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## PREVENTIVE HEALTH IN A CHANGING WORLD

### WATCHPAT HOME SLEEP TESTING SERVICE FOR DIAGNOSING OBSTRUCTIVE SLEEP APNOEA – A RAPID HEALTH TECHNOLOGY ASSESSMENT

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#### **Background**

The WatchPAT is a home sleep study device that allows earlier diagnosis in patients with Obstructive Sleep Apnoea (OSA) and reduces demand for in-laboratory studies. A rapid health technology assessment (HTA) was carried out to inform the introduction of this service.

#### **Methods**

The rapid HTA investigated the diagnostic accuracy of home sleep testing using WatchPAT. The PICO elements were:

- 1) Population- Adult patients who require sleep testing for suspected OSA
- 2) Intervention- Home Sleep Test using WatchPAT
- 3) Comparator- Polysomnography
- 4) Outcomes- Clinical Accuracy of WatchPAT

The Cochrane Database of Systematic Reviews, PubMed (MEDLINE) and Epistemonikos were searched for systematic reviews and HTA reports.

#### **Results**

Evidence on the diagnostic accuracy of the WatchPAT for OSA was identified from three systematic reviews and three additional primary studies. Studies identified from systematic reviews showed statistically significant correlation between WatchPAT and Polysomnography. Studies comparing respiratory disturbance index had a combined correlation of 0.879 (95% CI, 0.849-0.904;  $P < .001$ ); those comparing the apnea-hypopnea index, 0.893 (0.857-0.920;  $P < .001$ ); and those comparing the oxygen desaturation index, 0.942 (0.894-0.969;  $P < .001$ ). Good agreement and correlation was also demonstrated between the WatchPAT and Polysomnography in three primary studies. However, only two known studies provided evidence of efficacy for home-use as the majority of the evidence reported the performance of WatchPAT in the clinical setting.

#### **Conclusion**

The findings suggest that WatchPAT provides useful data for identification of patients with suspected OSA when performed in the clinical setting. More evidence is needed to validate its usefulness in a home-setting.