**IMPACT OF AN ONLINE SLEEP AND INSOMNIA TRAINING PROGRAMME ACROSS A MENTAL HEALTH TRUST – USE AND BEHAVIOUR CHANGE**

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**Introduction** There is very limited sleep medicine education within the UK at undergraduate or post graduate level. There are a small number of accredited, online sleep medicine course offered at UK universities but these are costly and this may limit access for many health professionals. Face to face training is available for small numbers only. Any sleep education and training should be validated

**Method** An interactive, online sleep medicine training package was developed and embedded within the e-learning modules of the National Health Service Electronic Staff Record (ESR). This was then made freely available to every staff member of a large UK mental health trust (total staff 7000). This allowed all health professionals to access the material. Data analytics then tracked patterns of use, the knowledge gained as measured by knowledge based quiz before and after training. The results of the first 50 users are presented in detail. It comprised 4 x 45 minute modules covering function of sleep and physiology over the lifespan, sleep disorders, relevant investigations for in-patients and out-patients, basic principles of sleep services. WatchPAT 300 (WP) is a finger-mounted sensor device that uses peripheral arterial tonometry to estimate the apnoea hypopnoea index (AHI). While its use is increasing it has not been validated in patients with a BMI >35, the target population in bariatric surgery.

**Results** Of the first 50 users that registered sequentially, the majority were nursing staff (36%), psychologists (30%) but medical (4%), pharmacy (2%), service managers (10%) also completed training. 39 viewed all modules, of those who completed post intervention quiz all had improved knowledge base. Time to complete training had a wide range from 5 days to 3 months with 32% viewing on multiple occasions.

**Discussion** This is a novel use of the NHS ESR system which allows e-learning for sleep medicine in a format that can be used to validate the effectiveness of training. It allows a complete range of health care professionals in secondary care to access free, online sleep medicine education.

**VALIDATION OF WATCHPAT 300 FOR PRE-OPERATIVE SCREENING OF OSA IN PATIENTS UNDERGOING BARIATRIC SURGERY**

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**Introduction** Undiagnosed obstructive sleep apnoea (OSA) is increasingly recognized as a serious post-operative risk with bariatric surgery, hence increasing need for pre-operative screening and a need for simpler ways for screening than the clinical standard, respiratory polygraphy, to mitigate strain on sleep services. WatchPAT 300 (WP) is a finger-mounted sensor that uses peripheral arterial tonometry to estimate the apnoea hypopnoea index (AHI). While its use is increasing it has not yet been validated in patients with a BMI >35, the target population in bariatric surgery.

**Aim** To validate WP against polygraphy in pre-bariatric surgery patients with clinically suspected OSA and a BMI>35 and to assess patient acceptability of WP.

**Method** AHI was measured simultaneously with WP and Embletta. Outcome measures were 1) autoscored AHI from WP and 2) manually re-scored AHI from Embletta. Agreement between AHI from Embletta and WP was assessed using intra-class correlation coefficient (ICC), bland Altman and ROC plots.

**Results** 28 patients (22 female/6 male, mean ± SD age 44.1 ± 11.6, BMI 45.7 ± 7.5) participated. One study failed due to the patient removing the WP probe prematurely. AHI was higher in WP than Embletta (28.1± 17.9 versus 15.0 ± 13.4; p<0.05). There was a strong positive correlation between WP and Embletta AHI measurements (ICC 0.876 (95% CI 0.75-0.94; figure 1). Bland Altman plots revealed a systematic bias; differences diverging at higher AHI values. A ROC plot revealed high sensitivity and specificity for an AHI >15 (Area under the curve 0.917; p<0.05). 97% of respondents reported that WP would be acceptable to them if introduced into the bariatric surgery pathway.

**Discussion** WP accurately estimates the AHI in pre bariatric surgery patients, has a low failure rate and is clinically acceptable in this group. Further larger scale studies are needed to confirm these findings before incorporating into clinical guidelines.