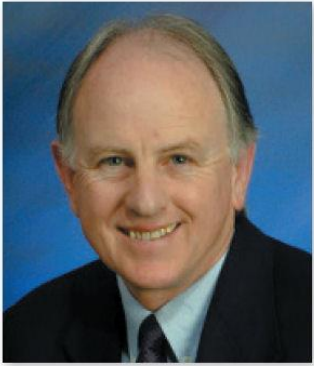




Dr Alex Bartle

Medical Director
Sleep Well Clinic
Christchurch



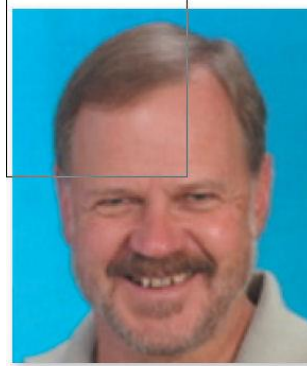
Dr Michael Hlavac

Respiratory and Sleep Physician
Cansleep
Christchurch



Dr Laurie McLay

University of Canterbury
School of Health Science



Professor Richard Jones

Neuroscientist and Neuroengineer
New Zealand Brain Research Institute
Christchurch

Saturday, August 10, 2019

(Room 5)

14:00 - 16:00 WS #105: Sleep 101 Forum (120mins, not repeated)

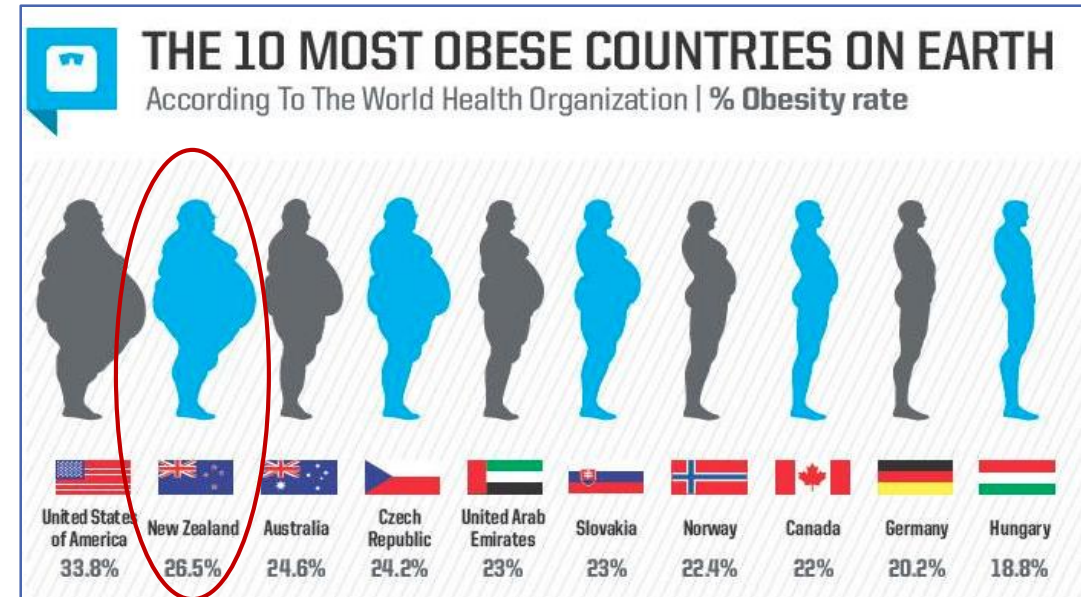
An Update on OSA Assessment and Management ...in 20 minutes

South GP CME 2019

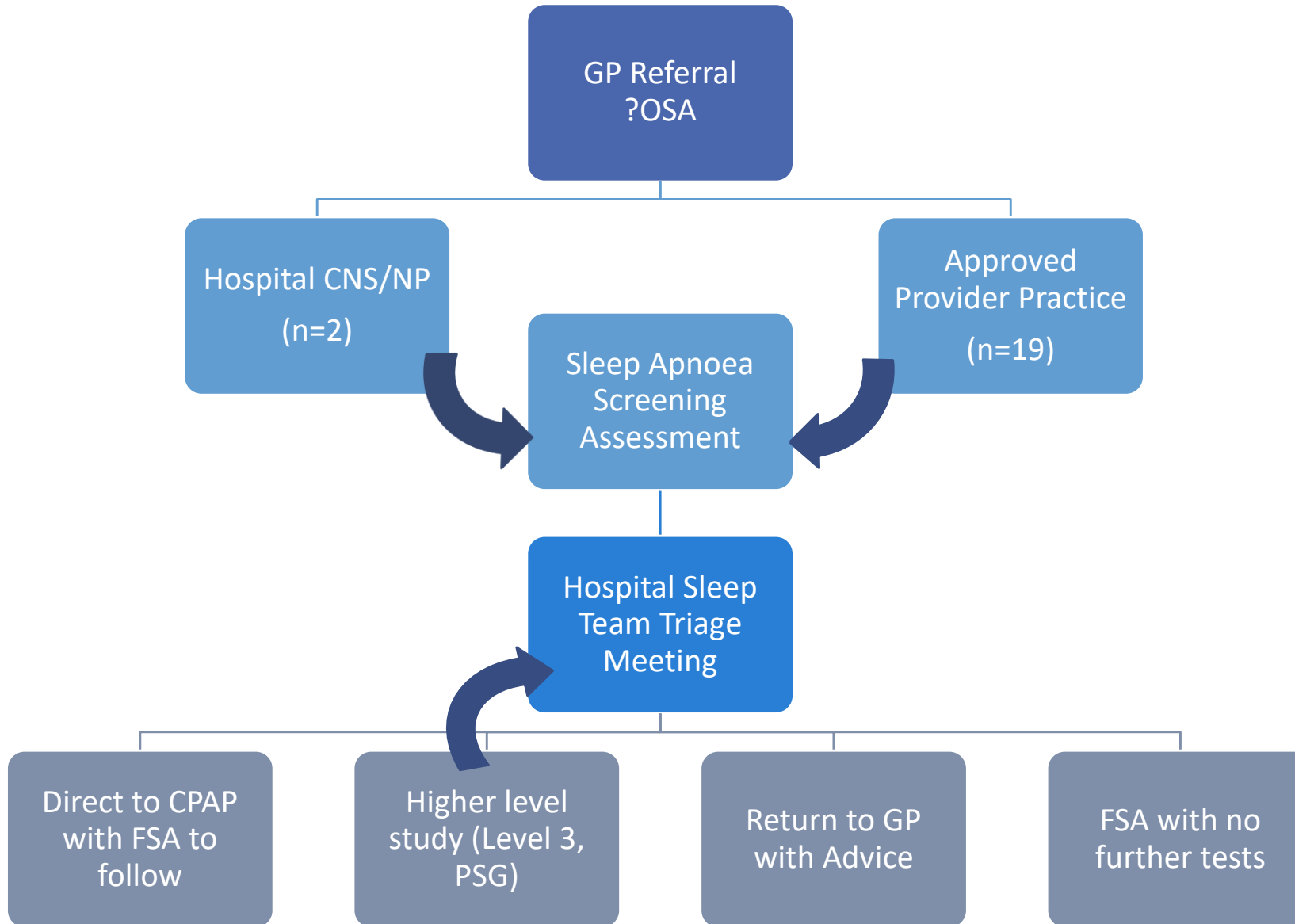
Michael Hlavac
Sleep and Respiratory Physician

OSA – Global/Local Challenges

- Rising obesity rates
 - 27 % NZ population
- Estimated prevalence of moderate to severe OSA is now 25%
- A third of patients presenting to GPs have symptoms suggestive of OSA
- Long waiting lists, with socioeconomic & geographical barriers
- Traditional models of care unable to meet demand
 - Interest in alternative health care models



CDHB Sleep Pathway



Primary Care Sleep Assessment Service

npj | Primary Care Respiratory Medicine

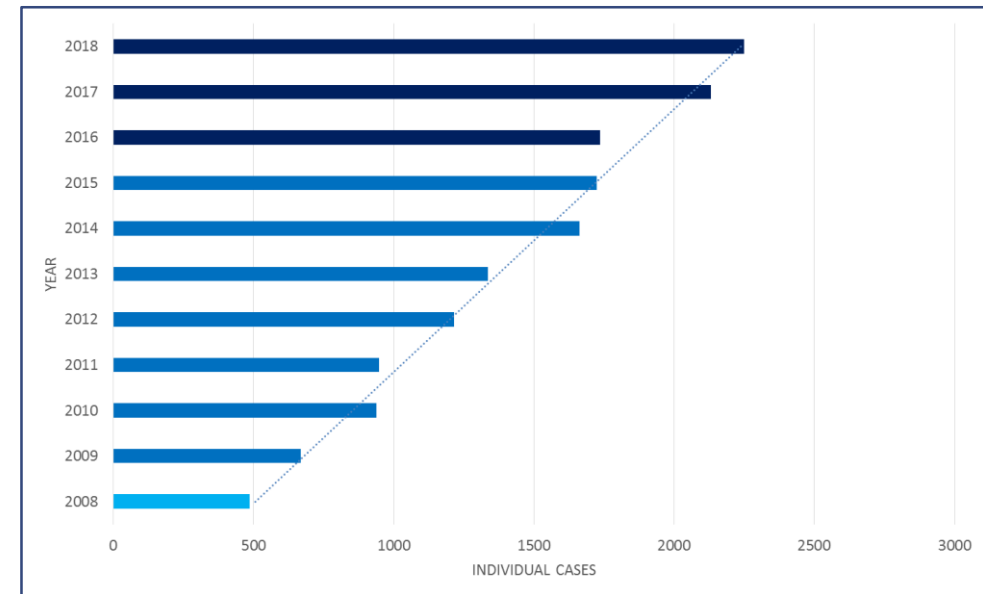
www.nature.com/npjpcrm

ARTICLE OPEN

Development and outcomes of a primary care-based sleep assessment service in Canterbury, New Zealand

Michael J. Epton^{1,2}, Paul T. Kelly¹, Brett I. Shand³, Sallyanne V. Powell¹, Judith N. Jones², Graham R. B. McGeoch³ and Michael C. Hlavac^{1,2}

“the establishment of a community sleep assessment service and sleep MDM, led to significantly **more assessments**, with **short waiting times for treatment**, especially in high-risk patients with severe obstructive sleep apnoea. Most patients can be assessed without more complex studies or face-to-face review by a sleep specialist”



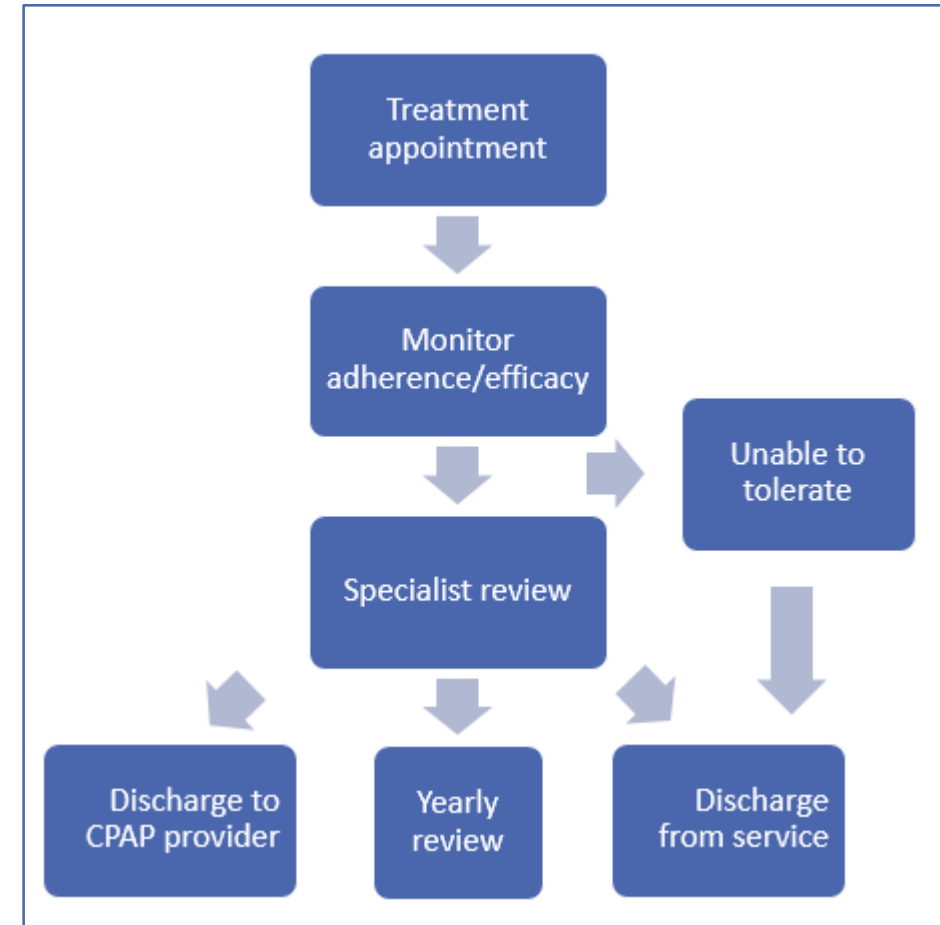
Sleep Disordered Breathing: Treatment

Continuous positive airway pressure (CPAP) is mainstream treatment

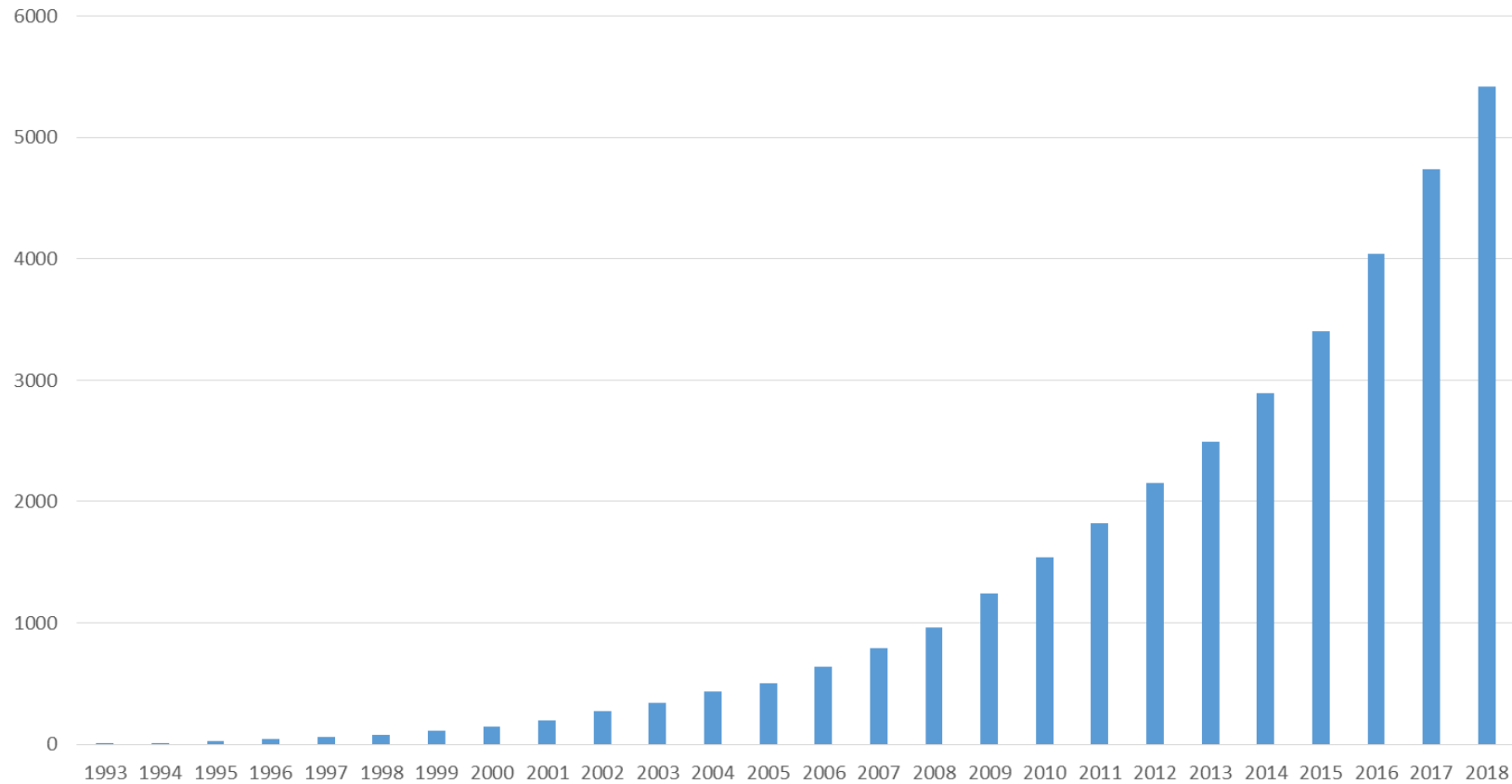


Criteria for funded CPAP therapy in CDHB

- Severe OSA (>30 breathing pauses per hour)
- Evidence of mild/moderate OSA in combination with:
 - *Severe subjective daytime somnolence*
 - *Occupational risk*
 - *Significant co-morbidities*



CPAP Demand – 900 trials p/a



Follow up demand (patients with CPAP device)

Changes to CPAP provision/follow-up

- Group CPAP Sessions – 8 patients per session, weekly over 3 weeks
 - Waitlist reduced from ~250 to <100 days
 - No compromise to patient care
- Community CPAP Model of Care
 - CPAP gifted to patient
 - Complex patients (20%) retained by Sleep Service for annual review
 - BiPAP, occupational drivers, complex comorbidities
 - Non-complex (80%) discharged to community provider (USL medical)
 - Annual replacement of consumables, CPAP machine as required
 - Further Sleep Unit review only at request of GP team
- Cloud-based compliance monitoring
 - Identify non-compliers (~30%) early (ie <6 months)
 - Lower threshold for discontinuing CPAP and pursuing alternative treatment options

Other DHB management options

- Mandibular advancement devices
 - Only by specialist referral to CDHB Dental Service
 - Same severity criteria as CPAP
 - Part-charge to patient (~\$300)
- ENT/ORL
 - Variable ability to manage all referrals
 - Will require sleep study so best referred through Community Sleep Pathway
 - Combined Sleep Clinic (MH/SS/RL) – multidisciplinary approach
- Bariatric surgery/weight loss
 - No current sustainable model in public sector



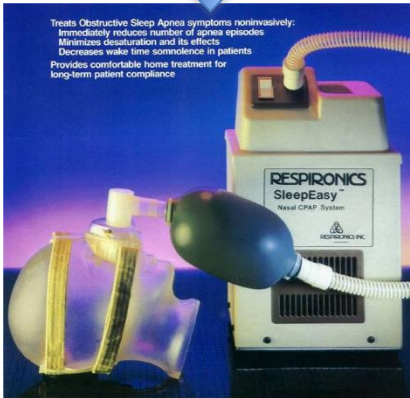
New Developments in OSA Management



Evolution of CPAP therapy



Vortex Blower with Sullivan/Bruderer Soft Mask



CPAP Comfort Settings

Ramp function

- Little evidence to suggest improved compliance, potential for “ramp abuse”

Expiratory pressure relief technologies

- Reduced pressure in expiration (in various ways) to enhance patient comfort
EPR (Resmed); C-flex, A-flex (Philips Respironics); SmartFlex (DeVilbiss)
- No significant difference of any system cf standard CPAP (Cochrane Review 2009)

SensAwake (Fisher & Paykel)

- Drops pressure in response to periods of irregular breathing (~wakefulness)

“For Her” (Resmed)

- Algorithm sensitive to changes in flow limitation
- Responds rapidly to smaller reductions in flow





PRODUCT NEWS

10 Sleep Apnea Treatments to Consider for Patients Who Fail or Refuse CPAP

Published on August 30, 2017



Oral Appliances

- Mandibular advancement splint:
 - Mild-mod OSA, lower BMI
 - Range of devices, costs
 - “boil & bite” vs custom made
 - Overall equivalent to CPAP
 - Similar effects on BP
 - Less effective, but better compliance
- Tongue stabilisation device (Aveo):
 - Effective but limited tolerance



UA Surgery for OSA

- Results best when clear anatomical problems
 - Tonsillar hypertrophy
 - Retrognathia
 - Maxillomandibular advancement
- DISE/awake endoscopy to define level of collapse
- Less success in obese patients
- Well-defined prognostic factors now used to guide surgery:



Friedman Classification

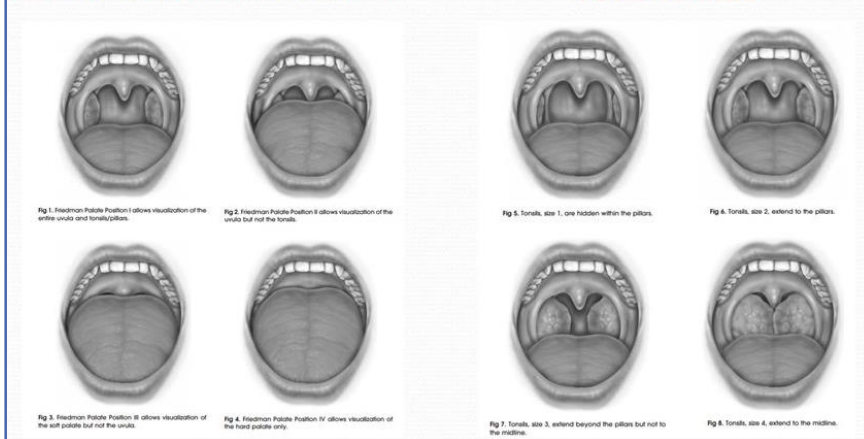
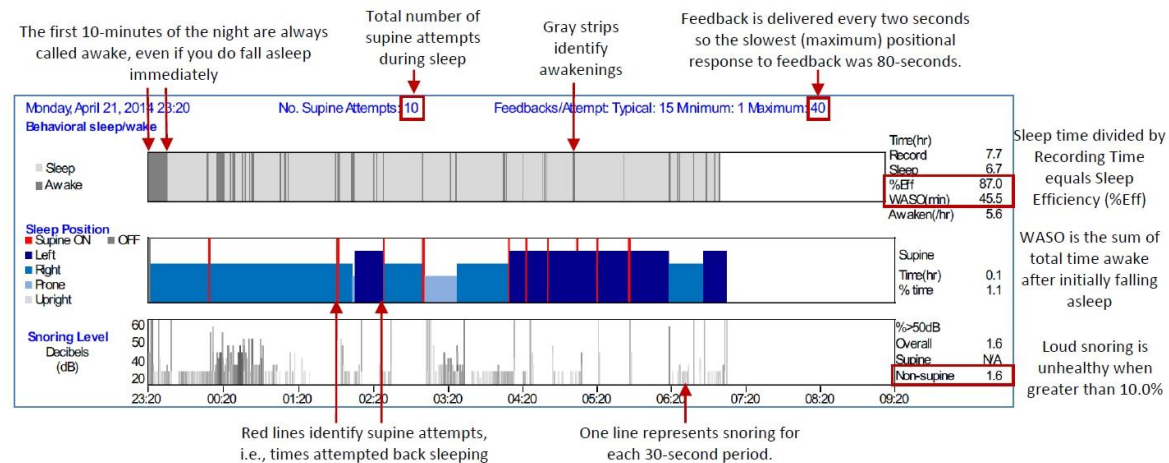


Table 2. Friedman's Classification

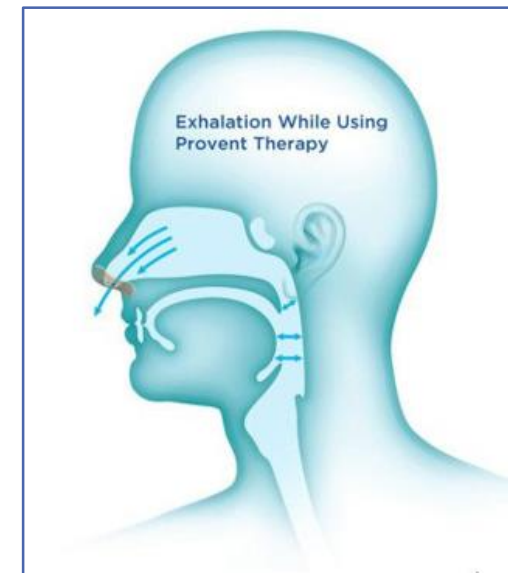
Stages	Modified Mallampati	Pharyngeal Tonsil	BMI
Stage I	1	3.4	<40
	2	3.4	<40
Stage II	1.2	1.2	<40
	13.4	3.4	<40
Stage III	3	0.1.2	<40
	4	0.1.2	<40
Stage IV	1.2.3.4	0.1.2.3.4	>40

Anti-supine Technology

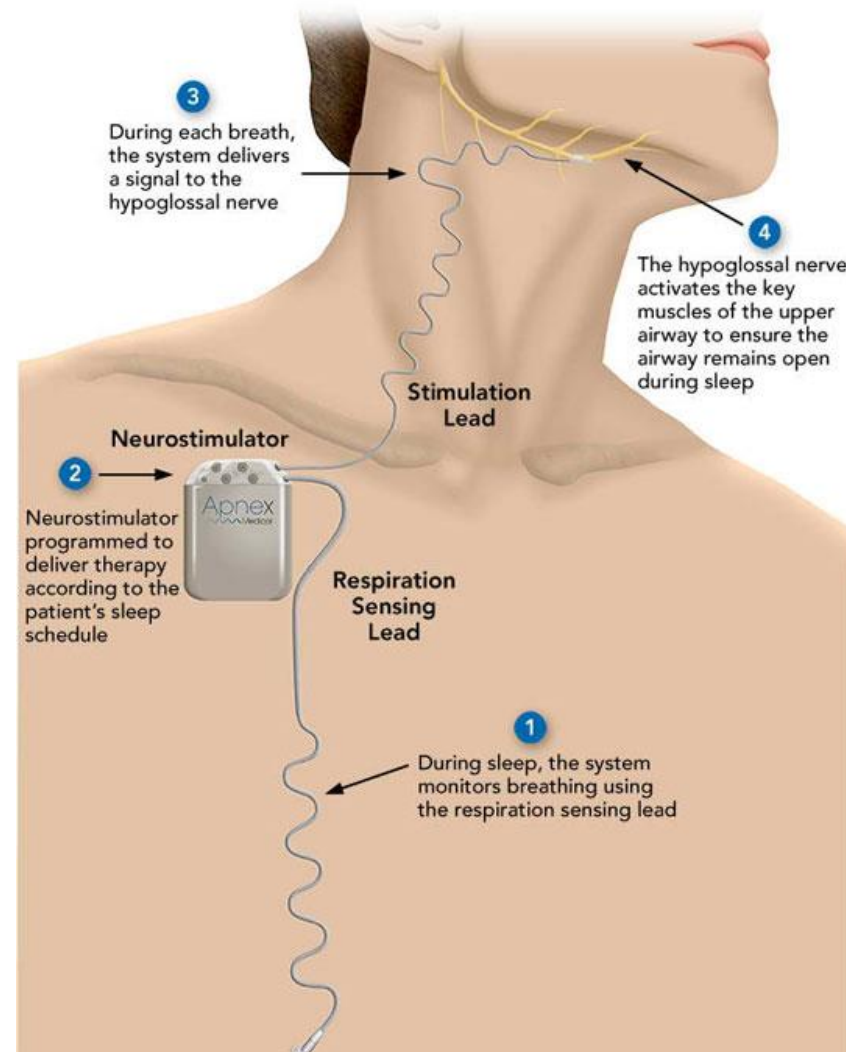


Provent

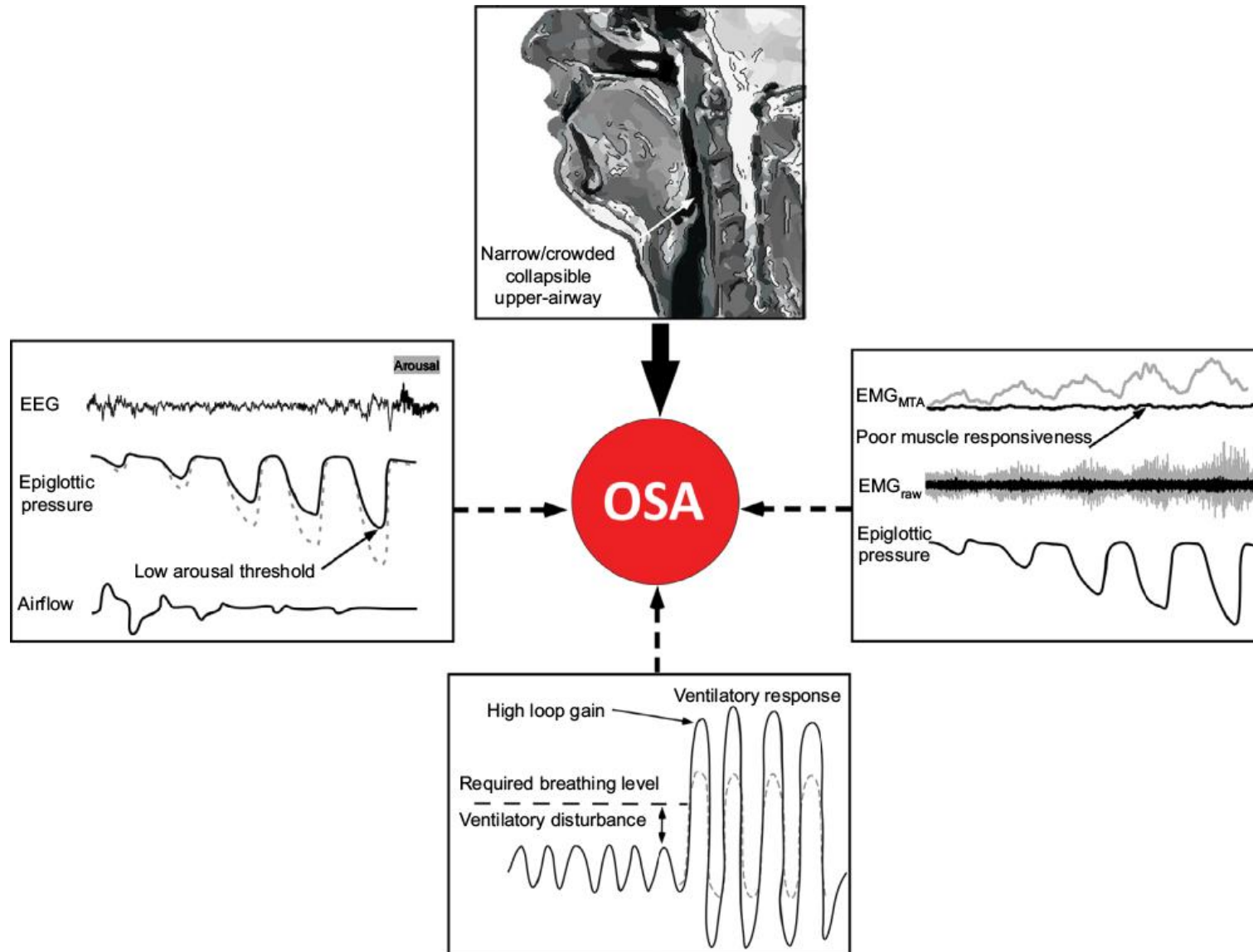
- Novel EPAP device
 - Positive UA pressure during expiration
 - 30-50% reduction in AHI in some studies
- Available in NZ
- FDA Approved for use in US
- \$130/month



Hypoglossal Nerve Stimulation



Phenotyping for OSA



Phenotyping for OSA

