Catherine's Research Picks 2018

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Aim

- To talk you through a few publications that I have found important this year
- These are only my opinion and I am open to

- Accept that we all have read different papers and all have different opinions

The NEW ENGLAND JOURNAL of MEDICINE

NEJM 2018 379:711-721

PARAMEDIC2
The Adrenaline Trial

- International Liaison Committee on Resuscitation called for a study over concerns of safety of using adrenaline
- NIHR funded
- Randomised double-blind trial comparing adrenaline given intravenously or via intraosseous route with a saline placebo. Standard care did not alter
- The outcomes of 8,014 patients were analysed with survival to 30 days as a primary outcome, and hospital discharge with favourable neurologic function as a secondary outcome

Methods

- 8014 patients involved in OOH cardiac arrest

- 4015 received adrenaline
- 3999 received saline 0.9%

- Primary outcome was survival at 30 days with favorable neurological outcome

Results

- 130 patients in adrenaline group alive
- 94 patients in placebo group alive
- No significance difference with favorable neurological outcome
- At time of hospital discharge **severe** neurological outcome had occurred in more patients who had received the adrenaline

Conclusion

- Adrenaline results in a higher rate of hospital discharge **BUT** more of these have severe neurological impairments
- Treating cardiac arrest quickly with CPR and defibrillation offers the best chances of survival

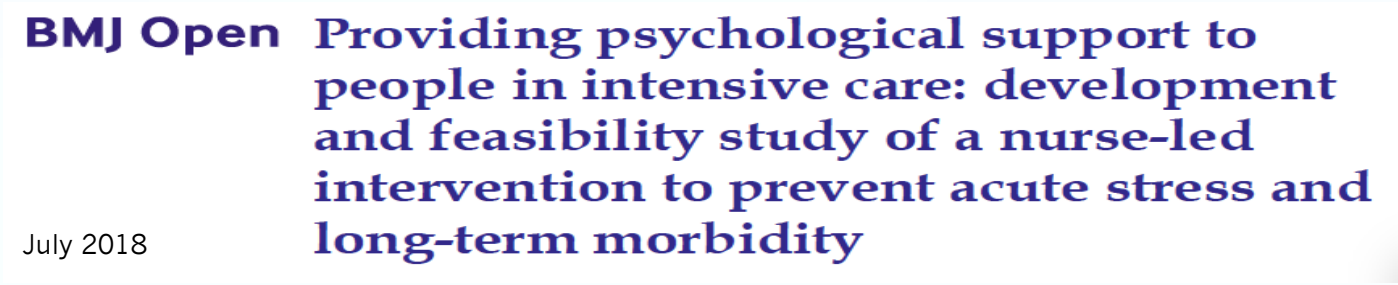
- Do you know where your nearest defibrillator is when not at work?
- Does any organisation know where the nearest defibrillators are in UK at this time?

HELICOPTER EMERGENCY SERVICE EQUIPMENT

DEFIBRILLATOR LOCATOR MAP

Welcome to our CAERvest and Automated External Defibrillator (AED) locator.

- Their goal is to provide a detailed map of the life saving equipment, for public availability across the UK
- So if your community has a defibrillator get it logged



- **P**rovision **o**f **p**sychological support to **p**eople in **I**ntensive Care
- NIHR funded
- Stage one of POPPI began in November 2013 and finished in June 2015.
- Stage two started in September 2015 and completed recruitment in February 2017.

- Stage one:
- The feasibility study developed and tested the training course for intensive care nurses in **2** NHS hospitals
- The pilot study, conducted in **2** different NHS hospitals, ensured the necessary processes/procedures were in place to proceed to stage two

I was the PI on my unit for Stage 1& 2

- Stage two was RCT conducted in **24** NHS hospitals throughout the UK to find out if psychological training for nurses improved patients' well-being after a stay in the ITU
- Psychological training was provided to nurses in **12** ITU. Patients in these units were compared with patients in the other **12** ITU where nurses did not receive psychological training.

Intervention

- 127 patients screened
- 44 of these received at least one support session
- 42 received relaxation and recovery programme

Non intervention

- 435 patients screened
- 86 patients consented
- 62 of these completed the 5 month questionnaires

Limitations

- Intervention only on 2 UK sites
- Limited patient feedback
- Key staff on each units had to complete a 3 day face to face training course
- All staff on each of intervention units had to receive training

Strengths

Interventions acceptable to patients and staff

Conclusion

- Nurses can created a therapeutic environment
- Stress support sessions can be delivered nurses
- A relaxation and recovery programme can be used
- The POPPI psychological intervention was feasible, acceptable and ready to evaluate further

Can this be feasibility be rolled out in UK critical care units?

The NEW ENGLAND JOURNAL of MEDICINE

2018: 378:2365-2375

A Randomized Trial of a Family-Support Intervention in Intensive Care Units

- RCT involving patients with a high risk of death and their surrogates (families) in 5 USA ICUs
- 1420 patients enrolled into study
- A multicomponent family-support intervention delivered by the inter-professional ICU team vs. usual care
- Primary outcome HADS score at 6/12 of surrogates
- Secondary outcomes included Quality of Communication modified, Patient Perception of Patient Centeredness, Impact of Event Scale and LoS

Intervention

- The intervention arm was led by nurses selected for their strong communication skills, who received training focused on the skills needed to support families of seriously ill patients
- The nurses met with families on a daily basis and arranged clinician-family meetings within 48 hours after enrolment and every five to seven days
- The nurses were charged with the role of keeping family members closely informed, helping them prepare questions for the doctor, checking understanding, and debriefing after meetings

Results

- No difference between the groups' HADS scores at 6/12 or Impact of Event Scale
- Quality of Communication and Patient Perception of Patient Centeredness was better in intervention group
- LoS lower in intervention group (6.7 days vs. 7.4 days)

Conclusion

- Family-support intervention delivered by the team did not significantly affect the families' burden of psychological symptoms
- The families' ratings of the quality of communication and the patient- and family-centeredness of care were better
- The LoS was shorter in intervention group

Why is this not being done in all units already?

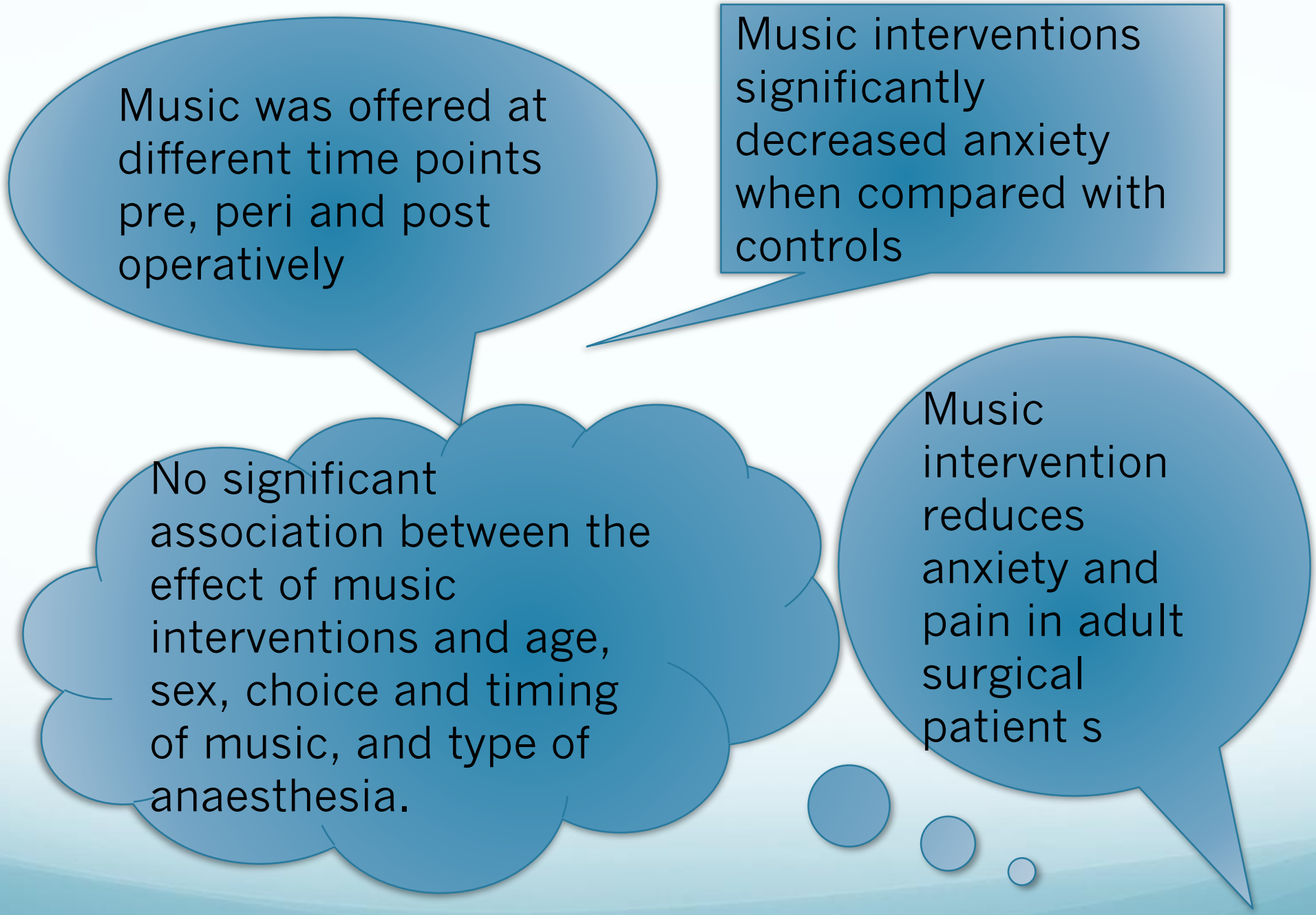
- Cost of intervention is minimal compared to cost of a days stay in critical care
- Is this not what nurses should be already doing?
- If you had a relative / friend in critical care is this not what you would want?

BJS

April 2018

Meta-analysis evaluating music interventions for anxiety and pain in surgery

- Aim to evaluate anxiety and pain following music interventions compared with control conditions in adult undergoing surgery
- Meta-analysis looking at effects of music interventions on anxiety and pain during invasive surgery published between January 1980 and October 2016
- 92 RCTs (7385 patients) were included in the systematic review, of which 81 were included in the meta-analysis.


Music was offered at different time points pre, peri and post operatively
Music interventions significantly decreased anxiety when compared with controls
No significant association between the effect of music interventions and age, sex, choice and timing of music, and type of anaesthesia.
Music intervention reduces anxiety and pain in adult surgical patient s

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Music has a potential to benefit critically ill patients but more evidence is needed

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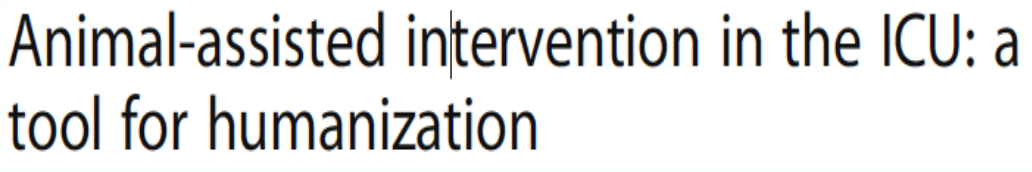


2018 22:22

- You all know the effects that critical illness has on patients and families
- This paper looked at non-pharmacological things to reduce suffering and promote recovery in more humanized critical care environments
- This editorial put into context what I knew
- “…through creating humanized ICU environments patients no longer must wait for hospital discharge before they begin to live again…”

Animal Assisted Intervention

Reduced suffering

Things to consider

- Who will benefit from dogs (own or AAI) visiting
- Protect patient from zoontic infections
- Clean (wash / groom) dog before and after visits
- Make sure dog not ill, and fully vaccinated
- Ensure no open wounds on patient
- Wash hands of all concerned before and after touching dog

Working with Dogs in Health Care Settings

2018

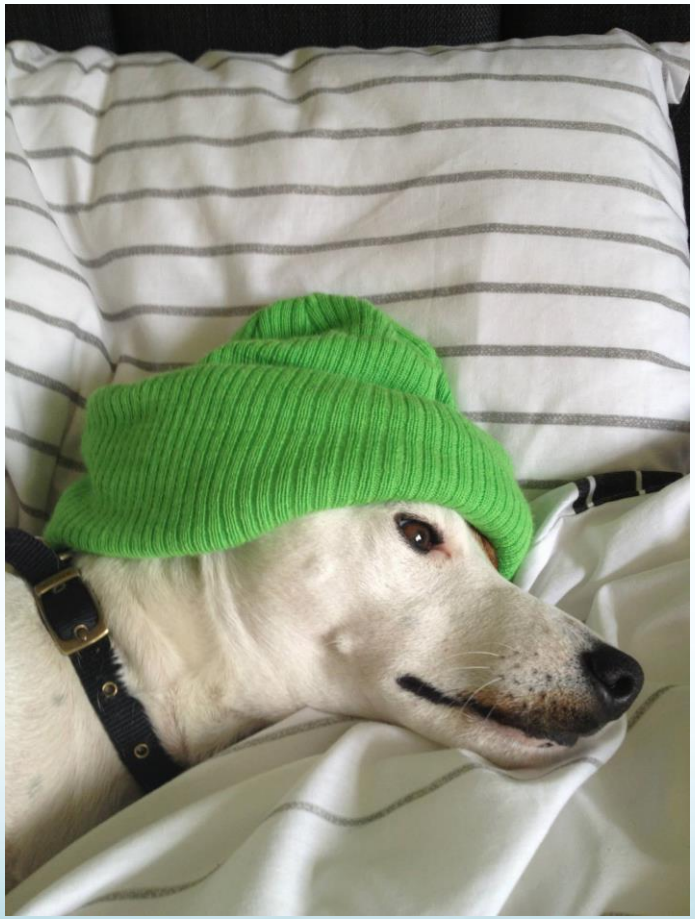
Royal College of Nursing

- Dogs registered and trained with a visiting Animal Assisted Intervention organisation
  - ✔
- Patients' pet dogs – some exceptions highlighted but not critical care
  - ✘

Template for pet dogs visiting health care settings

OWN PET VISIT PLAN

The internet has loads of examples of dogs visiting patients and being in bed with them !!!



One to look out for in 2019

Clinical effectiveness & Cost effectiveness

Primary outcome at 90 days

Secondary outcomes

Death in critical care and acute hospital

Duration of advanced respiratory support and renal support

LoS in critical care and acute hospital

Cognitive function 90 days and 1 year

- 65 adult general critical care units
- All patients >65 years who are getting vasopressors and who have vasodilatory hypotension
- RCT : permissive hypotension with a MAP 60 – 65mmHg vs. usual care

icnarc

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