

WINSTON CHURCHILL TRAVELLING FELLOWSHIP REPORT



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American Approach to Music Therapy in Dementia Care

April - June 2010

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Introduction

It is estimated that by 2033, 5% of the total population of the UK will be over 85 and at risk of developing Alzheimer's disease. The number of people affected is growing at an alarming rate. There is no current cure for Alzheimer's; nevertheless, much can be done to improve the quality of life of people suffering with this terrible degenerative disease.

The healing properties of music have been recognised for years and there is no human culture within which it is not valued. Music directly affects our heart rate, sweating, breathing and blood pressure and is known to educe the production of oxytocin – a neurotransmitter which is said to give rise to feelings of trust, solidarity, and union. Despite evidence that music can provide valuable treatment for a number of symptoms, its use within the health industry is insufficient.

The lack of music therapy services available in the UK for patients suffering from dementia first came to my attention whilst looking for work experience opportunities in this field. I was due to embark on a two year postgraduate course in music therapy and sought to gain experience working with older adults, in particular, those with Alzheimer's. To my surprise, having called numerous local care homes enquiring about music therapy, I failed to find any institutions that provided weekly music therapy services.

I recognised that there was, and still is, a lack of financial support for such services; however, I was also aware of music's ability to alleviate the symptoms of dementia, thus, in turn, reducing costs for care facilities. Recent studies in America reported that singing lullabies slowly and softly, timed to breathing rate, was more effective than a sedative in successfully getting toddlers and infants to sleep. Medication was either not needed or worked a lot faster. Insomnia, agitation and depression are common symptoms of dementia therefore it should be considered that music can be a valuable and alternative form of treatment.

My grandmother developed Alzheimer's and during her years of suffering I noticed how music continued to engage and comfort her, despite suffering from a progressive decline in cognitive skills causing memory loss and withdrawal. When words failed, music was able to provide an alternative way of communicating.

Consequently I was determined to find a way of making music services more accessible to patients suffering from dementia and began reading and researching various organisations committed to this cause. A book by John Zeisel entitled *I'm Still Here* encouraged me to learn about Hearthstone Alzheimer Care and their unique approach to treatment within this field. This opened a gateway towards learning about various organisations in New York and, in turn, America as a whole.

On September 18, 1992 the U.S. Senate passed the ‘Music Therapy for Older Americans Act’ into law. It included provisions for funding music therapy with the elderly, in recognition of the benefits music offers. It called for “the use of musical or rhythmic interventions specifically selected by a music therapist to accomplish the restoration, maintenance or improvement of social or emotional functioning, mental processing, or physical health of an older individual” (Castle, Brown University). The Act resulted in funding, education, training and dissemination of information.

I decided to apply for the Winston Churchill Travelling Fellowship in the hope that it would provide an opportunity to investigate how world-leading centres for music therapy and Alzheimer’s disease were run in America. I anticipated that I would return with an enhanced perspective of how best to improve the reputation and funding of music therapy services for the elderly in British care homes and hospitals. My application was successful, and my quest to learn about the American approach to music therapy in dementia care began....

Itinerary

April

4 th	Arrive in Las Vegas
6-11 th	Western Region of Music Therapy Association Conference 2010
12 th	Fly to New York
14 th	Meeting with Dr. Faerstein (Musicians on Call)
15 th	Hebrew Home at Riverdale
16 th	Parker Jewish Institute
19 th	Brain Music Therapy (Steven Kahan)
20 th	Langone Medical Centre
21 st	Musicians on Call (Rivington House)
22 nd	Brain Music Therapy (Steven Kahan)
23 rd	Kate Geller (Service Programme for Older People)
26 th -30 th	Louis Armstrong Centre for Music Therapy

May

3 rd	Kendra Ray (Visit to Brooklyn)
4 th	Institute of Music and Neurologic Function (Marlon Sobol)
5 th	Brain Music Therapy (Steven Kahan)
6 th	Lane Chazdon
9 th	Fly to Orlando
12-15 th	American Geriatrics Society Annual Scientific Meeting
16 th	Fly to San Diego
18 th	Music Therapy Centre of California
20 th	Music Therapy Centre of California
24 th	Music Worx
27 th -28 th	Alzheimer's Disease: Update on Research and Care
30 th	Fly to New York

June

2 nd	Mount Sinai School of Medicine
7 th	Hearthstone Alzheimer Care
8 th	Institute of Music and Neurologic Function
9 th	Colleen Brigid Fitzpatrick
11 th	Brandon Ally
22 nd	Petr Janata

LAS VEGAS

Western Region American Music Therapy Association Conference

My first stop in America was the Western Region of Music Therapy Association Conference and the bright lights of Las Vegas. I opted to sign up for a pre-conference course dubbed 'Strength-Based Improvisation Stage 1' which commenced two days after my arrival in Sin City. Improvisation is the main technique used within music therapy in the UK, and I hoped to acquire new skills and greater confidence as an improviser as a result of the course.

Strength Based Improvisation Course

Strength Based Improvisation is the creation of Lisa Jackert and Robin Rio; it draws upon their experience as trained music therapists and aims to support and develop improvisational skills. Participants are encouraged to explore their musical and inner strengths, which in turn improves confidence and highlights areas for improvement.

This three day course proved to be a terrific introduction to how musical improvisation is approached in America. The group consisted of four trained music therapists, two course leaders, and myself. We were all encouraged to explore various aspects of our musical history, which was further buoyed through the use of art, movement and music. By portraying our early experiences we were able to consciously think about our musical heritage and become aware of our limitations and preferences. The class also explored the use of songs, layered entrances and soloist/conductor exercises, which equipped me with new improvisational techniques.

Improvisation can be used clinically with patients suffering from dementia by stimulating cognitive function and creating a context to think and be in the 'here and now'. In his book *I'm Still Here*, Dr. Zeisel stresses that 'people living with Alzheimer's live in the present moment', therefore it is very important to create a framework within which patients feel supported and able to express fears and worries.

Both Lisa and Robin created a relaxed and encouraging environment. By exploring our improvisational strengths we were able to learn about ourselves both musically and personally, in turn creating greater effectiveness within music therapy.

Music Therapy for Early Memory Loss

Jeffrey Klein (Director of Las Vegas Adult Day Care Centre) presented a particularly interesting programme called 'Bright Pathways', which is specifically designed for people with early symptoms of Alzheimer's disease, or other early memory related disorders such as Mild Cognitive Impairment. The programme provides a social and supportive environment in which people are supplied with specialised information and resources. The focus is on the development of practical skills to aid memory loss and the stimulation of mental and physical attributes.

Creative therapies play an important role in the daily running of this programme. Music therapy is particularly significant and interventions include:

- Tone chimes.
- 'Name That Tune' game.
- Hello and goodbye songs such as 'Show Me the Way to Go Home'.
- Lyric puzzles, which include muddled chorus and verses.
- Weekly themes and genres, for example, blues and classical music.

He believes music therapy can improve the following:

- Group cohesion.
- Encourage positive interaction.
- Engagement of long term memory and reminiscence.
- Positive self-expression.
- Self-esteem.
- Current skills and lead to an acquirement of a new skill set
- Acceptance of self and condition.

NEW YORK

New York University Medical Schools

Langone Medical Centre (NYU)

Dr. Mary Mittelman, a professor at Langone Medical Centre, very kindly agreed to meet me during my time in New York. Music therapist Kendra Ray was also invited to the meeting to discuss a research project which both she and Dr. Mittelman had been involved. This three year project is funded by New York State Department of Health and is entitled 'Making Music Therapy Practicable for Nursing Homes'. The goal is to investigate how music therapy influences the three common behaviours associated with dementia, namely wandering, agitation and depression. The project also aims to teach carers and staff members how to integrate music into daily care routines with the intention of addressing these symptoms more effectively. This programme encompassed the primary endeavour of my fellowship; hence, I was very interested to learn more about it.

The project records results from three different care homes in New York and targets patients with mid-stage dementia, who are diagnosed using medical records and screened using the FAST scale Reisberg test. Researchers record the effect of music therapy on wandering, agitation and depression before and after each musical intervention. This is done using the Algase scale for wandering, the Cohen-Mansfield scale for agitation and Cornell scale for depression.

Therapy sessions are guided by board-certified music therapists and are conducted individually or within groups, depending on each patient's needs. During each session, the resident's preferred musical style is always considered. Kendra is based at a centre in Brooklyn and disclosed that the programme there is achieving substantial results thus far. Staff members report "less resident agitation with doing everyday care activities such as dressing and bathing following music therapy". It appears to make life much easier for nursing staff, thereby its use is encouraged daily.

Recreational and nursing staff are also asked to attend a three day training course which educates attendees on the best methods of implementing music-based activities. This training features the following:

- Learning about dementia and its related symptoms
- Music therapy
- How care staff can integrate music in their daily work
- How to use an MP3 player
- How to run a successful music group.

The use of iPod is encouraged and playlists are preloaded, attempting to cover a variety of genres and styles. Kendra shared her experiences with us and stated that "for residents diagnosed with dementia and for those who tend to wander or suffer from depression and agitation, we use music during sing-a-longs; regular, daily movements; assisted bathing; assisted range of motion; tonal protocol, and wound care".

Having learnt about the programme, I was invited by Kendra to explore this personally at the care home in Brooklyn. A nursing staff member, who had recently attended the three day training course, allowed me to observe a music group being conducted. The group consisted of five residents and she used an MP3 player to encourage movement using coloured scarves. I witnessed the energy change as a result of this activity and it appeared to have not only put a smile on the faces of each group member, but also that of the staff member.

Results have not yet been published but Kendra believes that some effects are obvious. "Since we kicked off the music therapy project, participants have been more willing and able to participate in social and everyday activities". She continued to say that "more specifically, we have already found that music therapy often improves a resident's mood and helps alleviate his or her level of agitation and wandering behaviours". She claims to be able to report that the "music therapy project has positively influenced how staff and residents value the role music plays in the therapy of residents diagnosed with dementia".

Mount Sinai School of Medicine

I am very grateful to Amanda Burden from the Alzheimer's Disease Research Centre at Mount Sinai for organising a meeting with Berna Huebner, an inspirational lady who is the producer of the documentary *I Remember Better When I Paint*. This film, which she co-produced with Eric Ellena is about the positive impact of art and other creative therapies on people with Alzheimer's. Berna's mother, an accomplished painter, was the inspiration for the film. Berna saw how "through painting and sculpting she emerged from her listless state; and reconnected to the world around her. Her Alzheimer's symptoms eased, at least in part; she spoke, she danced, she played catch, she sculpted, and she painted and painted and painted."

Berna and I discussed the importance of creative therapies as a treatment for the symptoms of dementia, as well as the establishment of her charity, the Hilgos Foundation. The foundation provides student funding at the School of the Art Institute of Chicago with the intent of supporting and encouraging the ongoing process of artistic creation with elderly people. The documentary was partly filmed at the Institute in Chicago as well as various other locations across North America and Europe, including the Louvre in Paris. It describes how the worlds of art, science and medicine intersect and encourage the use of non-pharmacological treatments within dementia care. This film has been very influential in raising awareness and support for the art therapies.

I was also able to meet with Dr. Samuel Gandy (a leading researcher in the field of neurology) and Dr. Martin (neuropsychologist and principal investigator in the Home Based Assessments Trial); both of whom discussed with me the pathology of Alzheimer's disease and the assessment tools available. I learnt how the brain is affected by dementia and how the area of the brain responsible for emotional processing, called the Amygdala, maintains its function until the late stages of the disease. Music can play an important part in allowing emotions and feelings to be expressed non-verbally.

Care Homes

Musicians on Call

Musicians on Call is the wonderful organisation responsible for bringing live and recorded music to the bedsides of patients. I met with the executive director, Dr. Leslie Faerstein who told me about the organisation and their unique 'Bedside Performance Programme'. All musicians are volunteers who are screened and trained appropriately before visiting healthcare facilities. Dr. Faerstein set up two opportunities for me to observe the programme at work. The first opportunity involved visiting Rivington House Health Care Facility; a skilled nursing facility for patients suffering from HIV/AIDS. The second involved a visit to the Village Nursing Home in Lower Manhattan.

The evening I visited the Village Nursing Home, the musician on duty was a 16 year old singer-songwriter. A guide was also present since musicians are always escorted by trained and selected Musicians on Call volunteer guides. The guide plays a vital role as a liaison between the patient, the musician, and MOC. Guides present patients with an option to either hear music, or to refuse it. It is my opinion that allowing the patient to make this choice is as important as the music itself; patients are often told what to do, when to take medications, when to bathe and when to eat. Allowing them this opportunity to choose, to say 'no', gives them back a little independence; something which is barely possible to retain when confined to a bed.

Very few residents declined, and those that accepted were left with smiles on their faces. It was wonderful to see the positive impact music had on residents that were bed-bound. This very personal interaction between musician and patient has the powerful effect of resurrecting the emotions of joy and happiness that often fade away in healthcare facilities.

Parker Jewish Institute

Parker Jewish Institute in New York provides health care and rehabilitation programmes for adults. I was pleased that the director of volunteer services Priscilla Martin accepted my request to visit the Alzheimer's Day Care programme. I was invited to attend the same day as the music volunteer. During his time at the centre the volunteer would entertain residents weekly by playing the piano and accompanying sing-alongs.

Priscilla explained to me how important music is to the centre. I witnessed a charming retired naval officer, who suffered from Alzheimer's, sing a number of songs faultlessly, such as 'Let Me Call You Sweetheart'. As soon as the gentleman retired to his seat, he became disorientated and unsure of where he was, despite being able to lead others in song moments earlier. It was great to see how music empowered him and provided him with a sense of familiarity in unfamiliar surroundings.

Hearthstone Alzheimer Care

Hearthstone Alzheimer Care was founded by Dr. John Zeisel, and their mission is to create an environment in which people living with Alzheimer's and other related disorders can flourish. Dr. Zeisel believes that the key to communicating with people with Alzheimer's is the Amygdala. This part of the brain allows us to connect with others and form relationships; the need for social interaction remains as important for patients suffering from dementia.

Hearthstone's approach focuses on each individual's abilities and strengths. Centres have a number of classes which residents lead and attend including reading clubs, gardening clubs and cooking clubs. The utilisation of outside space is encouraged; spending time outside in daylight can regulate mood and sleep cycles by synchronising our circadian rhythm, which essentially refers to the 24 hour period to which the human body has adjusted through evolution. Hearthstone is focused on employing as many non-pharmacological treatments as pharmaceutical ones.

I visited one of the Hearthstone residences at Palisades, New York and met with the director Kerry Mills. Kerry gave me an overview of the organisation and discussed their approach to Alzheimer's care. She explained that symptoms of Alzheimer's such as anxiety, agitation and aggression are to a large degree caused not by the disease itself but rather by the environment within which the person is living. Hearthstone facilities all share a common focus on environmental design which creates a comforting atmosphere. Features include the following:

- Hallways are visually engaging with photographs and art work displayed throughout.
- Exits are discretely camouflaged.
- Pathways have destinations so people walk rather than wander.
- People are provided with a place of their own with their own possessions that reinforce sense of self.
- Common spaces are decorated and sized to communicate what appropriate behaviours are for those areas.
- All sensory inputs are those that residents understand.

The environment here was distinctively homely and relaxed; from Kerry's office I could smell the popcorn that accompanied the classic movie being shown in the lounge area. I was lead through the building to be introduced to a fascinating lady who I shall call Mary. Mary had a full size piano in her room, but explained to me that she couldn't play very well. I was kindly invited into her room and could see pieces by Beethoven and Mozart spread out on the piano stand. Once she was encouraged to play, I immediately realised that Mary was a very talented pianist. I was later told that she in fact practiced the piano everyday, very often in the middle of the night.

Hebrew Home At Riverdale

This care home situated in the Bronx appears to be one of a kind. It provides the only overnight outpatient programme in America for seniors with dementia. This all night care programme is designed for people living at home who have difficulties sleeping. People with dementia are often struck by sleeplessness or night terrors and are often prone to wandering. This agitation and disorientation is often called 'sundowning' and is especially worrying for relatives trying to care for family members at home, and often hastens their placement in nursing homes.

I was met night recreation supervisor Karena Larrequi who introduced me to residents and explained what happens each night. Participants are collected from their homes at 7pm and returned home at 7 in the morning. When not sleeping they are given the option of taking part in a number of activities including music, art, potting plants, dancing, talking, yoga or alternative remedies like aromatherapy and reiki. Patients who are at the later stages of dementia are often entertained by relaxing music, massage and twinkling lights.

Karena advised that this kind of programme can prove to be very successful; care homes can utilise the space at night, whilst providing an option for families to care for their loved one at home. It proves to be financially effective and provides home carers with an alternative to admitting their loved ones into full time care of nursing homes residences.

Individual Music Therapists

Kate Geller

Music therapist Kate Geller is employed at the Service Programme for Older People (SPOP) in New York. She trained at New York University and has worked with a variety of patients. I observed Kate conduct two group sessions; one for patients suffering from Alzheimer's and the other for patients with mental health issues.

Before attending the morning group session for dementia patients I was told that it would be a difficult session for both Kate and group members. A lady well liked by all patients and staff had been told that her position at the centre was no longer available with immediate effect. Kate had been asked to disclose this bad news, with the hope that music therapy would provide a platform to discuss and release any difficult emotions that would arise as a result. Due to the nature of the group's cognitive abilities (all patients were in the mid stages of Alzheimer's disease) she was unsure if this information would be processed or remembered by the members.

Patients reacted in a surprising way; they were able to offer encouraging words of support throughout the session and the information appeared to have been retained. The music reflected this; a loud drum circle followed which appeared to provide an outlet for angry emotions. This news appeared to connect with patient's feelings, which once again proves that patient's suffering from dementia remain intact emotionally.

Lane Chazdon

I spent one day at the Hudson Valley VA Centre with music therapist Lane Chazdon. I was able to observe Lane conduct several group music therapy sessions throughout the day. Lane worked with patients with a variety of needs, ranging from schizophrenia to dementia.

The first group I observed were veterans suffering from various forms of dementia. Lane used a variety of therapeutic interventions, for example, props such as parachutes and balloons to encourage mobility, lyric analysis and the use of pre-recorded songs. He also planned sessions in advance using a set theme. Songs and activities would then be chosen to fit around this theme.

Medical Centres

Louis Armstrong Centre for Music Therapy

The Louis Armstrong Centre for Music Therapy was established in 1994 and is part of Beth Israel Medical Centre in New York. Music therapists conduct daily sessions with patients in many areas of the hospital including paediatrics, neonatal intensive care, maternity, HIV/AIDS, family medicine, pain medicine, palliative care, oncology, orthopaedic surgery, and emergency and intensive care. The centre also provides services within the community including several outpatient services in clinics and schools.

Scientific research conducted at the centre indicates that music therapy may improve breathing, regulate heart rate and blood pressure, reduce pain, anxiety and depression, and enhance quality of life. The team use a variety of music psychotherapy techniques including clinical improvisation, music meditation, pain management, sedation and breathing modalities of music and healing. It was refreshing to see music therapy used in a medical environment to support such a variety of needs.

I was fortunate to be able to spend a week at the centre, observing several music therapy sessions. On the first day I met with notable music therapist and director Dr. Joanna Loewy. Dr. Loewy explained that the centre's current research projects include researching the effect of medical music therapy on children with asthma and adults with cardiac and pulmonary problems. The centre has also been involved with investigating the use of music psychotherapy in the treatment of paediatric pain. I was told that many clinicians believe that pain and music responses travel along the same neural pathways, thus drumming is a great activity to encourage pain management, providing a means of pain release by directing energy outside the body.

I was particularly interested in this centre's approach to pain management. In 2002, the Journal of Neurology published a paper stating that as many as 80% of nursing home residents are at high risk from undertreated pain. Untreated pain is often the most common cause of agitation and depression. As dementia progresses, a person may have difficulty communicating their pain to a carer and symptoms remain unmanaged.

Institute Of Music and Neurologic Function

The Institute for Music and Neurologic Function promotes wellness through the use of music. Music therapy is used to awaken, rehabilitate and heal individuals suffering from a wide range of neurological conditions including strokes, trauma, dementia, Alzheimer's and Parkinson's diseases. The Institute provides music therapy services for a range of centres across New York.

I spent a day at the Schnurmacher Center for Rehabilitation and Nursing with music therapist Marlon Sobol. I observed an 'Ambulation Programme' being conducted; this programme was designed specifically by Sobol for wheelchair bound patients who have the ability to walk. Marlon is a multi-instrumentalist and I was intrigued to see the ukulele used so effectively during this programme; he sang and played whilst the patient stood up and walked. Music was used to encourage and motivate mobility and lyrics from the song incorporated the patient's name.

The second group I observed at Schurmacher involved a small music group for three gentlemen suffering from the effects of stroke and dementia. Marlon used an ipod and presented each patient with a choice of what they wanted to listen to. Conversation was encouraged after each song choice, which enabled the group to form a close relationship with each other and discuss and share problems.

The final group I observed that day involved a music therapy group session for dementia sufferers. Marlon believes that therapeutic drum exercises, particularly drum circles involving carers, are great interventions when working with patients with neurological impairments. Rhythm is known to wake up sleepy dementia patients and provides carers with an opportunity to interact with patients on the same level.

I also spent a day at the Institute's main base at the Beth Abraham Medical Centre in the Bronx. Here I met with Benedikte Scheiby (director of music therapy clinical training and supervision and senior clinician) and Dr. Connie Tomaino (director and founder). Dr. Tomaino has studied the therapeutic effects of music for more than 30 years and has recently launched a new programme for Alzheimer's patients involving the use of iPods which are preloaded with customised playlists. She believes that for people with AD and other dementias, music and familiar songs can help unlock memories, improve communication and overcome withdrawal.

With funding from the New York State Department of Health, the centre conducted an unpublished study involving 45 patients with mid- to late-stage dementia. Each patient had one hour of personalised music therapy, three times a week, for 10 months. Results demonstrated an average improvement of 50% during cognitive function tests and one patient in the study recognised his wife for the first time in months. By engaging very basic mechanisms of emotions and listening, music is stimulating dormant areas of the brain that haven't been accessible due to this degenerative disease.

Neurological Approaches

Brain Music Therapy

Brain Music Therapy is progressively becoming more popular in the US. Having learnt more about it, I can see why. Brain Music Therapy is a process by which an EEG (electroencephalogram) is used to record brain waves, which are associated with various physiological parameters, such as heart rate and muscle tension. These brain waves are later transferred into unique musical compositions which are presented in two forms: relaxing and activating. Listening to these files reflects on individual brain wave patterns and promotes the desired state of mind.

I met with Brain Music Therapist and neurologist Steven Khahan, who helped me understand how it all works in a little more detail. He explained how EEG's show waves of varying frequency, ranging from fast to slow; the faster the brain wave, the greater the level of alertness. Common brain waves include Delta (0-4 Hz), which is the slowest and is commonly associated with sleep. Theta (4-8 Hz) is most commonly associated with daydreaming and Attention Deficit Disorder. Alpha waves (8-12 Hz) are associated with being in a relaxed and focused place; this is what athletes strive to achieve and is so-called the 'zone'. Beta (12+Hz) is associated with high stress levels and periods of focused concentration. Steven explained that each brainwave is appropriate in certain circumstances, thus there is no 'good' or 'bad' brain wave.

The EEG reads these brain waves, filters them and then music is composed based on each person's specific neural fingerprint. The brain entrains to rhythms around it, thus music that is specifically designed for your brain can be used to re-teach the brain to reach the desired state. Tests have concluded that Brain Music Therapy is very effective in treating insomnia and anxiety; perhaps most importantly, it has no side-effects. It represents a useful alternative to medication. I found this process interesting and very exciting as it shows how the brain can be rewired in order to assist patients suffering with dementia

Steven also makes use of singing bowls; these are multiphonic instruments which produce multiple harmonic overtones at the same time. It has been found that among the wave patterns of different singing bowls there is a measurable wave pattern that is equivalent to the alpha waves and/or theta waves produced by the brain. These bowls instil a sense of very deep relaxation and can be used to tone and balance the various energy bodies.

Colleen Brigid Fitzpatrick

My visit to Harmony Village in Moorestown was one of my most enjoyable Fellowship experiences. Harmony Village is affiliated with Hearthstone Alzheimer Care and provides excellent care for dementia patients; Colleen works here as a cognitive rehabilitator in memory impairment. Her clinic, dubbed the 'Brain Gym', focuses on the use of art and music to assist with functional gains in older adults, both mildly cognitively impaired and those at the first stages of dementia. The concept of the 'Brain Gym' was devised by Dr. Mitchell Slutzky who has pioneered the use of affect-regulation to improve memory and emotional well-being. He believes that there is a strong connection between positive emotional regulation and beneficial changes in the brain.

Colleen uses various modes of therapy at the 'Brain Gym', including the use of computer programmes to stimulate multiple memory centres and processing centres in the brain. Nevertheless, music is considered to be one of her most important tools and it is utilised in multiple ways. Musical instruments are used daily to develop and train residents; activities include keyboard exercises and song-writing exercises. Colleen believes that singing can improve language function and the ability to initiate and maintain conversations. All activities at the 'Brain Gym' are designed to aid patients in maintaining their independence, increasing their confidence, improving their ability to form and maintain friendships and improve activities of daily living.

During my time there I was introduced to a lovely gentleman named John who suffered from Alzheimer's. John owned a green ukulele, which he used to accompany a rendition of 'You are my Sunshine'. It was apparent that music was a big part of his life and he later joined another resident on the piano. During this performance, music somehow allowed all symptoms of dementia to disappear.

ORLANDO

American Geriatrics Society Annual Scientific Meeting

This conference in Orlando was held by the American Geriatrics Society and provided me with the latest information on clinical geriatrics, research on ageing, and innovative models of care delivery. I felt it imperative to learn about how dementia is addressed medically and how music therapy can be used to support pharmacological therapies.

I learnt about what happens to the brain tissue of patients suffering from Alzheimer's, and how the disease typically destroys neurons in the parts of the brain responsible for controlling memory; including the entorhinal cortex, the hippocampus, and related structures. Alzheimer's later attacks areas responsible for language and reasoning. Eventually, many other areas of the brain are damaged, and the person becomes helpless and unresponsive to the outside world.

There are very few medications that have been approved to help control the cognitive loss that characterises Alzheimer's disease. Anticholinesterase inhibitors are often prescribed namely Donepezil (Aricept), Rivastigmine (Exelon), and Galantamine (Razadyne). These prescribed medications work by stopping or slowing the action of the enzyme which breaks down acetylcholine, a vital neurotransmitter that helps form memory function. Memantine (Namenda) works in a similar way, by regulating the levels of glutamate, another neurotransmitter involved in memory function. These maintain some of the patient's ability to carry out activities of daily life, as well as maintain some thinking, memory or speaking skills. They also help with certain behavioural symptoms; however, they do not stop or reverse the effects of this terrible disease.

Many behavioural problems that arise as a result of Alzheimer's disease include agitation, verbal and physical aggression, wandering, depression, sleep disturbances, and delusions. Available pharmacological treatments include antidepressants, anti psychotics, anticonvulsants and anti anxiety agents; many of which have side effects. Cholinesterase inhibitors have the potential side effects of nausea, vomiting, diarrhoea, loss of appetite and weight loss, headache, vivid dreams and insomnia, dizziness and slowed heart rate. This further reinforces the need to increase non-pharmacological interventions used in the treatment of dementia; natural and creative therapies often work better and have fewer side effects.

SAN DIEGO

Music Therapy Centre Of California

Since 2003 the Music Therapy Centre of California has offered music therapy services for the greater San Diego Community. I met with co-director and founder of the centre, Julie Guy, who works with both adults and children. I was particularly interested in her work with adults suffering from dementia and how her approach would differ, if at all, to other music therapists whom I had visited in New York.

The first session I observed was with a group of adults in a care home in La Jolla, San Diego. The residents were already in the communal area doing their daily morning exercise routine when we arrived. Julie introduced me to the group, who seemed intrigued to have a visitor.

The session began by singing songs, all of which had a common theme; this theme was Mother's Day. Visual props were used such as scarves and plastic flowers, and this seemed to help the residents stay focused and prompt memory retrieval. Julie communicated with residents throughout the session, often asking them about their likes and dislikes. She also encouraged cognitive stimulation by asking group members to name songs which had flowers in their title; she would then lead the group in song, often using her flute or drum as accompaniment. Even though the group appeared to have varying degrees of cognitive abilities, Julie managed to engage the group as a whole.

Following this group session, I observed an individual session with an elderly Alzheimer's patient who had recently suffered a stroke. His speech was often incoherent, but his ability to sing songs using the Q Chord as accompaniment was remarkable. This versatile instrument generates electronic sound and combines the capabilities of the autoharp, a rhythm machine and keyboard collectively within a portable and easy to use format. Due to its ability to combine the production of immediate musical feedback with limited movement it enables music to be accessible to everyone. The Q Chord was used throughout the whole session and Julie and I sang along to each song.

I also observed a group session involving patients in a nursing home, each of whom were given a rhythmic instrument. Julie believes that drums can provide a platform for creative thinking within group settings, whilst also allowing individuals to feel supported. The energy produced by this drum circle appeared to inject life back into the faces of the sleepy residents and even produced a few smiles.

Another particularly useful instrument is the Clavinova: an electronic piano which has the ability to save and load songs. Julie conducted a Clavinova group session in which residents in an assisted living facility were able to use the instrument daily. One lady even used the instrument before mealtimes to entertain people whilst waiting for their food. This group provides residents with an opportunity to learn something new and to communicate and meet others in the community.

Music Worx

Music Worx is a music therapy and wellness agency based in San Diego. During my time there I met with music therapist Noelle Pedeson, who is also the director of education and training for a sister company named 'Resounding Joy'. Noelle allowed me to observe her work with a group of patients suffering from dementia, as well as her work in palliative care.

Noelle has a beautiful singing voice and it was great to see how she used this instrument so effectively within music therapy sessions. Her work with a hospice patient provided a great contrast to the group session, as it called upon a completely different set of skills. The music used was soothing and comforting and appeared to support the patient during this critical stage of her life.

The group session made use of visual props and maintained a common theme throughout; coincidentally, this also happened to be that of 'Mother's Day'. Noelle used the guitar and her voice to lead the group in song, and percussion instruments were also used to encourage movement and energise residents.

Patients suffering from the later stages of dementia have different needs to patients at the earlier stages of the disease, hence each individual should be provided with therapy specific for their particular needs. Music therapy can be used to help with the changing needs of the patient during their final days and help to provide closure and support for families.

Alzheimer's Disease: Update On Research And Care

I attended a conference organised by the Shiley-Marcos Alzheimer's Disease Research Centre entitled 'Alzheimer's Disease: Update on Research And Care'. This conference enabled me to gain an understanding of the newest clinical research on Alzheimer's disease as well as an appreciation of the differences between normal brain tissue, and that of an Alzheimer's patient. I was also given an insight into the use of pharmacologic and non-pharmacologic interventions and the dangers of polypharmacy in dementia patients. It was both educational and inspirational; however, it seemed to me that, once again, the emphasis of the conference seemed to lean towards pharmacological treatments.

Barry Oken

During this conference Barry Oken gave an interesting talk on non-prescription and non-pharmacological therapies for dementia. He discussed how extracts of the leaves of fossil tree Ginko biloba is used for medicinal purposes. There has been evidence that it has an effect on cognitive performance in Alzheimer's disease, although the effect is fairly modest. I did, however, find interesting that the 'cognitive changes are of similar magnitude or slightly less than those reported for the currently available cholinesterase inhibitors' (Oken, B., *Complimentary and Alternative Medicine Applicability in Aging and Alzheimer's Disease*). What was particularly remarkable to me was that the extract does not produce any serious side-effects.

Daniel Kuhn

An inspirational speaker called Daniel Kuhn presented a talk on 'Put downs and uplifts in dementia care'. He affirmed ways of connecting with those suffering from dementia and focused on the importance of an individualised approach to care. Listed below are a few points that he shared:

Putdowns result in...	Uplifts result in...
Ill-Being	Well-being
Loss	Fulfillment
Loneliness	Connection
Sadness	Cheerfulness
Confusion	Orientation
Worry/Anxiety	Contentment
Frustration	Peacefulness

Kuhn believes simple changes in how we interact with patients can lead to a better quality of life. He spoke of the following things as being put-downs:

- Intimidation: People with dementia often don't see things in the same way that we do. We need to accept this rather than attempt to change their way of thinking to meet ours.
- Withholding: Withholding attention from a patient calling out "Help me" or "I want to go home" rather than taking a minute to comfort that patient and make sure they are not in physical or emotional pain.
- Accusation: Accusing a patient of wearing the wrong clothes, rather than commenting on how nice they look.
- Infantilisation: We need to honour them, their past and their present and be sure that we don't treat them like a child.
- Objectification: Talk with a patient as you approach them with a task that needs to be done (i.e. bathing). Don't come up behind them without warning. This can trigger a negative reaction from the patient.
- Disempowerment: To empower the patient, let them do the things that they are able to do. This helps them to maintain their precious identity and independence.
- Outpacing: Tell the patient one thing at a time that is going to happen during their day.

Mr. Kuhn believes that in order to be a happy and healthy caregiver one needs to constantly rethink the relationship and the ways we relate to those experiencing these problems. How a person with dementia lives and dies depends upon one's care giver, thus it is imperative that the care provided is the best it can possibly be.

Susan McCurry

The talk on 'Innovative Methods of Managing Sleep Disturbances' by Susan McCurry, provided me with an opportunity to learn about how light therapy can be used to synchronise the circadian systems. Many older adults have limited exposure to bright light, and light therapy can improve sleep, reduce napping, and decrease depression and agitation in persons with dementia.

Barbara Reuer

The most enjoyable talk at the conference for me personally, was presented by music therapist Barbara Reuer. Her work is world renowned and I was privileged to be able to attend this talk. She discussed how singing can be a great way to start a music therapy session as singing increases the production of endorphins and the voice is an intimate and healing tool. Other suggestions for music therapy interventions included vocal and instrumental improvisation, therapeutic drumming, movement to music and song writing.

Rhythm is, of course a central part of our bodies and it incorporates many areas of the brain. We were told about the 'Memory Drummers'; they are a group of people with early onset dementia who meet regularly to form a drum circle. Drumming can be a great way to release tension and enhance energy levels; our response to rhythm is basic to human functioning. This group environment also provides a peer support network and an opportunity for creative expression. Percussion activities can be done with little or no previous musical background or training and minimal equipment is required.

Barbara stressed that the preferred music type for people of this generation is the music from their time as a young adult, i.e. between the ages of 18 and 26. Some examples of songs used today within music therapy include 'My Favourite Things', 'Let Me Call You Sweetheart' and 'You Are My Sunshine'. It was demonstrated that music can evoke emotional well being, stimulate and improve cognition and even allow for the creation of new pathways.

DAVIS

Centre for Mind and Brain

Petr Janata is the associate professor at the Centre for Mind and Brain at UC Davis. The centre is a research and training unit dedicated to understanding the nature of the human mind from interdisciplinary perspectives. Dr. Janata's work has an emphasis upon music and I was particularly interested in his paper 'The Neural Architecture of Music-Evoked Autobiographical Memories' which was published in the Cerebral Cortex.

Dr. Janata explained to me how the study involved using functional magnetic resonance imaging (fMRI) to record the brain activity of 13 UC Davis students whilst listening to excerpts of 30 songs. These songs were chosen randomly from "top 100" charts from the years during which they were 8-18 years old. When asked why this age range was chosen, I was told that music from a person's adolescent years appear to produce the most vivid memories; this era is usually associated with identity formation and is the period at which memory is at its peak.

Results demonstrated that songs that were unfamiliar to the student stimulated a reaction in the auditory processing part of the brain; those that produced emotional reactions stimulated other brain areas. Notably, songs that generated a specific personal memory evoked particularly strong activity in an area of the brain just behind the forehead, called the medial prefrontal cortex. Remarkably this area of the brain has also been identified as one of the last parts of the brain to deteriorate as Alzheimer's disease progresses. It appears to serve as a hub where music, memory and emotions meet.

Dr. Janata believes that by playing familiar music frequently to patients, music can elicit an improvement in mood and alertness. Despite not being able to reverse the effects of Alzheimer's; music can be used to improve the quality of life of patients suffering from this disease. He hopes to further study whether test conducted with Alzheimer patients produce the same results and stimulate this area of the brain known as the medial prefrontal cortex.

BOSTON

Brandon Ally

A recent project undertaken by Boston University, entitled 'Music as a Memory Enhancer in Patients with Alzheimer's Disease', suggests that music may help patients suffering from Alzheimer's to retain new information. This research was conducted at the Alzheimer's Disease Centre facility at the VA Medical Centre in Bedford. I met with co-author and assistant professor of neurology, Brandon Ally, to learn more about this innovative study.

Brandon and I discussed how patients with mild Alzheimer's and patients with healthy cognitive abilities were tested on the retrieval of song lyrics, both when set to music and when unaccompanied. Memory tests demonstrated that patients with Alzheimer's were able to remember lyrics better when set to music, compared to those that were just spoken. Results demonstrated that healthy adults showed no difference between tests done with lyrics set to music and those spoken.

Brandon believes that results could lead to a new way of helping Alzheimer's patients remember things required for the maintenance of their independence and well-being. Music could be used as an aid to remember simple daily tasks such as taking medicine and shopping lists.

The study of music's effect on the brain is widely documented. It is known that music processing is distributed throughout the brain; however, this study demonstrates that it is a possibility that certain music processing areas are spared by Alzheimer's disease. It can also be said that music heightens arousal in Alzheimer's sufferers, allowing better attention and improved memory. Brandon hopes that these results along with future studies will enable researchers to come a step closer to realising why musical memory differs from verbal memory.

Professor Ally is hoping to continue his research regarding the value of music by comparing rhyming lyrics with non-rhyming lyrics, and comparing the effectiveness of different types of melody. He also hopes to repeat the study with a larger sample size, and further investigate why music seemed to have no effect on recognition of test information by healthy adults. This study proves that music can aid the formation of new memories; thus providing a promising notion for people suffering from Alzheimer's.

Return to UK

Having experienced so much it has been difficult to summarise my ten week Fellowship. Each individual I met and each centre I visited served to inspire and confirm the importance of music within Alzheimer care. Here are a few important reasons why music should be prescribed daily to patients:

- Music is a great reminiscence tool and helps reawaken a sense of personality, identity and dignity.
- By reconnecting patients with their favourite music, the result is often reduced depression, anxiety and better mood.
- By improving mood, agitation is often reduced and cooperation and attention is increased.
- Music can be used to manage pain by providing means of distraction and relaxation.
- Its use to improve cognition and encourage the formation of new memories can be used to increase patient independence and quality of life.

Despite a recent drive by Nordoff-Robbins and Barchester Healthcare to improve music therapy services available to patients suffering from dementia in the UK, I am still aware that funding for such services is limited. I am hoping that, through dissemination of the information I acquired during my stay in the US, I can inspire a cost-efficient way of enabling music therapy to become widely available to patients, both within care homes and for those cared for at home.

Since returning, I have been very busy studying full time for my MA in Music Therapy at the Guildhall School of Music and Drama. In 18 months' time I hope to become a qualified music therapist. The course is teaching me about various areas of psychology, medicine and music and how various musical interventions can be used therapeutically within clinical settings. Unfortunately, an overwhelming workload has not allowed me much time to disseminate my findings. However, with the completion of this report I am in the process of discussing various ideas with several organisations which have arisen as a result of my Fellowship experience.

By combining ideas introduced by both the Institute of Music and Neurologic Function and the Langone Medical Centre, I believe that music can become a daily part of existence within British nursing homes. Music can be made practicable within nursing homes and one way to achieve this goal is to encourage nursing staff to incorporate music into daily care rituals. By allowing access to pre-loaded mp3 players of various genres and styles, carers can easily and quickly access music which can be used to soothe and relax patients. The device could also be used to encourage group activities such as dancing and singing groups.

The night programme at the Hebrew Home is also a programme which I believe can prove to be very beneficial for Alzheimer's sufferers and their families. I am meeting with the Director of the London Centre for Dementia Care to discuss this further and am currently writing a report to contribute to the Quality in Ageing and Older Adults journal.

This experience has also sparked my interest in neurology which led to me to attend a conference in October called 'Music and the Brain'. Here I met a variety of music therapists and neurologist who were eager to promote and improve musical services for people suffering from neurological impairments.

I am extremely grateful to the Winston Churchill Trust for giving me this wonderful opportunity and to all the abovementioned individuals and organisations for their time, knowledge and wisdom.

Despite not having a clear evolutionary reason for existence, the significance of music for human beings is both recognised and undeniable. Current research projects are looking promising in the search for a cure for Alzheimer's. In the meantime, much can be done to improve the quality of life of those suffering. Music's deeply personal and emotional influence has the ability to be of therapeutic value to us all.

'The existence of illness in the body may be called a shadow of the true illness which is held by man in his mind. By the power of music the mind may become exalted so that it rises above the thought of illness; then the illness is forgotten'
(Hazrat Inayat Khan)

Press Release

AMERICAN APPROACH TO MUSIC THERAPY IN DEMENTIA CARE

Going For a Song' Treatment for Alzheimer's

Music composer and harpist, Teleri Dyer from Clapton in London, has recently returned from a Winston Churchill Travelling Fellowship (www.wcmt.org.uk) to the USA. The purpose of her Fellowship was to investigate how music therapy is used within dementia care, with a view to promote the use of music and music therapy in nursing homes in the UK.

Teleri reported: "Music has the power to change the lives of individuals suffering from Alzheimer's and it doesn't cost a penny. To quote John Logan: "Music is the medicine of the mind", and for many, including John, pictured below, this is true. John suffers from Alzheimer's but can charm anyone with his rendition of 'You are my Sunshine' on his green ukulele. John is a resident at Harmony Village in Moorestown, and is one of the many wonderful people I met during my ten week Fellowship.

The ability to appreciate, remember and respond to music can remain long after other forms of memory have deteriorated. This is why Colleen Fitzpatrick, who runs a Cognitive Rehabilitation in Memory Impairment programme at Harmony Village, focuses on the use of music to improve cognitive function. Music raises the body's serotonin levels, a natural treatment for agitation and depression, but Colleen has found it also helps people recall and form memories.

I also visited the NYU Langone Medical Centre in New York. Their current project analyses the effect of a two-week music therapy course on wandering, agitation and depression in Alzheimer's patients. It incorporates the training of carers to conduct weekly music and movement sessions using iPods. This proves an effective and inexpensive way to ensure music is available to all residents.

There is no denying the human need for music; this need remains as true for individuals suffering from dementia. Music is free medicine – make the most of it!"