



## Amgen And Novartis Highlight Findings From A Large Global Patient Survey Revealing That Worldwide Approximately 60 Percent Of Employed People With Migraine Missed, On Average, A Week Of Work In A Month

June 27, 2018

**The My Migraine Voice Survey Involved More Than 11,000 People Globally, 10 Percent of Which Were From the U.S., and Highlights Urgent Need for Better Care for Benefit of Patients and Society**  
**In the U.S., Patients Reported Eighty Percent of Employers Knew About Their Migraine, but Only 21 Percent Offered Support**  
**Migraine is Estimated to Cost Up to \$22 Billion in the U.S. Annually, Including Indirect Costs Such as Lost Productivity; Survey Finds 18 Percent of Worktime is Missed Due to Migraine in the U.S.**

THOUSAND OAKS, Calif., June 27, 2018 /PRNewswire/ -- Amgen (NASDAQ:AMGN) today announced initial findings from a large global migraine patient survey, involving more than 11,000 people from 31 countries, including the U.S. The findings, to be presented at the 60th Annual Scientific Meeting of the American Headache Society (AHS) in San Francisco, reveal that migraine is associated with overall work and activity impairment.<sup>1</sup> On average, 60 percent of employed respondents worldwide missed almost a full working week (4.6 days) due to migraine in a month.<sup>1</sup> Migraine is a distinct neurological disease and is estimated to cost up to \$22 billion in the U.S. each year.<sup>2,3</sup>

The *My Migraine Voice* survey was initiated and funded by Novartis and the European Migraine and Headache Alliance, guided by a steering committee including Amgen, migraine patients, neurologists and patient advocacy organizations. The survey included people who had at least four migraine days per month and 90 percent of respondents in the U.S. reported having previously tried at least one preventive treatment. The impact of migraine at work, including reduced work productivity (presenteeism) and work time missed due to migraine (absenteeism), was assessed using the Work Productivity and Activity Impairment (WPAI) questionnaire.

Among survey participants in the U.S., approximately 63 percent reported overall work impairment due to migraine.

"From being afraid to speak up about their disease at work in fear of losing their jobs, to feeling judged by colleagues, the stigma around migraine in the workplace is an ongoing issue that the migraine community faces daily," said Mary Franklin, executive director of the National Headache Foundation. "The findings from the *My Migraine Voice* survey shed light on the true impact of migraine at work, and showcase the urgent need for employers and employees to change the dialogue around migraine."

Further, employed respondents in the U.S. reported they felt lack of support and judged. For example:

- Although the majority of their employers (80 percent) knew about the employee's migraine, only 21 percent offered support.<sup>4</sup>
- Of those who reported that migraine affected their professional life, 30 percent said they felt judged, illustrating the need for awareness and support in the workplace.

Previous studies have shown that 90 percent of people say they cannot work or function with a migraine.<sup>5</sup> In the *My Migraine Voice* survey, 72 percent of the respondents in the U.S. who were employed, including self-employed, needed at least one day off of work in the last month due to their migraine, with more than half of the respondents mentioning they could not work up to five days in a month.<sup>4</sup>

"Amgen, and our partner Novartis, have committed to leading the charge together against migraine misperceptions, and it is our mission to actively listen and respond to patients around the world to advance our knowledge of under-recognized diseases like migraine," said Anthony C. Hooper, executive vice president of Global Commercial Operations at Amgen. "Migraine has gone under-appreciated and under-treated for too long, and these results from the *My Migraine Voice* survey reinforce the immediate need to improve the lives of these patients."

Amgen and Novartis are working on future initiatives to focus on addressing how stigma against migraine manifests in the workplace: migraine gets in between people and their careers, and in between employee and employer. Through outreach and education, Amgen and Novartis aim to assist people in getting the support they need, and facilitate informed communication among people with migraine and those who live and work with them, including coworkers, employers and insurers.

Further results on the physical and economic burden of migraine will be released at upcoming medical meetings, and the findings from the survey are being prepared for submission to peer-reviewed journals.

### **About My Migraine Voice Survey**

The *My Migraine Voice* survey was a global survey assessing the worldwide migraine burden from the patient's perspective.<sup>1,4</sup> Data was collected via a 30-minute online questionnaire fielded in 31 countries between September 2017 and February 2018. The survey questions covered the social, economic and emotional impact of the disease, the real-life experience of an individual living with migraine and their journey through the healthcare system and employment environment. Study participants were 11,266 adults (aged 18 years or older) who had experienced at least four migraine days each month in the last three months and self-reported having been diagnosed with migraine by a medical professional.<sup>1,4</sup> Of those recruited, 90 percent had experience of at least one preventive treatment and of these, 80 percent had to change their treatment one or more times.<sup>1</sup>

Participants were recruited via online panels in all countries. In 12 countries, some participants were recruited through patient advocacy organizations (Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Netherlands, Russia, Sweden, Taiwan and the United Kingdom). In France, patients were also recruited through the Migraine Buddy mobile app.

The average age of respondents was 39.<sup>4</sup> Sixty-three percent were married and 73 percent reported that they were employed in some capacity (full-time, part-time, self-employed or studying).<sup>4</sup> The survey highlighted the chronic nature of migraine, with more than one in three respondents (37 percent) reporting they have been affected for 16 or more years.<sup>4</sup>

The study was conducted by the market research company Gesellschaft für Konsumforschung (GfK) in Switzerland. Full results of the survey will be released at future scientific congresses and in peer-reviewed publications.

The European Migraine and Headache Alliance (EMHA) is a non-profit, patient umbrella group which was launched in 2006 and represents 25 patient groups from across the continent. EMHA is an active member of the European Federation of Neurological Alliances, the International Association of Patient Organizations and the European Patients Forum. The EMHA works closely with organizations such as the European Headache Federation, the European Brain Council and others.

#### **About Migraine**

People with frequent migraine may lose more than half their life to migraine. They endure debilitating pain, physical impairment, and live in constant dread of the next attack – all of which is compounded by a widespread misperception of the disease.<sup>5</sup> The 2016 Global Burden of Disease Study ranks migraine among the top 10 causes of years lived with disability worldwide.<sup>6</sup> Migraine is associated with personal and societal burdens of pain, disability, and financial cost, and it remains under-recognized and under-treated.<sup>5</sup>

#### **About Amgen and Novartis Neuroscience Collaboration**

In August 2015, Amgen entered into a global collaboration with Novartis to develop and commercialize pioneering treatments in the field of migraine and Alzheimer's disease. At the center of the Amgen and Novartis neuroscience collaboration is the shared mission to fight migraine and the stereotypes and misperceptions surrounding this debilitating disease.

#### **About the Amgen and Novartis Migraine Mission**

Migraine has gone under-appreciated and under-treated for too long. Amgen and Novartis have committed to leading the charge together against migraine misperceptions. Through outreach and education our goal is to challenge public perception of migraine disease, assist people in getting the treatment they need and facilitate informed communication among people with migraine and those who live and work with them, including co-workers, employers and insurers. Future initiatives will include a focus on addressing how stigma against migraine manifests in the workplace: migraine gets in between people and their careers, and in between employee and employer. We hope our workplace program will serve as an example to coworkers, employers and human resources to help each party understand why and how they should treat migraine as a serious disease.

#### **About Amgen**

Amgen is committed to unlocking the potential of biology for patients suffering from serious illnesses by discovering, developing, manufacturing and delivering innovative human therapeutics. This approach begins by using tools like advanced human genetics to unravel the complexities of disease and understand the fundamentals of human biology.

Amgen focuses on areas of high unmet medical need and leverages its biologics manufacturing expertise to strive for solutions that improve health outcomes and dramatically improve people's lives. A biotechnology pioneer since 1980, Amgen has grown to be the world's largest independent biotechnology company, has reached millions of patients around the world and is developing a pipeline of medicines with breakaway potential.

For more information, visit [www.amgen.com](http://www.amgen.com) and follow us on [www.twitter.com/amgen](https://www.twitter.com/amgen).

#### **Forward Looking Statements**

This news release contains forward-looking statements that are based on the current expectations and beliefs of Amgen. All statements, other than statements of historical fact, are statements that could be deemed forward-looking statements, including estimates of revenues, operating margins, capital expenditures, cash, other financial metrics, expected legal, arbitration, political, regulatory or clinical results or practices, customer and prescriber patterns or practices, reimbursement activities and outcomes and other such estimates and results. Forward-looking statements involve significant risks and uncertainties, including those discussed below and more fully described in the Securities and Exchange Commission reports filed by Amgen, including our most recent annual report on Form 10-K and any subsequent periodic reports on Form 10-Q and current reports on Form 8-K. Unless otherwise noted, Amgen is providing this information as of the date of this news release and does not undertake any obligation to update any forward-looking statements contained in this document as a result of new information, future events or otherwise.

No forward-looking statement can be guaranteed and actual results may differ materially from those we project. Discovery or identification of new product candidates or development of new indications for existing products cannot be guaranteed and movement from concept to product is uncertain; consequently, there can be no guarantee that any particular product candidate or development of a new indication for an existing product will be successful and become a commercial product. Further, preclinical results do not guarantee safe and effective performance of product candidates in humans. The complexity of the human body cannot be perfectly, or sometimes, even adequately modeled by computer or cell culture systems or animal models. The length of time that it takes for us to complete clinical trials and obtain regulatory approval for product marketing has in the past varied and we expect similar variability in the future. Even when clinical trials are successful, regulatory authorities may question the sufficiency for approval of the trial endpoints we have selected. We develop product candidates internally and through licensing collaborations, partnerships and joint ventures. Product candidates that are derived from relationships may be subject to disputes between the parties or may prove to be not as effective or as safe as we may have believed at the time of entering into such relationship. Also, we or others could identify safety, side effects or manufacturing problems with our products, including our devices, after they are on the market.

Our results may be affected by our ability to successfully market both new and existing products domestically and internationally, clinical and regulatory developments involving current and future products, sales growth of recently launched products, competition from other products including biosimilars, difficulties or delays in manufacturing our products and global economic conditions. In addition, sales of our products are affected by pricing pressure, political and public scrutiny and reimbursement policies imposed by third-party payers, including governments, private insurance plans and managed care providers and may be affected by regulatory, clinical and guideline developments and domestic and international trends toward managed care and healthcare cost containment. Furthermore, our research, testing, pricing, marketing and other operations are subject to extensive regulation by domestic and foreign government regulatory authorities. Our business may be impacted by government investigations, litigation and product liability claims. In addition, our business may be impacted by the adoption of new tax legislation or exposure to additional tax liabilities. If we fail to meet the compliance obligations in the corporate integrity agreement between us and the U.S. government, we could become


subject to significant sanctions. Further, while we routinely obtain patents for our products and technology, the protection offered by our patents and patent applications may be challenged, invalidated or circumvented by our competitors, or we may fail to prevail in present and future intellectual property litigation. We perform a substantial amount of our commercial manufacturing activities at a few key facilities, including Puerto Rico, and also depend on third parties for a portion of our manufacturing activities, and limits on supply may constrain sales of certain of our current products and product candidate development. In addition, we compete with other companies with respect to many of our marketed products as well as for the discovery and development of new products. Further, some raw materials, medical devices and component parts for our products are supplied by sole third-party suppliers. Certain of our distributors, customers and payers have substantial purchasing leverage in their dealings with us. The discovery of significant problems with a product similar to one of our products that implicate an entire class of products could have a material adverse effect on sales of the affected products and on our business and results of operations. Our efforts to acquire other companies or products and to integrate the operations of companies we have acquired may not be successful. A breakdown, cyberattack or information security breach could compromise the confidentiality, integrity and availability of our systems and our data. Our stock price is volatile and may be affected by several events. Our business performance could affect or limit the ability of our Board of Directors to declare a dividend or our ability to pay a dividend or repurchase our common stock. We may not be able to access the capital and credit markets on terms that are favorable to us, or at all.

CONTACT: Amgen, Thousand Oaks  
Kristen Davis, 805-447-3008 (media)  
Andrea Fassacesia, 805-905-2575 (media)  
Arvind Sood, 805-447-1060 (investors)

## References

- <sup>1</sup> Schwedt TJ, Vo P, Fink R et al. Work productivity amongst those with migraine: results from the My Migraine Voice survey. Abstract presented at the 60th Annual Scientific Meeting of the American Headache Society (AHS), San Francisco, CA, USA, June 28-July 1, 2018.
- <sup>2</sup> Hawkins K, Wang S, Rupnow MF. Indirect cost burden of migraine in the United States. *J Occup Environ Med.* 2007;49(4):368-374.
- <sup>3</sup> Hawkins K, Wang S, Rupnow MF. Direct cost burden among insured US employees with migraine. *Headache.* 2008;48(4):553-563.
- <sup>4</sup> Data on file. Novartis, 2018.
- <sup>5</sup> Lipton RB, et al. Migraine prevalence, disease burden, and the need for preventative therapy. *Neurology.* 2007; 68(5):343-9
- <sup>6</sup> GBD 2016 Disease and Injury Incidence and Prevalence Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 328 diseases and injuries for 195 countries, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016. *Lancet.* 2017;388:1545-1602.



 View original content with multimedia: <http://www.prnewswire.com/news-releases/amgen-and-novartis-highlight-findings-from-a-large-global-patient-survey-revealing-that-worldwide-approximately-60-percent-of-employed-people-with-migraine-missed-on-average-a-week-of-work-in-a-month-300673463.html>

SOURCE Amgen