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## Improving healing through art and music

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The capacity of the arts to produce beneficial health outcomes has been appreciated intuitively for some time. Nearly half of all American hospitals utilize some form of arts-based activity to serve patients, visitors, and staff. But it is only relatively recently that the healing and restorative impacts of art and music have been substantiated by careful research.

The emergence of art and music as proven sources of healing is following the path followed by the emergence of evidence-based facility design. Research on the impacts of design features, which began in the 1980s, is now applied widely to improve the health, safety, and satisfaction of patients and staff, as well as rewarding healthcare institutions with cost savings and strengthened reputations.

Now, as thoughtful clinical studies throughout the world are showing the significant healing impacts of art and music interventions in healthcare settings, arts applications are earning the right to be considered alongside today's accepted medical practices and evidence-based design principles. Some of those arts applications are as effective as accepted medical practices in addressing some conditions while at the same time they are also safer, less costly, and more harmonious with a healing environment.

Moreover, findings about the healing effects of music and art provide executives and designers with additional evidence-based tools to advance the six dimensions of quality identified by the Institute of Medicine in its important 2001 report, *Crossing The Quality Chasm*.



Photography: Robin Blossom

The "Art While You Wait" program, now in use in hospitals nationwide, eases the fears and alleviates the pain of children waiting for emergency treatment

# Reducing the need to administer medications

To foster and recognize innovative arts projects with strong research components, the Blair L. Sadler International Healing Arts Competition was created in 2001. The competition's jury evaluates submittals from arts projects that have been conducted in partnership with a healthcare organization and whose impact has been formally evaluated, and each year's honorees are selected for their measurable impact on healthcare delivery, their quality, and their ability to be replicated.

Many Sadler Award-winning projects (see sidebar) have shown that art and music can achieve patient outcomes comparable to those achieved by accepted medical practices. In an award-winning project from 2007, for example, a musical recording created by a team of physicians and musicians in Denmark reduced anxiety and distress so successfully in psychiatric patients who otherwise would have been treated with on-demand sedative medication that 87% of the patients relaxed, calmed down, and even fell asleep from listening to the music.<sup>1</sup>

In a project from Northern Ireland that also earned a Sadler Award this year, hospital patients learned printmaking and created original prints in a highly interactive program. Nearly half (49%) of the patients reported that their pain and other symptoms were relieved, while over 90% of them felt more at ease and relaxed, with significantly improved moods.<sup>2</sup>

Previous Sadler Award winners have also demonstrated important healing-related outcomes from music and art interventions. For example, when children at a Florida hospital were so anxious about a diagnostic test they were about to undergo that they would typically have been sedated by an anesthesiologist, music played to them by a music therapist was sufficiently calming to allow the test to proceed without anesthesia. Using this modality, the hospital was able to eliminate anesthesia 98% of the time for echocardiograms and 88% for CT scans, with no need at all for sedation of children under the age of six.<sup>3</sup>

Another award-winning project focused on the family caregivers of cancer patients—a population within which psychological and mood disturbances can reach as high as 30%. In that study, one hour of involvement in a simple art-making exercise reduced depression symptoms, anxiety, and stress, and produced significant improvements in overall mood.<sup>4</sup>

In all of these cases, the art or music application accomplished a result that otherwise might have been pursued by the use of pharmaceutical drugs, with all the risks that such usage entails. Some of those applications also eliminated the need for some medical staff to be present and made the treatment less stressful for those staff who were present.

Cost savings from using these applications can be significant. For example, it has been estimated that a large children's hospital could save hundreds of thousands of dollars by using music to calm children who are anxious about an imminent diagnostic test, rather than pharmaceutically sedating them.<sup>5</sup>

It should be noted that although the research cited above often applies only to relatively narrow situations (patients in a psychiatric ward or family caregivers who are accompanying a cancer patient for treatment at a hospital facility, for example), it can reasonably be expected that these arts applications will have similar positive impacts on many other populations and in many other situations.

# Improving other medical outcomes

Even when the possible need for a pharmaceutical intervention is not obviated as it was in the previous examples, music and art have significant power to improve medical treatment.

For example, in another 2007 award-winning project, a computer that translates movements into sounds and music, developed by an interdisciplinary team at Harvard Medical School, was employed to inspire stroke victims to continue their physical therapy exercise regimens. In a pilot test focused on recovering hand motor function, participants in this music-based treatment achieved movements that were more controlled, coordinated, and purposeful than those of patients receiving traditional nonmusical therapy.<sup>6</sup>

The “Art While You Wait” program, an award winner in 2005, engages children in creating art works while they await treatment in busy emergency rooms where there are typically long waits. Research showed that 92% of those children experienced reduced pain and decreased anxiety.<sup>7</sup>

## The quality revolution and the arts

The six studies described here, along with many others, demonstrate that art- and music-based treatment modalities deserve a place in any comprehensive, quality-focused healing environment. Again, it is appropriate to compare these developments with what has been learned about how proper attention to the built environment furthers the ongoing revolution for better quality in healthcare. As Colin Martin wrote in *The Lancet*, “Although the premise that the physical environment affects well-being reflects common sense, evidence-based design is poised to emulate evidence-based medicine as a central tenet for healthcare in the twenty-first century.”<sup>8</sup>

Just as “the premise that the physical environment affects well-being reflects common sense,” it also is commonsensical to most people that the arts can affect well-being. Anyone who has made music, created art, danced, sung, or participated in any other arts activity knows that troubles can fade, pains can dissipate, and fears can diminish in those situations.

In *Crossing The Quality Chasm*, the Institute of Medicine (IOM) identifies six dimensions with which quality-focused leaders and institutions should concern themselves: effectiveness, safety, patient-centeredness, efficiency, timeliness, and equity. Art and music applications are demonstrating their effectiveness, even in comparison to accepted medical practices; they are increasing safety by eliminating or reducing the use of anesthesia and pharmaceutical drugs; and they are patient-centered, because they can utilize the patient's own resources for healing rather than something extraneous to the patient, such as a pill or a physical therapist.

Regarding the fourth IOM criterion, efficiency, arts applications can reduce the need for expensive medical personnel and allow procedures to transpire more quickly than they would otherwise. They also can make treatment more expeditious because patients experiencing less pain and less distress are easier to talk to and their complaints can be addressed more quickly.

As for the timeliness criterion, the IOM says “the system should anticipate patient needs, rather than simply reacting to events.” Such strategies as beginning to reduce the pain and improve the emotional state of children in a waiting room before they see an emergency physician, or offering an effective antidepressant modality to family caregivers before they come to require medical attention for that condition, help make medical services proactive rather than simply reactive.

The arts are also remarkably equitable. When respectfully chosen, music and art communicate to persons regardless of their cultural heritage or religious affiliation, education or income levels, age, or gender. The “Art While You Wait” program, for example, now serves children from diverse backgrounds in a wide range of communities that include San Diego and Oakland, California; Salem, Massachusetts; Honolulu, Hawaii; Madison, Wisconsin; and Providence, Rhode Island. The calming music described above, which was recorded

in Denmark, has been used throughout the world. Art and music have the advantage of being, to a large extent, “universal languages.”

## Conclusions

Paralleling the emergence of evidence-based medicine and evidence-based design, there has been in recent years a dramatic increase in documented positive impacts of art and music programs in healthcare settings. While many design improvements are usually feasible only during a major construction project, carefully chosen art and music interventions provide any healthcare organization with low-cost opportunities to improve healthcare quality within all six of the IOM's quality domains. They should become part of everyday practice throughout the country and the world.

Looking back over the research findings of the last twenty-five years related to facility design, we might be surprised by some of those findings, but for the most part they demonstrate what common sense already has told us: that patients and staff are generally healthier and happier in environments that honor the inherent human desire for beauty, peace, and inspiration. More surprising perhaps is the fact that such common sense was so often subverted by designs that honored a somber, depersonalizing, mechanical, industrial, assembly-line approach to patient care.

Today's best healthcare facilities are freed to honor the full panoply of human aspiration within their physical designs, knowing that wisely incorporating those qualities benefits patients and their loved ones, administrators and staff, the larger community and the bottom line. It is increasingly apparent from the research evidence that arts programs can accomplish similar ends. May we hope that we will not look back some years from now only to wonder why it took us so long to accept what the evidence was telling us, in confirmation of our common sense, about the place of the arts in healthcare. **HD**

Annette Ridenour has invested nearly 30 years in transforming the built environment and creating healing experiences using evidence-based, patient-centered, and holistic design principles. Aesthetics, Inc., her interdisciplinary healthcare design and consulting firm, located in San Diego, provides regional arts programs, wayfinding analysis and planning, interior design, and donor recognition systems and strategies. Blair L. Sadler is the former president of Rady Children's Hospital in San Diego and is a senior fellow at the Institute for Healthcare Improvement in Boston. Under his direction from 1980 to 2006, Rady Children's Hospital received numerous awards for its commitment to the arts and their impact on healing. Blair and Annette cofounded the Blair L. Sadler International Healing Arts Competition and are currently coauthoring a book about arts in healthcare.

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## Sidebar

### 2007 Sadler Award Winners Demonstrate Healing Powers of Music and Art



Through the healing sounds of MusiCure, combined with visual nature scenes, MuViCure creates islands of calm and relaxation even in distracting areas

For five years, two physicians and a distinguished composer in Denmark learned all they could about the healing properties of music in order to produce original recordings that would improve the overall sound environment in hospitals and for application in specific medical situations. They produced their first MusiCure CD in 2003, and with continuous feedback from patients and hospital staff, their “sound images” have been refined and expanded. Careful testing has demonstrated high patient satisfaction levels and some significant potential as an alternative to standard medical practices. For more information, visit <http://www.musicure.com>.

## Sidebar



In the Arts Care research project at the Mater Hospital Trust in Belfast, Northern Ireland, patients learned six methods of printmaking, then created original prints reflecting the overall theme of “Dreams.” The project's brochure can be viewed at <http://www.artscouncil-ni.org/departs/all/docs/Dreams%20brochure%202.pdf>.

Dr. Amir Lahav, a neuroscientist who is also a composer and professional musician, developed the Virtual Music Maker, through which a computer translates movements into sounds so that even people with no special musical talent or skills can create music. For more information about the stroke rehabilitation project described

in this article, visit <http://www.mmmlabl.com>.

## Sidebar

### About the Blair L. Sadler International Healing Arts Competition

The Sadler Awards honor innovative artists who have partnered with healthcare organizations to develop and implement high quality projects that have a measurable impact on patients, families, or staff. The competition is a partnership with the Society for the Arts in Healthcare. By supporting individuals or teams who have developed superior programming models at healthcare institutions and emphasizing the importance of research-based project design, the competition aims to close the gap between arts and healthcare.

Applications for the 2008 Sadler Awards will be accepted between October 15, 2007 and January 21, 2008. Awards are announced in February and presented at the Society for the Arts in Healthcare annual conference in April.

For more information about the award or how to apply for it, contact Jan Carpenter Tucker at 619.683.7500 or [carpentertucker@aesthetics.net](mailto:carpentertucker@aesthetics.net).