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ASHT Natalie Barr Lectureship

Reflection and change in unprecedented times



Unprecedented times, we have heard that phrase so often during this past year. The definition of unprecedented is never done or known before. The time since the onset of COVID has brought us experiences that we have never encountered before. This past year the American Society of Hand Therapists (ASHT) annual meeting was held in a virtual format for the first time and this year in person attendance is limited to 400 attendees. Some of us have lost friends and loved ones due to illness, some of us have lost financial resources due to loss of a job or change in work status, some of us have suffered depression or anxiety regarding the status of world and personal affairs, and many of us experienced some sort of emotional fatigue. If any of these events have happened to you in the past year, I am truly sorry for your loss and what you have experienced.

Unprecedented times provide an opportunity for reflection. Reflection can lead to change and new opportunities. ASHT has benefited from past leaders in our profession that have helped prepare us for the future by foreseeing changes that would impact the profession of hand therapy and helping us navigate successfully through the challenges that have threatened our profession. Although COVID-19 could not be anticipated, past wisdom is available to guide us toward the future. It will take years for researchers to fully understand the effect coronavirus had on the U.S. population, and it's unlikely there will be one single lifestyle shift that characterizes the pandemic. Right now, the dominant trend seems to be change itself. The COVID-19 pandemic appears to have spurred a collective reckoning with our values, lifestyles, and goals—a national existential crisis of sorts.

Evelyn Mackin gave the very first Natalie Barr lecture in 1986. She encouraged hand therapists to “maintain a kind of freshness all through life, the kind of freshness that a long-distance runner experiences when, at the apex of fatigue, he experiences a second wind that takes him on to the finish line in a burst of renewed energy.”¹ Right now, we need that freshness and renewed energy. It has been a hard year to find that renewed energy and freshness when we were learning new technology to treat patients online, adjusting our work life balance and managing children learning from home, or simply just wondering when will this ever end? We have faced new challenges and missed traveling, hanging out with friends, going to events, and attending museums and attractions.

Karen Lauckhardt in her Natalie Barr presentation in 2009, told us that “We cannot control many things in life, but we can manage our response to them.”² If we mentally reframe our perspective and priorities, we might make the necessary changes more palatable.² We can make a new normal that is perhaps even bet-

ter than the normal we previously took for granted. Karen told us that “A therapist's personal wellness and general fulfillment is a vital element in providing optimal therapy care and in the right work situation a therapist can deliver excellence of care, render treatment more efficiently and feel satisfaction in their chosen career.”² As many of the 33% of the US workforce made employment changes during COVID,³ Some people have changed careers, some have changed jobs, and some have retired earlier than they had originally planned. Some decided that they did not want to return to a face-to-face work environment.

All the events of 2020 and 2021 have created new opportunities as well. The words spoken in 1987 ring true today. Maude Mallick stated that “The opportunities are many and the choice is yours.”⁴ Change can be scary, but Karen Lauckhardt said “don't be afraid of change or challenge. Change and variety can be positive – challenge is an opportunity for personal growth!”² Carolina deLeeuw who was the Natalie Barr recipient in 1995 said “We make choices. Our destiny is in our own hands. Time moves forward. We have only the moment, and as human beings, we have a pretty short shelf life.”⁵ This past year has been one of change for me. I have lived in Florida since I was a young girl and established my hand therapy practice there. I had the privilege to be in a private practice that allowed me to be a clinician researcher and eventually wean out of full-time clinical practice into academia. I sold my practice to my business partner in October of 2019, right before COVID started which was very fortuitous for me. In spring of 2020, I was in Spain with students when life started changing drastically. We left Europe in early March and returned to Zoom based learning rather than in person learning. All the events of early 2020, made me start to reflect and reconsider if I was on the correct path and if I should consider a change. So, I looked at the data and made a comparison table of what I liked about my life situation prior to the pandemic and what I disliked about my situation since the pandemic started. I asked myself to reflect and answer some questions. “Am I enjoying a healthy, well-balanced lifestyle, doing work that I love and that gives me financial return with time off to pursue other interests?”⁶

Research regarding change has indicated that people can be excessively cautious when facing life-changing choices. Levitt's study asked 22,511 people to decide on a dilemma based on the outcome of a coin toss.⁷ Researchers then followed up to see whether participants followed through with the decision and how they felt about it. The study found that “for important decisions (eg, quitting a job or ending a relationship), individuals who were told by the coin toss to make a change are more likely to make a change, more satisfied with their decisions, and happier six months later

than those whose coin toss instructed maintaining the status quo.⁷ Some things to keep in mind when faced with a change. (1) Fear is normal. (2) You will never know until you try. If you're on the fence about something, go for it! Even if it doesn't end up working out, you'll still learn something about yourself along the way. (3) You can always change your mind. I also sought out advice from mentors before deciding to make a move. "Ask (find out everything you need to know to make informed decisions; ask other people, including mentors or people you know who have more experience or expertise in an area than you do; remember this acronym: ASK—Always Seeking Knowledge)"⁶

Change comes in many fashions. I decided I was ready for a big change and moved from Florida to Nevada. I bought a home sight unseen I found using Redfin on the Internet. Roughly 1-5 Americans either moved or know someone who moved during COVID-19.⁸ Instead of being an "East coast" person I moved across the country to the desert. However, change does not have to be so drastic. Many of you came to this meeting to gather new information about hand therapy with the intent of possibly changing your practice patterns and interventions you provide to your patients. Leaders in our society have taught us to embrace evidence-based practice (EBP). Here are some examples I have pulled from past Natalie Barr Lectures. "EBP and PCC complement each other. Joy MacDermid stated that "we need both to help patients return to full healthy participation in life activities. The end result is evidence-based patient-centered care."⁹ Ken Flowers told us "when it comes to our science, we have to be vigilant in our pursuit of excellence; we have to set a high standard and we just can't accept anything less and when we deal with our science, we cannot afford to relax our rigor."¹⁰ Susan Michlovitz believes "it is incumbent on us as hand care professionals to regularly read current research in scientific peer-reviewed journals and use the knowledge gained to optimize patient care."¹¹ Paul LaStayo reminded us that "it is how we remain open to data and how we respond to this that matters."¹²

We certainly need to be mindful of research and critically appraise research to determine if we should change our practice. A study recently published in the *Journal of Hand Surgery* indicated that a digital home program was as effective as traditional hand therapy following distal radius fracture.¹³ Some limitations of this study that we and others must consider include the small sample size. Of the 90 patients eligible for the study only 51 agreed to participate. The power analysis indicated need for 32 per group. The hand therapy intervention that was described only included exercise and orthotic provision. Is that all we do? The mean age of participants was 54 years of age. Is that really the mean age of patients that incur a distal radius fracture? They did not address if patients had comorbidities in the inclusion and exclusion criteria and only provided fracture classification.¹³

We need to view research studies with a critical eye before we decide to make changes in our practice. When we do decide to change our practice, does that change happen easily? How many times have you left a meeting with the intention to incorporate your newly learned skills into practice, but life got in the way? How many times have you read a research article and changed the way that you practice? The science of taking research evidence and applying to the real world is called, knowledge translation. I remember the article in the *Journal of Hand Therapy* that encouraged me to go back and get my clinical doctorate degree and learn about evidence-based practice. The Martinez-Silvestrini et al. study made me question my practice patterns regarding the treatment of chronic tennis elbow.¹⁴ I had been using stretching, cross friction massage, pain control interventions, and ergonomic modification instruction. The article discussed eccentric strengthening which was a new concept to me. I had never learned about the technique before, and I realized that the interventions I had been

using with this population had not resulted in the improvement of patient symptoms that I had hoped for. I started incorporating eccentric strengthening and found information on the Mulligan maneuver and taping for the treatment of chronic tennis elbow and my patients' outcomes considerably improved. I had one patient walk in the door several months after discharge showing me his eccentric exercise performance. I asked him why he was back if that worked so well, and he said because now you are going to fix my shoulder like you did my elbow.

Incorporating information from a research study and implementing into practice takes time. According to Balas, it takes 17 years to translate knowledge into clinical practice and improve patient health outcomes.¹⁵ In general, the healthcare community is good at generating new standards of care and evidence but fails to systematically translate and make the information more relevant in everyday practice. We know we should always embrace EBP, but sometimes life gets in the way and change can be hard. According to Graham et al., 30% to 45% of patients are not receiving care according to scientific evidence and that 20% to 25% of the care provided is not needed or is potentially harmful.¹⁶

There are some barriers to knowledge translation. Funabashi and colleagues report that barriers include lack of detailed description of the intervention used, confusing language, and interpretation issues.¹⁷ They indicate that some clinicians that try to apply research findings into practice end up selectively interpreting and using the knowledge as it serves their own purposes and fits their situation.¹⁷ Knowledge translation requires introspection and a willingness to look at ourselves honestly, without confirmation bias. Confirmation bias is the tendency to interpret new evidence as confirmation of one's existing beliefs or theories and ignoring the facts or evidence that is contrary to our existing beliefs.

Ros Evans asked us to consider if some of our protocols are based in habit rather than science.¹⁸ She also told us that "relaxing ethical, clinical, and scientific standards is not the answer when we encounter challenging times."¹⁸ Elaine Fess in her Natalie Barr lecture in 1989, asked us to question what we do.¹⁹ "Just because a concept is taught in school, read in a publication, or seen in an advertisement does not mean that it is clinically efficacious."¹⁹ Unfortunately, "We are constantly bombarded with new and unproven gadgets, techniques, and theories. Some work, some do not. As consumers we must be more demanding. We must be thinkers."¹⁹ "The mind once stretched by new ideas never regains its original dimensions."⁵ Mark Walsh encouraged us to use clinical reasoning to give "us autonomy and allow us to use our minds and the knowledge we have strived to obtain. Most important, the beneficiaries of our clinical reasoning will be our patients in the quality of care they receive."²⁰ Judy Colditz also advised us to "read and question. Use every patient, every day to provide a beneficial learning experience."²¹ "Each of us (should make) a commitment to ourselves and to our patients to seriously question all that we do."¹⁹ Donna Breger Stanton told us that "any one of us can do this, yet it does take time, a commitment to move past your comfort zone, and you need to be willing to take the time."²² Elaine asked us "if ten repetitions of a given exercise was magic, and yet have you ever asked the question why ten? Why not seven, or perhaps 14?"¹⁹ Or perhaps even one. If we look at Ken Flowers and Paul LaStayo's work²³ on total end range time (TERT) to effect tissue change and we apply that principle to orthotic intervention, why do we tell patients to hold each repetition of their home exercise program for 20 seconds or so? I usually tell my patients to hold each stretch one time for a long time. Perhaps an entire episode of *Dancing with the Stars*. This way the tissue is placed on load for a long period of time, and this will increase joint passive range of motion (PROM) because PROM of a

stiff joint is directly proportional to the length of time the joint is held at its end range, or TERT.

Patients also need to know what we want them to do at home and be provided with specific instructions. I have had my share of patients come in with orthotic devices on upside down or backwards. Georgiann Laseter advised us that the simplification of “patient education materials encourage more interaction and involvement which in turn helps reduce anxiety and increase self-efficacy”.²⁴

Another barrier to knowledge translation can be as simple as misunderstanding the research or confusion. Sometimes we interpret the science wrong when we attend meetings. Ken Flowers discussed the concept of TERT during his Natalie Barr lecture in 1994.¹⁰ He said that the feedback he received from therapists that heard his presentation was regarding the technique that they had used rather than the principle they were trying to share. He said the wrong message went out to the audience. “The paper hadn’t been about serial casts at all. They had chosen serial casts only as a model to study a much broader phenomenon—the relationship between end range time and passive range of motion.”¹⁰

Another reported barrier to knowledge translation is lack of detailed description by the researchers of the interventions used in practice. simple language and detailed procedures of how the technique is performed should be employed by the researchers. When I am a peer reviewer, I often ask the authors for a detailed description of the exercises provided, or a copy of the handouts provided to subjects. As researchers, we need to ensure that we are providing specific details regarding our interventions with pictures and specific directions are provided to the readers to facilitate knowledge translation.

So, is there anything we can we do to “speed up” the knowledge translation process? What can we do today to commit to making a change based on something that we have learned at this meeting? The value of attending a conference such as this is ability to elicit change in attendees so that new knowledge and skills gained at the conference are then used to improve patient outcomes. A newer concept is a commitment to change statement. The concept of commitment to change (CTC) is based on the principles of encouraging and enabling participant reflection on personal goals and values. It is intended to instill in the participant an obligation to improve his/her personal practice behavior. CTC is a central feature of adult learning and promotes the development of expertise. It is a potential method of reinforcing learning and measuring positive educational outcomes. Ratelle et al report that conferences are the most common form of continuing medical education (CME), but their effect on clinician practice is inconsistent.²⁵ Reflection is a critical step in the process of practice change among clinicians and may lead to improved outcomes following conference-based education. Reflection, however, requires time to process newly learned material and in many conferences, there is little time assigned to stimulate the learner’s active engagement with newly learned material. This concept has not been studied with hand therapists. However, physicians that participated in a CME course on geriatrics were randomly assigned to either a CTC or a no CTC group.²⁶ The physicians in the CTC group were asked to identify areas of clinical practice they planned to alter as the result of the education program.²⁶ The largest number of changes made was by the participants in the CTC group at the follow-up.²⁶ Please reflect for a moment on something that you have learned so far at this meeting. Make a commitment to change based on something you have learned at this meeting.

Some parting thoughts. Paul Coelho wrote a book called *The Alchemist*.²⁷ *The Alchemist* tells a story of a young shepherd boy who goes on a journey and quest for treasure to realize his ‘personal legend’. Along the way, he runs into many obstacles and the jour-

ney quickly turns into an adventure. The constant theme in *The Alchemist* is to pursue your dreams by following what your heart desires. With each passing obstacle and hurdle that the young boy encounters, there is a lesson to learn. He realizes that he must go on with his own ‘personal legend’ no matter how difficult the journey becomes. He learns to use his heart to overcome fear. He learns to use his soul to never lose hope when faced with adversity. He learns to focus on his own journey, disregarding the influences of society. Here are some of the lessons. No matter what you do, make sure that you do it because it is what your heart and soul desire. Life will get in the way sometimes, but we must not let life disrupt what our heart truly desires. If you aren’t doing what you know you are supposed to be doing. Or if you aren’t following your dreams and pursuing your passion, you are not fulfilling your personal legend. If you don’t like your current path, take a different one. You will fail. Don’t give up in the process. It is important to know and remember where you are and whom you are to get to where you want to be and whom you want to be. “It is written”. Everything happens for a reason. Suffering comes from wanting things to be different than how they truly are. Remain focused on your goals through difficult times. “It’s the simple things in life that are the most extraordinary”. Life comes with its twist and turns. It is never a straight line. If it is, you aren’t living or fulfilling your personal legend. As to pursue your personal legend you will have obstacles. Each obstacle is an opportunity to learn from and about yourself.

A Tribute: To those that helped me on my path...

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Thank you again for allowing me to speak with you and bestowing this honor on me.

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