



Media Release

March 17, 2023

On World Sleep Day Idorsia highlights the publication of a global study on the economic and societal impact of chronic insomnia disorder

- Chronic insomnia disorder (CID) is a persistent medical condition that prevents sufferers from getting restorative sleep¹⁻³; research on wider societal and indirect economic costs associated with CID have been limited to date¹
- New report indicates annual lost productivity costs of \$417 billion in GDP across working age populations in the countries of focus* and annual “hidden” intangible wellbeing losses of \$239.5 billion¹
- Reducing the impact of CID could result in a boost to the GDP of national economies ranging from 0.64% to 1.31% across the countries of focus*¹
- Idorsia partners with the World Sleep Society on educational and disease awareness activities focused on the theme: Sleep is Essential for Health

Allschwil, Switzerland – March 17, 2023

On World Sleep Day, Idorsia Ltd (SIX: IDIA) highlights the publication of a first-of-its-kind report by RAND Europe on the economic and societal impact of chronic insomnia disorder,† “[The Societal and Economic Burden of Insomnia in Adults: An International Study](#)”. Idorsia commissioned RAND Europe, an independent, not-for-profit policy research organization, to help fill some of the knowledge gaps associated with understanding the financial burden of chronic insomnia disorder and to deliver new peer-reviewed research into the impacts of insomnia.

The new report focuses on both the *indirect economic costs* (i.e., non-healthcare related costs) and the “hidden” *intangible costs* (i.e., costs that are not directly observed through economic transactions but nonetheless have impacts on an individual’s health or well-being) associated with chronic insomnia disorder.

RAND Europe’s findings indicate the indirect economic costs associated with lost work productivity ranging between \$1.8 billion and \$207.5 billion (for a total of \$417 billion) in gross domestic product (GDP) across the countries RAND analyzed.*¹ The intangible annual wellbeing losses range from \$1.5 billion and \$127.1 billion (for a total of \$239.5 billion) in the countries of focus, which include France, Italy, Germany, Spain, the United Kingdom, the United States, and Canada.^{1,2} The report also provided additional insights on chronic insomnia disorder.

As part of the company’s ongoing commitment to advance research in insomnia, Idorsia supports RAND Europe’s recommendation and highlights the importance of:

- Incorporating insomnia screening during routine clinical visits
- Addressing physician knowledge gaps and improving the identification and management of insomnia
- Conducting more research on the prevalence of CID and its societal and economic impacts

Jean-Paul Clozel, MD and Chief Executive Officer of Idorsia, commented:

“Our scientists have over 20 years of experience in the field of sleep research, through the orexin system, and continue to work on better understanding of the science of sleep and chronic insomnia disorder. An example of our commitment to furthering this understanding is our sponsorship of the research published by RAND Europe. Their findings are unique by revealing, for the first time, the indirect economic and ‘hidden’ wellbeing costs of chronic insomnia disorder. Despite sleep being a biological necessity to ensure optimal functioning throughout the day,⁵ millions of people globally are not getting restorative sleep due to chronic insomnia disorder. It's important that we acknowledge chronic insomnia as a legitimate medical condition and recognize the enormous burden it places on individuals and society as a whole.”

According to the recently published figures, the cost of chronic insomnia disorder is substantial. In terms of indirect costs, chronic insomnia disorder was associated with approximately 11 to 18 days of absenteeism, 39 to 45 days of presenteeism (defined as reduced productivity while at work), and 44 to 54 days of overall productivity loss annually. This equates to an estimated loss in annual GDP of approximately \$170.7 billion for the 12 European countries analyzed, \$19.6 billion for Canada and \$207.5 billion for the United States.* The indirect economic costs reported by RAND are higher than costs reported in other literature.¹

It was found that people suffering from insomnia, including chronic insomnia disorder, would be willing to trade, on average, an estimated 14.0% of their per capita household income in order to recuperate the wellbeing loss associated with the condition.* From this, population level intangible costs were estimated to be \$92 billion across 12 countries in Europe, \$10.7 billion in Canada and \$127.1 billion per year in the United States for those of working-age range.¹

Marco Hafner, study co-author and RAND Europe research advisor:

“A lack of sufficient, restorative, quality sleep due to chronic insomnia disorder impacts an individual’s mental and physical health, quality of life, and productivity, the consequences of which also adversely affect employers, and global economies.¹ Our research found that eliminating the effects of chronic insomnia disorder on productivity loss in the workplace would increase national GDPs in the observed countries by approximately 0.64% to 1.31%, equating to tens of billions of dollars. These findings underscore the need for strategies to better mitigate the impact of chronic insomnia disorder through policy, clinical practice and future research in order to positively impact the health, well-being and productivity of individuals and society as a whole.”

The report is published on **World Sleep Day 2023**, an annual event organized by World Sleep Society, an international association whose mission is to advance sleep health worldwide. Idorsia has partnered with the World Sleep Society to support with disease awareness education. The importance of sleep to our overall health has been underlined by the World Sleep Society, which has chosen to focus World Sleep Day on this central theme for 2023: *Sleep is Essential for Health*.

Sleep is one of the three key pillars of health, alongside diet and exercise.⁴ A lack of good quality sleep can negatively impact daily life,⁵ affecting an individual’s ability to make decisions, and limiting their attention span.⁶ A lack of good quality sleep is also associated with physical health issues, such as an increased risk of hypertension and cardiovascular disease,⁵ along with increased susceptibility to infection.⁷ The most important indicator of getting a good night’s sleep is not just the number of hours spent asleep, but the quality of that sleep and the impact the sleep (or lack of) has on how you feel and function the next day.⁸

Chronic insomnia disorder, for the approximately 1 in 12 people estimated to suffer from it,^{*,1} is a persistent medical that impacts a person’s ability to fall or stay asleep at least three nights a week for

at least three months and has a negative impact on daytime functioning.^{2,3} While direct healthcare costs related to managing or treating insomnia exists, research on the wider societal and indirect economic costs associated with chronic insomnia disorder specifically have been limited to date.¹

* The focus of the RAND research was on general adult populations in 16 high-income, Organization for Economic Co-operation and Development (OECD) countries: Australia, Austria, Belgium, Canada, Finland, France, Germany, Greece, Italy, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and the United States. Figures for Greece were only included in prevalence estimates.

† Costs in the RAND Europe report were calculated using modelling methods and therefore include a number of underlying assumptions which are detailed in the report itself.

Notes to the editor

About The Societal and Economic Burden of Insomnia in Adults: An International Study

The objective of this study was to identify and quantify the societal burden of insomnia and its resultant impacts, both in terms of indirect economic costs (i.e. non-healthcare related costs) and intangible costs (i.e. costs that are not directly observed through economic transactions but nonetheless have impacts on an individual's health or well-being). Based on these findings, the report includes independent recommendations for future policy, clinical practice and research to mitigate the societal and economic impacts of insomnia.

The focus of this research was on general adult populations in high-income, Organization for Economic Co-operation and Development (OECD) countries of Northern, Southern and Western Europe, as well as North America and Australia. The research methodology included a literature review, secondary database analysis and the development of a macro-economic model to estimate the indirect economic costs associated with insomnia. More detailed information on the methodology can be found [here](#).

The Societal and Economic Burden of Insomnia in Adults: An International Study was funded by Idorsia Pharmaceuticals Ltd and conducted by RAND Europe under the advisement of a steering committee whose members were selected for their subject-matter expertise and objectivity. RAND Europe had full editorial control and independence of the analyses performed and presented in this report, which has been peer-reviewed in accordance with RAND Europe's quality assurance standards. This work is intended to inform the public good and should not be taken as a commercial endorsement of any product or service. The views presented in this report are the authors' and any remaining errors are their own.

RAND Europe is a highly regarded, not-for-profit organization whose mission is to help improve policy and decision making through research and analysis. All RAND research undergoes rigorous expert review to ensure high standards for research quality and objectivity.

About World Sleep Society

World Sleep Day is organized by World Sleep Society, an international association whose mission is to advance sleep health worldwide. World Sleep Society hosts a biennial scientific congress on sleep medicine aiming to globally connect sleep professionals and researchers to advance current knowledge on sleep. A virtual meeting is also underway with details on worldsleepsociety.org. Follow the excitement on Twitter @_WorldSleep and facebook.com/WASMF.

About chronic insomnia disorder

Chronic insomnia disorder is defined as difficulty initiating or maintaining sleep, causing clinically significant distress or impairment in important areas of daytime functioning.^{2,3} This impact on sleep quantity or quality should be present for at least three nights per week, lasts for at least three months, and occurs despite an adequate opportunity to sleep.^{2,3}

Insomnia is a condition of overactive wake signaling and studies have shown that areas of the brain associated with wakefulness remain more active during sleep in patients with insomnia.^{9,10} Insomnia as a disorder is quite different from a brief period of poor sleep, and it can take its toll on both physical and mental health.⁵ It is a persistent condition with a negative impact on daytime functioning.³ Idorsia's research has shown that poor quality sleep can affect many aspects of daily life, including the ability to concentrate, mood, and energy levels.

About Marco Hafner

Marco Hafner is an economist and co-author of *The Societal and Economic Burden of Insomnia in Adults: An International Study*. He is also lead author of the 2016 report *Why Sleep Matters: Quantifying the Economic Costs of Insufficient Sleep*. Hafner was Senior Research Leader at RAND Europe at the time of this study, where he conducted research at the intersection between health, labor and international economics.

He has published studies in peer-reviewed academic journals on the economy-wide effects of ill-health in the population. Hafner holds a Master's in Economics from the University of Zurich, an MPhil in Economics from UCL, and conducted doctoral studies at the University of Freiburg. He previously worked for the Institute for Employment Research in Germany, before joining RAND in 2013.

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About Idorsia

Idorsia Ltd is reaching out for more – We have more ideas, we see more opportunities and we want to help more patients. In order to achieve this, we will develop Idorsia into a leading biopharmaceutical company, with a strong scientific core.

Headquartered near Basel, Switzerland – a European biotech-hub – Idorsia is specialized in the discovery, development and commercialization of small molecules to transform the horizon of therapeutic options. Idorsia has a 20-year heritage of drug discovery, a broad portfolio of innovative drugs in the pipeline, an experienced team of professionals covering all disciplines from bench to bedside, and commercial operations in Europe, Japan, and the US – the ideal constellation for bringing innovative medicines to patients.

Idorsia was listed on the SIX Swiss Exchange (ticker symbol: IDIA) in June 2017 and has over 1,300 highly qualified specialists dedicated to realizing our ambitious targets.

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