

# Music as Medicine\* as a complementary treatment method for hospital patients with delirium

Camilla Engelstoft Hess, Clinical nursing specialist, MSc (Nursing)

Department of Nephrology and Endocrinology – H0842, North Zealand Hospital, Hillerød Denmark

## Background and Aim

Delirium is a commonly occurring, serious neuropsychiatric complication associated with acute somatic illness. Delirium is most common in patients who are elderly, have dementia or are chronically ill. The condition can be extremely distressing for the patient and may cause some patients to act aggressively or experience anxiety. North Zealand Hospital's department of Nephrology and Endocrinology, H0842, treat a large number of patients with delirium.

An alternative to medical treatment could be a non-pharmacological intervention in the form of music. Several Danish and international studies suggest that music from MusiCure and the specially developed MusiCure Pillow\*, can be successfully used in the treatment of delirium.

This quality improvement project was to test the efficacy of the MusiCure pillows as a complementary treatment method for patients, who become delirious during hospitalisation. The primary goal was to replace medical treatment for delirium with music. The secondary goal of the project was to make the patients feel more secure, and to reduce stress, side effects, mental illness and mortality resulting from delirium.

## Design and Procedure

The retrospective design of the project involved gathering six months of data on the ward's use of extra 1:1 carers and Serenase and Stesolid medication. The prospective part of the project consisted of a four-month intervention using MusiCure pillows. The aim of this approach was to test and detect any issues or barriers, so that it was possible to modify and revise the intervention before implementation.

The intervention was carried out at the Department of Nephrology and Endocrinology, H0842. The intervention started when an inpatient became delirious. Patients who became delirious were identified and CAM screening was performed. If the patient had a positive CAM score, they were included in the study with the music pillow. The intervention was carried out in the patient's room, where they lay in their bed. The music played for over an hour and often repeated for several hours or days, and the nursing staff completed the attached registration form to measure the effect of the music.

## Method and Results

The quality improvement project was based on a scientific hermeneutical approach. This is reflected in the project's combination of qualitative and quantitative data collection. The project's quantitative component consisted of collecting data on patients' behaviour before, during and after the music, and any use of sedatives. The ward's use of extra 1:1 carers was also registered. The music pillows were tested on 13 patients over a period of four months. The results from the registration forms showed that patients recovered from delirium more quickly, when they listened to the music:

- 7% of patients experienced no effect from the music
- 23% of patients experienced some effect from the music, but remained delirious
- 69% of patients recovered from delirium after 2-13 hours of music.

33% of these patients received Serenase in connection with their delirium.

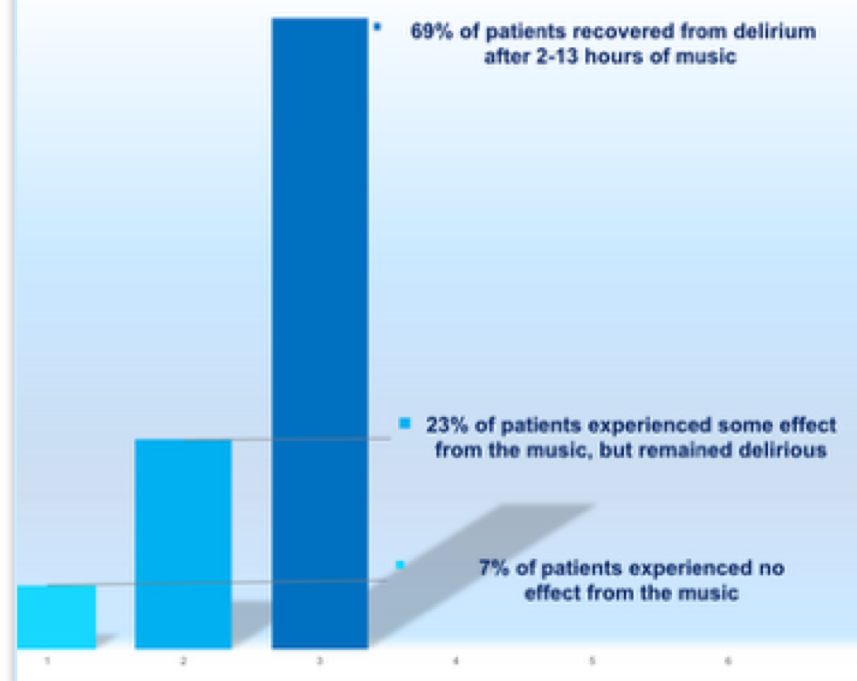
The results also showed that no extra 1:1 carers were used during the intervention period. In the period prior to the intervention, an average of 11.5 extra 1:1 carers per month were used in the ward. A review of the ward's use of Serenase and Stesolid also showed that during the intervention period, 0.12 less packets of Serenase and 0.62 less packets of Stesolid were used compared to the remaining months in 2019.

## MusiCure Pillow

The MusiCure pillow is an ergonomic, memory-foam pillow with a built-in sound system. The pillow comes with a rechargeable MP3 player loaded with one hour of specially designed music. Studies have shown that it increases the body's oxytocin level and lowers the cortisol level. The pillow's cover can be easily cleaned using sanitiser wipes. The pillow is also CE marked and EU approved as a class 1 medical device.



### The efficacy of MusiCure Pillows as a complementary treatment method for delirious patients



## Conclusion

The aim of the quality improvement project was to test the efficacy of MusiCure pillows as a complementary treatment method for delirious patients.

It was found that patients who received music and other non pharmacological treatments recovered from delirium faster and needed less sedation. It can therefore be argued that the music pillows can beneficially be used as a first priority before any sedatives are used for the treatment of delirium. The use of the music pillows also resulted in there being no need for extra 1:1 carers when the patients were listening to the music. The ward's costs associated with the use of extra 1:1 carers were therefore much reduced during the intervention period.

After publication of the positive results with delirium patients from both Hvidovre and North Zealand Hospitals, a number of other Danish hospitals have introduced the same procedures with the MusiCure pillows to delirium patients, and achieved similar results.

\* 'Music as Medicine' is a part of the original MusiCure® International Trademark.