Sleep – An Important Component Of Recovery on BCH Respiratory Unit

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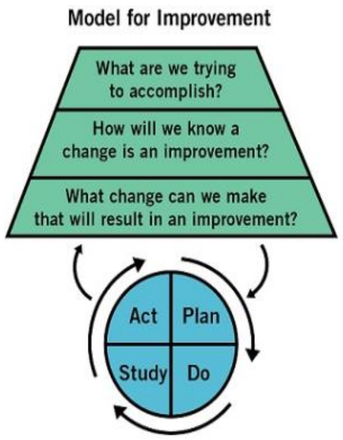
Introduction

It is acknowledged that sleep plays an important role in recovery from illness. Yet , hospital wards do not provide an environment conducive to sleep. Pain, anxiety, medication effects, noise, light and medical interventions are just some of the reasons why inpatients report reduced sleep quantity and increased sleep interruptions. Consequences of poor sleep include loss of circadian rhythm, disruption to neurological function such as delirium and in-itself exhaustion and hence reduced engagement in recovery interventions such as physiotherapy.

We sought to improve patient's sleep by targeting noise and light as two patient reported sleep limiting issues.



Aim

To increase the amount of sleep patients are getting on the respiratory unit, wards 8N and 8S, in the BCH by 25% from August 2019 to November 2019.

Methods

We collected our baseline data on patient's individual sleep prior to any intervention.

PDSA cycle 1 – We distributed ear plugs to agreeable patients. Following their night's sleep with ear plugs we collected data via a questionnaire.

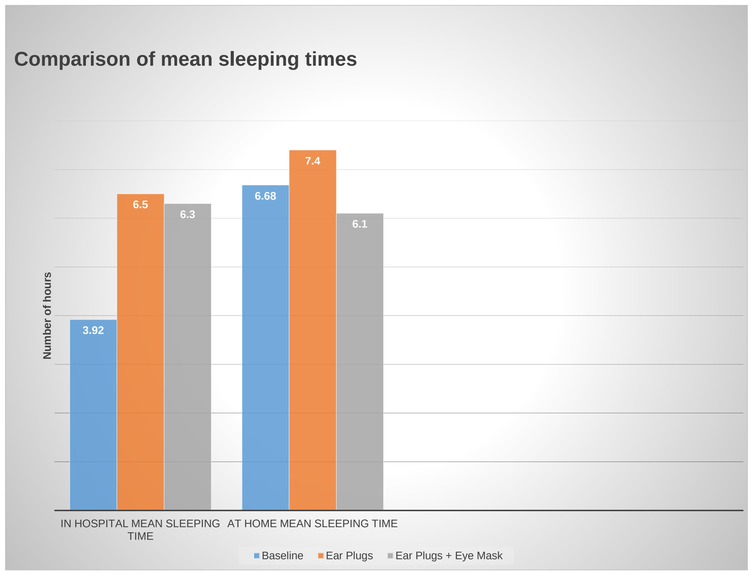
PDSA cycle 2 - We made our second intervention. We distributed eye masks and ear plugs to selected patients.

We collected data following their sleep and compared it to our baseline data and to the results from PDSA cycle 1 (ear plugs alone)

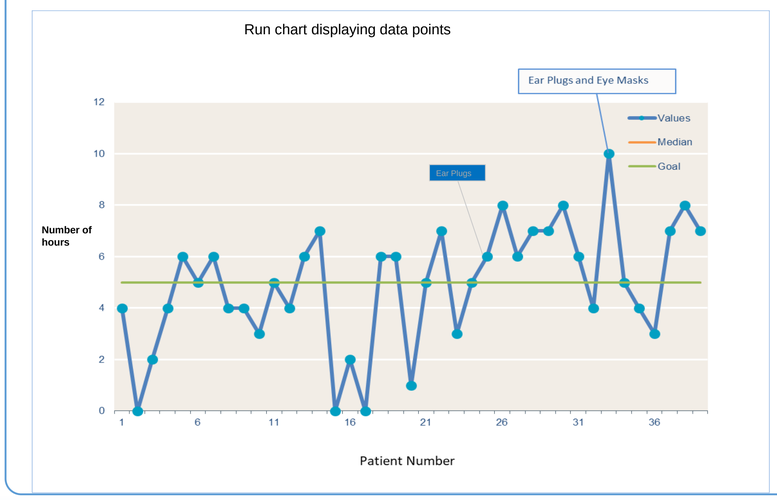
Measurement

We distributed patient questionnaires seeking information on length of sleep, quality of sleep and the cause of any interruptions in the preceding night. We also asked them to record their normal sleeping duration at home. We collected these questionnaires prior to any intervention and following PDSA cycle 1 and 2.

Results



- Mean sleeping time in hospital by 24 patients prior to intervention was **3.92** hours. At home their mean sleeping time was 6.68 hours.
- Mean sleeping time by 8 patients in hospital using ear plugs was **6.5** hours. At home their mean sleeping time was 7.4 hours.
- Mean sleeping time by 7 patients in hospital using ear plug and eye mask was **6.3** hours. At home their mean sleeping time was 6.1 hours.



- 39 patients, number of hours sleep y axis , patient on x axis.
- Median and goal line share the same numerical value.
- Ear plugs first intervention – following this there is a shift of data points. This suggests non-random change – and that our intervention made an improvement.
- Ear plugs and eye mask – there is one astronomical data point , which was one patient who stated it our interventions resulted in the ' best nights sleep of his life'!
- Shows that our intervention of ear plugs met our aim of increasing sleep by 25%.
- Does not show a significant change with eye mask added in compared to ear plugs alone.

Discussion

Our results showed that our intervention significantly increased the amount of sleep of patients on our ward. We met our target. Limits of our study included low patient numbers in PDSA cycle 1 and 2 and due to high patient turn over we could not apply the interventions to our baseline patients. Bias could have been present in the fact we selected patients by choosing to exclude patients who we deemed were too unwell or who would be unable to follow the study instructions. All other patients were offered the interventions , some declined.

Conclusions

These results show that we can improve the sleep of patients in hospitals. Our interventions were simple and low cost. We should consider roll out of this to suitable patients on admission. Patient selection would however have to be considered depending on the patient ability to use such devices safely. Other interventions including staff education, poster displays and medication reviews should also be considered in further PDSA cycles. Improving patient sleep could have many positive outcomes including enhanced recovery times.