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Title: Support Research on Effects of Virtual Reality on Human Health

Introduced by: Sam Schuiteman for the Medical Student Section

Original Authors: Arjun Adapa, Michael Broderick, Elie Ellenberg, Lauren McGee, and Andrew Prince

Referred to: Reference Committee E

House Action: **APPROVED**

Whereas, virtual reality offers realistic sensory experience that humans can interpret similarly to real life exposure¹, and

Whereas, public consumption of virtual reality is increasing, with one million virtual reality headsets sold in 2017 and 13.7 million expected in 2018², and

Whereas, children from ages 6-18 experience virtual reality as more vivid and real than those over the age 18, describing it as salient, immersive and similar to reality³, and

Whereas, gaming disorder, defined as impaired control over gaming and greater prioritization of gaming over other activities, may be included on the 11th Revision of the International Classification of Disease (ICD-11)⁴, and

Whereas, Internet gaming disorder alone is estimated at impacting on average 4.7 percent of the population with studies ranging from 0.7-15.6 percent⁵, and

Whereas, virtual reality raises concerns for mental health risks such as depersonalization disorder⁶, ethical risks about the use of personal data and personal privacy^{6,7}, and physical risks, including the risk of falls and injuries associated with spatial movement affected by altered sense of reality⁸, and

Whereas, despite these risks, current research has elucidated potential benefits of virtual reality in treating certain disorders, including alcohol dependence, psychosis, and stroke rehabilitation^{9,10,11}, and

Whereas, as it currently stands, limited research exists on the effects of virtual reality on physical, cognitive, and social development of children and adolescents^{9,12}, and

Whereas, our American Medical Association (AMA) rejects the excessive portrayal of violence in various entertainment media, including videos and computer games, while encouraging the depiction of its medical consequences (H-515.974), and

Whereas, our AMA supports heightened awareness of the need for monitoring and restricting of video game and internet use, related but distinct from virtual reality, to limit negative health effects (H-60.915); therefore be it

RESOLVED: That the Michigan Delegation to the American Medical Association (AMA) ask our AMA to support further study on the impact of virtual reality on human health.

WAYS AND MEANS COMMITTEE FISCAL NOTE: None

Relevant AMA Policy:

Mass Media Violence and Film Ratings H-515.974

Redressing Shortcomings in the Current System: The AMA: (1) will speak out against the excessive portrayal of violence in the news and entertainment media, including newscasts, movies, videos, computer games, music and print outlets, and encourage the depiction of the medical, social and legal consequences of violence by the media;

(2) advises physicians to counsel parents about the known effects of media violence on children's behavior and encouraging them to reduce the amount of violent programming viewed by their children;

(3) monitors changes in the current ratings system and working through state medical societies to inform physicians and their patients about these changes; and

(4) supports all other appropriate measures to address and reduce television, cable television, and motion picture violence.

Emotional and Behavioral Effects of Video Game and Internet Overuse H-60.915

Our AMA supports increased awareness of the need for parents to monitor and restrict use of video games and the Internet and encourage increased vigilance in monitoring the content of games purchased and played for children 17 years old and younger.

¹ Gega, L. The virtues of virtual reality on in exposure therapy, Apr 2017. Br J Psychiatry, 210(4), pp. 245-246.

² Lamkin, P. Virtual reality headset sales hit 1 million, Nov 30, 2017. Forbes Magazine.

³ Bailey, J and Bailenson, J. Immersive virtual reality and the developing child, Jul 14, 2017. Cog Dev Digital Contexts, pp. 181-200.

⁴ Gaming disorder, Jan 2018. World Health Organization. <http://www.who.int/features/qa/gaming-disorder/en/>

⁵ Feng, W., Ramo, D., Chan, S., and Bourgeois, J. Internet gaming disorder: trends in prevalence 1998-2016, Dec 16, 2016. Addictive Behaviors, 75, pp. 17-24.

⁶ Spiegel, J. The ethics of virtual reality technology: social hazards and public policy recommendations, Sep 23, 2017. Sci Eng Ethics.

⁷ O'Brolchain, F., Jacquemard, T., Monaghan, D., O'Connor, N. Novitzky, P. and Gordijn, B. The convergence of virtual reality and social networks: threats to privacy and autonomy, Feb 2016. Sci Eng Ethics, 22(1), pp. 1-29.

⁸ La Motte, S. The very real health dangers of virtual reality, Dec 13, 2017. CNN.

⁹ Son, J., Lee, S., Seok, J., Kee, B., Lee, H., Kim, H., Lee, T., and Han, D. Virtual reality therapy for the treatment of alcohol dependence: a preliminary investigation with positron emission tomography/computerized tomography, Jul 2015. J. Stud Alcohol Drugs, 76(4), pp. 620-627.

¹⁰ Rus-Calafell, M., Garety, P., Sason, E., Craig, T., and Valmaggia, L. Virtual reality in the assessment and treatment of psychosis: a systematic review of its utility, acceptability and effectiveness, Feb 2018. Psych Med, 48(3), pp. 362-391.

¹¹ Saposnik, G. and Levin, M. Virtual reality in stroke rehabilitation: a meta-analysis and implications for clinicians, May 2011. Stroke, 42(5), pp. 1380-1386.

¹² Park, S., Kim, S., Roh, S., Soh, M., Lee, S., Kim, H., Lee, Y., and Han, D. The effects of a virtual reality treatment program for online gaming addiction, Jun 2016. Comput Methods Programs Biomed, 129, pp. 99-108.