, anxiety, and depression, which became worse after the admission, GERD, hypoglycemia, headaches, and a prior hand surgery. His social and integrative medicine history found that he was single, engaged, and that he is the caregiver for his mom, who is elderly and ill. He was positive for tobacco, alcohol, and caffeine, but negative for drugs. He had quite a bit of social support, including his fiancée, a brother, and

friends. Regarding his financial situation, his Medicaid was cut off during admission. He is currently unemployed. That raised his stress level considerably, obviously. He denied having any religious or faith community affiliation. He had used aromatherapy for anxiety, not just for himself but also for his mom.

What do you think would be beneficial or helpful for this particular patient?

DR. CORBIN: What prompted the referral? Did the team have a specific recommendation or had the patient made a specific request?

MS. VITALE: One of the problems that we are trying to deal with is why the referrals come to us. We ask what is the purpose of the referral—on the referral form, which is paper—but they often don't answer the question. Because it is not a hard stop, and they can just bypass it and just get it done, oftentimes they do. The nursing staff will move on this referral to integrative medicine, and boom, it is out the door. It comes to us, and we respond to it regardless of whether there is anything written on that line or not.

The patient in this case actually declined the first referral, which came at day six, and didn't want any services because at that point in time he was post-surgical and he was not in a space where he wanted to actually have any other interventions done.

DR. FRYE: Are you required to get consent?

MS. VITALE: We are required to get consent with acupuncture. We are not required to get other consents because they are implied in the hospital admission. Basically, acupuncture would be implied in a hospital admission as well, but we give consent anyway because of their scope of practice.

MS. BORG: So when did he actually accept then?

MS. VITALE: Day 21, which was the second referral that we got from the physician. We have too many referrals to be able to actually hold on to folks and follow them when they have declined all services from the integrative medicine team. We just go to the very next patient that we have on our list, because we don't have any system in place right now to say this is a patient we probably should be treating.

With the 21 providers that we currently have, we have a maximum 600-bed hospital, so it is extremely large. We are in every area of the hospital, from post-surgical to PACU [***post-anesthesia care unit***] to women's healthcare, oncology, and cardiac care. We do have an ongoing list of folks that we have seen. We may not see them every single day, so we go back in and check them, if they have requested integrative care or they have received it in the past from us.

They are told, if you change your mind, just let us know and we can come back. The referral comes through the electronic medical record—we use Epic—we get an actual piece of paper faxed into our department. Then, we can look at that referral and discuss it in rounds in the morning. The 21 providers get together and talk about the referrals on the list, who are the ongoing patients that we are currently still seeing, and who is seeing whom and for what reasons.

On the referral is their name, their date of entry into the hospital, their admission date, their initial diagnosis, and a couple of basic bits and pieces. There is not a whole lot on there about their health history, because we can go into the medical record for that. We ask questions about whether or not patients have ever had integrative medicine of any kind, whether or not they are aware of the consult, and what the reason or the purpose is for the consult.

DR. FRYE: We press a lot for what the reason is, because often times, it is actually the staff who needs some help or support, because the patient's family is bombarding them. The staff thinks integrative—just get them a massage—that will at least give us 30 minutes of peace. So we press them for what the reason is, and sometimes they will say that family members are coming up to the desk constantly. We might talk to the nursing staff. They may need social work or psychiatry. We have a reiki nurse and a woman who plays the harp, and another reiki practitioner, and art therapy, and they have had some acupressure training, but we are looking to try to have a full-fledged service.

DR. BARROWS: When we had research funding for this for less than two years, we had an integrative physician, massage therapist, and acupuncturist on the team.

MS. BORG: We have got some inpatient services. We have animal-assisted therapy, massage therapy, and limited acupuncture, but it is not a formalized team. We will get a consult and then try to make a decision about who should go out there. It is mostly a physician or nurses putting in a referral for massage, acupuncture, or animal-assisted therapy. We have one nurse practitioner who does most of the triage for us right now. We are trying to get it into the medical record, but we don't have it in there yet. We have a limited amount of consults, which is helping.

MS. VITALE: What electronic medical record do you use?

MS. BORG: It's homegrown/GE. It doesn't interface with anything.

DR. CORBIN: We have a hidden inpatient service because, up until recently, we haven't had the providers to be able to respond. So if somebody said, "I want acupuncture for my patient going through labor," we couldn't guarantee we could get anybody there in the next

three days, so what good does that do? Recently, we have hired a lot of folks as contracted providers to do acupuncture and massage.

Now we are ready to respond to the demand, but we haven't quite rolled it out yet. Typically, we see a patient with cancer that we have seen in the outpatient setting who has been getting acupuncture, who is now an inpatient . So our acupuncturists go over and provide the acupuncture. Or maybe somebody will call for a massage. If someone calls for a true integrative medicine consult, I am the only person who does that, and I am busy, so it is a matter of trying to figure out when in the day I can go see them. That is another reason why we haven't rolled things out in a big way. Are your 21 providers purely dedicated for inpatient care?

MS. VITALE: Yes. We have six acupuncturists, six nurse clinicians, four music therapists, and the rest are massage therapists and mind-body specialists.

We have not really had anybody doing physician consults in the hospital setting. Dr. Courtney Baechler is our new cardiologist. I don't know yet how much she will actually do in the hospital itself; she will probably work more in the clinic.

MS. PEAVY: Sometimes the patients will hear about us, and they will call and ask for a consult. It is difficult for us, because we don't have a built-in inpatient program. Like you said, you will get a random page: "Can you come down and do this?" They don't understand that you have a clinic, or you are not there that day, or whatever it may be, but the patient may not be there the next day when you are in.

DR. BARROWS: This brings up a bigger question, for all of you that have started something. Philosophically, do we want to be like all the other services, such as nephrology and gastroenterology, where service implies a certain level of availability and follow-up. The way the patients get referred, consults are requested, and you can't ask a nephrology patient not to say the reason. So do we want to hold that line and say, "Look, this is a legitimate medical service like all the others, and therefore, it is going to look like all the others." There are pros and cons to that.

MS. PEAVY: We have house staff at Northwestern, and they see all the inpatients. That would mean that we would have to hire an integrative specialist specifically for the house staff, because the internal medicine physicians and all of the specialists don't come into the hospital to see these patients. They hear about it after the patient is discharged, that is the way they run it.

If that were the case, we would have to find someone who would be interested in doing it. I don't know about everyone, but I feel like the lifestyle of an integrative medicine physician

is more about patient atmosphere—they work in their clinics. There hasn't been a lot who actually go and do initial consults. We may get to that point at some point down the road.

MS. VITALE: We have 21 providers, and they do all of our consults. They do all of the assessment, the consult, the determination of where we go with this particular patient—the treatment plan. Having 21 of them is a huge team, and they are there Monday through Friday. We have usually between 15 and 17 on staff every day, Monday through Friday, from about 8:00 until 4:30 or 6:00, and we only see maybe 10 to 12 percent of the patient population. It is still small in comparison to the number of patients that are there in the hospital setting.

Each individual provider draws up the plan. For instance, if massage therapists happen to get a referral saying that the patient is requesting massage, or the physician would like this patient to have massage, they may go in and do a full assessment and consult with that patient, and may find out that acupuncture would be better for this patient. Then they will come back to the team the next day, it will be written up, it will be put into an acupuncturist's folder, the acupuncturist will review it and talk to the provider, and then the acupuncturist will take over. There is a treatment plan that gets set up right from the very beginning, but it could be set up from any of the 21 providers.

Whoever is on staff that morning gets together between 8:00 and 8:30 and they review all of their charts. They go into the medical record, and they look at all the patients that they have set up for the day. They look at any referrals that are in the particular area that they might go in. Then they come down between 8:30 and 9:00, and the whole team goes through the team rounds. They look at ongoing patient care—are there any that need to be handed off—and what are the new referrals, and who can take them. It takes about half an hour. There is not a lot of long discussion about every single patient. Practitioners are responsible for the clinical decision about what is best for their particular patients. So rounds in the morning are a touch point. Yes, I am seeing this patient; no, I am not; can we stop for a minute, I need everybody's input on this particular patient; or I need to hand this one off for whatever the clinical reason might be. It goes by fairly quickly.

DR. CORBIN: Maybe we need to have a team in the inpatient setting all the time. For us, one of the issues so far has been that we don't have a big presence. If you have a presence, people are more likely to use your services.

DR. BARROWS: This is a supportive service—it's not like a nephrology service. Maybe that is how we best fit into the acute care setting, rather than saying we are a primary service like the others.

MS. VITALE: Many integrative medicine practitioners use a very small percentage of their full breadth of training. We have folks who are trained as Traditional Chinese Medicine

providers and mind-body specialists., But when they are in an acute care setting, there is a small percentage of what they can actually provide at the bedside, based on the acute care situation of that patient, because it is procedure based—as opposed to the outpatient setting, where we interact with that patient in a full-breadth approach.

DR. FRYE: Are you caring for families and staff as well?

MS. VITALE: We are. Sometimes we will go in, especially when we are in the ICU area, and we can't necessarily treat the patient. We either can't get permission, or it may not be indicated, but we will treat the family as needed, if they are in the room, and if they are available. Periodically, we will treat the staff right there on the floor, because they might be highly stressed out at the moment.

DR. BARROWS: Again, just to point out, I'll be a neurologist for a moment—this is indiscriminate. This is obviously not like the rest of clinical medicine. You can give the therapies to the visitors and to the staff, just like you do the patients. It is hard for me to accept, but it might be a good fit actually.

MS. FLETCHER: It depends on your center and what it will tolerate. Ours has moved to more of a medical model at this point. If we were to say that we could or couldn't come by to see your patient, then we could or could not exist.

We don't have a formalized inpatient physician consultation service right now, because we just hired a second dedicated physician in October. Granted, he is onboard now, and he is seeing outpatients, but we lost our mid-level person, and now we are hiring for mid-level. We want to make sure that we can fully provide the consultation service.

We are moving to more of a physician-driven consult plan of care, whether it is the mid-level person that might be the one going in to see the patient and does the plan of care, and whether it involves the acupuncturist or supportive care, psychiatry, or even services that are outside of our domain, so to speak.

Our center has a social work department and psychiatry. They are not all under one umbrella. Integrative medicine also houses a functional music therapist, for example. Right now, the acupuncture, massage, and other services are physician-order driven. The inpatient nursing staff needs to go to the physician, and then they submit a consult online. We press them for it, and they need to fill in why—they can't just say, "Please come up." When we call them and ask them to say more about what is going on, then we get their story.

Sometimes they put ASAP on the referral, and at our hospital ASAP means we need to see them within four hours. We obviously have a very small staff, so that is going to be difficult, and we may need them to resubmit that to the next available person. We will

have our team put them on their list, but in the meantime, something is going on that makes them feel it is urgent.

DR. BARROWS: So when the request comes in, are you saying an integrative physician makes the triage call and then the massage therapist or other provider shows up?

MS. FLETCHER: Not currently. Currently, the referral comes in. If it says ASAP on it, the referring physician must consult with our physician as to why it is ASAP. First, we call the nurse and then we can generally tell if it is definitely an ASAP. Then we will ask the referring physician to please page Dr. Smith, our medical director, or whoever is on call for that day. They will talk it through, and then sometimes they will say yes, this is an ASAP. So that patient will be higher on the list for a massage or acupuncture or whatever it might be. The practitioners want to provide the whole service.

DR. BARROWS: Why did you go to the physician model? Is it because of acceptance?

MS. FLETCHER: In Houston, there are several different programs and they are more spa-like in nature. In the past, we have looked like that. We had someone in the waiting area doing massage. It is nice, and the patients love it, but it is confusing. It has been an interesting transition, even for the practitioners who have been there a long time. They see the patient in front of them, needing a service, but you have to make decisions. We have a small resource to serve a 726-bed and 326,000 outpatients a year to our center. There is just no way to get to all of those people.

MS. VITALE: One of the reasons why we chose not to have our program be physician-driven is the cost.

DR. BARROWS: It could be physician-filled. You get a consultation in the hospital.

MS. VITALE: You could certainly do that. We just chose initially not to do that, because there was an expense to it. But another side of it was that we weren't looking to bring an integrative medicine physician to talk to the other physicians. We actually went in the opposite direction, assuming that all of the physicians and medical directors in their areas were the experts, and we were coming in to find out from their perspective what are the areas that they struggle with. Is it pain, is it nausea, is it anxiety, is it sleeplessness? What are they not being able to treat effectively, and how could we best come in and treat that? It is very much a support service line. We just became a service line across all of Allina, which is really different for us.

Allina has a number of hospitals, but inside of those hospitals, there are clinical service lines, such as the Virginia Piper Cancer Institute, the Heart Hospital, and Sister Kenny,

which is a rehabilitative service line. If you go to Sister Kenny, Virginia Piper, or Heart, you would get the exact same services no matter what hospital you went to.

They have created service lines across the system to make the services identical and the quality of care equally high. We have just been named the first support clinical service line for Allina to go across all systems. Up to now, we have had basically a shotgun approach. We have been there for nine years. We were predominantly funded through philanthropy as well as with some hospital support. That has allowed us a lot of time to do research, to grow, and to infiltrate ourselves into the system to the point where the physicians now appreciate that we are there, because we have clinical outcomes, we have financial outcomes, and they have come to rely on us.

DR. BARROWS: They don't mind that they might come to see their patient, and there is an acupuncturist working on their patient, and they had no foreknowledge of that?

MS. VITALE: The only way that an acupuncturist would see a patient is if a physician made the referral. Acupuncture is the only physician-required referral that we have. We did it for two primary reasons. One is, we didn't want to annoy the physicians and have an invasive procedure being done to a patient without their knowledge. We wanted to work with them around that.

The other piece is, because they are required to make the referral themselves in the medical record, once that referral comes to us from the physician, when we close that out, all the information goes right back to the physician to sign off on. So we have an ongoing dialogue with the physician about the acupuncture, which has helped our dialogue with physicians around all of the services that we provide.

PARTICIPANT: We have Epic too, and we had to use Epic to launch our outpatient referral program. Number one, you can have that diagnosis field flagged as mandatory. Number two, we have been able to build schedules for our integrative medicine providers, so that they can see those patients that they had seen before.

MS. VITALE: When we get a referral, we have to act on it within 24 hours. We either then put them on our ongoing list, or we close it out. So if it gets closed out, a new referral would have to come in.

DR. FRYE: Is your program currently completely funded by philanthropy?

MS. VITALE: It initially was. Now, very little of it is funded by philanthropic funds. Most of the money that we get from our foundation now is for conferences, education, and training of staff. Very little of that money goes towards the actual operations of the program. Abbott is picking up all of it.

MS. BORG: How do you go forward then to get additional staff? When you are talking about feasibility, this is an area that we struggle with. Even though we know that data show that our work is positive, and the patients want it, and the physicians are referring it, we still have more demand than what we can manage. But that said, when we go to our operating coordinating group, even though it can be cost neutral and we know it saves money, we can't get high enough on the matrix to get any additional FTEs. We haven't been able to capture the data to show how it saves money. We have been using other people's data, and we have got other data showing decrease in use of pain meds—but they don't care about that.

PARTICIPANT: You can get your director, VP, or whoever it is, to agree to take that on, and certainly take the patients and diagnoses, and you should be able to at least develop a spreadsheet to show them the cost savings. I have a program that is completely separate from any of this that we are doing at my hospital to save inpatient days and inpatient visits for the frequent flyers and the homeless. We have no data, but we take our model, and say when we need to hire another social worker, for example. If they agree, then we are going to go forward. Perhaps there is a way that you can come up with some data.

MS. VITALE: The thing that is hard about showing cost savings versus revenue is that health systems want to see what revenue this will generate. So if you want another FTE, show me what the revenue is that the FTE will generate.

Cost savings is a different model for most hospital CEOs to think about, and that is not our decision tree. We don't make decisions from that perspective. So even though the data are there, we can look at length of stay, less pain meds, higher patient satisfaction, and staff satisfaction is higher, we have not earmarked numbers to that, in the same way that we normally look at revenue-producing—which is what the decision tree has always been based on. It is harder because you have to convince them to think differently.

DR. BARROWS: You need time to show that you are saving costs. Until then, the other main leverage is patient satisfaction. The trick is to get some funding, so then you can show the savings and the medical center will want to buy in because it saves them money. But getting started is the Catch-22 there.

MS. VITALE: We have a national joint replacement program at Abbott. But our particular hospital also has group acupuncture for all of the joint replacement folks. It is a huge differentiator.

DR. BARROWS: Joint replacement is big money.

MS. VITALE: It is big money, and that is not going away. That is only going to increase as we all age. It becomes a differentiator for choice of hospitals.

DR. FRYE: They will pay extra.

MS. VITALE: They don't. We don't charge any of our patients for any of the services that we have.

DR. CORBIN: That is getting around the Medicare problem, or do you log the visit?

MS. VITALE: We do; we chart it.

MS. PEAVY: I did my billing early this morning. The way it is set up is it is a zero-out charge. Before, it was a nightmare to log in each patient that my providers saw. It is set up in a way that every time one of our massage therapists or acupuncturists went in to see a patient, it would bill it to zero. So we weren't able to log each patient, it was a zero balance. We were able to detail out each patient when we saw them. It was built as a template, a form, and it was very simple. The patient's medical record number went in, the diagnosis, what was treated, the type of service. and the location.

It is set up as a form in the system. The faculty foundation, unfortunately, uses Epic. The hospital uses something called PowerChart and that is what our outpatient center uses.

MS. VITALE: Do they talk together?

MS. PEAVY: No, they don't. They created a form in PowerChart. When the provider goes in and pulls up this form by location, they decide to zero out. So in my outpatient setting, it is set to a price, depending on what the service is and the location. At all the other sites, we just pay the providers' salary, and it is zeroed out. But we still get a detailed list of the date, patient, and what the diagnosis was.

DR. BARROWS: When you say zeroed out, you mean you are entering a cost, but not needing to show the cost?

MS. PEAVY: We are putting in a service, and the service is zeroed out for that particular location, meaning that it is a zero balance. So when it comes over into this database, because it is set to that location, there is no balance on the file.

DR. BARROWS: Normally, without that, if you provide a service, what is going to happen?

MS. PEAVY: There is a charge associated with that.

MS. VITALE: So you are capturing visits without having to deal with the practitioner.

MS. BORG: And is that because of your grant?

MS. PEAVY: Yes, it's complicated in the sense that, on the outpatient side, we are charging the grant. On the infusion side and on the inpatient side, we are only charging the grant by the hour of service.

MS. VITALE: So at the end of the day, that would give us the number of visits, so that if we were able to charge, this is what the revenue would have been, and here are the results clinically or in patient satisfaction.

DR. FRYE: Is there a way to capture any family care?

MS. PEAVY: We are not capturing the family members because they don't have a medical record.

MS. VITALE: We do capture family and staff because there is a separate database that captures all of that.

DR. CORBIN: If somebody calls and says we want acupuncture or massage for our patient, then we send somebody over. The patients actually give their credit card information over the phone to somebody back at our outpatient clinic, who logs it in and charges their credit card for the service that is provided. That is fine because almost nobody published those services. For sure, Medicare flat out denies acupuncture and massage, and that is fine for outpatients.

But the issue is, when they are inpatients, Medicare knows that they are inpatients. The only way that we can capture these services that we are providing is with an outpatient code, so we can say, here is the acupuncture code that we use just to collect the data. But if Medicare sees that their patients have both an inpatient charge and an outpatient charge on the same day, Medicare could deny the whole hospitalization.

DR. BARROWS: Or it could be considered fraud.

DR. CORBIN: Yes, that is our issue. Even if it is cash. Our former manager said all we need to do is invent an inpatient acupuncture code. But now, our current manager has just looked into it and she says there really is no such animal. You can't just go around creating your own codes.

MS. PEAVY: We have zero codes, and you can make your own homemade code. Your patient access people for your hospital, billing compliance, reimbursement revenue people, all these people have got to get into the same conversation. They find ways to map your activity codes, so that when your center drops charge, so to speak, or they collect a payment for something, it goes into a system, so you have the activity for it. You get the cash deposited wherever it goes, but it doesn't go on your bill.

MS. FLETCHER: In our center, we do not charge for social work, chaplaincy, or even nutrition. We don't want those items to show up on someone's bill on accident. Those codes are used to capture the staff activity, but they are mapped in such a way that they don't go out the door.

MS. BORG: Do you use waivers for your Medicare patients? If Medicare patients want acupuncture, we have them sign an ABN [***Advance Beneficiary Notice***]. They are called something different in inpatient, but it is an ABN.

MS. FLETCHER: We have been traditionally been charging cash for inpatient services, but we are changing back.

DR. BARROWS: We have got to find a model where we are not doing that, because it is unacceptable to leadership, and I am right onboard with them. The problem is: This patient in this bed can pay for it, but the person right next to him can't. There is a perception that integrative medicine is elitist, so we have got to find another way.

MS. FLETCHER: We are going to stop charging for acupuncture. Philosophically, it is procedure-based. It doesn't feel right ethically to say, "I am sorry to do this, but could you have your caregiver run downstairs and give a credit card to pay for your acupuncture treatment." We are trying to look at it as more procedure-based—that patient needs this specific treatment, and it is most likely going to be a 20-minute visit. We are running some financial models currently in hopes that the outpatient model, where the acupuncturist can treat two to three patients in different rooms at a time, will make up for the difference in the inpatient cost.

MS. PEAVY: Our patient suite is about a block away from the hospital. So our providers literally have to stop what they are doing, or finish at the end of the day and trek over to the hospital, look at the patient, and figure out what is going on. It could take an hour plus of their time. I understand and I appreciate the idea that both of you are running with, because it does make absolute sense. It is not fair for people to not be able to get the treatment they need, but we have to figure out how to pay these practitioners. Although they may be making a certain amount on the outpatient side, I am hard-pressed to find people who are willing to take that extra time out to see inpatients—especially if it comes to the point where it is not one every blue moon, but it is one every day or two a day. I would imagine that they would not be willing to invest their time outside of that office that would be benefiting them. We are working on a gift from the oncology department through a donor. We have to work within the constraints of, for instance, a patient calling and saying that he would like acupuncture. If he is an orthopedic patient, the oncology grant won't pay for that. It is only paying for oncology patients.

MS. FLETCHER: We need to look at scheduling, too. Our providers work in both inpatient and outpatient settings. Now, we have inpatient-dedicated blocks. If the provider doesn't have as many inpatient appointments, then we fill out more outpatient slots.

DR. BARROWS: What about a training model? A lot of us have used academic training as a standard. For example, outpatient acupuncturists could now get a chance to go into the ivory tower of the hospital, and that has appeal—and they could pay tuition.

MS. VITALE: You can create fellowships so that people can be paid to get trained and certified to work in a hospital setting. That is being done at Beth Israel. We have talked about doing it as well, because we have one of the largest teams around. We have two schools in Minneapolis that graduate acupuncturists and about eight schools for massage therapy. We already do internships with both the massage school and acupuncture. But because they are not already certified or licensed, they can't function on their own. But we do provide a training program to give them the idea of what it would be like to be in a hospital setting, because that is who we hire from.

DR. BARROWS: What do they do, those massage or LAc interns, in the hospital?

MS. VITALE: They are shadowing our current providers, and they do hands-on work, while being supervised by our providers. So that takes time from our providers, but when a position becomes open, we have then been able to hire those folks who had internships with us. Some people fall right into inpatient care, and so as soon as we have an opening, we hire them.

We had to create the training program inside the hospital setting. These practitioners were educated in their institute, and we had a collaborative agreement with the institute. The next step for us would be to do what Beth Israel in New York is doing, because that is hugely lucrative in terms of providing different opportunities for people to get training. As you are looking either to expand inpatient care or getting into inpatient care for the first time, you need to look at specific areas in the hospital and acute care setting, especially if you want to be really forward thinking.

As we start to move forward, and healthcare starts to shift and change, some of the areas that are always going to have patients and which you are going to look at for patient satisfaction are pain control; orthopedics, around joint replacement; mother-baby scenarios, where you have somebody who is pregnant and is now on bed rest. When we treat any of the moms who come in and are on bed rest, regardless of what the intervention is, they stay pregnant longer. Every day that they stay pregnant saves a huge amount of money, not just in that hospital stay, but in subsequent NICU stays.

There are specific areas that you may want to focus in on, because then you can start looking at CPT [***Current Procedural Terminology***] codes, and have it as a bundled charge as just part of the hospital stay, because it is a differentiator. If you have got limited resources, this is where we are headed in the next couple of years, looking at taking our 21 providers and thinking about where we really need them. Where do we get the best results? Maybe with pain, or anxiety, or with length of stay in a particular area. We are just now targeting all of our data down to look at which areas this approach works best for.

If I were to start a new program from scratch right now, I would be looking at orthopedics and at postsurgical or presurgical care. We can carve down the hospital stays in an acute care setting, because we are going to have other areas of patient care for folks who have chronic illness.

So if you were to stay in a hospital setting or be able to provide a program that is going to be sustainable long-term, those areas where we are always going to have people in a hospital setting are pregnancy, joint replacement, and heart issues. If you want to do hospital-based work, you will want to look at the areas where you can work in now and that will have some benefit long-term.

This has been a great conversation. Thank you all for participating.

DISCUSSION: PATIENT OUTCOMES/ ELECTRONIC DATA CAPTURE

MODERATOR: JEFFERY DUSEK, PHD

Research Director, Penny George Institute for Health and Healing

Participants:

- Steve Amoils, MD, Medical Director, Alliance Institute for Integrative Medicine
- Brent Bauer, MD, Director, Complementary and Integrative Medicine Program, Mayo Clinic
- Brian Berman, MD, Director, Center for Integrative Medicine, University of Maryland
- Blythe Brenden, The Bravewell Collaborative
- Lorenzo Cohen, MD, Director, Integrative Medicine Program, MD Anderson Cancer Center
- Mark Cunningham, Practice Administrator, Osher Clinical Center
- Ben Kligler, MD, Research Director, Continuum Center for Health and Healing
- Mary Henwood-Klotz, MPH, Director of Operations, Stamford Hospital
- Marc Kosak, Vice President of Administration, Greenwich Hospital
- Carolyn Lammersfeld, RD, Administrative Director, Integrative Medicine Program, Cancer Treatment Centers of America
- Victoria Maizes, MD, Executive Director, Arizona Center for Integrative Medicine
- Anne McCaffrey, MD, Medical Director, Marino Center for Integrative Medicine
- Laurie Macaulay, Associate Director, Susan Samueli Center of Integrative Medicine, UC, Irvine
- Michele Mittelman, The Bravewell Collaborative
- Connie Pechura, PhD, The Bravewell Collaborative
- Kieran Richardson, Director of Operations, Arizona Center for Integrative Medicine
- Melinda Ring, MD, Medical Director, Northwestern Integrative Medicine
- Ellen Seymour, Practice Manager, The Center for Integrative Medicine at the University of Colorado Hospital
- Susie Laurenson Shipley, Regional Manager, Institute for Heath and Healing, California Pacific Medical Center

DR. DUSEK: This is the patient-centered outcomes research working group. I would like to find out what you are all doing and ways we could strategize to collect more information to really augment what happened in the mapping study. Are there tools that we could actually deploy and use together to maximize our efforts?

DR. McCAFFREY: We are actually in the middle of an NIH-funded outcomes research grant, looking at our electronic database to see if we can figure out any outcomes from it. Non-research collected data is a total mess.

DR. COHEN: We have a lot of ongoing clinical trials and struggle with getting good data that is meaningful in the long run from our medical center.

MR. CUNNINGHAM: We are looking for ways to not only continue collecting data within our integrative center, but also figure out how to pair with the other clinic I run to collect similar data.

DR. KOSAK: We are also in the process now of bringing up the Epic electronic medical record [*EMR*], which will come up in the next six months.

MS. LAMMERSFELD: I have had similar experience trying to pull outcomes from our electronic medical record with our informatics team. It is a mess when it wasn't entered for the purpose of research.

DR. KLIGLER: We have an EMR centricity that has got a huge amount of data that we can't figure out what to do with and are working with Dr. Dusek and others around an idea of a prospective electronic data collection that gives us more to work with basically.

MS. MACAULAY: We are just into the process of EMR conversion. I am looking to learn from you all what to do and what not to do in terms of setting this up for us clinically.

DR. BAUER: We have an EMR for about the last 10 years, and we still don't have a good way of getting our data in an easy and reproducible fashion.

DR. MAIZES: We are opening a new integrative primary care clinic based on a model we have designed and have received a grant to do outcomes research that we hope to embed in what will be an electronic medical record. We are eager to learn, both from the mistakes and from the successes, so that we can do as well as possible and not be sitting here in three years and saying we have a mess.

MS. SHIPLEY: We have had an electronic medical record, Epic, for a number of years. We are looking at starting to build outcomes data.

MS. SONNENBERG: We have been using the Cerner system for about 12 years, and we have a mess.

MS. SEYMOUR: I think we are somewhere in the middle of the two Epic conversions here. We are just about done getting the entire organization onto Epic, but have not yet begun to recognize or try to recognize what that can do for us in data capture and outcomes.

DR. RING: We have been using EMRs for a long time, using Cerner PowerChart, and the hospital also uses Epic. In terms of research, we are starting to work with another group on campus, Dr. David Cella's group, using PROMIS (Patient Recorded Outcomes Measurement Information System). We are presenting at the upcoming research meeting a system that we have developed that allows us to use the PROMIS system specifically for integrative medicine research. We have piloted that, both in our center and in the chemotherapy infusion suite. It is an exciting way to collect data.

DR. BERMAN: I am interested in how do we get good information for people to make healthcare decisions. At our center, we have been using shoe boxes to collect data, so we have a lot of data. They are moving us over to Epic now, but we also are getting more involved with comparative effectiveness research, and working with folks in Europe and in the United States. The Cochrane database has now over 43,000 controlled trials in the CAM site. The whole Cochrane database has over half a million randomized control trials. The people within that organization are very much looking at ways to use information and to make it more user friendly.

MS. HENWOOD-KLOTZ: We do have an electronic health record, but we have not been measuring our outcomes yet.

DR. DUSEK: So let it be shown, there still is a mess with electronic health records and the variety of health records. Again, with all of these issues we have got Cerner, and we have got Epic. We developed our own Epic flow sheet for inpatient integrative medicine data collection and to do it systematically. What we have been doing for about five years could be provided elsewhere.

I want this to be a learning session. Let's figure out what the issues are. What is going to be useful, as we take that mapping study to the next level and the next level after that? Partly, the data are interesting, not in a bad way, but we had to start somewhere. How do we know for outpatient care, what the therapies are that work best for breast cancer patients, or for prostate cancer patients, or for fibromyalgia? Is it a combination of modalities that work? If is it acupuncture, should it be once a week, twice a week?

If we can collect data systematically, my dream is a consortium of our centers all contributing data from which we could actually query specific items. At our center, we might see 100 breast cancer patients a year. We can't say a lot in outcomes-based research with 100 patients. But if we have 29 centers, or 30 or 50 centers, we would have 3,000–5,000 patients. We could start understanding practice-based patterns, we could get some best

practices—what is working, what is not working? We could ask questions like: Does it work differently if you are an aficionado of these therapies, or if you are brand new?

For example, my mother had a migraine. If she comes to our clinic, what should she get? Can she afford acupuncture? What does her insurance look like? Where we are right now is a state of randomness, which is not bad, but what is our intent about delivering evidence-based or evidence-inspired treatment. That is my goal for how we can work together. It is a team effort; it is a team sport. We have got great examples, such as PROMIS, and I am just really inspired. I have a RO1 [a National Institutes of Health Research Project Grant] to look at our inpatient program for outcomes data. We are happy to share that information as we get it, because we want people to benefit from what we are doing, including the struggles we have had. You don't reinvent the wheel. You can jumpstart from where we landed, learning from the mistakes we have made.

There is a whole institute now called PCORI [***Patient Centered Outcomes Research Institute***] that is helping people make informed health decisions. If you have got certain conditions, what are the things that we should be doing, what do we know from our clinical practice? This is patient-centered and patient-involved. If we can inform patients that there is evidence that a certain approach might be better for their condition and they don't know this, it is our obligation to educate them as we go, but to allow this to be a dialogue, a shared decision-making, essentially.

This process involves assessing the value of healthcare options. What is the full panoply of options we have, on the wide spectrum from completely integrative or alternative—whatever you want to call it—care, to a combination with conventional care. Where does that person need to be on that spectrum at that point in time? While some of you have Epic medical records or Cerner or other type of records, to my knowledge—and I could be wrong—we don't know what the best treatments are at this point in time. We have way more centers doing this work than we did five or 10 years ago, so we have an obligation to figure out if there are treatments that are most effective in this case. By working together, we can actually get somewhere that we couldn't separately.

In this session, we probably have 10 to 15 centers represented, so we would probably be able to understand where integrative medicine as a whole can go, and help the field, and help others who aren't in this room who would be happy to take the information we have learned to their CEO and say, now we know integrative medicine works for inpatient care or outpatient care.

Randomized controlled trials are great. I have done a lot them for many years. The trouble is: the eligibility criteria that we have for a randomized controlled trial don't reflect what happens in the clinic. What we have seen and what we have heard is that it is messy in the clinic, and we don't have eligibility criteria. But if we have a systematic way of collecting

and capturing data, would that allow us to develop a pool of data set, the consortium-like approach to allow us to deal with the messy data?

In addition, we have EMR data that are very complex. But they also allow us to collect information on clinical outcomes and cost outcomes as well as patient-centered outcomes. So again, we can actually put together what I call the trifecta: Is there clinical effectiveness, cost effectiveness, and patient-centered effectiveness. Does your clinic collect PRO [***patient-reported outcome***] data, why don't they, and what would we need to help you inspire them to do that. Is this information actually going to be useful, or is it just messy? I would say it is going to be useful, but it is going to be hard work.

How many folks are already collecting some form of patient-related outcomes in their clinical study? We are starting to do it, so we have probably about nine centers that are collecting some form of electronic health data. Let's go around the room, and say what you are doing and what is happening or not happening that is to your satisfaction.

DR. COHEN: We offer five individual consultations for patients: medical oncology, massage, acupuncture, music therapy, and meditation consultations. Those are one-on-one treatments. As part of those consultations, we are collecting systematic data. The most rigorous is in the medical oncology consultation, where patients will complete the MQOL [***Multidimensional Quality of Life questionnaire***]. It is a pretty simple form asking what are the two main issues that bring you into the clinic today, and then to rate the top one in terms of how much it is impacting your quality of life.

Then, based on how people answer, we will then give them subsequent questionnaires. If their main issue is fatigue, then we will also have them complete the brief fatigue inventory. If the main issue is pain, they will complete the brief pain inventory. We have five or six more-detailed questionnaires to assess specific symptoms. We will also have all patients complete the MDASI [***MD Anderson Symptom Inventory***], which asks about symptoms in the past 24 hours, and the ESAS [***Edmonton Symptom Assessment System***], which asks about 10 primary symptoms in oncology right then, at that moment that they are in the clinic.

They complete the SF-12, which is a general measure of quality of life. We are currently collecting it in paper version, and we have filing cabinets jammed full of all of this paper and haven't done much with that information. We published one study looking at just the MQOL, but that has limited benefit.

From my perspective, being a clinical trial researcher essentially, I always struggle with how do we incorporate research into the clinic. Looking at the MQOL and the symptoms is clinically very important to Dr. Richard Lee, who is the medical director and the medical oncologist. Being able to see whether the acupuncture that he referred the patient to

for peripheral neuropathy is helping based on looking at a detailed neuropathy scale is clinically useful.

But taking that data, we can publish it in a medical journal, looking at acupuncture for neuropathy with the patients who came into the clinic, but it is not going to change practice patterns, it is not going to change insurance companies' opinions, because it is not a randomized trial. At the same time, it is not appropriate to not collect this information, so that we can inform the field as a whole.

We are in the process literally now of trying to go fully electronic. The idea would have been to go with iPads, but the institution doesn't support iPads. They support a kind of interface between a laptop and a tablet. We are getting all our forms into an electronic system, so the patients in the waiting room can be filling them out on the computer, so there is no paper anymore.

DR. DUSEK: What system are you considering using, if you are not already using one, for data collection or data capture?

DR. COHEN: It would be good for patients to be able to fill out forms through the Internet as well, so that people could, in theory, do that at home before they come into the clinic, to at least fill out the basics. Having a smart form, of course, is ideal, so when they check that they have pain, and that is the primary issue, then they are asked to complete the BPI [***Brief Pain Inventory***].

DR. DUSEK: Who is using PRO in an outpatient setting?

MR. CUNNINGHAM: To some degree, with our back pain patients, every back pain patient is flagged at scheduling. We review those daily, and we have someone who interviews every patient who walks in the door, using pain measurements with questions from a research perspective. We meet weekly on each and every one who is enrolled with certain criteria of acute low back pain. We then meet weekly to manage the case, and then there are different points throughout the six months that we go back and call those patients and figure out what their pain levels are, review their care management plan, and utilization. We use mostly what we have in LMR [***Longitudinal Medical Record***], an electronic medical record that we collect data in. We set up manual databases to manage it.

DR. KLIGLER: My big question is: What are we doing that we can actually integrate into the normal day-to-day operations of the clinic, so that it is part of what happens. The only thing we are doing in that regard is that every time a patient with pain comes in, we do the VAS [***Visual Analog Scale***] zero to 10 pain scale. That is something that theoretically you could go into the record and extract.

I would love to see us figure out how to do that. We had an idea way, way back when that we never managed to execute of also getting data on every visit with SF-12, which doesn't take very long to do. There are two challenges: One is something that automatically happens at every visit, and then the other is: How to build something where patients can report from home at fixed intervals on how they are doing.

To me, those seem like two separate challenges, both of which we need. If it is something we just do when we are in the clinic, then you are hostage to how often do people actually come in, and what happens when somebody doesn't come back for a while. Does it mean they are better, or does it mean they got fed up and they left? I am interested in seeing us pursue both of those paths simultaneously, building something that is electronic, whether it is an app for smartphones, or an Internet prompt, or whatever gets back to people every six weeks or two or three months, to see what is happening now.

DR. RING: I can read a little bit from the abstract that we submitted to the International Research Congress on Integrative Medicine and Health.

"The patient-reported outcomes measurement information system, PROMIS, is a nine-year commitment from the NIH to improve and standardize patient-reported outcome measurement across common chronic conditions.

"It has five broad domains (fatigue, pain, physical function, emotional distress, and social health) as well as domains with specific relevance to different diseases and different conditions. It has these banks, and it allows the CAT, computerized adaptive testing, to get tailored PRO assessments that are more precise and less burdensome for everybody.

Assessment Center, a free online research management tool that enables tracking item development, and administration of the PRO instruments, including CATs, manages and exports data. The researchers and clinicians can create study-specific websites to administer PROMIS and PRO measures to patients.

It is a way to use this free Assessment Center, to use standardized, validated measurement surveys. To me, it is revolutionary for CAM and integrative medicine. One of the problems in integrative research and data collection is that it keeps getting criticized because we are not using the same tools. If acupuncturists in their own little center or researchers at an academic center use this tool, they are using the same measurement tool.

It is a patient-reported outcome: What is patients' fatigue doing, what is nausea doing, how is digestion, how is their pain responding? It is extremely exciting and it is something that we could use to bridge so many different things to get the numbers that we need to show that it works.

DR. DUSEK: Or doesn't work.

DR. RING: We have a philanthropist who gave us a small grant to get this started. We bought iPads, which the patients can use before and after the visit. We are starting with acupuncture, both in the chemotherapy infusion suite and in the clinic, with 15 data collection points. You can program in longitudinally how many collections points there are. Patients fill it out before and after the first visit, and then subsequently, at interval points. They can either do it while they are at the center or in the infusion suite, or they can do it from home and access it. It makes the process very user-friendly. They are quick, validated surveys, and you can specialize it to whatever survey or disease you are interested in.

I am not a researcher. I am a clinical person, so I am collaborating with my colleague in crime who is from Dr. David Cella's research group. This is something that we could share, that everybody could use. There is no reason to have IT people reinvent the wheel. There is a free tool out there for you to use already.

DR. DUSEK: The PROMIS tool, which is NIH-funded, is a multisite effort. It is going to be the gold standard in a number of years. If you are not using some sort of PROMIS, either the fixed forms or the CAT version, start doing it soon. Where we have used depression literature, the Beck Depression Inventory or the Hamilton, there has been a whole challenge with looking across studies and cross-fertilizing. We can't do it, because we are using different tools. So NIH is pushing very strongly to develop PROMIS as a central tool.

The one challenge I had with PROMIS, and we considered either REDCap-based electronic data capture or PROMIS-based, was the ease of use. The Assessment Center, albeit interesting, is always a train wreck for patients coming to our clinic.

DR. RING: We saw pretty good results, because it is very simple. It comes up one screen, one question at a time.

DR. DUSEK: The problem for us partly was the way it was set up—logging in for some folks in the clinic wasn't simple. It took a lot of front desk staff time. We are trying to figure out how to do this in a way that is not going to be labor intensive for the office, because that is where the cost is. When we were doing our pilot testing, we looked at the instrument that came out of UCLA, REDCap and PROMIS. REDCap was by far the easiest to work on for regular people, to work through this website, but it doesn't have longitudinal data collection. You have seven data sets, you have seven data points, which is hard because you have to link all of that together on the back end, and it gives us more of a challenge.

DR. COHEN: So a challenge to date with PROMIS and the assessment center is that it is not validated. It is drawing from validated forms and putting them into this new system, but

the new system and the computer-adaptive testing have not been validated, though they will be shortly.

If you were to submit a study of yoga—I do a lot of yoga clinical trials—and to say that we are going to use PROMIS as the primary outcome for physical functioning, we probably wouldn't get it funded because you can't put in all the information, validation, internal, external validity, and test reliability that exists with the SF-36.

DR. DUSEK: You are right. In fact, they are suggesting in this interim period that people use both.

DR. COHEN: Clinically, however, computer adaptive testing is, of course, the way to go. Within the clinic, you don't need to be doing a full Beck Depression Inventory. You ask patients about their depression, and then you have subsequent questions based on how they answered the first.

DR. DUSEK: So electronic versus paper and pencil, because our file cabinets and Dr. Berman's shoebox can't hold all the data. Partly, it is a costly endeavor to have a lot of staffing to do this. We have to be thoughtful, efficient, and need ease of use. Publishing the data, we want this to be useful information—how do we do this in fixed time points?—as Dr. Kligler pointed out. If we are collecting data every time someone comes to the clinic, "frequent flyers" have 25 collections in six months, while someone who comes in once a year has no data collection points. Systematic time points are also an important consideration. Within our pilot study, working with statisticians, we are looking every six weeks or six months, to look at longitudinal points in time, to see if there is a shift in outcomes.

Does anyone in this room know for certain what works and what doesn't work? Every patient is unique; every patient is different. We have to collect the information to enable us to figure out as a gestalt, what is working and not working. This is a critical thing for us to do. Any other thoughts about tools you have heard about, or your experience in using data collection? How do we do this, without making the clinic managers and front desk staff crazy? What happens, as a researcher, if clinical folks say research is not important—Why are you making my life crazy?—we know what works.

DR. COHEN: There is also the extra burden on the patients. If you are not using computer-adaptive testing, it can be overwhelming. When people come in with multiple symptoms, we can't have them complete a four-page questionnaire for each of six symptoms. That is too much of a burden.

DR. McCAFFREY: We do a basic clinical encounter. We have an intake form when patients start at the clinic. It is on paper, and there are some stress scales that come with it. It is not

particularly validated. It is something that somebody put together years ago that we are still using. I want to develop a new one.

I have been working with Mikel Aickin at University of Arizona, trying to figure out if it is possible to get any meaningful data out of this mess. One of the things I was saying to him, if all we get from this is guidelines of how to better collect data at the clinical setting, I am happy with that.

We are looking first at back pain. We pulled out 7,000 patients with a diagnosis of back pain. He is a researcher and a biostatistician, and he is saying, so the patient got the diagnosis of back pain and then it was taken off of the list three years later. There is the event. And I am like, no. That was when the doctor finally saw the patient for the physical exam again, and the doctor decided to clean up the problem list. That back pain could have been two days long. It is over now, but we don't know how long within that three-year period it happened.

What I would have loved to have is, at each encounter the patient comes in, we do a pain scale, we update the problem list. Now that the meaningful use measures are coming in, and we have to do these clinical visit summaries, the docs are basically being forced to clean up their problem list, at least annually, so that does shorten the interval.

We know that they have had back pain at some point. We are looking at the use of medications. Maybe you are looking at whether back pain was used in the billing code. It may be on the problem list, but it if wasn't billed for, then they didn't have it.

We have been talking about creating a proxy for improvement. There is a study about how back pain can enter you into an illness role. You become a sicker person. So could we do this with an amalgamation of patients who come in with back pain and they have a couple of problems on their problem list. Then we look at them eight years later and say if you went to acupuncture and chiropractic a couple of times, you end up having a lower illness burden 10 years down the road by use of a number of medications on your problem list and number of problems on your problem list. And it is all very squishy.

What I have gotten out of this is that clinicians need to be more mindful of what they are entering into the data set. They need help—they need prompts—with that. The electronic record needs to keep you from leaving problems on the problem list that don't exist anymore. We also need intervals of pain. If I had an interval of every six months of this person's pain, I would be so much happier.

DR. KLIGLER: The next level of what Mikel Aickin is doing is a project with Kaiser, where they are doing the same data mining, trying to describe outcomes based on the EMR. They are also doing a prospective cohort study following people forward, which is in progress,

through an RO1. Whether or not they pull it off, we will see, but their methods are very interesting.

They are diving into the EMR as they have been doing at Marino, and then simultaneously going to recruit a cohort to follow prospectively with regular collection of data intervals. Then they are going to look at what the EMR shows to see if the EMR-derived outcomes from the retrospective study, as Marino has been doing, mean anything or not, in comparison to prospectively-derived patient-centered, patient-reported outcomes. Then they can figure out if either the EMR-derived outcomes don't mean anything and it is a hopeless approach, or if there is a germ of possibility, but that we have to infuse the routine data collection by the providers with XYZ ideas.

The reason we actually are managing to collect the VAS pain scale data routinely is that it is one of our CQI [***Continuous Quality Improvement***] indicators for JCAHO [***Joint Commission on Accreditation of Healthcare Organizations***]. We were threatened as providers, that we were going to get in trouble if we don't have these data. We even have to collect it on routine well child visits. We have to put in zero pain, or we get feedback. This was not out of a research motivation. This was from CQI at the hospital. We had to start getting ourselves to do the pain scale on every single visit, even when it seems absurd. But it didn't come from a research initiative, it came from our clinical bosses. It did work, though—we have that data now.

MS. SONNENBERG: Pain is one of the frequent ones that is entered in a different place in the IT system. Whereas, a lot of the other data are dictated and then transcribed, so you cannot actually pull it out of the system.

DR. MAIZES: As a doctor, if someone doesn't come back who has come in and seen me for pain, I assume A) they have gotten better, or B) they have gone to somebody else. I don't feel a great urgency to get that person back in. I am wondering if we could spend a little time talking about some of the chronic disease management that we do, where we actually do feel like we have to manage that person's diabetes, we have to manage that person's lipids, where we actually do have much more regular points of interactions with the patients. I think it raises different questions and different challenges than pain.

There is an area where we actually have said we have to know over time how we are doing with someone's A1c or their lipids. That is part of our responsibility as we manage people over time who have these chronic diseases.

DR. KLIGLER: Diabetes is a great example. Another project we are working on is, we collaborate with a local non-profit agency that delivers a lot of care to underserved populations. They are a medical home—they have a tremendously well-developed chronic disease management system for people with diabetes. They have a massive statistics

program that extracts data already from their EMR about diabetes-related outcomes, and just plugs it in. It can show you anything about frequencies and changes.

We are working on a project where we bring in an integrative intervention and offer it to part of their population but not to another part. That data that is routinely being collected, but that is a little different from patient-reported data. But it is another whole avenue of how to use data that is being captured electronically, because somebody else had the standards and our organizations have to be doing that already.

DR. DUSEK: Dr. Amoils, your center is relatively small, and very innovative, with no electronic health records, only paper records. We were talking about the challenges of electronic tools and pulling data. As a practitioner, and a very good practitioner, what would you say to the other folks that are going to be reading these proceedings and thinking, I don't have an electronic health record, what do I do, how do I participate?

DR. AMOILS: We have been, for years, having patients self-report as they come in on a VAS for pain, and asking them about fatigue and common problems. We have been trying to track it. We have seen about 20,000 patients a year for the last 12 years. We have had a significant amount of patients that we have watched. One of the things that always impresses me is that people come in and they write on their chart six out of 10 pain. And they are smiling at you, and you are not quite sure if this is six out of 10 pain. A lot of the people are writing eight or 10 out of 10 pain, and they are also walking around.

You ask them, the last time you were here, it was also eight out of 10 pain. And they say, I am so much better, I feel fantastic. Your treatment has really helped me. There are a lot of factors that come into pain, including psychosocial factors and the need for attention and a host of other things. But one of the things they do report is the pain goes down, and then it stays down for a long time. Then, if the pain goes up, they come back.

Integrative medicine, in its nature, allows us to manage people. I always tell people we are not in the curing business, we are in the management business. We try to manage their pain. When we look at these people over 10, 12 years, and see how they are doing, they often have this chronic pain that comes and goes. If you try to write it down on a problem list, it will be there for a few months, then it goes away. It might come back the next year, it goes away. In reality, they may have a chronic disc problem that is just niggling along, and you turn the pain down.

What I would like to catch is this variation in symptoms, and some overall picture. We need to find an instrument where the patient will self-report and that becomes part of your data capture and research. We have been trying to get this on paper. We do patient satisfaction surveys periodically, and people tell you that 96 percent of the people are very happy with the outcomes. They prefer this approach to the conventional medical approach. But then,

when you see their chart numbers, their pain is still high, and that is what I am trying to look at.

DR. DUSEK: The idea of how the patients report and what can we trust—my six is someone else's two, I am a wimp—is challenging when you aggregate these data. So we have to find ways to almost, like you do with opioids, translate what that is into an equal amount for every individual perhaps.

It is important to use tools, as Dr. Kligler said, that have been valid in other areas that we can actually use in integrative medicine, being thoughtful of how we ask the questions of our patients and making it simple for them to do. As Dr. Maizes mentioned, we need to focus on chronic disease management. How do we tackle that very cumbersome group? They are the ones that are probably driving our healthcare system bonkers. Do we have any other thoughts about chronic care management, or using other tools, asking the patient differently, what do we know that is out there that has worked that we can model what we are doing?

DR. BERMAN: Probably 15 years ago, so we didn't have the electronic records, we used one piece of paper with two sides, and it couldn't be more than maybe two or three minutes at the most for the clinicians to fill out.

We asked the patients on one side their main problem, how did they think it affected them, and about the treatment and their satisfaction. It was just maybe five or six questions on one side, so it was very quick. On the other side was the clinician's side: What did they think, what was the diagnosis, what did they do, and if it was acupuncture, for example, what type did they do?

But it was having both sides of the coin that was important. I know we ask patients to give us information. I know clinicians have their records. I think that would be a very powerful way because what we were seeing, again, this was a lot of data, but now with electronic records it might be easier. The doctor and the patient were not on the same page a lot of times.

DR. KLIGLER: I think there is a bigger picture, too, which is that we are not even talking about web portals and electronic communication with patients as part of routine care. I personally think that the next five years, especially in middle class populations that most of us are serving, are going to see a huge change in how much happens online with the patients, as part of being integrated into routine care.

A lot of us are moving toward having these web portals where communications from patients, and back and forth, can directly enter the chart, and therefore be potentially searchable. It might be too old school to be talking about how we can get our providers

to collect data at visits. Number one, because we know that is really hard to sustain, even if you get it off the ground for a brief period of time. And number two, because the whole model of how we are collecting data in an ongoing fashion from patients is going to become more and more divorced from the actual visits.

We need a model where web-based data collection from patients in an ongoing way becomes part of a clinical tool, and that might be more years away than I think. But it seems like if we are not going there in how we think about this in the big picture, like if you build a national data repository that relies entirely on data that the practitioners collect at the visit, then a few years from now there is all this data out there that we would potentially be getting that we didn't think about, that wasn't at the core.

DR. DUSEK: I agree. The timing of data collection is important. There is methodological validity to collecting these data from patients outside of their visit, like at 2:00 in the afternoon the next day: How are they doing? For clinical providers as well, when do you collect information? I am at the point of wanting to make it easy and develop something that is flexible, such that we might be able to filter in some of this new information as it comes.

As Dr. Cohen said, can we make this publishable with useful information that can actually serve a purpose. As Dr. Kligler is saying, how will it be useful from the point of view of the real world. We are still clinic-visit–centric.

If we were to build a repository process, would people be interested in participating, with the idea that as a participant in that effort, you would have an opportunity to query, if you had a question about what is my best way of tracking diabetes care or chronic care management, for example. Or what is the best intervention that matches up with hypertension control? If we build something like that, would people want to contribute? If we have two sites, it doesn't do us a lot of good. If we have 29, it is a lot better. Would this help the administrators? We are very strongly supported by our hospital. and they are not pushing us yet, but I am projecting that. We want to show them the benefits of the care and how this is helping the whole system. We are trying to be a data-driven group. Would that help your administrators?

DR. BERMAN: It is even more needed because as you get more and more integrated, it is not just that you are a clinic. Now you are working with the cancer center, the diabetes center, the trauma center. There has to be a way to make that more seamless, or you just lose that data.

DR. DUSEK: I agree, so integration with our other providers is an issue. We have an Epic-based medical record for inpatient care, we have an Epic-based flow sheet we have developed. It goes into their record, and the respiratory therapist can see it, and the

physician can see it. They can see this guy's pain is down, and that he got acupuncture two hours ago, so it is working. This is a way to link having a record as a focal point for the patient's care. Are there downsides to doing this? I always like to think of the upsides. Do we see potential issues arising from collecting this information? Are we setting ourselves up for issues, unintended consequences? And again, I don't want to end on a negative note, but what are the things that could go wrong?

MR. CUNNINGHAM: I don't think that it is a downside. Depending on the size of your system, you are going to be having other data gathering initiatives you are going to be competing with, and how do you mesh those?

DR. COHEN: A challenge for us at MD Anderson would be that everything we do is within the context of patients' cancer care. In the absence of getting detailed information, on the conventional side of the street of what is this patient getting, what is going on with them, we can have them check a box whether they are in active treatment or a survivor. But beyond that, if we don't know everything that is going on with them, and has gone on with them, the data will always be somewhat limiting.

MD Anderson, of course, has electronic medical records, but every system has its own, every department and disease center has its own separate databases. Most of them are being gathered manually because the treatments patients are on are put in their charts, but are not put into a database that could be queried. So the breast medical oncology has four full-time data abstractors sitting there in a room, pulling the medical data for each individual patient and putting it into a separate database. It is critical to be able to merge all of these databases.

MS. SHIPLEY: One of the realities of the situation is when you start to look at patients as data, it takes away from one of the primary values of integrative medicine, which is looking at patients as an individual holistically, and what is actually going to work for this particular patient. That hypertension or back pain, or whatever it is, is only one small aspect of what is going on totally with that patient.

What interventions might work for them individually are different, based upon their spiritual beliefs, their emotional state, the whole totality of the patient. So again, not that it should necessarily not be done, but I do think that in terms of how it would look to the rest of the world or how we are trying to promote the transformation of medicine, it has a downside in that it starts looking like we veer away from that principal value.

DR. DUSEK: My own worry is that we have benefited from the patient demand, and I feel as though we are all going to have to be our own healthcare advocates. We are going to have a fixed pool of resources and are going to have to choose between eight acupuncture sessions for my low back pain or conventional care. If we don't have some information saying we

have some evidence to show that this is a viable option, people are going to go towards a conventional model of care only. But again, it has got to be cost neutral at worst, or cost saving at best.

We have to be thoughtful about that information. It has got to be clinically effective, and cost effective, and patient satisfaction effective. But how do you do that with constraints on what we are doing, and burdening clinicians to ask more questions, and asking the patient more questions.

I don't want to end on a negative note at all because I am extremely optimistic, seeing 29 centers, and there are probably another 20 of good quality, and we are all doing really good work. I am of this mind that if we can find a way to do good work and work together, we can have this major transformative impact. We will have some missteps, but we have to build something that is different than what is out there.

It is important that patients, insurance companies, other providers believe that it is evidence-based. My hope is that we generated some ideas, and we really just started to scratch the surface. I appreciate everyone's time and effort to come into this session. I look forward to working with you in the near future.

PATIENT CARE DISCUSSION: HEART DISEASE

ERMINIA (MIMI) GUARNERI, MD

Founder, Scripps Center for Integrative Medicine

Participants:

- Sandi Amoils, MD, Medical Director, Alliance Institute for Integrative Medicine
- Gurjeet Birdee, MD, MPH, Assistant Professor and Director of Research, Vanderbilt Center for Integrative Health
- Bill George, The Bravewell Collaborative
- Penny George, The Bravewell Collaborative
- Maryanna D. Klatt, PhD, Associate Professor, Ohio State University College of Medicine
- Sheldon Lewis, The Bravewell Collaborative
- Charles Terry, The Bravewell Collaborative
- Peter Wayne, PhD, Director of Research, Osher Clinical Center

DR. GUARNERI: This is intended to be a mind-body-spirit opportunity for us to talk about how we take care of the whole person. This patient is a perfect example of someone I would see in my practice every day, and I bet someone some of you would probably see in your practice every day. Because we don't have a lot of clinicians in this session, but we have a lot of PhDs and others, this is really exciting. Most of what is going on with this woman would never ever be resolved if we didn't look at how she lives her life, who she lives with, what her support is, what her community is, and so on.

It might be nice to go through the case in sections and talk about what you might be thinking as we get the story from an integrative perspective and what is going on with this woman as we travel on through her journey. Like so many people, she came to me saying that she was having trouble achieving optimal weight. Most of my patients want to lose weight. She is 58 years old, and this was an issue that came around the time of menopause when she gained ten pounds.

With the gaining of the ten pounds and menopause, she was told that she has high cholesterol and pre-diabetes. At the time she came in, she had no other symptoms that pressed for an urgent concern. For example, she had no exertional chest discomfort, shortness of breath, palpitations, syncope, or pre-syncope, nothing that made me put up

one of my cardiology red flags. She said she had no allergies. Her past medical history was unremarkable. Specifically, she had no rheumatic fever, scarlet fever, and so on.

She had no previous surgeries. She was not taking any prescription medications. She occasionally remembered to take her calcium, occasionally remembered to take her fish oil, and had a multi-vitamin that she took most days. What bothered her the most was that she had sleep disturbance. She would wake herself up snoring. She had a lot of gas and bloating. She had diffuse joint pain and swelling.

What was striking about her social history was that she was raised on a farm in Wisconsin. She said her childhood was basically happy. Her birth was vaginal. She was raised Catholic. She stated that her father ruled the house by fear. She turned away from the Catholic Church. She is non-practicing, but she stated that she believes in a higher power but had no formal spiritual training or practice that she followed. She has an MBA degree; she is the CEO of a start up. She spends her days at the office. She eats in restaurants. She is not married, has no children, no pets, and her quote was, "Who has the time?" She has no significant other—"Who has the time?" She described having three close friends as her main social network.

Her family medical history included the fact that her mom had diabetes and her father who had heart disease died at age 64 with a myocardial infarction. She has an overweight sister who is also questionably diabetic. There is no colon cancer or breast cancer in her family history. She does not smoke. She has two glasses of red wine per night, because, she says, "It helps her to unwind" after her day. Her exercise is less than an hour per week other than her activities of daily living, and she has no formal resiliency practice.

In my usual consults before I see people, I have them fill out a three-day food diary, and I ask them to fill it out for two weekdays and one weekend day, so that I can get a spectrum of their eating. I have found that people are very honest when they write things down, and I can get more information that way.

I have a whole packet I give people that asks all these questions that many times physician and patient would be uncomfortable talking about, such as sex habits, drinking, and erectile dysfunction. People pour their heart out. I have found doing intakes upfront to be very helpful. In addition to the three-day food diary, I use an SF-36, a Beck Depression II, and a coping with stress scale, so that I can see where they are on that spectrum, and a spirituality questionnaire—basically, do they have a higher power that they turn to?

By having them fill out questionnaires upfront, when I walk in I have some clue of what is going on and what their health insurance is. Her nutrition assessment was notable for lots of simple carbohydrates such as granola and bagels. She was having less than three servings of fruit and vegetables daily. She was living on caffeine, which she put cream in. Beef and

chicken were her main protein. Her physical exam was notable for a Body Mass Index of 25, blood pressure of 142/90. She had a thyroid nodule on exam, on the right side. She had a short systolic cardiac murmur.

Her labs were notable for an elevated TSH [***Thyroid Stimulating Hormone***], a low T3, and a low T4. These labs are consistent with hypothyroidism. Hemoglobin A1c was 6, Vitamin D was 20, CRP [***C-reactive protein***] was 4, which is consistent with chronic inflammation. Her lipids were notable for a total cholesterol of 200, but her good cholesterol—her HDL—was low at 46, her bad cholesterol—LDL—was 135, and her triglycerides were high at 210. This is a classic metabolic syndrome patient with hypertension, dyslipidemia, elevated hemoglobin A1c, and so on.

We have a research nurse who scores the surveys, so I have the SF-36 scores for physical and mental functioning, and the Beck Depression Inventory-II. I have a number right there from the perceived stress scale, and it is fascinating because I will see someone come in with a perceived stress score of 19 who is sitting there smiling and totally calm. I tell them that they scored high and ask what it's about. All of a sudden, this whole story comes out that I may have never gotten otherwise.

The SF-36 we pay so that we can run it right through the computer. It's all codified. The others are pretty simple. The three-day food diary I look at, but we also have a nutritionist who puts that into a computer and is able to pull out. I can right away see that when somebody is having bagels in the morning, white bread in the afternoon, and four glasses of wine at night, you start to glean some of the patterns in terms of what is driving, what's happening here.

It takes about a half hour to fill out these questionnaires. I think we are going to get more creative with technology. When we have the opportunity to have people put it into their iPad, it's going to be quicker and easier. I'm still operating in the old fashioned world, but we get all the paperwork out to people beforehand. I have found that I can ask all the questions I want in the office, and a lot of times patients say that they already answered them, but I tell them that I want to hear it from them again now. I get extra information that way. I put a couple of red flags on her. This is a classic presenting story in a preventive cardiology practice where someone is being sent for dyslipidemia and pre-diabetes. I will tell you that nine out of ten physicians will look at this woman and say here is a statin, here is metformin, take your pills, and go home. If I wasn't practicing integrative functional medicine, there is no doubt in my mind that I would have missed some things.

If you look at her review of systems, she said she was having nocturnal snoring with arousals at night, and we frequently miss this concept of sleep-disordered breathing, which stimulates all of the stress hormones, and is associated with hypertension, obesity, dyslipidemia, diabetes, and very commonly associated with depression—a whole host of

issues that frequently get missed. Many times, these people are on antidepressants, because they say they don't sleep at night, or are up all night, or have hot flashes, but no one gets to why they are up. They are up because they are not breathing. That was an important point. Some people say that they wake themselves up snoring, or the other question I will ask is whether or not they wake up and don't know why they woke up. They say, yes, that they wake up and they have to go to the bathroom. Frequently, the bathroom is the afterthought. The telltale sign is how they feel during the day. Are you the kind of person that can sit in the chair and go to sleep? Yes, I can go to sleep in a second.

The other point here was gas and bloating with meals and joint pain. In the setting of hypothyroidism that should send a red flag off to everyone that this is gluten intolerance until proven otherwise. I cannot tell you how easily this is missed, this combination of joints hurting, gas, and bloating one's whole life. The next questions that we would ask from a functional medicine perspective would be: "Have you been treated a lot with antibiotics, which would have changed the gut flora and resulted in impermeability of the gut.

MR. GEORGE: Have you ever asked someone like this what their purpose is in life, or another way of coming at it more gently?

DR. GUARNERI: I do. Once you have all this information—having talked to someone and you have all their labs—then you have what I like to think of as whole-life diagnosis. The next question, which is really big, is if I were going to ask this woman to make changes, *why* would she want to make them? I call that the anchor. Why do you want to live? Why do you want to make the changes? What is your purpose in life? That's another one of those areas that I have found to be incredibly revealing. I'll hear things like, "My wife has cancer and I want to stay around to help her"—which I might never have thought of. Some of the more common ones are that my grandchildren are in elementary school and I want to see them graduate. Or I want to make it to my son's wedding. Those are a little bit more concrete, but the question is: What is the anchor, the reason, and the passion for loving oneself enough to make changes.

MS. GEORGE: That's a real difference from conventional medicine—how about the other doctors in here, do you ask questions like that?

DR. BIRDEE: You have to find what triggers the patients, what will motivate them and cause behavior change. There are people who do lack self-awareness and meaning, and so there is more of a void there when you ask questions. It may take time for you to develop a relationship with people and start having them become a little bit more introspective to get at meaning. That only comes with time. We have a similar approach.

DR. WAYNE: There is also a real need for sensitivity in knowing when to probe and when to just be supportive and wait for that opening. People can be put off—are you telling me

this is all in my head? You can lose them. Although by the time someone shows up at an integrative clinic, they may have more of a predisposition to have an appreciation that way.

DR. AMOILS: I find that patients are actually quite relieved that somebody has the sensitivity to ask them and that they have never been asked that in a medical setting. Like Dr. Guarneri, we use a lot of questionnaires, and they reveal a lot to us about the person. They can give you the angle of how to approach people in what you ask and what you say. Many times they are shocked at how much I can understand how they are, just from the way that they have answered the questions. Virtually every patient that comes to me for a consultation cries at the first consultation. Many of them say to me that they never cry. I create this space and environment for them, and that is very much our task because we have to get to these aspects of people, particularly somebody like this who is obviously a very lonely woman who needs an anchor in her life.

DR. GUARNERI: I agree that you have to meet people where they are. A lot of times I will see women who weigh, say, 276 pounds—I'm thinking of one woman in particular, who is morbidly obese. When I see a woman like that, the first thing that I'm thinking is: Was she sexually molested or raped? You can bet I'm not leading with that question, and there's a good chance it may not even come out in that hour. I establish that trust and that confidence, but trust is the key, so that the patient feels like I am connected with her on a level where she might be willing to have that conversation.

MR. GEORGE: I'm hearing that the reason they are crying is because you cared about them.

DR. BIRDEE: You give them permission to express their emotions. In our society, there is that sense of holding in and by asking them directly, empathetically connecting with someone, people will start to express their feelings. It can happen so remarkably quickly if you allow that space.

DR. AMOILS: This kind of patient is a very good example; particularly these post-menopausal women are very interested in hormone replacement and they are much more concerned about getting breast cancer, and they ignore the fact that they're going to die from heart disease and not breast cancer. This group has to be targeted.

DR. GUARNERI: The initial intake is one hour. I have all the questionnaires and blood work done before the patients even come in. I then refine the blood work once I figure out what else I need, but I have a lot of information when patients first come in, from a mind-body-spirit and then biomarker perspective. I talk to them, hear their concerns, and ask them, "What are your goals?" As a cardiologist, my goals for her may be to get the diabetes and lipids under control, get her exercising, help her lose weight, but where is she at, and what are *her* goals? How do we pair those two sets of goals together?

I presented this same woman to my cardiac fellows, some of whom are in the integrative center, but some of whom are not. They jumped right away to prescribe metformin, 500 mg twice a day, and Crestor, 10 mg once a day. They went right from the ill to the pill: "If I see diabetes, I'm giving metformin. If I see high cholesterol, I'm giving Crestor." That's when I showed them the tree diagram, showing how it's important to treat the roots of the condition. I said, let's look underneath. What's causing what we're seeing on the outside? Of course, it's all embedded in lifestyle. Inflammation is one of the final common pathways for illness, whether it is arthritis, heart disease, or other conditions. It's being driven by sleep apnea, simple carbohydrates, central obesity, and stress.

How do we start to work in that arena with a woman who is the CEO of a startup, who is saying that she doesn't even have time to do anything?

MS. GEORGE: Do normal cardiologists not buy into the inflammation idea? It doesn't sound like, from what you said, that they even stop for a moment to think about that.

DR. GUARNERI: They know about inflammation. What they don't have time to do, mainly because they don't even know how to do it, is to take this woman and say, these are your goals and what are we going to do. We have to get some really concrete things to do that she can work with in her paradigm and start to have small steps that lead to success.

MR. GEORGE: It sounds like this woman does nothing but work and has no life, but there has to be a reason why.

MS. GEORGE: She might tell a conventional cardiologist something different about what she wants than she might tell somebody who she senses actually sees her.

DR. GUARNERI: There's a good chance they are not going to even ask her.

MR. TERRY: What have you found really successful in motivating lifestyle change?

DR. GUARNERI: Trust, they have to trust in me. People have to have a relationship with their physician or their care provider. I can't tell you how many times patients come in to see me and say, "I lost ten pounds for you." They know that I'm going to congratulate them and tell them how great their numbers are looking. The anchor—"Why do I want to live? What is more important to me than this box of donuts, this pack of cigarettes, these three martinis at night? What is my anchor? Is it my God? Is it my grandchild? Is it my spiritual belief system? Is it my wanting to stay alive for my child who is retarded and is going to need a caregiver her whole life?" As one of my patients said to me once after he lost 168 pounds, and I asked him what did it, he said, "I learned to love myself." He said he hated himself. He said that he looked in the mirror every day and hated himself.

MS. GEORGE: Do you all pay attention to the need for community support? One of the theories I work on is that to change lifestyle, you have to be with other people who are also trying to do that. Is that something that is part of how you work with your patients?

DR. WAYNE: To me, there is a trade-off. This is a very busy person, so you can't be too ambitious in saying, "Do this, and do that." One of our common referrals is to offer group exercise with a mindfulness component, such as tai chi or yoga, sometimes even in a medical setting where there are other people with health issues. The idea is to get the person into the community to be part of something and learn about herself.

DR. BIRDEE: One of the tools we have at our health center with this type of patient, which is unfortunately not atypical, is health coaching. Frequency of touches is so important to establish not only the relationship, but also for sustained behavior change. Sometimes we can promote changes in behavior, but recidivism is a huge issue with behavior change.

The good thing about health coaching is that it can be delivered over the phone as well, so there is an initial consult and maybe touches in between, but you can have the person call in. Health coaches are trained specifically to help promote behavior change and the skills that the patients are developing, so it is a very useful model in terms of promoting life style change.

MR. TERRY: One thing that helped me a huge amount is that I got into a spin class at a local gym. That group process is very supportive. It's not competitive, but I do feel pushed by doing that in a group.

DR. GUARNERI: The "W-E" in "wellness" is "we." One of the financial challenges that we have at our center is that from day one, 15 years ago, we have had support groups that we still have going, and yoga and meditation groups that we still have going, and lifestyle change programs, but there is a lot of expense and overhead along with that. You have to pay the group support leader, and that's $100 per hour, and the yoga instructor is $100 per hour, and then there is the space. As Scripps always says, when you're not holding a yoga class, this room is empty, and we could put six treatment rooms in here.

I, too, have been working on new models of integrative care, because for years, physicians have come to me and asked how they can do what I do. It has to be more cost-effective. One of the models that I've designed utilizes health coaches in exactly the way Dr. Birdee is saying. They can be an extension of the physician without the physician's overhead. The other is the health-coaching naturopath.

At our center, we have also been working in the arena of building Web-based technology for extension into the medical home so that, if it's two o'clock in the morning and they can't sleep, they can tap on my face or one of my colleague's faces and learn how to lower their

cholesterol, or listen to a guided meditation. The other thing that I've been experimenting with is price points for people—other than the underserved—to start investing in their health. Whether it is $30 per month to run this machine or $35 per month to have a health coach come to you via Skype. I realized after 15 years, that I can't have it all at one center and have it be financially sustainable, not at the Scripps overhead rate for the lights, the building, and all of that. It just doesn't work.

DR. BIRDEE: Since you mentioned the underserved, health disparities are huge. Integrative medicine thus far is cash-based, and access is a huge issue. This patient is a CEO, but the demographic that has problems with medical access is predominantly African American, Hispanic, and other minorities—this is where the population is exploding. In terms of community engagement, we need to communicate intelligently and make culturally sensitive interventions that make sense. I know this isn't a solution, but for example, we recently had an African-American woman in our community say that there was no yoga class for big African-American women. When these women do go to the yoga studios in Nashville—I don't mean to be offensive—but there is a petite, thin, white woman teaching yoga. So we now have an African-American yoga teacher in Nashville, teaching a yoga class that is wildly successful with African-American women.

That's one paradigm in terms of yoga. If you're expanding to movement and lifestyle, making culturally sensitive interventions with the community is where we need to grow, especially if we are going to narrow these disparities. We need to make integrative medicine accessible to other populations. Unfortunately, integrative medicine is still viewed as somewhat of a boutique and edgy. We need to address that.

DR. GUARNERI: I think that in integrative medicine we got ourselves into that position because in the beginning, to be honest, I'm not sure we knew who we were. We kept morphing who we were and redefining who we were. As a cardiologist, at the end of the day, I thought this is really about prevention and wellness. All of these underserved communities, that is really what we in integrative medicine should represent—an option or a solution to the country's healthcare crisis for prevention and wellness. Communities like the one you are describing go to their faith-based centers. You go into the synagogues, you go into the churches, you get the faith-based community behind you. Everyone does it as a group.

DR. KLATT: I had an adult program, but it was this issue of the underserved that kept getting to me. So I took the program to the public schools in the inner city, with all African-American students. There is half an hour of nutrition once a week followed by ten minutes of yoga, and then the ten minutes of yoga is repeated every day for eight weeks. There are eight different nutrition classes and eight different yoga routines.

The interesting thing regarding the research was that we got great results in the African-American community. On the second study, we took it to Columbus Catholic schools and then to a low SES [***socioeconomic status***] school. In the more affluent school, we didn't get the same results with the yoga exercise. Both schools had the same nutrition education, but the more-affluent kids didn't need it. It was the kids who weren't allowed to go out and play after school because they don't live in a safe neighborhood who needed the program. So schools are a place where you can start.

DR. GUARNERI: It's a different model, it's a model of groups, it's a model of teaching 50 people proper nutrition, or running a movement class with 50 people. It's not sitting with Dr. Guarneri in the La Jolla office for an hour. The most successful programs we have are group programs, with people coming together in the community.

MR. GEORGE: The model we use at Harvard is you get some time with a professional, but then the groups take place without any professionals. They are peer-facilitated with six people, and they share if there's a clear curriculum for them to discuss. The groups hold each other accountable. Once you have a professional in the room, participants ask the professional for the answer, but they have to be overseen—so you have to start with them as a group with a professional.

The context of the groups is leadership. These are very independent adults who normally would not be sharing their life stories or the fact that they were sexually abused, the fact that their father hated them and they could never win their mother's love—issues that were impeding their leadership. It's really an AA [***Alcoholics Anonymous***] model, if you think about it, and AA will hold them accountable. You have about 1,700 people who went through that process to great success.

DR. BIRDEE: We're social organisms, and in the context of modern day phenomena, that kind of communication in groups doesn't occur as much. It is very natural to have groups come together and solve problems without necessarily a hierarchy or an authority.

MR. LEWIS: One of the challenges with a person like this is that she is so socially isolated. Do you start her with baby steps? Do you start by giving her meditation so that she starts to get in touch with some deeper place within herself, so that there is some possibility of change?

DR. GUARNERI: First of all, there are some real physical issues here. I always look at the situation from a body-mind-spirit perspective. The fact of the matter is that she has hypothyroidism. She has sleep disordered breathing. She has metabolic syndrome. There are physical issues to work with. Quite frankly, fixing hypothyroidism, evaluating how bad the sleep disordered breathing is, and getting her CPAP if she needs it—this is why I never throw out my conventional medicine perspective—that had to happen. Then I can decide

if I want to put her on metformin to stimulate weight loss and so on. Everybody gets a pedometer when they leave my office so that they can start to track their walking, and we also go over the glycemic index in detail. In this case, she'll get omega 3, and vitamin D, and some other basic supplements.

The bigger issue is how to engage her in community and have her come back to the center. I have two resources from the stress perspective that I use all the time. We have wonderful transcendental meditation teachers right down the road. TM is a great program for people like this woman—she can afford it. She doesn't have a lot of time. We got her private TM instruction, and she learned to meditate for 20 minutes twice a day. Why? Because the research shows that you're going to change your eating habits, it will improve your insulin resistance; it will lower your blood pressure. Another option, if she's willing, is to take the mindfulness class for 8 weeks in a row. At least I have those options available.

In her case, I strongly suggested our Fit and Trim program, which is personalized nutrition counseling and personalized fitness. If you want to work out at 7:00 AM, the trainer is there for you. If you want to work out at 9:00 PM, the trainer is there for you. We restructured her day to when she could make it work for her. She can afford to do it. I have people who are so embedded in their work life that I have to send the yoga instructor to their office. How crazy is that?

DR. BIRDEE: A gateway mind-body experience makes people aware of how they are feeling and making them realize that this a priority—look at her health, her joints are swollen, she has digestive issues, she is stressed. Giving people experiences where they recognize that and have some kind of relaxation through meditation and mind-body practices increases or heightens their awareness that something is wrong.

People block this out. Often, mind-body practices serve as a window into awareness: Oh, I am working 70 hours per week, I'm not sleeping well, I'm exhausted, I'm depressed. Wait, my life is not so good, I need to make a change. I find mind-body practices to be very useful for that.

DR. AMOILS: I would encourage her or challenge her to invite some joy into her life. She is working really hard, and she must be getting some satisfaction from that. Maybe even changing her attitude toward her work environment and making herself more efficient in a different manner would make her have more time for herself. I ask my patients: How are we going to create some joy? I sense in her real loneliness, unhappiness. She is chasing her tail. How can we change this? Quite often, I challenge patients to try things that they maybe have never tried, like mind-body therapies. Different things work for different people. She needs to create the time to do that. If she were happier in her work, everything else would be much easier for her to do. She wouldn't need the alcohol. She wouldn't need the carbohydrates.

DR. GUARNERI: The analogy I love to use with my patients is when you get on the plane and they say that when the oxygen mask falls, put it on yourself first. So many people, especially women—not necessarily this woman, but women in general—tend to be caregivers, taking care of everyone else, and their physical health gets put by the wayside. In her case, her self-worth was identified with the company's success.

MR. GEORGE: I would say, as a non-physician, how I would approach it is closer to what Dr. Amoils said. This woman is not effective at work. I can guarantee you cannot be an effective leader working 80 hours per week, because you over-manage and underperform. You're not calm. You don't make good decisions. There is no correlation between hours of work and being an effective leader. She needs to pull back and get some perspective. I have a bias towards Transcendental Meditation, but some form of introspective, reflective practice, whatever yours is, is needed to help people pull back and reflect on what they are doing, what are their goals, and what is important to you, before you can become more effective.

When I hear that she only exercises for an hour a week, that tells me that she is running from pillar to post at work. She is probably over-managing everyone else and driving them nuts. But she needs to pull back and find joy in her life—joy inside herself—not joy from drinking or going to a movie every night, but joy inside herself.

MR. TERRY: I do something similar at a slightly different angle. I have felt that I am most effective in my work when I have been centered. What I do, what I say, how I behave, out of a quiet, centered place carries so much more and moves things so much further. That's a good motivator for people. Actually, if you ask people to think about it for themselves, I think they would probably agree with that.

MR. LEWIS: When people who come to study meditation with me say they are too busy to sit and meditate, I don't argue with them. I say, "In the course of your day, set times where you are just going to stop and breathe. Start somewhere. Take conscious, mindful, intentional breaths—whatever you want to call that. Just stop and breathe. People start doing that, and then, of course, they start sitting for meditation at some point, because they actually experience what it is like to stop the craziness for even a couple of minutes a few times a day.

DR. WAYNE: It's a skillful idea to think about how to meet this person in a place where she spends most of her time, that has the most meaning to her, which is at work. There are so many little things like taking little breaks, or changing leadership style, or getting some coaching, but it is logical to meet people where they are. To push against them and say you have to be different doesn't work.

DR. BIRDEE: I am actually doing a research study that just got funded that is very similar to what we're talking about. I'm studying yoga as an intervention for metabolic syndrome, but

the premise is not of yoga as exercise. Yoga is done first and then right after the yoga class we have an expert nutritional lifestyle educator.

The idea is that the yoga is going to mentally prepare people, hopefully put them in a receptive state so that they can uptake the lifestyle. That is actually the research question: What is the intersection of the mind-body practice and health behavior. We're looking to capture the physical component and all the physiology, but the really interesting part is the impact of the mind-body practice on health education and metabolic syndrome.

DR. KLATT: One clinician gave a disposable camera to somebody who didn't know what the joy in their life was and said, "Take one picture every day between now and when I see you next as to what gave you joy that day." Isn't that great?

DR. AMOILS: Along the same line of thinking, I say, "You have to laugh at something." The question of loving yourself came up before, and I say, "Find something, even if it's your toenail or a hair, on your body that you actually do love, and make that love grow."

MR. TERRY: That's beautiful. Another really good practice is a gratitude practice. At the end of the day, are there three things that you were grateful for today? You begin to shift how you look at the world if you know that you're going to have to write them down at the end of the day.

DR. GUARNERI: The longest journey is from the head to the heart. This woman loved appointments. I rode on that because she had her appointment calendar with all her appointments, so we fitted her in with appointments for fitness counseling, for fitness with her personal trainer, and to the TM program. That started her on her journey.

I also started her on Armour Thyroid and some supplements and started a conversation about diet. Even though I know she needs to be gluten free, I did not lead with that. When I start with that, people check out right away. That's worse than saying you have to be a vegetarian. I said, "I'm going to genetically test you for the genes that are associated with gluten-sensitivity." I know my chance of getting her gluten-free if she is an HLA-DQ8—if she's carrying that gene—are going to be much higher when I show her the blood test. I also want her to clean out the granola, the white bread, the white rice, the pasta, the potatoes, all the sugars and carbs—for me, that is the start.

Our nutritionist connected her with Cooking Elves, a local company that will prepare her food, because she insisted she could not cook. This is medicine for the wealthy. I'm sorry, it is, but you have to meet people where they are. She came in because she wanted help. That was the journey that we started her on. She got a thyroid ultrasound because of her nodules, and a sleep-disordered breathing study, and it turned out that yes, she had sleep apnea, and a CPAP was recommended for her. I told her that she increased the possibility that she

would get better when she decreased her weight, and so on. She is still doing TM, which is easy to stay with. I hate to be generic about anything—and I'm sorry, I'm not looking to offend anyone—people say that they went to the mindfulness course for eight weeks, and it was great, but they don't do it.

DR. AMOILS: I love TM, and I have done it for years, but the problem is that they have to be able to afford it.

DR. GUARNERI: It costs about $900, but there are scholarships. Once you have paid your one-time fee, if you decide you want to go back, they will take you for free. I have a lot of people who got mantras in the 1960s when TM was popular, and if they remember their mantra, they can go to a TM center for free, and they will reinstruct them for nothing.

I saw a similar man who was living on canned beans because he had no money for food, in the same clinic, if you can imagine that. That becomes a whole other challenge. At least it was beans, which are good for the heart and not macaroni and cheese, which a nun who kept getting admitted for congestive heart failure was living on because she was vegetarian and that was cheap.

DR. AMOILS: I spend a lot of time focusing on food. We have a naturopath who works with us, and patients come in for a 90-minute appointment. They keep a food diary before they come in, and we make it very clear to them that we don't judge you by what you write down. We want you to be honest. It helps a lot. We have a thing called Green Bean Delivery. It's a local organization, and you subscribe and order local, seasonal, organic produce, and it is delivered once a week to your house. People may get something that they have never eaten before, such as Brussels sprouts or broccoli, things that they don't always cook. The great thing is that you come home, open your fridge, and you have food to cook, not a can of beans to open.

DR. GUARNERI: When we talk about how to make integrative medicine a movement, we think of movements that we can use as examples: Earth Day, for example. All of a sudden, people stop using plastic bags.

MS. GEORGE: Is it reasonable to expect people to move toward the optimal diet right away if they are following a terrible diet? The Heart Institute in Minneapolis, where Bill went through their preventive cardiology program, had a nutrition consult and they wanted me to come along. It was terrible. This place never mentioned whole grains. The George Institute, which is 100 yards away was completely different. They talk about whole grains. I think the assumption was that people aren't prepared to do that. Is that a reasonable assumption?

DR. GUARNERI: Not any more. In medicine, we have hidden behind this idea for years, that people won't make these changes. You tell people: Don't eat white rice, eat brown rice. Don't eat white bread, eat whole grain bread that you can't roll into a little ball. Don't eat white potatoes. Eat broccoli, or sweet potato, or Brussels sprouts, or cabbage. I gave this woman a list of glycemic index of foods. Eat this; don't eat that. It gives people lots of choices, but it is spelled out very clearly. We don't give people enough credit. We discredit people when we say to use lard sparingly in the cardiology literature.

DR. BIRDEE: We need to take care about how we deliver health literature and nutritional information. We're doing a miserable job in general, in terms of health literacy. If you give a handout about diet to a patient, in terms of calorie counting and sodium intake, people's understanding and ability to process the information varies.

DR. GUARNERI: Thank you all very much.

PATIENT CARE DISCUSSION: CHRONIC PAIN

MYLES SPAR, MD, MPH

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Venice Family Clinic

Participants:

- Clem Bezold, PhD, CEO Alternative Futures
- Kathleen Guidotti, MPH, Complementary Integrative Therapist, 11th Street Family Health Services
- Richard Lee, MD, Medical Director, Integrative Medicine Center at MD Anderson Cancer Center
- Sherry Lund, The Bravewell Collaborative
- Arti Prasad, MD, Founding Executive Director, University of New Mexico, Center for Life
- Molly Roberts, MD, Physician, Institute for Health and Healing, California Pacific Medical Center
- Henri Roca, MD, Medical Director, Greenwich Hospital's Integrative Medicine Program
- David Spiegel, MD, Medical Director, Stanford Center for Integrative Medicine
- James Yang, MD, Fellow, GW Center for Integrative Medicine

(Note: The audiotape of the morning chronic pain session was corrupted and thus the transcript is not included here.)

DR. SPAR: Why don't we just go around and say why you chose to come into the chronic pain session.

DR. ROBERTS: There is so much of chronic pain, I want to see what other people are doing for this.

DR. ROCA: Ditto for the reason.

DR. YANG: I picked this topic just because we see a lot of chronic pain.

DR. LEE: One of the major referrals we get is for patients with chronic pain.

MS. GUIDOTTI: Chronic pain is certainly a pressing need for a number of our patients. It is a challenging population, however, and facilitating a program that is accessible and that allows follow through is something that we are very challenged with. We tried a couple of different models, so I am really very interested in seeing other perspectives and what comes out of it.

MS. LUND: I chose chronic pain, first of all, because of Dr. Spar. Second of all, because at my age, all of my friends are talking about chronic pain.

DR. SPIEGEL: I have been using hypnosis for longer than I like to think about. One of the major things we treat is pain, both acute and chronic. I am interested in sharing more of that experience.

DR. SPAR: The case is intended to be a launching point of a typical patient with musculoskeletal pain. Chronic pain is defined as 12 weeks or later, which is the national standard definition, especially for research purposes. As we know, unfortunately, most of our patients are in pain for a lot longer than that. We did a study on our patients, and the average length of pain was six and three-quarters years of pain. So we are talking about people with at least 12 weeks or longer.

The question is: How would we each address a patient like this—not just with modalities, but we want to share how do they even enter your system. Everyone has different ways. Do they get referred in by a physician or by the primary care provider, or do they self-refer? Who decides what the plan of care will be?

This is a 57-year old Hispanic gentleman who has been in back pain for three years. Generally, the pain is at a level of about four out of ten, but every month he has a few days where it gets up to about seven to nine out of ten. It is relieved somewhat with heat and exacerbated by activity and exercise. There is no numbness or tingling. Specifically, this is non-neuropathic pain—a lot of our centers have felt that neuropathy is not something we are as good at as other types of pain.

Plain film shows some arthritis, the MRI shows some disc disease, though not really enough to explain symptoms fully. He has had three steroid injections. Often, people who are on narcotics come to see us—they have gotten injections, we don't know exactly if there was even really a diagnosis to warrant it.

The pain had gotten so bad, interfering with his ability to work, that he had to quit his job as a postal service worker. He takes the hydrocodone, but it makes him feel foggy and makes him constipated. He wants to get off the medications, or at least decrease them, but also to be able to increase his level of activity. His only co-morbid condition is

hypertension, which is well-controlled. He is from El Salvador and is married with two grown children. His wife works, because he is not able to.

His elderly parents live in El Salvador, but they are alive and well. He has a strong support base from his religion, his community, and his family. He drinks alcohol socially. His diet is not great; it is a Western Salvadorian-style diet. His activity, as we said, is limited by pain. He is on Norvasc for his blood pressure—at more than the dose he should be on. He is on ibuprofen, 800 mg three times a day, which we know chronically is not good for high blood pressure. He is on hydrocodone and acetaminophen, which is a higher dose of Vicodin, four times a day. He does take multivitamin, vitamin D, D3, and calcium.

The only prior complementary type medicine experience he has had is a massage, which has provided temporary relief. He is 5'7", weighs 155 pounds, which makes him overweight, but not obese. His blood pressure is borderline. Otherwise, vital signs are normal. He has some pain when he changes position, but otherwise, no tenderness. There is no palpable muscle tightness or spasm, no spinal tenderness. His bilateral leg raise tests are negative, which as we know, look for conditions like sciatica or neuropathic pain.

He does a normal backbend with some pain with forward flexion, but his strength and his reflexes are normal. His labs are non-significant, specifically autoimmune screening, ANA and the HLA-B27 negative. HLA-B27 is associated with ankylosing spondylitis. His MRI shows some spondylitis and some disc bulging two or three millimeters on two different levels, but not encroachment on the neural foramina or on the central cord.

How would he even present to your clinics? Does he get the front desk?

DR. ROBERTS: Usually it depends on what he calls and asks for, but if he is asking for an integrative medicine consultation, he comes to see one of us first. But some people show up just to get the acupuncture.

DR. ROCA: People can come into our program for whatever they choose. If they don't know what they want, or if they ask specifically for an MD, then they get the MD.

DR. SPAR: What about the plan of care? Is there any coordination? How is what treatment he is going to get determined?

DR. ROBERTS: If people come to see the doctor, then there is a plan of care. Then I work out what I call my wish list, of all the things we could do. I put that together into a letter for them. When the patients come back, we talk about what draws them the most, and head in those directions.

DR. PRASAD: If the patients are seeing a CAM practitioner, then they continue to see the CAM practitioner, unless the CAM practitioner initiates the referral to an MD within the center. We are trying to change the culture a little bit, and we are having case conferences—originally once or twice a month, but now weekly—and asking the CAM practitioners to present their patients.

DR. LEE: We have them weekly as well.

DR. SPAR: Who comes to these?

SEVERAL PARTICIPANTS: Everyone.

DR. ROBERTS: Somebody brings a challenging case forward. We were doing it weekly with everybody, and realized that the physicians needed a little bit more time to themselves. So now the doctors are meeting two times a month, and then the whole team meets two times a month.

MS. GUIDOTTI: We have a weekly check-in meeting with as many chronic pain patients as wish to attend. We are trying to establish a hub of communication, and all the providers involved in any kind of chronic pain meet. It includes an educational component, an opportunity for them to then schedule a plan that they are willing to follow through with, in terms of meeting with individual providers. Then, bimonthly, we meet afterwards to discuss the more challenging cases.

DR. SPAR: How formalized is the outcome of these? Is there someone that is writing them down, do they go in the medical record with a plan of care?

DR. PRASAD: Yes, we do that, and sometimes we can bill for it, too, depending on their insurance. You can bill if the patient is not there—there are two different codes, one if the patient is not there, one if the patient is present. But we have to check with their insurance first and get patients' permission as well to bill.

DR. SPAR: You come up with a plan of care, listing what modalities, and the frequency that they are going to get them? That goes on the chart and then that gets communicated to the patient at their next visit?

DR. PRASAD: Yes, we actually invite the patient, too. We meet for the first half hour as practitioners. One person takes the responsibility of presenting the patient, who is the owner of this patient's care. If I take that ownership, I present the patient to the whole group. Then, we discuss the history, the findings, and if people have questions, we accumulate those questions. Then, we invite the patient 30 minutes into the conversation, and then we ask more questions that other practitioners want. We start to just build a plan

with the patient present. One person takes notes, and if you have to actually examine the patient, then we take the patient into the room and examine that patient. The notes go into the patient's chart. In India, we always had patients there. We actually examined them as a group, too.

DR. SPAR: What specific types of practitioners are involved in these teams? It sounds like you are using a team approach. So who is there? An acupuncturist, MD or DO, the integrative medicine physician, chiropractor, yoga instructor?

DR. ROBERTS: We have a Feldenkrais/craniosacral/body work practitioner.

DR. PRASAD: And we have Ayurveda and massage therapists.

DR. SPAR: Does the Ayurveda practitioner act as a primary integrative medicine physician?

DR. ROCA: Ultimately, one of those people serves that purpose, as opposed to having a separate stand alone individual.

DR. SPAR: If you look at the *Bravewell Mapping Report*, chronic pain was the number one reason for referral into integrative medicine. From our 29 respondents, 27 have yoga—that was the number one. So how many of you here have yoga? With the yoga, is there an emphasis on teaching that patient how to do this on their own? Do they have to come to the group classes?

MS. GUIDOTTI: Both, with the opportunity to work one-on-one, in conjunction with the physical therapist to ensure correct movement. Then they come into the group classes.

DR. ROCA: I think individual yoga is most appropriate for this person to begin with because we are talking about rehabilitation level yoga.

MS. GUIDOTTI: In a lot of instances, people self-refer to the yoga instruction classes. If that is the case, I insist that they meet with the physical therapist first. Then we would meet together to make sure that it is appropriate or not.

DR. ROBERTS: We would start out with our Feldenkrais fellow, because he can take a look at what their movement is now and what their abilities are, and help decide if they should go to yoga. He runs classes as well but always starts out with individual treatments first.

Basically, he spends the time to look at how you are lying down, how you are sitting, how you are standing, how you are walking. He can see functionally how you are moving your body in space, and whether it is getting in the way of your comfort levels. Is there any spot on your body that is stuck and not moving quite as well? Then he recommends small

adjustments that can make a big difference. I have seen Feldenkrais practitioners work wonders with people, just with the slight change of their positioning of their hip while they walk, it can make a big difference. He does craniosacral and body work as well, if there are areas that need massage work.

DR. ROCA: Our chiropractor does the functional movement screen, which is going to be similar to this approach to watch someone walk, or sit, or stand and look at their overall biomechanics, because from her point of view, one of the things that can drive chronic pain is any kind of structural asymmetry, such as scoliosis or muscle imbalances, where one muscle is stronger than the other.

Soft tissue is another component. This patient screams myofascial pain syndrome of the gluteus, minimus, or medius, so those specific interventions and evaluations would be paramount. Shame on whoever shot him up with steroids, shame on them!

DR. SPAR: Alexander technique is similar. It is a little more structural. An Alexander teacher will observe a person doing their activities, even standing up from a chair and will have them stand up, sit down, stand up, and watch what they are doing, to teach them how to minimize the work they have to do with their body movements.

An important question is: What is the underlying meaning of his pain? Let's say he was actually fine in his job, he was making a good living, but he was lifting things every day. When he would try to take off time to let it rest, he was told no, you have got to get back on the job and keep working. So the little acute pain episodes never would resolve completely, and then it became chronic.

DR. ROBERTS: My background was in rehab psychology, and I found that as long as people had a lawsuit going, they weren't going to get better. So one of my questions is: How much is his need to get disability payments factoring into his pain? That might be worth some of the exploration: Is that still the job that you want to go back to? Do you see more back pain in your future with that?

DR. ROCA: I am working on the hypothesis that this is more musculature in nature, which may or may not be driven by some sort of structural abnormally. Then, in order to get him better, it won't be simply changing his posture or doing acupuncture. It will be helping those muscles function better.

If he can't absorb correctly, for whatever reason—stress, because he is out of work, constipation, medications—then he is constantly going to be behind the eight ball. We need to, from a foundational place, ultimately get him to a place of being able to absorb what he will need to help his body work to heal itself. So the gut is very important in my evaluation, as a foundational place.

DR. ROBERTS: The other piece to that is not only is he not absorbing, are any food sensitivities adding to his pain? Often time it is getting people onto a gluten-free diet, and all of their pain goes away, or just cleaning up the gut in a way.

DR. SPIEGEL: Being a psychiatrist, I go from the gut to the brain. I would use hypnosis for this guy. Hypnosis is very helpful for literally changing pain perception. One of the ironies of these complex mind-body problems is people who have a lot of functional components to their problems like pain insist that it is in their body, it is not in their head. People who have a really bad physical problem will tell you it is in my head, it is not in my body, my body is fine. But the problem is: Telling them it is in their head is the dumbest thing you can do because you humiliate them around getting better.

What I do is talk about rehab, and part of what happens is that you are so irritated by the pain you feel that you want to pay more attention to it, and there are ways of transforming and teaching you how to change your perception of the pain, and at least control it, and maybe eliminate it. I see if people are hypnotizable, and if they are, I teach them self-hypnosis to control the pain, as one component of what we do.

I often work with our acupuncturists for the physical manipulation, and they work with me for the mental manipulation. I sometimes need just one session to teach them self-hypnosis. Unlike other symptoms, with pain you know right away whether hypnosis is going to help. You have them rate the pain before, during the hypnosis, and after, and you can see whether they get improvement or not. If they do, they may want to come back for further reinforcement. If they don't, you do something else.

There is a five-minute test called the hypnotic induction profile that I have used thousands of times. It is a structured hypnotic induction, with a neutral sensory alteration. So you tell them your hand will be lightening and float up, and see what happens if you pull it down. And do they have a sense of involuntariness and sensory alteration in doing it? So you can see whether they have got the ability to alter their sensation of motor control, and if they have, then you can use it to help them with the pain.

DR. ROCA: This is a great thing for EMG biofeedback, presuming that there is a muscular component.

DR. PRASAD: We also use energy medicine, and Therapeutic Touch, with a nurse who incorporates imagery into the touch treatments.

MS. GUIDOTTI: We also have the option for mind-body stress reduction, which encourages awareness, in a four-week program. We did some trials with four, six, and eight weeks. There was much more consistency and follow-through with the four weeks, and even more likelihood for them to come back and try it again. Then, we can have the educational

component of the understanding that reactivity to the pain encourages the pain even more, and vice versa.

DR. ROBERTS: We have a lot of classes, so they can choose what works for them, from mind-body skills groups, I-rest, Five Rhythms, dance, and others. What is close to my heart is having a conversation with him now that his life is very changed and to ask the big question: In his heart of hearts, what does he want his life to look like from here on out? What is his passion, what brings him joy, where does he want to head? Five years down the line, what does he want his life to look like?

What I find with pain is that people often fight the pain. They get the pain and they stiffen and they fight it. So one of the things I teach people is to turn that around, and whenever they feel pain, put their hand on their heart and say, "Oh, honey, what do you need?" Just like that. That shifts the energy around it, and they relax into it. Then, the question is: What is the next step for them?

On a personal level, I have experienced chronic pain. I had an injury where I was paralyzed for a while, and so I understand pain on all the different mind-body-spirit levels. I don't share that with everybody, but if I have somebody who is really stuck, I will bring it up, because then it gets past their thinking that the doctor can't possibly understand what I am going through.

MS. GUIDOTTI: We are currently working with music therapy as well. From my perspective, music therapy has given them the opportunity to work with the pain, the movement of pain, the experience and intensity of pain. You see individuals shift from the experience of being identified as a person who is in pain as opposed to a person with this pain that I can work with, and it's nominal instead of something that owns me.

DR. ROBERTS: One other concept is that when pain is getting in your way, it is literally getting in your way. It is literally in your face. Part of the training for me or to help people get through this is to find a way to make pain the companion. If it is going to be with you for the rest of your life, how can it be your companion instead of your block? That seems to help as well.

DR. SPAR: I often say: How do you have the pain and not let the pain have you?

DR. ROBERTS: Yes, and to use the pain as a guide. What is it about your life that is out of balance right now. The pain can be the little whisperer in your ear that something needs to shift. You need to lie down, you need to take care of yourself, you need to eat, you need to do that sort of thing. Shifting the person's relationship to the pain sometimes helps significantly, especially, if they are not going to be able to get rid of it.

MS. GUIDOTTI: That's about a real understanding of what it means to nourish oneself in pain, versus coping with it.

DR. ROCA: It may be that the emotional content may ultimately have its source someplace else. Neurons that wire together fire together, and those that fire together wire together. There are mechanisms by which we put our emotional content into our bodies, and it is potent to be able to give people a mechanism to explore that and then to release it. Sometimes it can be done with acupuncture, or it can be done with massage. But it is going through that process, while there is some ongoing physical intervention.

DR. SPIEGEL: Again, I would use hypnosis, and I do a complete assessment and hypnosis. I can do it in one session because hypnosis doesn't have to take a half an hour. It is really a shift into a state of highly focused attention, and you can do it in seconds. I do the test in five minutes, the teaching them self-hypnosis in 10 or 15 minutes. The first part of the interview is the standard evaluation of what is going on with the person. The nice thing is: It is a skill you can teach them. You can demonstrate in the office, between the two of you, whether or not it is having an effect on the pain control. If it is, I then print out a personalized list of self-hypnosis instructions for them to do and continue doing it. That is one part of it, but the nice thing is, you can see it right there and see whether it is going to help them or not.

First of all, the hypnotizability predicts outcome, so there is about a .5 correlation between measured hypnotizability and analgesic effect down the road. Secondly, you can see whether the exercise you are doing with them actually results in reduction in pain. I have had people and their mothers in the office crying, saying, "I haven't been able to reduce the pain this much in years." There are times when you can really make a difference right there, and then teach them to carry it on. It may get better, but at least you see whether it is likely to work.

DR. ROBERTS: We also use something called EFT, or Emotional Freedom Technique. It is hard to describe because it is kind of a strange little process. It uses tapping, with the meridian system that acupuncture uses. It also is, in some ways, a lot like EMDR [***Eye Movement Desensitization and Reprocessing***], so it is aimed at creating new neuropathways. I had one fellow who had 16 years of disability, and with just one or two treatments, he no longer needed to be on disability. Another woman who was struggling with pelvic pain had one treatment, which cleared it.

DR. SPIEGEL: There is a lot of overlap among all of those techniques. There is a lot of hypnosis in EMDR and some of these other techniques. You are getting someone to focus their attention to alter their perception in relationship to their body. I often work with our acupuncturists, and particularly if I feel that we are not getting as much results as we could, I will send them to the acupuncturist, or for therapeutic massage. If they have more

difficulty with hypnosis, we have a mindfulness-based stress reduction course. I think this issue of fighting the pain is a big part of what tends to perpetuate it actually, both physically and mentally.

We have the whole array of evaluation and treatment programs, so I may send the person for an MRI. We have a pain clinic that does nerve blocks, but they tend not to refer to us and we tend not to refer to them.

Increasingly, I am spending a lot of time getting people off of chronic opiates—not just because of the constipation, but after a while, they actually sensitize the pain response rather than relieve it, though they can be good for acute pain and really bad problems with chronic pain. I will tell people, if you are tempted to take your next medication, do the self-hypnosis first, and see how much longer you can go without the medication. We gradually try to wean them off these analgesics that are not doing a lot of good.

DR. ROCA: That is another reason for having the diagnosis, because there are some diagnoses, such as chronic bone pain from osteoporosis or cancer bone pain, where you won't take a person off the analgesic.

DR. ROBERTS: The way I would describe the analgesic is that it puts a blanket on it. It doesn't make it go away. They still know that the pain is there, but it puts a blanket on it.

DR. SPAR: We call the pain management department the narcotic management department.

DR. SPIEGEL: Heroin was invented to treat opium addiction, and the cycle keeps going.

MS. GUIDOTTI: Initially, we would encourage patients to attend the resource center meetings, a weekly meeting, so that they would have a one-time opportunity to meet with all of the providers, to get to know them and what their options are, so that they can have a more self-directed goal plan. If there were a particular provider that they developed a relationship with, then they would work with that practitioner.

I would encourage them to choose a modality they felt they would follow through with and would be appropriate for them. The likelihood is this individual would probably go through physical therapy first, and then mind-body stress reduction from my perspective. I also teach the EMDR classes. They would also have the opportunity for brief individual therapy, either as an adjunct or follow-up.

DR. LEE: I think our approach would be very similar. We might begin with physical therapy and see how they do, and probably would also refer them to learn a mind-body technique. We have instructors who can teach self-hypnosis or meditation techniques. Massage would also be a reasonable option, and lastly, acupuncture. We would discuss with them what

their preferences are and how they would like to proceed, and then see how they do after several weeks.

DR. YANG: There are a lot of different modalities and different approaches. For musculoskeletal pain, the person can benefit from energy work or acupuncture, addressing inflammation, pain perception, and analgesia, use of supplements, and exercise. I will take probably one or two of these, starting with massage, and adding acupuncture, reiki, supplements for inflammation, pain perception, and making sure they are doing some exercise.

I am concerned about creating these large, and maybe sometimes overly extensive plans versus a simple approach that may include just one modality and see if the person improves and then go on to the next. But this is someone who has had a lot of failures. So they are not going to give us ultimately too many chances to make mistakes and follow up—if that didn't work, try this.

DR. SPAR: That is what I see. That is what concerns me. My bias is to have one person as the cornerstone, whether it is an MD, DO, NP, or PA, somebody who, if it doesn't work, that person can go back to and say it is not working. That person would address what this means to them, and do they have the fundamentals. Are you sleeping, what is your nutrition like, do you have anything that gives you joy, do you have community support?

At a lot of centers, people refer themselves to the different practitioners on their own. I worry that those may be the patients who aren't getting better. They say, "I went to acupuncture twice, but I didn't get better," but no one coordinated their care. No one told them that if this doesn't work, we have a lot of other tools in our toolkit.

DR. PRASAD: Yes, it can become very overwhelming for the patient. I say, "This is the menu. What are your choices? Let's do some menu planning. What can fit into your life at this time? And if it is only going to acupuncture, it is going to be acupuncture. If it is going to be chiropractic, that is what we are going to do." Then they come back to see me. This is a new thing we have done to limit the number of visits to care practitioners, and then they come back to their primary provider. Then we reassess and say, "This has worked some, but let's go ahead and now add a couple of special treatments." Again, cost is an issue—how to pay for all of these services. We do offer scholarships for MBSR. We never turn away anyone who cannot pay.

DR. ROCA: It is a collaborative discussion with the patient, so that we are choosing something that they actually think they can succeed at. If I were to be more directive of the process in this person, then I would make sure that their nutrition is together. In terms of supplements, with the likely GI challenge that he is facing, the biggest single supplement is magnesium, magnesium, magnesium, magnesium, magnesium.

DR. ROBERTS: I might actually do some nutritional testing to see what exactly they need. In the first visit, we just talk, and I say that I don't even order labs, I don't give suggestions for medicines or anything, first we just talk. Then, I come up with a wish list and that is what I call it. And then from that wish list, on our next visit, we talk about which ones are grabbing them and where they want to head.

I tell them that if you find that you go down that one aisle and you are not getting as far as fast as you want, don't worry about it. You have got a treasure trove of healing ability within you. It is just a matter of finding the right inroad, so they can come back to the wish list and see what else is on there. I never fill out a disability form. I tell them that I am here to see them as healthy, happy, joyful, loving their life, and all of that. The moment I start trying to justify their disability, then I have lost that role, and as long as they are trying to convince me of how ill they are, they can't get better. I tell them if they need a disability form, they need to go back to their primary care doctor to do that.

In the first visit, I always talk about mind-body, emotions, and spirit. There are so many different inroads to healing, and it is just a matter of figuring out which one. If you are going down the physical road and you are hitting roadblocks, and you can't get there from that direction, then let's look at the other areas and see if we can clear out stress. Sleep is one of the first things I look at. That would explain the blood pressure issue, too, and so it would be worthwhile to look at.

I want to comment about cost, because for a lot of the modalities, people don't have the money, especially if they are on disability. We have something called a patient assistance fund. At our store, we get everything at a discount; we sell it retail, and then the difference between those two goes directly into our patient assistance fund, which could be used for supplements, for example.

DR. SPAR: Everything is free at our center, because we get a donation. By the way, the only other supplement I use a lot is white willow bark extract. I have had so much success with it. It is a salicylate relative, but with much less side effects. It works amazingly well for chronic pain without problems for kidneys. Thank you so much everybody.

PATIENT CARE DISCUSSION: FIBROMYALGIA

MODERATOR: STEVE AMOILS, MD

Medical Director, Alliance Institute for Integrative Medicine

Participants:

- Brent A. Bauer MD, Director, Complementary and Integrative Medicine Program, Mayo Clinic
- Marc Brodsky, MD, Medical Director, Center for Integrative Medicine and Wellness, Stamford Hospital
- Lisa W. Corbin, MD, Medical Director, The Center for Integrative Medicine at University of Colorado Hospital
- Mikhail Kogan, MD, Medical Director, GW Center for Integrative Medicine
- Daniel Monti, MD, Director, Jefferson-Myrna Brind Center of Integrative Medicine
- Wadie I. Najm, MD, Clinical Professor, Susan Samueli Center for Integrative Medicine, University of California, Irvine

DR. AMOILS: At our center, we see approximately 20,000 visits a year, and five to eight percent of the people have fibromyalgia. I am presenting a patient of Dr. Adam Perlman. His patient, Sandy, a 38-year old female, is a fairly standard fibromyalgia patient. She presents complaining of a pain in her neck, upper back, lower back, and knees. She also complains of fatigue, difficulty sleeping, decreased libido, a foggy feeling, and occasional abdominal pain and bloating. The symptoms started as mild neck pain, after a low-speed motor vehicle accident three years ago. They have gradually progressed, and the pain has become more diffuse. Shortly after the accident, x-rays and the cervical MRI revealed only some mild degenerative changes.

She has seen multiple MDs and brings a copy of their workup with her. Past medical history: Appendectomy, depression previously treated with Sertraline. Review system highlights: Occasional sinus congestion, no rashes, no hair loss, or autoimmune disease. Menses are regular but heavy, with increased irritability. I presume that is the PMS type of irritability. She has occasional constipation, and she has gained 10 pounds in the past eight to ten years; she has no joint swelling.

Family history: Her mother is 69 and has hypothyroidism; her father, age 71, has hypertension, a history of BPH [***benign prostatic hyperplasia***], and alcoholism. Her brothers are 41 and 43 and are both healthy. Social history: She has worked as a paralegal

and is currently a homemaker. She is married with an 8-year old son and a 5-year old daughter. She used in vitro fertilization. Her husband is supportive, but a heavy drinker, and she has supportive friends. She is a non-smoker, drinks three to four glasses of wine per week, and uses no drugs. She is able to fall asleep, but three to four nights a week she will wake up with difficulty falling back to sleep. She has occasional restless legs, but no periodic limbic movement disorder, averages six hours of sleep, but still feels tired upon awakening.

Her diet is the standard American—SAD—diet, she drinks one cup of coffee and two Diet Cokes per day, and has GI upset with dairy consumption. For exercise, she walks outside or on a treadmill four days per week and has tried yoga and weights in the past, which lead to increased pain. Medications and supplements: Tylenol, ibuprofen PRN, Vicodin PRN, calcium, and a multivitamin. Allergies: Penicillin, Compazine, and Alprazolam.

Physical exam: She is a pleasant female who appears tired and tears up several times while telling you her story. Vital signs are normal; multiple bilateral tender points —occipital, trapezius, supraspinatus, gluteal, and knee. She has no active synovitis or nodal changes; her neurologic exam is normal. Her lab workup was normal except for low vitamin D.

Let's go around, and tell us what your thoughts are about how you would treat this patient.

DR. KOGAN: She is a pretty common patient for our practice. We can do a lot for this patient, but on the first visit, we have to set this up as a new patient. I would definitely find out more personal history on the patient, as to what she has already tried and what she has found effective. We haven't been given much of the psychological, spiritual, and emotional assessment here, which I would be assessing. It is not very clear what are this woman's interests in life, such as hobbies. That would be potentially very important to address.

Definitely, the diet triggers a lot of my thought processes as to whether she may have nutritional deficiencies and food allergies. When I talk to patients like this about diet, I usually start introducing the idea of functional medicine. I might want to do some basic nutritional testing. We use two labs, Genova and SpectraCell, for assessing nutritional deficiencies. Frequently, patients like this have some B vitamin deficiencies. I also find that frequently people with fibromyalgia have very low levels of molybdenum. I don't know if there is a lot of evidence for that, though. Regular multivitamins never have molybdenum, but good multivitamins have a dose of it.

There are so many other issues. Her sleep is inadequate clearly, so that needs to be a big part of working with her early on—finding more about her sleep hygiene, whether it is more of a psychologically-based issue, or whether she is depressed.

We would try acupuncture if she is willing to do it, because it can potentially help her sleep and potentially help her pain at the same time. I would definitely recommend some form of mind-body therapy, if this is something that she would be interested in exploring. Frequently, I bring this up, trying to stay as neutral as possible, without using any comprehensive words like religion or spirituality.

So I usually bring the first visit down to kinesiology. We would give this patient the heart rate variability assessment. Often, that helps me not just see their autonomic function, but it also helps me to bring up the whole idea of mind-body practice and then normalize the need for it—by showing that in real life, right in front of a computer (HeartMath), if she does certain breathing practice with an emotional component, there is some improvement. Quite frequently, people feel really excited about seeing that they can actually control their autonomic function.

I wouldn't do much more of an in-depth psychological assessment. I'm a primary care physician, and I definitely rely on the people in the practice. I would refer this person to our energy provider, who does reiki and who is also a speech therapist. She can often facilitate a psychological opening much more than anyone else at our center can, because there you are not going to a shrink. Or if the person is open, I would send her to a psychiatrist.

We have a program where the reiki practitioner and the psychiatrist will work together at the same time, because it seems to be quite effective for bringing issues up and working on them. I am not sure how much she will be able to exercise. Low-grade exercise has some effectiveness, but that is something that can wait.

To summarize, every part of her lifestyle can substantially have some recommendations to make her feel better. I would have her guide the first steps, because patients like this can improve from a variety of approaches. For supplements, we give modified Myers infusions for these patients. These infusions include B vitamins, magnesium, calcium, and a low dose of vitamin C. We tend to give a higher dose of vitamin C, so our Myers has a little bit more of vitamin C than the regular dose. But again, usually I structure this—I don't do everything on the first visit. I tend to assess what the patient is interested in pursuing. There are so many things that we can try, and it is not really the tools that are going to make this person better, but her own process.

DR. BRODSKY: As for a mechanism of action, I conceptualize fibromyalgia as system breakdown. That is why a lot of these symptoms run together, they overlap—neuromuscular, immunologic, and hormonal. That is why we see the PMS symptoms, the muscle pains; they might have dysregulation of their immune system, with allergies or basal motor rhinitis, or they get sick a lot.

The treatment approach is that we are restoring infrastructure, so that a lot of these issues can manage themselves primarily through self-care, but also through modalities we offer at our center. We give trigger-point injections and acupuncture, and we help people lose weight if obesity is a factor. We have mind-body programs with guided imagery, hypnosis, and mindfulness meditation.

As Dr. Kogan says, patients usually come to me first, and I do mostly the acupuncture and trigger points. Then, to work slowly on lifestyle, we teach them acupressure, and try to get them to start walking—20 minutes is realistic, beginning three to five minutes a day and incrementally increase. We rule out any other specific conditions, like sleep apnea, if necessary, or depression. If it sounds like depression, we try not overwhelm people on their first visit. But over time, we use a more rational medication regimen. We don't prescribe benzodiazepines or opiates to anyone with fibromyalgia.

If they come in on these medications, we do not feel the need to take them off those drugs. We say the goal is to change these medications to others, such as tricyclics, SSRIs or muscle relaxers. The ultimate goal is for medications to be a bridge to self-care, to restore sleep, exercise, and social relationships. We look to see if there is PTSD [***Post-Traumatic Stress Disorder***] from the accident. Should she be seeing a psychotherapist? Was there early trauma or depression? We "start low and go slow"—there is a tendency to try to throw the book at these people.

They are so depleted that just listening to their story, and over time working with them, on more frequent visits, we usually see these people and follow up once a week for four weeks, and then try to separate out the appointments. There are fibromyalgia patients that we have seen every week since our center opened four years ago, and we customize the amount of follow-up and the treatments for the person that are evidence-based, but also per their preferences.

I did a two-year fellowship at UCLA in their East-West Medicine center, with Chinese medicine doctors who were trained in Western medicine and Eastern medicine. Our approach is a combination of what does the research show about certain acupuncture points on the limbic system. It's ironic that the best evidence on acupuncture is using one acupuncture needle in the hand. That is probably the best evidence we have on acupuncture. I draw on concepts of Chinese medicine, but I think that the data show that the points really aren't so important, just so long that you are following some method and inserting the needles in a clean and safe manner, and following FDA precautions.

DR. MONTI: One way that I would characterize the system breakdown is inflammatory overdrive, and this patient is an inflammatory mess. Virtually everything affects inflammation, including stress. But the place that we would start, because you have to start somewhere, and as you said, you can't overburden the patient, is in the gut. If you

don't fix the gut, the person can meditate their life away and they are still going to have significant symptoms. That is where many inflammatory signals begin, and that is where the inflammatory breakdown begins. So healing the gut, and also preventing the gut from further injury, would be a primary starting place.

Bundling all of those other restorative and treatment-oriented issues, such as reducing symptoms with acupuncture are important, but there is usually gut dysbiosis in a patient like this. There is significant flora imbalance—if you don't have the gut functioning well, then you are going to have all kinds of inflammatory signals going to the Kupffer cells of the liver, and then you're going to have a red alert. The gut is the furnace of this inflammatory pain, most often, in somebody who has fibromyalgia.

The diagnosis is based on her clinical presentation. The treatment is to clean up the diet, of course, and thoughtful use of a few products such as a good probiotic and a good prebiotic. We like Metagenics products, such as Glutagenics, which often soothes the gut when there is any kind of gut dysbiosis.

I would not give a ton of supplements for somebody like her. I would use an Omega-3 fatty acid, maybe to lower inflammation systemically a bit and make sure she is getting her basic nutrients. Certainly, if she is a highly motivated patient, I would have her come in for a couple of IVs to make sure that she has got all the right building blocks, as Dr. Kogan was talking about. But if not, I would recommend a high-quality multivitamin with minerals—and it has to be a high-quality one or even a powdered one—because this is the kind of patient who would say, "I took my one-a-day and saw it in the toilet the next day." She does not have good enough gut function to break down and assimilate the nutrients, unless you thoughtfully think about that supplementation.

We are fortunate to work very closely with the Jefferson Pharmacy, where we stock different products. I like to give people options, because not everybody can come to our store. There are commercial brands that I like, that people could buy throughout the country. I happen to like New Chapter as a company—I like their probiotic and I like some of their other formulations.

If the functional medicine person in our clinic were here, he would also, without a doubt, put this patient on a Metagenics product called Inflamax. Anybody who has an inflammatory issue would get that. We can't underestimate how important those probiotics are. There are 30 trillion cells in our body, and 10 times more bacteria in the gut, so who is controlling whom? It is clearly a symbiotic relationship, and our lifestyles throw that flora balance off. I would want her history, to know whether she had lots of courses of antibiotics when she was younger. That is the common theme that you hear with a patient like this.

Two studies, one in *Nature* and one in the *British Medical Journal*, show that after repeated courses of antibiotics, you don't actually go back to your normal gut flora balance. Some people should take lots of probiotics every day. I know I do, and I don't feel as well unless I do. I thought that I had an ulcer, and I tried everything. I started taking probiotics, and as soon as I stopped taking them, I felt that ulcer coming back. Some people need to take them forever, but that is not a bad thing to have to take every day. We also would use detoxification products, but we wouldn't start there.

DR. KOGAN: How much functional testing would you advocate?

DR. AMOILS: The answer is nobody knows, and because this testing is not standardized or validated, we give the patients options. Instead of saying, you can spend 400 bucks on testing, I can give you 100 bucks of supplements and see how you do. If in six weeks, you are much better, then we don't have to do the testing. If not, then we can do it. As long as you get patient buy-in, there is never a problem. It is when we impose ourselves on the patient, that the problem starts.

DR. CORBIN: I had a question, too. I was curious, especially about the two supplements you mentioned. Did those have fibromyalgia data?

DR. MONTI: There isn't fibromyalgia data.

DR. CORBIN: I will take chronic pain data.

DR. MONTI: The data are more in the area of what is the effect on inflammation? There are some data, but not overwhelmingly good clinical trials.

DR. KOGAN: We use UltraClear Renew. Also, Metagenics has quite a few products, like Fibroplex, which is malic acid that also helps get rid of heavy metal, and is a safe, easy product. There is also LactoFlamX, which is an anti-inflammatory probiotic. Endefen is a gut rehab program. It is a prebiotic, and it also soothes the gut.

DR. MONTI: That is the prebiotic we use, Endefen.

DR. KOGAN: And you combine it with their own probiotic?

DR. MONTI: You can use the Metagenics probiotic or one from Hippocrates in Florida. There are very good probiotics out there.

DR. BAUER: I am actually here more to get information than to give information. Our fibromyalgia treatment program is run within our division of general medicine, but it is separate from our program, although we have some tight connections. It is run by a

woman who used to work with our program, who is trained in acupuncture, Ayurvedic medicine, and so forth.

Despite having done some interesting studies on acupuncture and fibromyalgia at the clinic over the years, the approach there is very heavily based on cognitive behavioral therapy, getting people past the catastrophizing: I can't walk—well, of course you walked; you walked to the office. Can you walk two minutes a day? They are very effective with that approach, but there is a wide open opportunity to do a lot more than we are currently doing.

The other supplement that I have used personally in my own practice with fibromyalgia patients in the context of the whole person approach is D-ribose for fatigue. That seems often times very helpful. I don't think it works like a miracle pill or a miracle powder. But in that comprehensive context, it will work on sleep, while we are working on stress, and we are doing the community building.

DR. CORBIN: We, for the past seven years, have been the fibromyalgia referral clinic for the hospital, which can be interesting because we will have patients who will come in and they ask, "Why am I here when I see that acupuncture and chiropractic are offered? I don't want anything to do with that."

The place I start is with the patient, too. I try to understand and validate what they have got going on, because a lot of these patients have been going to doctor to doctor to doctor. Half the time, the doctor says it is all in your head, and that is the message that they get. So legitimizing the diagnosis and explaining a little bit of pathophysiology as far as we know it goes a long way.

Fibromyalgia is just a small point in the whole spectrum of chronic pain, and there is a lot of common pathophysiology with different chronic pain conditions with a disorder of centralized pain processing. I have heard that the American College of Rheumatology is trying to adopt some new criteria for diagnosis that is going to come back to what we were talking about, that looks a lot more at gut function and more review of systems that are commonly present in patients with fibromyalgia. I am suspicious that we will get away from tender points, for example. Chronic pain will have a number of other symptoms positive, and then you get the diagnosis that way.

I start with education, and then also the big three things that have shown the most success are sleep, exercise, and mind-body. We may have a different population than yours. My patients are more than happy to talk to the psychologist and do cognitive behavioral therapy almost universally. Sometimes HeartMath is involved, and that is a good tool, as was said, to get people more engaged in the mind-body connection.

With this particular person, I would take a more detailed sleep history, and talk about sleep hygiene, and figure out where to intervene. If I am ever to use medications with people, it is typically around sleep. I like the tricyclics for starters, and cyclobenzaprine in particular seems to be pretty good.

We are fortunate in Colorado to have an amazing insomnia clinic, so they will take people and put actographs on them, to see exactly how much they are sleeping, and come up with some really cool diagnoses, and they have great behavioral approaches for people with sleeplessness. Every once in a while, I will see somebody whose sleep is just so messed up that there is no way we are going to get you better until you are sleeping. That can be a big sticking point.

With exercise, I also tend to start slow and I tell people that I use the FIT protocol, F-I-T. So F is frequency, I is intensity, T is time. Start with the frequency—try to do something daily. Time is the next most important, and some people are able to walk 10 minutes, but there are some people who are so couch-bound that standing up during the commercials and sitting down is their exercise. Rarely, I think, if ever, do I get to the I for fibromyalgia patients. I would try to gradually work them up to two 15-minute bouts a day or 30 minutes, and the cognitive behavioral therapy is fabulous. From that, plus or minus supplements, plus or minus medications, plus or minus acupuncture, chiropractic, and massage—depending more on patient preference, and again, not overwhelming them right away.

With all the patients I see, I try to pick the things first that engage them in their own care, rather than being yet another stop on the fix-me line. They go to the doctor, and maybe the doctor is smart enough to try Duloxetine with them at this point. But that is a very passive therapy, and we could say the same about acupuncture and massage. It can be very passive, so this is another plug for starting people with the exercise, mind-body therapies, and sleep, as it gives them some power to control, and they feel like they can do something about it.

For the past 10 years, I have been trying to find a physical therapist who understands fibromyalgia, because my experience is you send them to PT, and they kill them. Just last week, I got an email from our director of PT, who says there is a PT who works mostly in the Boulder clinic, but may expand. He works with chronic pain, and they then sent me his resume: he has got a Feldenkrais background. He has a broader background than most PTs, and I suspect he would be doing something like that.

I have to put a plug in for Brent's program at Mayo. I remember one time, seeing a guy in his 20s with fibromyalgia and fatigue. He had been to this local fibromyalgia and fatigue clinic, where they just basically put people on tons of supplements and are heavy-handed with the narcotics as well. And he is sitting there like this, and his mom is like oh, my gosh, oh, my gosh. And I gave the little spiel, sleep, exercise, mind-body, and he couldn't take any of it in because he was so gorped out.

Then I saw him back three months later, and I figured, number one, he is going to be a no-show because we got nowhere. But there he was, in the waiting room, and he was all perked up and happy. I said what happened? He said, "I went to Mayo. Mom got stressed, she sent me to Mayo, they had this intensive day program." "What did you do?" "They stopped all my meds, they did sleep, exercise, mind-body." He was a changed man.

DR. NAJM: We don't have a large program; we just have a naturopath part-time, an acupuncturist, and myself. Services that we can offer within the clinic and then our center are fairly limited. We don't have a large fibromyalgia population, but we do approach them in a variety of different ways. I agree with everybody that there are a lot of issues here that need to be addressed. But the one thing that I approach first and foremost, given the fact that she is complaining of fogginess, abdominal pain, bloating, constipation and so on, that is a major gut issue and major inflammation.

We do some of the functional testing, just so that we can get a parameter of where we are. We do some of the GI stool testing to get the sense of what the flora is, and whether they do have parasites, yeast, or whatever else. We also sometimes do the food sensitivity testing. I know it is not very scientific, but at least it gives me a sense because the one thing that we try to do with patients, particularly combining these two things, is to do an elimination diet.

In order to do a good elimination diet, we need to know which foods they are not reacting to, which foods they are reacting to. At that time, we can target an elimination diet to that patient. We use many of the products that were mentioned. We often use probiotics, and the probiotics can be a wide spectrum. I like to use Opti-Biotics, which basically is a combination of a variety of different probiotics, which basically covers everything for me.

We are fairly limited on what we can offer for the pain management, so we try to go with our acupuncturist and just simple acupuncture, not doing heavy acupuncture, because the patients cannot tolerate it. We are lucky enough to have tai chi as classes that we offer, and I usually like to send the patients to tai chi and have them do as much as they can, rather than do everything that the tai chi class is offering. They do come and tell me that they are very tired afterwards, and they are not able to do it probably twice a week. But the key is they are to do it once a week, and that is a good start.

Finally, the concept of what is going on in fibromyalgia is a lot of inflammation, but also, there is a mind-body disconnect. One of the things that we try to do is to help them either connect with a really good counselor or a good group, so that they can have some of their issues addressed. This lady, for me, is somebody who had a family where there is alcoholism in the father, there is a husband who is an alcoholic. She says she has good support, but we really don't know what type of support she has. That would facilitate the other aspects that we are trying to deal with.

Each of the patients that I have seen so far had a slightly different perspective that I needed to deal with, but the basic principle of our approach is trying to get rid of the inflammation as much as possible, dealing with the gut and food sensitivities, first and foremost, and then, trying to deal with the mind-body connection, with other options that patients are willing to go through. The one thing that I do in the clinic that is very helpful for me is I have been trained in motivational interviewing. I use motivational interviewing quite a bit in identifying what the patients are ready to change and ready to do at that time. I basically have them be in charge of what is it that they want to change, which will give them a success that I can build on for the next step and the next step.

DR. BRODSKY: There is a high concordance rate with fibromyalgia and IBS. There are many cases of fibromyalgia, at least that I see, without GI symptoms. Would you still treat for gastrointestinal problems, even if they didn't have GI symptoms? I am wondering if the gut is the primary problem, or maybe just an innocent bystander?

DR. KOGAN: I usually do the basic assessment, and I use 22 food sensitivities, which is extremely expensive, as a screen for the patients. You could have mucous membrane symptoms, not at the gut level, and still have results. But that goes back to how much testing you are going to do. At our clinic, it is a very privileged population; everyone wants this test and that test, because they heard it somewhere.

DR. AMOILS: We have a big population of fibromyalgia patients, and we have a big population that has gotten better. I tell them that fibromyalgia is a syndrome. It is a constellation of symptoms that has been around for hundreds of years, if you look in the literature. But it was not given the name until the ACR [***American College of Rheumatology***] criteria came out. I have spoken to some of the people on that panel, and they couldn't even agree where the tender points were.

If we look at fibromyalgia, we call it a dysfunction, and it is a constellation of symptoms. If we draw a Venn diagram, we have overlapping symptoms. So if you have irritable bowel syndrome, you would have premenstrual syndrome, and there are a lot of other symptoms like sleep and fatigue.

These patients have a constellation of pain syndromes: carpal tunnel syndrome, patellofemoral disorders, other enthesopathies, where they get tendonitis, Achilles tendonitis. They have TMJ [***temporomandibular joint pain***], migraines, and depression. You could look at a dysbiosis, leaky gut, or another syndrome, in terms of what leads to this. We also test for cognitive dysfunction and a neurotransmitter and endocrine disorder as well.

We also see mitochondrial dysfunction as part of fibromyalgia. We see vitamin deficiencies, such as vitamin D. There are also psychosocial issues that are often part of a history of

alcoholism in the parents. So you start expanding out, as functional or as integrative physicians, because we have multiple roads into this whole process.

The question that you asked was: Which came first, the chicken or the egg? Traditional Chinese medicine has a great way of describing it, which is the five phases including low adrenals, low kidney energy, liver congestion. I never quite understood what liver congestion is until we started doing "snips" [SNPs, or ***single-nucleotide polymorphisms***] testing of the liver—phase one and phase two "snips." What happens is people don't detoxify well. They get basal motor rhinitis, which is not an allergy. They get headaches and brain fog.

A lot of these symptoms go away when you do a liver detoxification protocol. They get spleen deficiency, which is the fatigue, and then they get GI disorders. In Chinese medicine, there is a wheel that helps you figure out which one of these came first. You can start backwards, beginning with the symptom that came last. Then you work back until you hit the original one.

So there are different ways in, but for us, as practitioners, as we work through this whole process, my experience has been that if you think you have got the answer, there is always something else to be addressed. You go with what you are good at, and then you work through this until you find some critical balance.

If people learn to look at their symptoms as a barometer of what is going on, rather than the problem—if their fatigue is flaring, if their pain is flaring—they can look at their life and see what they just did that might be causing it. Then when they come back, we will try to figure it out.

Our approach has been to have people do certain things for themselves—such as MBSR [***mindfulness-based stress reduction***] or exercise and stretching—and there are certain things that we can do for them, such as acupuncture, chiropractic massage, or energy work. We work with them until this broad array of symptoms narrows down to what they can manage, and then we often help them get rid of those too.

DR. BRODSKY: How do you measure that? It would be great if there were outcome measures that we could all use and some standardization.

DR. AMOILS: The standardization you can use is to measure the tender point criteria or a dolorimeter, which is a machine which tells you how much pressure to get to the tender point criteria, their fatigue levels, and so on—although we don't use these.

We use a test by Neuroscience, which tests cortisol rhythms. You can see what stage they are in their fatigue. If people are low in serotonin or epinephrine, if you give them

Cymbalta, they do great. But sometimes, that is not the problem. Sometimes they have a high glutamate, and the glutamates tend to respond to Lyrica or antiseizure medicines, but they also respond to N-acetyl cysteine [***NAC***]. There is always a nutritional option and often a medication option; there are always options. My biggest question is: If there are 20 things I can do for you, how much time do you have, how much money do you have, and what do you want to do? Let's invest in something. Once we enroll someone in that protocol, where they are helping drive the bus, then it makes it much better.

We did a study on food testing. We took people and we sent the labs off to different labs, and they all came back different, with the same person. One of the reasons for that is that they test different antigens on the food. They may be right in what they are testing. We send someone's blood, and then we send the same person the next day, and we want to see if those labs come out the same. But when we sent it to three different labs, we got three different answers. That is why I stopped doing that.

DR. MONTI: We put together a battery of different measures for our Bravenet pain study that encompasses pain levels, quality of life, and fatigue, and that should be available to everybody. In our study, we still have everybody sign a consent form who agrees to it, which is just about everybody who comes in for a new visit. That is now part of the intake questionnaire. We have people fill out those measures, and at different time points, so we can see how we are doing over time. The best studies are the ones that are prospective and long, where you see how people are doing over a couple of years.

DR. BRODSKY: How do you follow someone over years?

DR. KOGAN: It has to be part of your standard practice.

DR. BRODSKY: But it has to be part of everyone's standard practice.

DR. KOGAN: That is my point. We are all using different methods, so how do we compare them to each other?

DR. BRODSKY: That is standard care, too. How are you going to measure your controls?

DR. KOGAN: At most of our own institutions, because most of them have a rheumatology clinic that deals with these patients, we don't have the fibromyalgia clinic. We have a chronic pain center, and then we have a rheumatologist that sees patients.

DR. BRODSKY: Fibromyalgia is underdiagnosed. Most of our patients with fibromyalgia are not referred for fibromyalgia. So there needs to be the recognition when you are a neurologist, that it isn't just a headache that you're looking at, or when you're a gastroenterologist, it isn't just IBS [***Irritable Bowel Syndrome***], but it is the whole system.

DR. CORBIN: It will be really interesting if they do adopt these new criteria, go to a multisystem, more-complex approach.

DR. BRODSKY: Then people with fibromyalgia are seeing you, they are seeing me, they are seeing their chiropractor, they are seeing a psychiatrist, they have been through physical therapy a few times, they are on opioids, they are on Cymbalta, they are on this, then they are on that. It is difficult.

DR. MONTI: We like to pretend that there is not an art to being a diagnostician or a clinician, but even recently, the study that came out in *JAMA*, that basically the standard of care—giving an antibiotic for a sinus infection—almost didn't affect the outcome, for a condition that is as well-described and well-circumscribed as a sinus infection. When so many treatments are put under the microscope like that, and you take out the abilities of the clinician and the uniqueness of each case, and you just put everybody on a protocol, whether it is an antidepressant, whether it is treating a sinus infection, or arthroscopy for the knee, the therapeutic effect washes out.

DR. AMOILS: Thank you all.

OPERATIONS DISCUSSION: FINANCIAL VIABILITY

MODERATOR: KEVIN BARROWS, MD

Director, Clinical Programs, Osher Center for Integrative Medicine, UCSF

Participants:

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- Courtney Jordan Baechler, MD, Vice President, Penny George Institute for Health and Healing
- Brian Berman, MD, Director, Center for Integrative Medicine, University of Maryland
- Margaret Chesney, PhD, Director, Osher Center for Integrative Medicine, UCSF
- Mark Cunningham, Practice Administrator, Osher Clinical Center
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- Laura Fletcher, MA, Director, Integrative Medicine Center, MD Anderson Cancer Center
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- Sherri Peavy, MBA, Director, Northwestern Integrative Medicine
- David Rakel, MD, Director, University of Wisconsin Integrative Medicine
- Emily Ratner, MD, Co-Director Division of Medical Acupuncture, Stanford Center for Integrative Medicine
- Kieran Richardson, Director of Operations, Arizona Center of Integrative Medicine
- Melinda Ring, MD, Medical Director, Northwestern Integrative Medicine
- Ellen Seymour, Practice Manager, Center for Integrative Medicine at University of Colorado Hospital
- Patricia Vitale, LICSW, Interim Executive Director, Penny George Institute, Minneapolis

DR. BARROWS: This is a rare opportunity. We are all here to discuss this matter that is so fundamental to our survival and to learn now from each other.

I want to thank The Bravewell Collaborative for making this possible, for their intelligent, strategic, and generous support that makes this meeting, and so many other things, possible. Also, I want to thank Margaret Chesney, the Director of the Osher Center, who has helped further the financial turnaround of our clinical program by helping us receive clinical grants as well as our community care fund; our patient assistance program has increased under Margaret's tenure.

So let's jump right in. The idea is to share pearls and duds. Raise your hand if you have an MBSR program, but to point out the obvious from a financial perspective, once you have the expertise, you have a roomful of maybe 25 people, who are all paying tuition. Regionally it varies, but it's around $300 per class. At our center, we pay the instructor by the number of people who are enrolled, so that they share the liability, and they are also motivated to get the room full.

This is the idea of our fabulous clinic administrative director, Diane Sabin. In the last three years, we have increased patient volume 75 percent. We have not increased staffing at all. The way we have done this is by using our administrative intern program. We have relationships with three institutions in San Francisco that train LVNs [***Licensed Vocational Nurses***]—one program, for example, is a masters program at San Francisco State University in health management and policy.

Sometimes we have as many as eight interns at a time, and they do a lot of the work for us. Now, of course, it takes our investment to train them, but it has allowed us, as I said, to increase our patient volume. We moved into a new building in January 2011, which requires someone to accompany the patient from the waiting room to the clinic examination room, so you need another person to do that. We get to use the interns for that, so we have saved a lot of money, although there is the time investment in coaching them.

These are interns who want to learn about healthcare and how to function in healthcare environments. So our paid staff gets to play a supervisory role now, in terms of the interns, and the interns also bring a new energy to the center.

Not only does the university appreciate the fact that we are a training ground, but also it changes the face of our clinic, because one of these programs, which is UCSF-sponsored, has a lot of people of color, which helps our staff represent a broader demographic.

Two duds, which I will share with you, are clinical packages, although you may have success stories about them. When we rolled ours out, the timing was horrible. Yoga is an interesting story for us, because we are in San Francisco and there are fantastic yoga centers

on every block. It is a highly competitive environment, so we have tried to carve out the medical yoga niche. We even have a chair yoga class—one of our classes for the people who can't even stand up, due to obesity or because they are so impaired physically or orthopedically, or fatigued from their chemotherapy.

But even with a couple of really dynamic yoga teachers, teaching and trying to generate interest, we haven't been able to do it successfully. We have realized that it is cumbersome to pay at the Osher Center. At yoga studios, you can just buy a pass and that gives you freedom—you don't have to go every Tuesday, and you don't have to pay in advance for eight Tuesdays. So we are learning, but yoga is still a loser for us, though we can't imagine an integrative medicine center without yoga, especially as we try to launch Ayurveda.

So in the spirit of collaboration, do you have any pearls and duds that you can share?

MS. FLETCHER: On the plus side, there are conceptual things that I want to share. We have cross-trained providers, so we have a massage therapist who can also provide meditation, which is helpful. The downside is, if you have a practitioner who has no billing potential at all, then you have someone whom you have trained and brought into your clinic who doesn't have that potential. If that person is not licensed, then when you are talking about billing, they fall outside of that model.

Another dud for us is charging for acupuncture. An initial visit and a follow-up have different fee schedules, regardless of whether it is inpatient or outpatient, and what the actual need is—versus looking at it more as a procedure, for example, someone needing acupuncture for chemotherapy-induced nausea. One person might need a 20-minute visit versus another person who would have more of a comprehensive assessment. So would we charge $80 to you, for your 20-minute session, and then charge $80 to the next person with a comprehensive assessment? We are revisiting that and looking at different levels of acuity that will model a different fee schedule.

DR. EHRLICH: Who is paying for the acupuncture in the hospital?

MS. FLETCHER: Currently, the staff are paid by the institution.

DR. KLIGLER: A pearl, which might apply more so, or perhaps only, to people doing primary care has been treating kids, which has been a huge driver of success in our practice, for a number of reasons. First, a lot of times people will bring their kids, because for their kids, they are after a particularly holistic, or collaborative, or natural approach to care. Then the parents discover that they themselves also want that type of care, and that they are not so crazy about their current doctor. So we end up getting the kids to come into the center, and then we end up getting the parents.

The second part, from a more mercenary perspective, is that our primary care practice is a blend of people—doctors taking insurance and doing fee for service, and having patients use their out-of-network benefits. We have found that people's willingness or tolerance for paying fee for service and/or using their out-of-network benefits is much higher when it is about their kids. If you have kids, you will spend money on your kids that you won't spend on yourselves. A lot of parents will, where they themselves might want to stay with an in-network doc, they are going to send their kids to the doctor they want the most. That has ended up being a real part of the success of our primary care practice—to have a blend of fee for service and managed care. Having the kids there is a key part of it, because it keeps the fee for service bubble afloat on the big mass of insurance reimbursement.

DR. BARROWS: On a smaller scale, we have had the same thing at the Osher Center. We started pediatrics just over a year ago. We don't do primary care, though, so the effect is not as large. How about any duds?

DR. KLIGLER: A big dud for us was our early plan to offer tai chi and yoga classes as part of our business model. We were forced to realize that we would have had to have a whole parallel business infrastructure for building the classes and marketing them specifically. Because we never were willing to invest in that, the classes never got off the ground, so that was a dud.

Something that may be a pearl or it may be a dud is: We have been trying to get sales going for a couple of years now. Because of some stops and starts with the pharmacists we were collaborating with, it's not quite clear yet if it is a dud or a pearl.

MS. LAMMERSFELD: If you do the quality assurance right, a lot of the companies don't have the right assays to know whether you are providing a quality safe product for patients. If you have to independently do those tests, it turns out to be a dud.

DR. KLIGLER: I wonder if anybody has success, meaning you actually make money?

DR. BARROWS: We thought about this at Osher and we haven't done it yet, but with natural products and supplements, you are going to have to choose a brand and a product, which seems, especially for an academic center, to be fraught with problems. There is the whole perception issue of having a vested interest. Do other centers find stores to be profitable, or are there downsides to them?

DR. RING: We have gotten around that by requiring that the product has to be recommended by staff at the center. None of the people make any money off of it—the center makes money, but it's not profit driven. When I recommend a supplement, I say, you can get it here or you could go to Whole Foods, but we have it here for your convenience, and we know it is good quality.

DR. McCAFFREY: Do you offer at least a couple of different brands of each supplement?

DR. RING: We have a very strict formula. We have five or six different manufacturers that we work with. But we have one turmeric supplement, for example.

DR. McCAFFREY: How are you doing your quality assurance?

DR. RING: Our naturopath is in charge of our supplement formulas.

MS. LAMMERSFELD: We actually have a gentleman who runs our quality control program who worked in the pharmaceutical industry for years. A lot of people make money selling supplements, but if you are running through the best steps for quality control, it is expensive to send them out for special assays. We were selling a supplement from a very reputable company, but their mushrooms had twice the acceptable level of aflatoxin, so we don't have that product available.

DR. RING: The question is not, is it profitable for the center, but what does the patient want.

MS. SHIPLEY: Our store funds our patient assistance program. So every dollar we make basically goes into patient assistance, and it gets fed back into the clinic.

DR. McCAFFREY: That is a great way to do it.

MS. SHIPLEY: When patients ask, "Are you making money on this?" we say, "We make money on it, and it goes back into our patient assistance program." That is one of the pearls in our organization, that we have mutually reinforcing programs—whether it is classes, in-hospital services, health professional education, the clinics, and the stores. Cross referring has helped us to be financially viable, rather than being more siloed as in some organizations.

DR. EHRLICH: What do you attribute that to, getting that kind of energy going, this mutually supportive cross-referring, because that is something that we are struggling with, even within our own institution.

MS. SHIPLEY: To be honest, I think it is a leadership issue. It is about who is the leadership and who is driving it. We share with all of our physicians, not just the budgets of our clinic, but the budgets of the entire IHH, our Institute for Health and Healing. We show them how we survive as a whole. We are not just a clinic; we are all of these aspects.

DR. MAIZES: Do you think the reason for this is historical, because you started with patient education and patient services, and added the clinic quite a bit later into your history?

MS. SHIPLEY: We added the clinic in 1994 and we started in 1988, but the clinic has been around for a long time. We didn't start out, unlike our neighbors in San Francisco, with a large endowment. We started out with more of a grassroots effort—with a $30,000 grant.

DR. BAECHLER: If I am able to recommend a type of antibiotic, which may or may not be indicated, depending on the physician that you get in the room, why wouldn't you be able to recommend supplements for someone's need at that location? Maybe the thinking behind it needs to change for the organizations, that you really are servicing your patients, as Dr. Ring pointed out.

DR. McCAFFREY: Are you saying that most primary care practices are actually dispensing the meds?

DR. BAECHLER: A lot of primary care settings in Minnesota have the InstyMeds.

DR. McCAFFREY: In Massachusetts, it is only the free clinics.

DR. BAECHLER: You go and you put your credit card in there, and you enter what your doctor recommended, and you get that. I am sure there is a little kickback for the clinic to have that in there, just like there is a little kickback for supplements. But as a mom, that is what I am going to do with my kid, rather than go to CVS on the way home. It is the same thing at the hospital, when you get prescriptions filled at the pharmacy. You can buy vitamins there. We have to look at it differently, and all those things are put in place for places to financially do well.

MS. VITALE: We keep a small supply of supplements, because we don't sell to the general public. Specifically, what we have on the shelves are what our practitioners want, and that changes, given the season, and what conditions we may or may not be seeing. We only put supplements out that our practitioners have already looked into, what they want and will prescribe, and we only then sell them to our patients—and we also sell them online. You have to stay on top of the inventory, and you have to have somebody monitoring the expiration dates.

MS. SHIPLEY: There is software that helps manage the inventory, but it can be a huge problem.

MS. VITALE: We have both self-serve and staff assistance. Generally, a practitioner will come out, having recommended something, and will show the patients where it is on the shelf and will talk to them about it a little bit. Then they will go and pay for it at the counter.

MS. PEAVY: I have a pearl for the exercise classes. We have a large movement program at Northwestern. We acquired it when we merged with the Wellness Institute. Integrative

Medicine was separate, and Northwestern had a Wellness Institute that was owned by the hospital. We merged with them and created the Center for Integrative Medicine and Wellness, and changed our name about three times. We have several yoga classes for different populations—mom/baby, full-figured yoga, seated yoga, yoga for smoking cessation, and a few others. We also have tai chi, Nia, and others.

A couple of years ago, the hospital had a newsletter that went out to the community of Streeterville near North Chicago, that would advertise all of these classes, and they decided to yank it, unbeknownst to us. We found out about it like a week before it was supposed to go out again. We were basically dead in the water. Our patients didn't know when our next classes were going to be. We saw the program do a nosedive down, because no one knew how to get in touch with us. At the same time the hospital discontinued the newsletter, they were supposed to have a website up, but it wasn't up until three months later. We were in big trouble with this program.

But we have great staff in that wellness movement group, and we started passing out fliers all around the community for the patients who were normally going to the classes. In the past two years, we have seen that program grow, and grow, and grow, and even surpass where we were two years before they dropped the program. I would say that the commitment level of the instructors that have worked there, who have been there a very long time, helped make sure this program survived. We worked in conjunction with that team, to make this program last on campus.

In addition, we have set ourselves up in different areas across campus. We have free space to use for our exercise classes, which cuts down on expenses. Also, this past year, we rented a studio for the first time. In addition to that, we are working with a health club in the city that allows us to use their space because we provide them with instructors to attract more of their clients to take classes there. We are also able to advertise different programs in our own office, so we are able to market them.

Depending on the number of patients or participants, our instructors get paid an incremental amount. It is to their benefit to get the patients to come—usually hospital patients are registering for these classes. They tend to take these classes over and over again for years, and a lot of the women are friends.

DR. RING: We are not Equinox, and it is not the yoga class where you are standing on your head. Our classes are specifically for people who have a health condition or are older.

MS. PEAVY: Usually, they are older men and women, but we are now also marketing to the employees of the hospital. We are creating classes for younger people, like boot camp, abs, and back, and so forth. We are trying to market to a younger group, because we have to continue to recreate it to continue to be successful.

MS. MACK: Duke has started to teach yoga instructors to do yoga for cancer patients. They are bringing revenues in from other yoga instructors around the state, who are coming to learn how to do wheelchair yoga, yoga for cancer patients, yoga for senior citizens, yoga for children with autism. That has been a good revenue booster for Duke, rather than just teaching yoga to patients. They do that, too, and they fill their rooms when they offer it.

DR. BARROWS: The teaching training model is sustainable.

MS. SONNENBERG: We are doing the same thing with those licensed doctors of oriental medicine and massage therapists, and teaching them how to work in a medical clinic. They are coming in and paying us for a month-long experience, to learn that. It has been another great revenue source for us.

DR. BARROWS: We have a childbirth and parenting program, which is an adaptation of MBSR for pregnant women. That tuition is very helpful to revenue.

DR. KLIGLER: We have an acupuncture fellowship, for licensed acupuncturists who finish their training, who want to get experience in the medical setting. They pay tuition, and they work two half days a week in the hospital, and there is a half day of teaching in our clinic. That is how we have been underwriting acupuncture services in the hospital. It is similar to another program that we have, the Urban Zen integrative therapist training program. The people that are taking that program pay Urban Zen their tuition, but then we become the clinical placement where they do their internship. So Urban Zen helps support our yoga coordinator, because she is overseeing their training. We don't get the tuition directly, but we provide a service to the Urban Zen training program, which helps support one of our staff people.

The flip side of that is: We did get some either harsh or fair critique early on with the acupuncture program, about why is it that fellows in medicine get paid for their work and fellows in acupuncture have to pay to work. So we did lower the tuition a lot after that, and the tuition is pretty nominal now and doesn't support our costs for the program. We underwrite that out of philanthropy, but what it does provide is acupuncture on the inpatient side that we don't have to bill patients for. That has been a big success.

At some point, the hospital chairs or the hospital administration, like what I gather happened at the Penny George Institute to some degree, may see the value and decide it is something they need to pay for because patients want it. We have had a lot of conversations with people about that, but they have not taken the plunge to then hire an acupuncturist for surgery, or orthopedics, or other places that could use an acupuncturist.

MS. SHIPLEY: Does anyone have an inpatient training model? We have one, where we train guided imagery therapists, expressive arts therapists, massage therapists, harpists,

and holistic nurses. It is the same idea where they pay a fee and then they provide service in the hospital. But ours is not financially sustainable. The tuition doesn't cover the cost of running the program, so we have to offset that with philanthropy, but I am wondering if someone has figured out a magic formula for making it work in a more financially sustainable way.

DR. KLIGLER: If you look at a bigger picture and you monetize the acupuncture treatments that our acupuncture fellows are delivering, then in the big hospital system picture, it clearly pays for itself, because they are delivering a lot of value. It doesn't mean that we don't end up having to fundraise for our costs in running the program. We have been trying hard to talk in a language to the hospital about the monetary value of what these fellows are providing, but it hasn't quite worked yet.

MS. VITALE: We use a couple of different models. We have TNT, which is in-house training we provide to all of the nurses at Abbott and some of the other hospitals around work they can do at the bedside, instead of always relying on the department to come in to do it. We have also created training programs for massage therapists and acupuncturists that we run periodically as outside training rather than as a fellowship that the practitioners pay us for.

Northwestern Health Sciences gives us two acupuncturists and two massage therapists for about a 13-week period of time. We are training them to work in a hospital setting. We don't get any monetary gain from doing that—it is an altruistic piece. But because we have six hospitals in the state of Minnesota, if we are going to expand, we need to be able to hire people who know how to work in a hospital setting, know how to function under our umbrella, and know our philosophy.

It is a collaborative concept between us and them, so that we can benefit at some point later on down the road. But we haven't figured out how to make it work from a financial standpoint.

MS. SONNENBERG: Our program is very similar to Continuum's. We have gotten to the place where the CMO [***Chief Medical Officer***] and the CNO [***Chief Nursing Officer***] very much want to invest hospital dollars into hiring CAM providers for inpatient, rather than us continuing to come on our own time basically and do it. The difficulty is that with all of the new quality regulations rolling out, they don't have money. But both the CMO and the CNO have put as their top priority to be able to hire folks to do that.

DR. BERMAN: We have also had a program that was started by philanthropy for nurses. It was Healing Pathways—self-care and bringing it to the bedside for patients. It has gone from opening up the doors to training people in the shock trauma center, which is our big trauma hospital, to different clinical departments, and now the VA, which has trained possibly up to 100 people. The funding is coming from the hospital and the VA, who are

willing to pay for this, because it is helping our nurses to enjoy their job more and to stay at their job.

DR. BARROWS: We used to use a cash-only model at the center. In December 2008, we went to insurance for physician and NP [***nurse practitioner***] services. The leadership at the time was worried that it would kill us if we took insurance—that we would need some source of cash, so they created this clinical packages program. The idea would be you would pay $1,500 or so for different packages, such as cardiovascular, diabetes, or mental wellness. Each package would be designed accordingly, so you might get a physician consultation for cardiovascular health, and then perhaps biofeedback. It didn't work—it seemed like we weren't getting a lot of calls. Then we did get calls, and the patients would ask, "If I come in with my Health Net card, couldn't I just see the integrative physician." They would take apart our packages.

DR. EHRLICH: I want to raise this whole question of a membership model in primary care. We have seen that about 30 or 40 percent of most primary care doctors spend time doing completely unreimbursed services. The only time insurance is going to pay you is when you physically see the patient. Much of what we do is outside of that context. We are thinking that one way to perhaps support integrative primary care is to have people pay for longer visits or electronic consults. Now, in New York City, most of my patients are emailing me 24/7, for any number of things. We are thinking about a membership model, and there is a context for this. One Medical, which is a small group that started in San Francisco and is now coming to New York, has a membership fee of $199 per person. They don't offer integrative care per se.

MS. SONNENBERG: We have been looking at the same thing, so I am very interested to hear more from you because we are looking at social media, and the concept of paying a fee, getting one online consultation, possibly followed by a phone call, and then referrals to services wherever the patient may live. We have been looking at that in conjunction with all the greater access patients will soon have to their medical records. We are in a rural state, so we think there would be great interest in that.

DR. EHRLICH: I envision social media and the capacity to have a consult after an initial face-to-face visit for follow-up for people who come long distances. But how does it get paid for? Insurance companies actually have codes for electronic consultations and telephone consultations, they just don't reimburse for it.

DR. RAKEL: We just did that. We changed the reimbursement model for our physicians and our nurse practitioners and our physician assistants in our primary care system—not just in integrative medicine. We all now get reimbursed in a hybrid model, but we get $108, not a lot, per patient on our panel to manage their lives, to get us out of the throughput model

of care. So how could we reach out and facilitate health for our community, instead of just waiting for them to come in and get sick, which we hear so many times?

We are hoping that this will then allow the direct-to-primary care model to work more effectively, because now we have dangled the carrot for us to see patients in a different way. How can we keep populations healthy and how can we develop our expertise and create interdisciplinary teams to focus on what a community needs with less medications, with less acupuncture treatments, with less hospital admissions. How can we truly facilitate that health and healing process?

We went to our medical board foundation, and first of all, the surgeons were angry because they were always supplementing us. But that was the dysfunctional old system—rewarding disease. We are starting to create two different budgets—one that recognizes the importance of filling hospital beds, but another one that recognizes the importance of keeping people out of the hospital, because you can't have a financial model that is dichotomous like that. It won't succeed. Hopefully, in the future, if we do this well, we will be supplementing the surgeons.

DR. BAECHLER: What is the measurement that you are using?

DR. RAKEL: We are looking at outcomes measures. First of all, the most expensive thing is loss of workdays, so we are looking at keeping people working. Hospital admissions, urgent care visits, physician visits, and pharmaceutical costs are the four main measures that we are looking at. We have got a commitment from our administration that this is an ongoing process. Then we have to figure out how to make it work.

MR. KOSAK: Is that something that your system did on its own, or were the insurance companies involved at all in acquiring those measures?

DR. RAKEL: We got in trouble a bit because 31 percent of cost goes towards a third-party payor, and 31 percent of $2.7 trillion dollars is $900 billion. So that is what this direct primary care model allows us to do, to bypass that high cost insurance, so the money can go directly to the community that is delivering care through these interdisciplinary teams.

MR. KOSAK: I was wondering were you required by the insurance companies to put those performance measures in place for your primary care docs.

DR. RAKEL: We own our insurance company, so they had to be part of the conversation, so that allows us to do that. This is all through primary care, so we are starting with the nutritionist, we are starting with the psychologist, then through the mind-body process, we have stress reduction. It is not the traditional integrative clinic, but we are looking at what

our patients need. A lot of that is emotional health, nutrition, and weight management. If that is all we did, those three things, we could make tremendous headway.

MS. MACK: Are you keeping track of your grateful patients to approach for funding? Do you actively involve them on a regular basis, to tell them how you are doing, so that you are not just approaching them for money as you come down the pike? [Chorus of "Yes!"]

MS. PEAVY: We probably could benefit from doing more of that within our centers, just to help get the word out exactly from a donor's perspective. That also pays forward the idea of having people give a little bit, even if it is $5.00. If it is going toward patient care or some other project, it is going to benefit the community.

MS. MACK: I would assume you send newsletters out to your community about what you are doing.

DR. KLIGLER: How often do you think grateful patients usually want to hear from a place, four times a year, twice a year?

MS. VITALE: We send ours out quarterly.

MS. MACK: Regular updates about your programming, your successes, and also the duds, and things that you have learned, are important because people want to know that you are evolving and growing. It is also important that you are not above admitting things that don't work and getting rid of that dead weight, such as a costly program. Duke, for instance, is thinking about getting rid of their little gym facility that has equipment in it they thought was valuable for teaching people how to safely use gym equipment, but it was a huge outlay of money for them. Now they are discovering it is not worth it, so they are trying to find an athletic team at Duke to buy it from them.

Letting your community know that you realize that this has been something that hasn't worked, and that you are excited about the program that is going to replace it—or that you are looking at creative ways to manifest your profits in other ways and not just say we are having a fundraiser in a month or so, we would love for you to attend—people want to hear that. Involving your community in the programs that you are offering, and what you are especially doing within the community, is so important.

MR. CUNNINGHAM: We are gravitating toward using social media for responding to issues that may come up in the news that people have an interest in, starting to identify that we are one of the places you can go to for this kind of information, reliably and safely. We are also figuring out how to promote ourselves and the work we are doing.

MR. KOSAK: We redesigned our website last year, and we are sending out electronic newsletters every other month. We found it to be quite successful. We send out an article with basic information, and we highlight one of our services each month. Then, we can measure the hits to our website and how they spike when our newsletters go out. We are also tracking where our new patients come from, and we have seen a dramatic increase in the number of new patients that are coming through the Internet, through our website, both for primary care as well as for our CAM services.

MS. MACK: Even reporting on an event like this would make a big difference, too. You are not just in your little silo, you are reaching out with other centers, trying to make a difference on the national level. That goes a long way, too.

MS. PEAVY: Is anybody blogging—weekly, daily?

MS. SHIPLEY: Different practitioners will do it at different times, but it is all linked on our website.

MR. KOSAK: We tried Tweeting.

MS. MACK: Are the children coming into your centers for chronic issues, like obesity or diabetes? Why do the parents bring them?

DR. KLIGLER: We are seeing two streams at our center. One stream is for kids with illnesses of one kind or another, such as autism, ADHD, or asthma, who have a physician that they see, but they want an integrative consult. Then, probably a much bigger chunk is kids who are coming to us as their regular doctors because the family has more of a natural medicine–oriented approach to care than they have been able to find with pediatricians out in the community.

MS. MACK: That is really terrific, because that is when you get to the prevention model.

MS. VITALE: We have group programs with two different models. One, we do group acupuncture, both on the inpatient and outpatient side. We also offer resiliency training for chronic depression in an eight-week series of groups, as well as in a nutrition consult and an exercise physiology consult. It starts out with a psychiatric evaluation for appropriateness for an education training model. Then the participants go to a group, once a week for eight weeks for two and a half hours of mindfulness-based stress reduction. Then, they have two nutrition consults and two consults with exercise physiology, and then an exercise fitness profile is done.

Because we are self-insured through Health Partners, we have gotten Health Partners to pay for it. If one of our employees goes through the program, Health Partners will pay

$800 out of the $900 that we charge for the package. We are getting phenomenal results in terms of the impact on depression. We are hoping to be able to take these results to another insurance company, but we have been able to do it internally because we are self-insured, which is great for collecting data.

DR. EHRLICH: On a related point, institutions are putting a lot of emphasis on, and money into, employee fitness and employee health. At our Continuum Center in New York, there is a huge system-wide employee wellness program. This is a natural place for us to both provide support and get support, and increase our visibility throughout the system.

DR. KLIGLER: Regarding group visits, Lawrence Family Practice in Massachusetts, which is a community health center treating a varied population, has 36 groups a week. They started off with some foundation money, but now I think they pretty much support themselves. They have figured out a way to bill, because they have a doctor in every group. An article in Explore summarized their data about some of their successes. I don't know why more of us haven't figured out how to do it, but they seem to have figured out something that works.

DR. MAIZES: We aren't doing one now, but we did a mind-body group visit for many years when we had our residential fellowship, and it enhanced the experience of the patients to fulfill the recommendations in the treatment plan. They would have a consult, and they would have recommendations made to them, which is challenging. The fact that they then were in a mind-body group with other people who had different, but also extensive, recommendations, created group support beyond the mind-body skills that they were learning. That is valuable, and there were some challenges in setting it up. You have two choices, regarding the financial side of that: One choice is to bill for it as a clinical service. In our system, the hospital takes 70 percent of whatever dollars come into the system. The overhead is very high. Another choice is to offer it as an educational service—the hospital doesn't get involved if it is an educational service.

DR. CHESNEY: Ours is an underserved setting. We are using group visits now at San Francisco General Hospital. We have been able to set up an Osher satellite in a county hospital. It has been beneficial, in part for ourselves to feel that we are helping.

MS. SHIPLEY: Psychiatrists can obviously bill for group therapy, so we are looking at how to play off that group therapy model with mind-body skills and resiliency training.

MS. SEYMOUR: At our center, with the wellness initiative, which is run by the human resources department for employees, we have been self-insured for a few years now. Recently, they have become more and more supportive, and they will now subsidize 15 percent of any of the out of pocket costs for all of the university's employees to get integrative medicine services. They also provide the marketing push for that, because they are the ones who are putting out a newsletter every month and who run the website. Last

year, employees got $4.00 or $6.00 off on services, and this year we are going to go to 15 percent, which is an increase. For us, this has been an untapped market to have our own employees come to us to get services.

DR. BARROWS: It came up in the morning session that the reimbursement landscape is like a major earthquake in progress. We all have to share these innovative ways that you are thinking of, and keep strategizing, and thinking, and staying on our toes. Thank you all for attending.

KEYNOTE ADDRESS: THE FUTURE OF MEDICINE

CLEMENT BEZOLD, PHD
Founder and CEO, Alternative Futures, Inc.

It is an honor and pleasure to be here. Having spent the morning with you, it is an inspiration to hear discussions that I have had in terms of what you are doing in your various clinics. I am always excited looking at mission statements, and Bravewell's is significant in terms of defining integrative care. Likewise, your defining principles for the healing process are significant—all healthcare needs to move in this direction. Some of the primary care scenarios I am about to show identify them.

Integrative medicine is a critical part of the future, whether in integrative delivery systems, as well as the aspects of futures where we have integrative payment. Self care is a significant part of the way you do your care. The question moving forward is: How will integrative components of self-care evolve going forward?

Likewise, fee for service. There will always remain some degree of fee-for-service across all of our scenarios, but there will be major changes in primary care, particularly in payment.

Technology will make a huge difference in terms of years moving ahead, as well as knowledge driven by personalization, electronic medical records, and biomonitoring. As it was already pointed out, those personalization folks are just catching up to the degree of personalization in many ancient systems. But the purpose of primary care itself, and patient-centered medical homes, is a significant improvement in quality in the way that we deliver care and how we conceive of care.

But that is not enough, and it is likely that something like the community center health home will be a dominant part of primary care in 2025, and self-care will be as well. Then much of what an individual can do, a family can do, will be increasingly effective.

Another piece that we are learning that is increasingly significant is leveraging the social determinants of health. This is important for you as integrative providers, in that there are many aspects of personal behavior—such as diet, understanding your social conditions, understanding your own needs—that are significant.

Increasingly, we are recognizing that the social determinants of health are a major factor. How does the healthcare provider team, reach out and affect conditions in the community?

Among underserved and low-income populations, access and equity problems are often more pronounced. In general, the question of health equity revolves around the social determinants. The question is: What is the appropriate role for healthcare providers? You are not going to become the public health departments, but there is an appropriate role for healthcare providers to leverage the social determinants of health.

This project was funded by a Kresge Foundation grant to our Institute for Alternative Futures, to develop scenarios for primary care. We have a national workshop of leaders, and we are now using those scenarios in conversations like this with healthcare providers and other organizations. Kresge has used them internally to say, what are the implications for the way they are doing their health funding.

These scenarios are available on
http://www.altfutures.com/pubs/pc2025/IAF-PrimaryCare2025Scenarios.pdf

I am a futurist, as you heard, and scenarios are, in effect, alternate stories about the future. Right now, I couldn't give you the right one answer for what healthcare will be in 2025. But we argue that scenarios let you look at different pathways. They also help you understand how change might happen, to clarify assumptions, to track trends, to look at alternatives, and also to consider your own vision.

Scenarios should, in effect, consider what is likely and what is preferable. They should aid in your understanding of what might happen, but even more importantly, help you in creating your preferred future, so that leads the way we do scenarios to enhance focus on vision, visionary success, and sensitivity to opportunities. Usually scenario one is constructed around the expectable, what is the most likely scenario.

Second, if you look at all of the things that could go wrong, and you put some of those together, what is the challenging scenario. And then, three and four are what would be surprisingly successful, what would be visionary.

Each of those leads to different polling, as we have experienced it on a likelihood, on the preferability of scenarios, but it also says that we need to be conscious about whether we are in a zone of high aspiration as we try to create and define what we want. So we developed these scenarios by looking at key forces in developing preliminary forecasts for 10 different drivers. We put those in front of 56 experts and leaders of the field.

We held 10 focus groups with providers, asking them, given these forecasts, what will primary care be like in 2025 in your setting. Focus groups included Kaiser Permanente, Group Health, Henry Ford, an integrative clinic in Seattle, community health centers, nurse-managed clinics, a range of providers. Then we put together the scenarios including an expectable challenge in visionary futures for primary care.

One of the questions, though, is: What is defining primary care? Dr. Barbara Starfield said it was first contact, accessible, longitudinal, and comprehensive. Primary care increasingly is defined by the patient-centered medical home, which is adding a variety of aspects to care.

There are still emerging models in addition to patient-centered medical homes. One is the comprehensive health home, another is the community-centered health home, which basically argues that you take everything the patient-centered medical home does, and you say that the patient exists in a community. You need to understand community conditions, you need to ask what are the morbidity patterns in your area, what needs to be done to affect those and put that together with the patient-centered medical home, so that is the community-centered health home.

In doing scenarios, we also ask at the macro environment level: What forces are going to shape all sectors, not only healthcare, but everybody else. And right now, some of the major ones are recessionary recovery, how will we deal with debt and deficits, what is the role of the Internet, social media, and virtual reality. Our life is changing, and by 2025, if you think about 1990 and the Internet, by 2025, we will probably see that much change in terms of where it is going.

If you look at healthcare and primary care, the forces within healthcare and primary care, it would be relevant to put scenarios together. One is the unsustainable healthcare costs, the second is health reform, or whether we implement ACA [the ***Affordable Care Act***] or not, going forward. If we don't, we will have some other efforts in the next decade. But in addition, pressure for cuts in Medicare and Medicaid payments are out there. We saved the Medicare physician cuts on the back of the prevention budget. That kind of debate will go forward, and we could easily see significant cuts in Medicare and Medicaid.

But in addition to the PCMH [***Patient Centered Medical Home***] being a step forward in quality, the Triple Aim is even more significant. As a futurist, the statement that the Triple Aim is the aim of healthcare—that is, the excellent patient experience, lower per capita cost, and increased population health—is truly an audacious set of goals. For private care in 2025, will healthcare have successfully pursued the Triple Aim? If it does, again, healthcare would be very different.

What is the role of healthcare over a life course in effecting health? There are many answers, but whichever model you use, 75 to 90 percent of the variance in health is not in healthcare. And as I listen to you guys, you reach out to affect many of those other factors, particularly behavior. But increasingly, socioeconomic conditions in the environment need to be understood, and what is the right role for healthcare providers in shaping that? Complex models are looking at determinants and factors, individual risk factors, the intermediate outcomes in the state of health, and then higher level outcomes.

It is amazing what the primary care team could be and who is on it, the pharmacist, and the behavioral health person, and the dentist, and the community health worker.

Looking at forecasts of payment systems, we are going to go from 20 percent to 40 percent integrated. We will have about 30 percent semi-integrated, and we will have 30 percent still fee for service.

The community-centered health home works with community partners to collect data on social and economic community conditions. It aggregates health and safety data to systematically review health and safety trends. It identifies priorities and strategies with community partners that act as health advocates in a community and mobilizes patient populations and strengths and partnerships within local healthcare organizations. Then it does all the rest as the patient-centered medical home does.

All those factors led us to four scenarios. The first, Many Needs, Many Models, is an extrapolation of where we are headed, where the patient-centered medical home is the dominant force in shaping primary care. The Lost Decade, Lost Health, looks at the economy and the healthcare, and says we just don't get it together.

Primary Care That Works for All says, yes, we do get it together. We decide that in effect, integrative systems, people, health providers taking a risk, putting all that together wins, and that is the dominant payment form in scenario three. Whereas in the fourth, you get integrated systems, but many in the populations say I can't afford that. Besides given all these tools and where things are going, I can be my own medical home. So 40 percent of the population in scenario four is essentially taking care of themselves with a consumer-directed high deductible.

I will give you some more details now on each of those. The first, Many Needs, Many Models, is the expansion of patient-centered medical homes. There are some shortages of primary care providers, but all primary care team members practice at the top of their license, and that is significant for making the patient-centered medical care home work. Prevention becomes common and supported in primary care. Forty percent use integrated systems, 30 percent semi-integrated, and 30 percent fee for service, including the community health centers that are primarily fee for service. They have some capitated care.

But in Many Needs, Many Models, this first scenario, electronic medical records finally come home. As a futurist, I have to confess, for three decades I have been saying in the next decade, electronic medical records are going to be there and they are going to do all the wonderful things they will do in terms of aggregation. Well, the next decade, they actually will be there and they will be able to be aggregated. In this scenario, they do that.

But we will also have personalized monitoring equipment that can be an earring, eyeglasses, a bedpan you sleep on, a variety of things that will, in effect, develop your own biochemically unique profile over time. We will have just a range of amazing things that allow you to personalize your vital signs.

We will also have digital health agents or digital health coaches. In 2013, we are going to come out with a knowledge engine that knows all medical knowledge.

By 2025, we will have a variety of health coaching devices, for physicians, but we will also have them for consumers—and you will be able to pick your flavor, your philosophy, your approach to health coaching.

In this scenario, these changes come online, but employers continue to drop their funding, so we have lower and lower percentages of people who are insured by their employer. We also get significant disparities in access to quality in care.

Scenario Two is Lost Health, Lost Decade. We get recurrent and severe recessions. Whether it is a European problem, or gas and peak oil prices, there are severe recessionary possibilities out there.

In this scenario, we cut healthcare costs in Draconian ways. The current Medicaid cuts and Medicare cuts happen again, so you get two dramatic cuts in the next 10 years. Older physicians who, if they have got enough money, given the choice, retire and get out. We have got significant shortages for primary care providers.

In this scenario, we don't get as much movement into fully integrated systems. And in all of the scenarios, there is still a high 35 percent fee for service. There is a concierge high-end fee for service that remains in all the scenarios, and that is significant.

In fact, those with access to good insurance have advanced technologies. We have cures for Alzheimer's in this scenario. It is $60,000 a year for the cure for Alzheimer's, and basically, the affluent get it. But we have many more uninsured in this scenario, and many turn to the black market and unreliable online advice.

Scenario Three is Primary Care That Works for All. We have expanded teams of providers. Primary care does pursue the Triple Aim of low per capita health, increased population health, and excellent healthcare experience. The community-centered health home evolves as a predominant form of primary care. That includes the expanded team of providers.

In this scenario, the person with whom they have the strongest relationship is the community health worker, who carries all the intelligence of the system with him or her,

who has all of the biomonitoring data, gets advice from the other team members, and sends the patient to the other team members, as needed.

In this scenario, the primary care also addresses local social and economic foundations for equitable health, creating healthy communities.

In addition to proactive electronic records, virtual access, and coaching, we know that more important than your genetic code is your ZIP Code. So there will be census blocks and attention to hot spots—how do those affect what we are looking at in the clinic and how we pursue health?

In Scenario Four, I Am My Own Medical Home, we have got advanced knowledge technologies that allow self-care. The non-invasive biomonitoring, the wellness and disease management apps of various kinds, the personal health record, the digital health coach, the avatar that is set up for you, is culturally appropriate for you, it speaks to your knowledge level, your literacy level, reflective of your values and those of your provider system, and is effective.

In this scenario, 40 percent of people faced with the $8,000 a year or so bill, when they are making the equivalent of about $26,000, say I can't afford that, I will take the consumer-directed health plan. I will take care of it myself, and I have these tools to do that. So 40 percent of the market remains in consumer-directed health plans, essentially self-managed care. They are aided as well by Patients Like Me and other facilitated disease networks.

Demand for primary care providers declines in Scenario Four. Healthcare costs are significantly reduced in scenario four as well.

I will give you an example of primary care for the same individual in four scenarios. Mary is a 50-year old diabetic, earning an average income of about $26,000 a year. So Mary, in Scenario One, has great primary care. Her team is fantastic; her main provider is a nurse practitioner. She has got a great relationship with her. They use all of these tools. Her diabetes is kept under control, and she is very satisfied.

In Scenario Two, Mary does not have insurance—she can't afford it. Her community health center in her neighborhood went out of business, so she doesn't have access to that. She basically has to deal with clinics when she can afford to or the ER. Her diabetes often is not well-controlled.

In Scenario Three, health insurance is subsidized so that you never pay more than 10 percent of your income, so she would be paying $2,600 a year for her health insurance. She gets all of the great stuff in those fully-integrated systems, which ideally would be integrative, as well as integrated, which helps her keep her diet and her exercise under control. It is a community-

centered health home approach. It also looks into her community and says, what does it take to help you have the healthier choice be the easier choice.

In Scenario Four, there is not a subsidy on healthcare insurance. She can't afford $8,000 on her $26,000 salary. And so, she is her own medical home. As she needs it, she can say, "If I have to buy something, where do I shop, where do I go?" Between health coaching, her friends, neighbors, and Patients Like Me, she can take care of herself. That is her primary care.

So those are the four scenarios. Thank you.

BRAINSTORMING SESSION

HOW CAN THIS GROUP WORK TOGETHER AND HELP EACH OTHER?

Moderator: Charles Terry

MR. TERRY: This statement by Margaret Mead has been a watchword for Bravewell from the beginning: "Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has."

How can this group work together and help each other? Stated another way, how can we work together to benefit the whole field?

NOTE: *Individuals took a few minutes to write down their answers and then shared them with the people at their tables. Then each table responded to the whole group with their top choices, as follows.*

We can work together and help each other by:

- Sharing models and resources for inpatient and outpatient care
- Developing financial strategies and models that are sustainable
- Building a larger research network so we can pull different sites for multicenter trials
- Becoming a new healthcare system that doesn't conform to the dysfunction of the current healthcare system
- Starting to fit into mainstream America to make integrative medicine more sustainable going forth
- Thoroughly defining what best practices are, which could help us to be more embedded in primary care
- Identifying which therapies work best for which conditions, to broaden the average physician's toolbox of ideas
- Creating places to collaborate, such as a chat room or a message center, since we are all in different parts of the country

- Developing resources for ourselves, such as contact information as well as a list of providers across the country
- Creating talks such as "Health Is the Key," which could be given at different centers on one Health Is the Key Day; or TED-style talks
- Collecting, analyzing, and disseminating more cost-effectiveness data
- Communicating more with one another on a list-serv or at in-person meetings
- Creating more fellowships and training in integrative medicine
- Focusing on lifestyle medicine or behavior change as a way to combine conventional with complementary medicine
- Connecting more with the public, which has propelled this field forward, and develop more public interest and involvement
- Developing a resource center with the very latest information, including cost-effectiveness information to effect change
- Embracing partners with a common message
- Developing a questionnaire to use the mapping project as a way of moving forward quickly in terms of sharing information
- Both explaining why the approach we take to medicine is the right approach to take, and practically "sell" it by collecting data on cost effectiveness
- Creating a working group to develop ways of communicating with primary care doctors regarding what integrative medicine is doing for patients
- Integrating the activities of the centers represented in *Integrative Medicine in America* with the activities of the Consortium for Academic Health Centers in Integrative Medicine to help move the whole field forward
- Defining and validating a standardized, systematic approach to collecting data on patient outcomes
- Centers communicating with one another via telephone or email to ask and answer questions and exchange ideas
- Opening up the dialogue with consortiums of allied health professionals

- Creating a conference in 2013 about clinical models of care, financial viability, and sharing information across integrative healthcare professionals
- Developing a Web site where information on successful reimbursement strategies could be posted so that we can keep up with what works
- Creating an electronic database on clinical care
- Developing a coding system where all the centers are "speaking the same language"
- Identifying partners in health promotion and preventive healthcare with similar values that integrative medicine could collaborate with
- Developing training and education programs for non-conventional practitioners about research to help them participate in wide-scale trials and interface better with the practitioners within conventional academic centers.

CLOSING REMARKS

CHRISTY MACK

What we were hoping would come out of this is an idea of what all of you would like to see happen. We just wanted to sit and listen. We will make time to reflect on the conversations that you had, the relationships that you have begun to create, and noodle on this a little bit, and see ways to move forward.

These decisions cannot be made here today. There are a lot of implications with those decisions, and certainly Bravewell, as in the past, has always taken these proposals and projects and weighed them and done our due diligence as to how this works best so it can move the vision forward.

A lot of factors have to be taken into account, and we take everything that you bring to us quite seriously. A lot of that has to do with the Bravewell Clinical Network and BraveNet. We will stand and be ready to help facilitate whatever decisions they make.

All I can say is that Bravewell has gotten a very positive feeling from today. We are reenergized, as always. I think you all felt the same way.

Just know that when you go home that you are not alone, you are not in your silos again, but you have developed a community here and it is an important one, and obviously we would like to see what you come up with in regard to moving forward.

We wish you all well.

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