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Guest-Editorial

## Noteworthy: *The Music in Music and Medicine*

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Amidst the unfamiliar occurrence of receiving, rather than delivering, medical care, I awoke in the Intensive Care Unit (ICU) of a major New York City medical center, after extensive surgery, to the disquieting pulsation of the machinery around me. It hurt to move and to inhale. But my breathing rhythm and my heartbeat seemed to contrast with the rate of that damn nonstop electric beep in my room. And while sleeping is fundamental for recuperation, it is seemingly impossible to rest with an irritating “metronome” pounding endlessly. My own selection of recorded music, I thought to myself, would be a godsend. So why didn’t the hospital warn me to bring my CDs or iPod tracks along with my insurance card and toothbrush?

I should have known better, as I am the Medical Director of The Louis Armstrong Center for Music and Medicine. I use some form of music medicine on countless numbers of patients, and I know how noisy and unsettling an ICU can be. Yet, unfortunately, preparing to enter the hospital by bringing favored recorded music is not the standard for health care institutions, nor for typical patients, not even for me. Despite my training and experience, I did not think to diverge from the norm by bringing along music. It can be hard for even a senior clinician like me to think outside the box, to redefine well-established norms, when the hospital is not encouraging that.

So I lay there, wrestling with post-surgical pain, cognitive haze, anxiety, helplessness, fevers and shallow breathing, not entraining my biorhythms to beautiful melodies but, rather, being attacked by the proximate mechanized beep, the jangle of discord in my room.

Then the first note of The Beatle’s “Here Comes the Sun” washed across my eardrums and skin. I turned my head to my

right, in the direction of the songstress, and opened both eyes. Sitting just four feet from my bed, guitar in hand, was the medical center’s music therapist, a vision of loveliness who never before had set foot in the ICU. It could have been the effect of my morphine, but a halo seemed to surround her and to pipe her angelic voice toward me, like the round end of the bell speaker of an old Victrola might do.

The annoying electronic pulsation retreated instantly. Disappearing as well was my desire for selected recorded music, for at my bedside I had not only live music to suit me personally, but also an instant relationship with a tender therapist. We shared the medicine of music although I could not actually sing along. But I certainly did feel it, respond to it and participate in it. Other than her introduction spoken to me, we did not converse. But the interaction through our mutual presence and through the shared live music therapy was poignant and rewarding nonetheless. Her warmth, her mindfulness, her moment by moment adaptation of her musical engagement with me, all proved to provide therapeutic respite for me. My physical discomfort eased, my breathing evened, my sweating stabilized, and my biochemical rush of pleasure diminished not only the pain but also the defensive posture induced by living in the alien mechanized realm that is the ICU. And I shared human, caring time with this skilled and thoughtful music therapist who did not know me personally yet was able to sense, as a trained professional, how to reach me quickly with her therapeutic ways. In delivering music that was not only well performed but that was chosen to connect with me, the music of music therapy was highlighted. Beatles tunes, and other strategic selections, were both pleasing and familiar to me, to the point where the music practically seemed encoded already in my DNA. So while I could not, in my medical circumstance, sing along with it, nevertheless the music resonated in my mind, in my gut, in my cardiovascular system and in my immune cells, all helping to create in me a preferable inner state and a healthier physiological condition.

Oh, the power of song and the power of the songstress, the mythological siren. Oh, the power of music medicine and the power of the music therapist.

This mighty NYC medical center never before had enjoyed the healing activities of music therapy in the midst of its ICU. This bold, young, delightful music therapist, so much to her credit, simply pushed her way in when informed that one of her brethren in music and medicine was lying there in

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International Association for Music & Medicine (IAMM).

recovery. The quizzical looks on the faces of surrounding clinicians, staff and patients rapidly turned to engaged smiles once the melodious language between therapist and me floated into all corners of the ward. The therapeutic force of those few songs, performed live and in tune with the contextual demands and realities of the moment, brought a peaceful transcendence to the nurses, for their personal benefit and for enriching their clinical efforts with patients. In fact, one nurse commented that for purposes of stress management, team building and self-care, there ought to be regular live music therapy group sessions for the staff of the ICU, a normally demanding place to work.

Oh, the power of song and the power of the songstress. *The Power of Song* is the title of the wonderful documentary about the late, super great Pete Seeger, a therapeutic musician of the highest order, through music a healer of the individual soul and of the collective assembly, be it an audience of only two or the totality of the human population on earth. I cannot ponder about music and medicine without blessing the healing and transformative impact that the radically revolutionary Pete Seeger delivered and actually embodied.

The power of song references, in part as well, the theme of this edition of *Music and Medicine*, the journal of the International Association of Music and Medicine. So much music therapy research focuses on outcome. Music medicine relieves depression. Therapeutic music reduces anxiety. Music therapy calms pain. And so on and so on. However, rarely do we stop to analyze what it is that is therapeutic about the nature of particular music, this type versus that type, this rhythm or harmony or pace or tonality or progression that has this influence or that impact.

This volume of *Music and Medicine* is intended to do just that, to focus on the music of music medicine. Of course, different music influences different people in various and distinguishing ways, some for the better, some for the worse. But trying to understand, and ultimately predict, how varying music generates distinct neurochemical, psychological, interpersonal and spiritual activity in defined sets of people perhaps allows us, ultimately, to target our music therapy more precisely, more effectively and more efficiently.

While the rest of the giant medical industry talks increasingly of “personalized medicine,” perhaps there is greater potential for “personalized music medicine” waiting around the corner, in part as we accumulate knowledge and sense and intuition about how specified music has particular effects on a spectrum of people. Thus, we focus herein on the music of music therapy, and we hope to propel forward growing clinical and research and personal attention to the uniqueness of one kind of music versus another, used for therapeutic purposes. We hope in this journal edition to nurture increasing wisdom to support progress toward refining “personalized music medicine.”

At The Louis Armstrong Center for Music and Medicine we specialize in, among other facets of care, music psychotherapy for musicians. Music is a language of fluency

for musicians, so it works intensely and productively as an avenue for expression and psychodynamic exploration. But each musician patient is different, and the music that impacts, in various ways, on each musician patient, varies. We see this everyday, but we would benefit as a clinical field if we could better categorize and predict these effects, if we could go even further in constructing “personalized music medicine” by knowing more about the music.

With an emphasis on the nature of the music itself that has it work as a form of medicine, this volume of *Music and Medicine* opens with two articles reflecting on different aspects of Guided Imagery and Music (GIM). Helen Bonny, the founder of this school of music therapy, constructed her own system for understanding how differing musical styles, arrangements, genres, rhythms, tonalities and progressions generate various effects in clients, with the goal of achieving altered states of consciousness linked to psychospiritual transcendence, healing and wellness.

Our first article, by Denise Grocke, “*The Legacy of Dr. Helen Bonny and Guided Imagery and Music*” offers not only an overview of the GIM approach but also it delves deeply into discussing the clinical roles of specific selections of music, as determined by Dr. Bonny. The author explores the empirical effects, as seen by Bonny, of particular passages of music on diverse symptoms and conditions, but she goes further to examine, as well, physiological research on The Bonny Method’s impact on the human brain. She concludes, in looking to the future, how growing study of the neuropsychology of music and imagery, with resulting clinical use of the therapeutic ramifications, promises to make Helen Bonny’s work at least as relevant and impactful going forward as it has been relevant and impactful over the last 50 years of music therapy. As all of the psychotherapeutic disciplines transition, or at least expand, from attention on “mind” to focus on “brain,” GIM sits squarely as one of the important stepping stones on that path of scientific and clinical progress for music and medicine.

The second article on receptive music therapy, more specifically GIM, authored by Margareta Warja and Lars Ole Bonde, is “*Music as Co-Therapist: Towards a Taxonomy of Music in Therapeutic Music and Imagery Work*.” Consistent with the theme of this volume in studying the music of music therapy, the authors report on their research comparing various rationales for music therapists to prescribe certain music, as with The Bonny Method, versus approaches that use patient preference in selection of medicinal music. This clearly is a longstanding hot topic in music therapy. This article interestingly serves us by looking to order rationally the selection of music as medicine.

When we focus on the music in music and medicine, Helen Bonny’s systemized “prescriptions” of specific pieces to generate unique clinical results is central material for consideration. Therefore, it seems apropos in this very edition of *Music and Medicine* to include a memorial essay about this major figure in music therapy. Barbara Hesser has done us all

a great service in writing a moving tribute that speaks from the heart to present the work and the person of Helen Bonny. I am proud to include here a piece that dares to be emotional because music, therapeutic or not, is so heavily emotional in its form and its impact. It is important that an academic journal such as Music and Medicine employs the scientific method in investigating the many facets of music as a clinical tonic. Such rigorous study helps to move the field forward and helps entrench the field's legitimacy within the larger world of the biomedical sciences. But, at the same time, we must remain vigilant that the value of music therapy and music medicine not be reduced by us, its practitioners and advocates and researchers, strictly to its rational components. We want to celebrate the science of music and medicine yet not simultaneously obliterate recognition of the ethereal value and color of therapeutic music. It does not take from the scientific richness of music medicine if we also celebrate the emotional, mystical, intuitional and interpersonal magic of medical music. In this way, we are fortunate to have professor Hesser expound on the art and science of Helen Bonny and her work. As a society, we dare to praise the important piece of overall health care delivery that is art without diminishing the power of its science. Similarly, we do full justice in exploring music and medicine when we emphasize its scientific wonders, but also its soulful art.

We begin this journal edition with a dive into the art and science of music and medicine, using GIM as our centerpoint. Next, we explore a focus on therapeutic music in a very medical setting, the ICU. Toward that end, Annie Heiderscheit, Stephanie Breckenridge, Linda L. Chlan, and Kay Savik's article, "*Music Preferences of Mechanically Ventilated Patients Participating in a Randomized Controlled Trial*," revisits the burning question of what specific music works best as medicine for very particular patient subjects. Their research outcomes match my experience, described earlier, as a patient. They find statistically significant value in having ICU (ventilated) patients bring favored music with them to the hospitalization. And I wish that I had brought personally preferred music with me to my ICU adventure in order to have gained therapeutic benefit. Interestingly, while Heiderscheit et al find, importantly, the medicinal value of ventilated patients' selected music, they do not reduce the significance of music therapy down to a program simply of having patients reap all the benefit of music medicine by just bringing their five favorite CDs to their hospital stays. Rather, they appropriately leave for future research the study of additional rewards of music medicine, such as inclusion of a dynamic relationship centered around musical interaction between ventilated or ICU patient and trained therapist. Both personally selected recorded music and interaction with the music therapist and her live performance had great relevance for my personal ICU experience. The complexity of music and medicine, the art and science of music medicine, the many levels of music therapy, all allow for multiple

therapeutic aspects of music to emerge in a single clinical setting.

That is where Jennifer Harris picks up with her article, "*Music for Life: Does Music Have a Role in Intensive Care Medicine?*" In this review piece, the author distinguishes the research on live and recorded music for critically ill patients. And while she draws in conventional measures of therapeutic value for music, such as psychological measures, she also delves into the inseparability of music and medicine by detailing physiological parameters effected by music and pertinent to patient recovery.

Harris presents overarching material on music medicine impacting at multiple cellular, bioactive, interrelated targets. The next three authors hone in on three in-depth, focused studies on music as a biomedical force within the complex integration of music and medicine as art and science. All three articles examine particular features of music, strategically delivered, to drive positive medical outcomes.

Stephane Guetin and colleagues' "*Evaluation of the Standardized MUSICCARE App in the Treatment of Pain: The U-Shape Composing Technique*" presents their MUSICCARE system, which builds on substantial music medicine effectiveness in inducing relaxation and pain relief (physical and emotional). The authors carry their model forward to study, with standardization and systematic evaluation, their variant of music medicine, which proves to be clinically successful for diverse pain patients. Emphasis is on unique musical composition to deliver targeted medical outcomes, tying the nature of the music with particular medical gains.

Gunter Kreutz looks in his article, "*Psychobiological Responses in Amateur Choristers: When Speech is Silver and Singing is Golden*," to pull the music-medicine connection out of the enclaves of the most ill persons and into the everyday hunt for psychophysiological wellness in the general community. He studies choral performers to understand how musical participation generates specific physiological and emotional changes. It fascinates me to juxtapose two music and medicine articles, one that finds musical intervention to be potent for a narrow population of very sick individuals like ventilated patients, and the other that examines opportunities for certain music, and particular engagement with music, to foster broad public health gains.

Colin Lee and Amy Clements-Cortes' article, "*A Clinical Analysis of Debussy's 'Lisle Joyeuse': Implications for Music Therapy in Medical Settings*," is the endpoint of the stepwise, accumulative journey through this edition of Music and Medicine that focuses on the role and nature of music in medicine. Through the articles, we crescendo toward a detailed dissection in these authors' work of very particular music to examine the impact of its small, separate parts and its grand sum on medical outcomes and on the stand alone value derived from the music therapy process. It is a culmination here of integrating the art and science of music therapy and integrating the music and medicine of music medicine, but specifically with emphasis on the therapeutic music itself.

The final article in this thematic volume of Music and Medicine is Andrew Rossetti's "*Towards Prescribed Music in Clinical Contexts: More Than Words.*" It sits at the end because it points in an interesting direction for music and medicine to develop further. Not only does he present the argument that we continue to gain from additional study of the music in music medicine and music therapy, but he goes a full step further. To his credit, he dares to challenge the common notion in the field that the therapeutic selection of music must be prescribed only by feel and intuition in the moment by moment of the psychodynamic relationship as it develops between therapist and patient. He fears that this allows too often for arbitrariness in the selection of therapeutic music to pass for selection driven by "clinical judgment." He advocates that the more we understand the psychological, physiological, neurochemical, spiritual and interpersonal ramifications of specific features of differing music used therapeutically, the more we should be developing a systematic approach to selecting the right music for the clinical job.

Of course, at least in my mind, it is not always the specifics of medical music that matter so much. At times, nearly any music could be chosen for the music therapy because the music merely stands in as a straw man for the real healing process, the relationship between music clinician and patient. This mimics how often the specifics of the psychiatric or the medical prescription do not matter much, as nearly any prescription could be chosen because the medicine merely stands in as a straw man for the real healing process, the relationship between clinician and patient. On the other hand, however, where the differing facets of the music, or of the medications, do drive different clinical results, as is often the case, then we should carefully catalogue those differences and their therapeutic impacts, as per Rossetti's point.

Rossetti risks being accused of proposing the mechanization of music medicine, so he makes his valuable argument less intensely than I would were I he. But I come from a medical perspective that leaves me horrified by the mighty gap between what we know across the board in clinical medicine to be best practices standards versus how clinical medicine actually is practiced across the board. This large deficit must be reduced appreciably in order to improve meaningfully on the quality, and cost, of health care in America. Music therapy and music medicine, as clinical disciplines, could stand similar progress.

One solution in organized medicine is the creation and advancement of decision support processes to help the practitioner, in real time, with his clinical decision-making. The boom in medical information systems means that increasingly the computer will be learning the patient

alongside the clinician and it will "whisper in his ear" over time to assure the clinician's ongoing application of best practices in health care delivery.

Rossetti is proposing, in effect, a similar thing, but at a smaller scale proportionate to the fields of music therapy and music medicine, and sensitive to the cultural norms of these music-centered specialties. Advanced and comprehensive decision support systems in medicine would do wonders to improve care and cost effectiveness, yet they never will supplant the human clinician, the doctor-patient relationship, and the art of medicine. We can have all simultaneously and benefit as a result. Similarly, music therapy and music medicine can institute stricter, comprehensive evidence-based systemized standards to raise the overall quality and success of music-centered care. Yet at the same time, that need not replace the feel of the music clinician, the integral relationship between patient or client and music therapist, and the art of music and medicine. We can have all simultaneously and benefit as a result.

I am blessed to be surrounded by the incalculable amount of cultural material offered in NYC, so I attend a ton of live music performances. Frequently I am asked why I spend so much time, effort and money on it. I answer that all of my investment in music is worth it to luxuriate in the intermittent moments of joy and transcendence. My unique personal experience and biochemistry seem to leave me sensitive and predisposed to having musical input activate strongly my central nervous system pleasure centers. But the rewards are less physiological as well. Peak experience driven by musical highlights also escalate facets of my ethereal inner life: tranquility, love, purpose, liberation from the boundaries of time, escape from the biological limitations of the corpus, touching upon a universality (with audience members and/or musicians but also more widely), finding outlet for my emotional and creative juices typically suppressed by the demands of survival and rational daily life, excavating an ecstasy - a cosmic giggle - from the core of my being. Music is medicine.

Oh, the power of song.

While this editorial piece is written by me exclusively, the entire production of this volume of Music and Medicine would have been impossible without the brilliance, effort and dedication of my co-guest editor, Therese West. Her spirit binds these pages together.

“And then everything changed and I just went with the music...I was really living in the music. I was the music. I just became completely enveloped in the music which is a wonderful thing. I did not feel afraid again, though I was a little confused and apprehensive whenever the music stopped and changed. I was completely lost in the music, and had the strong feeling that music saves me. I was IN the music, and carried by it. I think I must have spent a long time just being carried by the music, in my head, as if on a magic carpet.”

*-A subject in the New York University Medical Center Psilocybin Cancer Anxiety Study, which therapeutically uses music in monitored clinical research investigating the effects of hallucinogen-facilitated mystical experience upon the existential and psychospiritual distress of patients diagnosed with cancer.*

Courtesy of Anthony P. Bossis, Ph.D., NYU School of Medicine