

Transforming the Sleep Health of Australians

Promoting Awareness
and Behaviour Change
for all Australians

Empowering and
Educating
Primary Care

Sleep Health Foundation and
Australasian Sleep Association
Pre Budget Submission 2020-21



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Foreword

This proposal will use established and effective methodologies to achieve widespread and significant changes in sleep health.

Although all Australians would benefit from improved sleep health, this proposal will especially prioritise vulnerable groups - including children, the elderly and those with mental health disorders - who are highly susceptible to the detrimental effects of sleep loss and sleep disorders.

The proposal is well aligned with the:

- Health Minister's **Long-Term National Health Plan** (pillar 3 - prioritising mental health and preventive health)
- **Productivity Commission Mental Health Report** (reducing the economic impact of mental ill-health and suicide)
- **National Preventive Health Strategy** (preventing and managing chronic disease)
- Recommendations from the 2019 **Parliamentary Inquiry into Sleep Health Awareness**

This joint Sleep Health Foundation/Australasian Sleep Association two-part proposal asks for \$28.9M support, staged over 5 years (year 1 = \$5.8M) to deliver a world first comprehensive sleep health strategy as an integral component of a broader preventative health plan.

Who we are

The Sleep Health Foundation (SHF) is Australia's leading advocate for healthy sleep. Its mission is *to improve people's lives through better sleep.*

The Australasian Sleep Association (ASA) is the peak scientific body for sleep in Australia. Its mission is to *promote sleep health and sleep science.*

Building on the 2019 *Bedtime Reading* Parliamentary Report

The economic consequences of sleep loss and sleep disorders in Australia were estimated at \$66 billion in a Sleep Health Foundation – Deloitte Access Economics report released in 2017 (and subsequently peer-reviewed and published internationally).^{1,2} In recognition of the importance of the sleep health of Australians for their physical, mental and economic well-being, a Parliamentary Inquiry into sleep health awareness was convened by the Federal Standing Committee on Health, Aged Care and Sport, with the encouragement and support of the Minister of Health, the Hon. Greg Hunt MP.

The report of the inquiry, *Bedtime Reading*, was released in April 2019 and detailed 11 recommendations that collectively recognised **sleep as the third pillar of a healthy lifestyle**, alongside nutrition and exercise, and called for improved access to services and therapies to address sleep problems.

Key recommendations were Recommendations 8 and 9. **Recommendation 8** called for a national sleep health awareness campaign and **Recommendation 9** advocated effective training mechanisms to improve the knowledge of primary health practitioners in managing sleep health problems.



Sleep is the critical third pillar in achieving maximum wellness.

We propose to address these recommendations through a costed 5-year Sleep Health Awareness and Behaviour Change Campaign (see Part A below) to be conducted in partnership with states and territories and key stakeholder groups. This would be supported by a comprehensive Primary Healthcare Practitioner Sleep Education Program (see Part B below) involving key stakeholders and utilising evidence based interactive tools.

This national activity is in the vanguard of international recognition of sleep health problems. The Australian parliamentary initiative was closely followed by a UK Green Paper: Advancing our health: prevention in the 2020s, an encompassing plan to improve health in which sleep is similarly identified as an important component of the healthcare preventative strategy. (www.gov.uk/government/consultations/advancing-our-health-prevention-in-the-2020s/advancing-our-health-prevention-in-the-2020s-consultation-document#executive-summary)

Similarly, US sleep experts are currently 'urging Members of Congress to support federal funding for critical sleep research and awareness' (www.prnewswire.com/news-releases/project-sleep-partners-with-sleep-research-society-to-host-third-annual-advocacy-day-300960538.html)

Health and economic consequences of improving sleep health

Improvements in sleep health will prevent or reduce the impact of the most significant **chronic diseases** affecting Australians and **save lives**. Inadequate sleep increases cardiovascular risk, leads to weight gain and risk of diabetes and adversely affects mental health. Furthermore, it substantially reduces productivity inside and outside the workplace and increases the risk of workplace and motor vehicle accidents and fatalities.¹

Obstructive sleep apnoea (OSA) and insomnia are highly prevalent chronic diseases affecting 9% and 15% of the Australian population respectively. They result in impaired daytime performance, cardiovascular disease, diabetes, depression, impaired productivity and accident risk. Proven, cost-effective treatments exist for them. However, they are under-diagnosed and under-treated problems. Partly because of this, it is estimated that there are over 3,000 deaths from sleep loss and sleep disorders annually in Australia.¹

Improving sleep quantity and quality and better diagnosis and **treatment of sleep disorders** will have a profound effect on **reducing mental ill-health**, including depression, anxiety and suicide. Sleep disturbance predicts the development of insomnia, anxiety and suicide and hinders the response to treatment. Treatment of sleep disorders (continuous positive airway pressure for OSA, cognitive behavioural therapy for insomnia) improves mood. These evidence-based findings have been highlighted during the recent public hearings for the Productivity Commission report into Mental Health.

There is clear evidence that **improving sleep loss and treating sleep disorders is cost-effective** and would produce substantial returns on investment. A recent economic analysis demonstrated that it costs the Australian economy more to **not** treat OSA than to treat it, with net savings of \$AU470 per person treated per year when the well-being, productivity and safety gains are accounted for.³ Treating insomnia with cognitive behavioural therapy for insomnia has also been demonstrated to be highly cost effective.⁴

The annual economic burden relating to inadequate sleep of \$66.3 billion of direct and indirect health costs¹ is based on evidence showing 40% of Australians regularly get inadequate sleep, of which half is due to untreated sleep disorders.⁵ Reducing the percentage of Australians getting inadequate sleep to 30%, an achievable aim based on other successful public education and intervention campaigns,⁶ would save the economy \$16.5 billion annually.

The available data provide a compelling case for implementation of the current proposal, both from a scientific and an economic perspective.

We thank the Government for considering this request.



Emeritus Professor Dorothy Bruck
Chair, Sleep Health Foundation



Associate Professor Alan Young
President, Australasian Sleep Association

Table 1. Sleep Health Foundation and Australasian Sleep Association Budget Proposal - overview

	2020-21 (\$)	2021-22 (\$)	2022-23 (\$)	2023-24 (\$)	TOTAL (\$)
National Community Education Campaign	\$2.720 million	\$5.227 million	\$5.154 million	\$5.161 million	\$18.262 million
National Education Programs for Health Professionals	\$2.370 million	\$2.825 million	\$2.855 million	\$2.885 million	\$10.935 million
TOTAL	\$5.090 million	\$8.052 million	\$8.009 million	\$8.046 million	\$29.197 million

References

1. Deloitte Access Economics. *Asleep on the Job: Costs of Inadequate Sleep in Australia*. 2017
2. The economic cost of inadequate sleep. Hillman et al. *Sleep*. 2018
3. Cost-effectiveness of continuous positive airway pressure therapy for obstructive sleep apnea: health care system and societal perspectives. Streatfeild et al. *Sleep*. 2019
4. Internet-Based Cognitive Behavioural Therapy for Insomnia: A Health Economic Evaluation. Thiart et al. *Sleep*. 2016
5. Report to the Sleep Health Foundation - 2016 *Sleep Health Survey of Australian Adults*. Adams et al. 2018
6. Use of mass media campaigns to change health behaviour, Wakefield et al. *Lancet*. 2010

PART A.

Sleep Health Awareness and Behaviour Change Campaign

The Sleep Health Foundation (SHF) proposes a national 5-year staged campaign to change community behaviour and practices in relation to healthy sleep.

Our strategy is evidence-based and utilises proven methodologies to achieve outcomes in areas of need, identified in conjunction with consumer and stakeholder representatives. Recognised priorities include the need to promote:

- awareness of normal sleep requirements, including the variable needs between individuals across age groups, and the consequences of inadequate sleep on wellbeing, mood, relationships, productivity and safety
- knowledge of the causes of inadequate sleep, including issues related to inadequate duration of sleep, inappropriate timing of sleep and quality of sleep
- understanding of the nature of sleep disorders such as obstructive sleep apnoea, insomnia, and circadian misalignment with emphasis on their mental health, cognitive and cardio-metabolic consequences
- development of healthy sleep habits amongst Australians with an emphasis on childhood and adolescent sleep to optimise their emotional wellbeing, with particular focus on mental health impacts and risk of suicide
- healthy sleep in older Australians, including identification of sleep disorders among them to improve physical and mental well-being and reduce rates of cognitive decline
- strategies to meet the challenges of shift work and thereby combat its adverse mental, metabolic, physical and performance consequences

The campaign to address these needs will be staged over 5 years to achieve a broad and lasting impact. It will formally identify gaps in knowledge across the community and these will inform the campaign's strategies for raising awareness. Tools for behaviour change will include both established advertising, advocacy and community development techniques and, where appropriate, trial and evaluation of emerging methods being developed internationally.

Proposed components of the staged plan

1. Identify gaps

in community awareness and documentation of adverse behaviours within the predefined communities through dissemination of carefully designed surveys with required levels of reach. Collation and analysis of findings will inform the intervention campaign.

Pre-specified target groups:

- Children and Adolescents
- Shift-workers
- Pensioners, elderly populations and carers

Timeline: 6 months (concurrent with 2 and 3).

Cost estimate: \$150K

2. Perform a synthesis

of existing level 1 (systematic reviews and meta-analyses) and level 2 (randomised controlled trials) evidence aligned with findings of stage 1 to inform recommendations. Summaries will be collated into a document of publishable standard.

Timeline: 6 months (concurrent with 1 and 3)

Cost estimate: \$100K

3. Perform targeted research and/or focus group activity

to assist in the design of an intervention strategy in areas which are deemed to lack sufficient knowledge and understanding.

Timeline: 6 months (concurrent with 1 and 2)

Cost estimate: \$250K

4. Intervention design and strategy

will be informed by stages 1-3. A steering group of stakeholders (see below) will be created to co-design a suite of interventions with marketing experts. This will include development of resources for information dissemination, including software and other products.

Timeline: 6 months (to follow steps 1-3)

Cost estimate: \$0.75M

5. Implementation of the Intervention

by advertisement, media, social media and other dissemination strategies, including roll-out of specific educational tools.

Timeline: 4 years (to follow step 4)

Cost estimate: \$12M

6. Evaluation of impact

Develop tools to measure outcomes. This may include national databases, registries, repeat survey activity.

Timeline: 2 years (overlap with last 2 years of step 5)

Cost estimate: \$2.5M

7. Improve or add methodological changes informed by findings of evaluation

Timeline: 6 months

(overlap with last 6 months of steps 5 and 6)

Cost estimate: \$0.25M

8. Administrative costs

Management cost, project officers' salaries, reporting and consultancy costs are estimated at \$400K per annum (= \$2M over 5 years)

Campaign Total Cost \$18M

over the 5-year life of the project

Steering Group

A steering group will be assembled to include representatives of the following constituents:

1. Sleep Health Foundation- Academic and clinical sleep health experts
2. Primary health care
3. Education representatives
4. Industry representatives
5. Transport representatives
6. Community representatives

The Department of Health will oversee the strategy and ensure the staged plan is executed in accordance with the endorsed comprehensive plan.

Table 2. Estimated Cost of 3-Year (+ Start-Up) National Sleep Health Promotion Campaign

Campaign Component	Component Detail	2020-21 (\$)	2021-22 (\$)	2022-23 (\$)	2023-24 (\$)	TOTAL (\$)
Scoping of campaign by behavioural consultants	High-level strategy draft Project plan	\$400,000 incl. travel and contingency				\$400,000
A national media and social media educational campaign focused on the value of making lifestyle choices that promote wellbeing and alertness through prioritising sleep.	Personnel recruitment	\$10,000	–	–		\$10,000
	Project Personnel (with leave, super):					
	– Manager	\$170,000	\$174,000	\$178,000	\$182,000	\$704,000
	– Officer	\$120,000	\$123,000	\$126,000	\$129,000	\$498,000
	Office expenses	\$80,000	\$80,000	\$80,000	\$80,000	\$320,000
	Evaluation		\$200,000	\$200,000	\$200,000	\$600,000
	Pre-launch marketing	\$750,000				\$750,000
	Launch event	–	\$80,000			\$80,000
Development, promotion and administration of Speaker program	Contractors	\$500,000				\$500,000
A Community Speaker Program for workplaces, Travel (speakers locally community centres, clinics, clubs, older citizen groups and other groups.	Speakers fees		5k pp x 40 = \$200,000	\$200,000	\$200,000	\$600,000
	\$40,000 (sourced where possible)	\$40,000	\$40,000	\$120,000		
A Secondary School Speaker Program for students and their parents	Speakers fees		5k pp x 40 = \$200,000	\$200,000	\$200,000	\$600,000
	Travel		\$40,000	\$40,000	\$40,000	\$120,000
A Primary School Teacher-Delivered Resource Package.	Contractors for development (includes pilot and evaluation)	\$400,000	–	–		\$400,000
An enhanced website providing materials that complement all initiatives	Website Contractor	\$30,000 set-up	\$10,000 update	\$10,000 update	\$10,000 update	\$60,000
	Resource development, interactive facility	\$260,000	\$60,000	\$60,000	\$60,000	\$500,000
Nation-wide promotion of all of the above resources across diverse media and related outlets	Marketing campaign to support awareness and adoption		\$4000,000	\$4000,000	\$4000,000	\$12,000,000
TOTAL		\$2,720,000	\$5,227,000	\$5,154,000	\$5,161,000	\$18,262,000

PART B.

Primary Healthcare Practitioner Sleep Education Program

The Australasian Sleep Association (ASA) will deliver an education program for primary healthcare professionals that underpins the implementation of a community behaviour change package. The ASA has collaborated with key professional organisations to develop, implement and disseminate sleep learning tools to Australian primary health care professionals.

Partner organisations are:

- Royal Australian College of General Practitioners (40,000 members)
- Australian Psychological Society (23,000 members)
- Australian Primary Health Care Nurses Association (5,000 members, 15,000 on database)
- Pharmaceutical Society of Australia (18,000 members)
- Pharmacy Guild of Australia (20,000 pharmacists, 18,000 pharmacy assistants)
- Australian Dental Association

Proposed learning packages:

- Online interactive case-based learning tools, webinars, point of care desktop tools
- Embedded assessment and accreditation of each activity
- Programs specifically tailored for each primary care group
- Core topics - normal adult sleep and sleep hygiene, paediatric sleep and sleep disorders, adolescent sleep and sleep disorders, sleep disorders in the elderly, insomnia, obstructive sleep apnoea, circadian rhythm disorders, limb movement disorders, narcolepsy, idiopathic hypersomnia, parasomnias

Costs to produce each online package varies with the hosting organisation: RACGP \$50,000, Pharmacy Guild \$35,000, Flinders University \$100,000 for a 1 hour online module. The latter includes detailed interactive components (case vignettes) and built in assessment tools. Additional costs for administration, assessment and promotion are built into the pre budget submission.

The total cost for the Primary Health Care Education proposal is \$10.9 million over a 4-year period.

The ASA is ideally placed to develop this program. Our membership comprises educational experts in the field of sleep medicine (sleep physicians, general practitioners, nurses, psychologists, pharmacists and dentists).

We have a proven track record of producing educational tools with multiple primary care groups. These include CME-accredited online learning tools, webinars, podcasts, face to face lectures and courses with the organisations listed above.

We currently collaborate with the NHMRC-funded National Centre for Sleep Health Services Research to implement evidence-based educational strategies. Involvement of Primary Health Networks will also be critical to the dissemination of these learning tools.

Combined costs of the proposals

A: Sleep Health Awareness and Behaviour Change Campaign	\$18M over 5 years
B: Primary Health Care Education proposal	\$10.9M over 4 years
Total Cost	\$28.9m

Table 3. Estimated cost of 3-year education and training programs for health professionals

Health Profession Group	Component Detail	2020-21 Start-up (\$)	2021-22 (\$)	2022-23 (\$)	2023-24 (\$)	TOTAL (\$)
General Practitioners	Assessment of current status including surveys and face to face qualitative research	\$400,000				\$400,000
	Development and delivery of online tools	\$90,000	\$180,000	\$180,000	\$180,000	\$630,000
	Webinar development and delivery	\$30,000	\$60,000	\$60,000	\$60,000	\$210,000
	Development and delivery of GP desktop programs	\$100,000	\$150,000	\$150,000	\$150,000	\$550,000
	Dissemination, engagement and promotion of educational programs to GPs	\$80,000	\$100,000	\$100,000	\$100,000	\$380,000
	Management of accreditation process	\$10,000	\$25,000	\$25,000	\$25,000	\$85,000
	IT support and graphic design	\$40,000	\$60,000	\$60,000	\$60,000	\$220,000
	Office expenses	\$30,000	\$50,000	\$50,000	\$50,000	\$180,000
	Project Personnel (with leave, super): – Manager (1.0FTE)	\$170,000	\$174,000	\$178,000	\$182,000	\$704,000
	– Officer (0.5FTE)	\$60,000	\$87,000	\$89,000	\$91,000	\$327,000
	Travel and professional expenses	\$20,000	\$40,000	\$40,000	\$40,000	\$140,000
Support to link up sleep centres and GP practices	\$20,000	\$15,000	\$15,000	\$15,000	\$65,000	
Psychologists	Development of online modular courses	\$60,000	\$120,000	\$120,000	\$120,000	\$420,000
	IT support and graphic design	\$20,000	\$40,000	\$40,000	\$40,000	\$140,000
	Office expenses	\$20,000	\$40,000	\$40,000	\$40,000	\$140,000
	Project Personnel (with leave, super): – Manager (1.0FTE)	\$170,000	\$174,000	\$178,000	\$182,000	\$704,000
	– Officer (0.5FTE)	\$60,000	\$87,000	\$89,000	\$91,000	\$327,000
Travel and professional expenses	\$15,000	\$30,000	\$30,000	\$30,000	\$105,000	
Dentists	Development of online modular courses	\$40,000	\$100,000	\$100,000	\$100,000	\$340,000
	IT support and graphic design	\$20,000	\$40,000	\$40,000	\$40,000	\$140,000
	Office expenses	\$20,000	\$40,000	\$40,000	\$40,000	\$140,000
	Project Personnel (with leave, super): – Manager (1.0FTE)	\$170,000	\$174,000	\$178,000	\$182,000	\$704,000
	– Officer (0.5FTE)	\$60,000	\$87,000	\$89,000	\$91,000	\$327,000
Travel and professional expenses	\$15,000	\$30,000	\$30,000	\$30,000	\$105,000	
Pharmacists	Development of online modular courses	\$40,000	\$80,000	\$80,000	\$80,000	\$280,000
	IT support and graphic design	\$20,000	\$40,000	\$40,000	\$40,000	\$140,000
	Office expenses	\$20,000	\$40,000	\$40,000	\$40,000	\$140,000
	Project Personnel (with leave, super): – Manager (1.0FTE)	\$170,000	\$174,000	\$178,000	\$182,000	\$704,000
	– Officer (0.5FTE)	\$60,000	\$87,000	\$89,000	\$91,000	\$327,000
Travel and professional expenses	\$15,000	\$30,000	\$30,000	\$30,000	\$105,000	
Nurses	Development of online modular courses	\$40,000	\$100,000	\$100,000	\$100,000	\$340,000
	IT support and graphic design	\$20,000	\$40,000	\$40,000	\$40,000	\$140,000
	Office expenses	\$20,000	\$40,000	\$40,000	\$40,000	\$140,000
	Project Personnel (with leave, super): – Manager (1.0FTE)	\$170,000	\$174,000	\$178,000	\$182,000	\$704,000
	– Officer (0.5FTE)	\$60,000	\$87,000	\$89,000	\$91,000	\$327,000
Travel and professional expenses	\$15,000	\$30,000	\$30,000	\$30,000	\$105,000	
TOTAL		\$2,370,000	\$2,825,000	\$2,855,000	\$2,885,000	\$10,935,000

Background of our Organisations

The Sleep Health Foundation

The Sleep Health Foundation ('the Foundation') is a not-for-profit body that was founded in 2010 to help in improving people's lives through better sleep. In the time since it was established it has become the leading national advocate for healthy sleep and its work has impacts worldwide.

It aims to promote sleep health, raise awareness of sleep disorders and build partnerships with organisations with complementary objectives. It is now the go-to organisation for quality, community-orientated sleep health information and is rapidly developing a large network of interactions with other health orientated not-for-profit organisations and relevant industry-related groups. It is a trusted source for objective information regarding sleep and its problems and is widely used by media outlets and public alike. Its website (www.sleephealthfoundation.org.au) receives more than 1000 visits a day and it has active social media platforms. It is sought by print and electronic media for sleep health-related information and its regular media releases receive impressive take-up, reflecting the interest in sleep related issues of the community and the relevance these have to their daily lives.

Among its many activities, the Foundation has a well-developed and growing Speaker Program, with over 40 presentations nationally each year to community groups, schools and the industry/corporate sector, providing a solid basis on which to build a more ambitious speaking program. It is developing a library of quality audio-visual materials to complement these face-to-face seminars.

Included in the Foundation's various pursuits are the promotion of two key initiatives for school-aged children at upper primary school level. The university-developed and tested Healthy Heroes Sleep Module and World Sleep Day sleep health activities are hosted on its website. These teacher-led activities were delivered across 51 Australian schools when we made the program a campaign focus for World Sleep Day one year. This program, jointly undertaken by the Sleep Health Foundation and the Australasian Sleep Association, won the international 'Distinguished Activity Award' presented by the World Association of Sleep Medicine.

Apart its public education role, the Foundation has regularly commissioned research into national sleep habits, sleep disorders and the economic aspects of inadequate sleep. In doing so it has been careful to use authoritative sources and much of the work it has commissioned has subsequently appeared in peer-reviewed medical / scientific literature, attesting to its value and veracity. These reports and the subsequent papers are summarized in the 2018 Sleep Health Foundation annual report, available at the foundation website. These studies provide the community with reliable data on which to develop an understanding of the extent of the nation's sleep problems, their economic costs and the ways in which these issues might be addressed.

The Australasian Sleep Association

The Australasian Sleep Association (ASA), is the peak scientific body in Australia & New Zealand representing clinicians, scientists and researchers in the broad area of Sleep.

The ASA has a track record of developing educational tools and programs for GPs; three accredited category one online learning activities have been developed with the RACGP on chronic sleep disorders (OSA, insomnia, and paediatric sleep disorders).

The ASA has a strong record of developing and delivering educational programs for psychologists: it has developed a practice certificate in sleep psychology with the Australian Psychological Society.

Mission: To lead and promote sleep health and sleep science in Australia and New Zealand and to facilitate the professional development of its members by providing education and training, fostering research and establishing clinical standards within the field.

Vision: Provision of world standard research, education and training, and establishment of clinical standards to ensure clinical best practice in sleep medicine resulting in an informed community with healthy sleep practices.



**Sleep
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Improving people's lives through better sleep

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