Improving inpatient sleep on an acute medical ward

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Method (continued)

Baseline audit (n=41)
- 48.8% (20 out of 41) of patients met their sleep requirements.
- Mean sleep duration 4.33±1.8 hours per night.
- Mean self reported quality of sleep of 3.63±2.8 out of 10.
- 80.5% of patients admit that noise level negatively affected their sleep.
- When asked, 65.9% admitted they would like to try ear plugs.

Intervention
- Discussed findings with junior doctors, junior sisters and ward manager
- Decided on two interventions:
  1) Ear plugs to be ACTIVELY offered on ear plug ward rounds around 10PM by FY1
  2) Band 6 nurses/nurses in charge are to police noise level at night

Pilot re-audit (1st re-audit, n=11)
- Trialed a pilot re-audit over 4 days, to assess feasibility and limitations of interventions
- 54.5% (6 out of 11) of patient met their recommended sleep duration.
- Mean sleep duration of 4.9±1.9 hours per night.
- Mean sleep quality of 4.6±2.0 out of 10.
- All staff nurses (n=9) knew about the interventions and the location of the ear plugs. All senior nurses (n=2) knew they were supposed to enforce noise level at night.

Second re-audit, n=31
- Revealed statistically significant improvement in:
  1) Proportion of patients meeting their recommended sleep duration of 80.6% (80.6% vs. 48.8%, p=0.006)
  2) Mean sleep duration of 5.45 hours (5.45 vs. 4.33 hours, p=0.021)
  3) Mean self reported quality of sleep of 5.94 (5.94 vs. 3.85 out of 10, p=0.004)
- Number of patient complaining of noise decreased (51.6% vs. 80.5%, p=0.05)

Discussion

From our study, we were able to improve sleep target compliance, patient sleep duration and self perceived sleep quality on acute medical ward D57. The interventions were well planned, practical and collaborative with a multidisciplinary approach to improving of sleep quality and implementation was efficient.

We felt that our study benefited from several inherent advantages. Ear plugs were cheap at 20.22 pence per ear plug (£10.11 for 50 pairs) and were already included in the ward budget. Supply chains and distributors were already established. The interventions and data collection were easy to implement.

Overall, the project went well and we met our primary aim of improving inpatient sleep.

Future considerations
- Currently, there are no local guidelines on inpatient sleep. We have drafted a provisional guideline and are trying to get it ratified.
- Some patients felt that the lighting affected their sleep. Perhaps an re-audit with eye masks and ear plugs could be trialed.

Ethics/Approval

This project was approved by the Audit Office at Queens Medical Centre. This project was deemed to be exempt from ethical approval.

Acknowledgement

We would like to thank all of the nursing staff involved on D57 in Queens Medical Centre, Nottingham.

References