

FILED UNDER SEAL

EXHIBIT 52

CONFIDENTIAL

EXPERT SUMMARY OF OPINIONS

Zachary Jonathan Ward, MPH, PhD

State of New Mexico, Ex Rel. Raul Torrez, Attorney General v. Meta Platforms, Inc.; Instagram, LLC; Meta Payments, Inc.; and Meta Platforms Technologies, LLC.

First Judicial District Court, Santa Fe County

No. D-101-CV-2023-02838

outcomes (e.g., changes in behavioral risks and health outcomes). A continuum of outcomes should be measured, including:

- a. User behavior (usage patterns)
- b. User experience (e.g., BEEF-style questions)
- c. Psychological/neurocognitive responses (e.g., anxiety, self-esteem, body image)
- d. Behavioral risk factors (e.g., sleep quality, eating/dieting habits, self-harm, suicidal ideation, substance use, physical activity)
- e. Disease screening (e.g., Patient Health Questionnaire for depression, SCOFF for eating disorders, Generalized Anxiety Disorder questionnaire)
- f. Diagnosed disease prevalence (e.g., “Has a doctor ever diagnosed you with depression?”)
- g. Wellbeing (e.g., Quality of life instruments such as SF-6D and EQ-5D)

41. Assessing a continuum of outcomes over time will provide more robust information on the impact of prevention efforts and also provide critical data on how SM use impacts both short-term and long-term outcomes which will help to guide future research and policies.

5. Social Media Platforms Generate Billions of Dollars in Revenue from U.S. Youth

42. As for-profit companies, SM platforms are motivated by revenue, which incentivizes them to maximize user time spent on platform. Internal documents show that, to maximize revenue, platforms have optimized user engagement, time spent on the platform, and other metrics related to ad revenue. For example, in testimony from Adam Mosseri, the head of Instagram, internal emails stated that the “overall company goal is total teen time spent” on the platform.⁹³

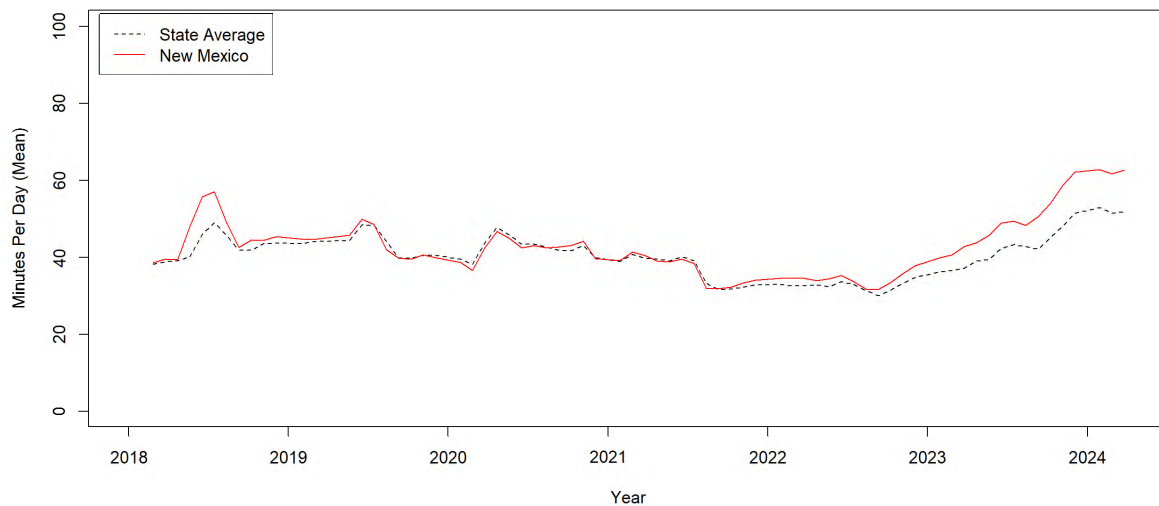
5.1 Estimated Revenue

43. SM platforms have not been required to make data publicly available on revenues from youth, but it is estimated that they derive large profits from young users who may be vulnerable to negative mental health outcomes. Although Meta contends that its platforms are not available

⁹³ METANMAG-002-00172504, at -00172505; See also, METANMAG-002-00172506, for Meta presentation on teen user engagement strategies and statistics.

to users under 13 years of age, research shows that children under 13 years of age consistently access and use Meta's platforms.⁹⁴ My study on the subject used available data on platform use by age and total revenues estimated that across six major SM platforms, the 2022 annual advertising revenue from users ages 0-17 years was nearly \$11 billion, with ages 0-12 years accounting for over \$2 billion.⁹⁵ Estimates for Meta platforms (Facebook and Instagram) were \$5.3 billion for ages 0-17 and \$0.9 billion for ages 0-12. In this study, my co-authors and I modeled the number of users and mean duration of exposure by platform and estimated the percentage of total advertising revenue by user age group. Subsequent to this study, as part of my assignment in this case, I was provided non-public data from Meta on duration of platform use by State. These data on Instagram use among New Mexico teens reveals mean duration of use very similar to the average across states between 2018 and 2022 (dotted line below), with use in New Mexico increasing faster than average in 2023 and 2024 (red line below). See Appendix VIII for more details.

Figure 12: Adolescent Instagram Use - New Mexico vs State Average



⁹⁴ J.M. Nagata, *et al.*, "Prevalence and patterns of social media use in early adolescents," *Academic Pediatrics*, 25(4), 2025; Pew Research Center, "81% of U.S. adults – versus 46% of teens – favor parental consent for minors to use social media," 2023 (<https://www.pewresearch.org/short-reads/2023/10/31/81-of-us-adults-versus-46-of-teens-favor-parental-consent-for-minors-to-use-social-media/>).

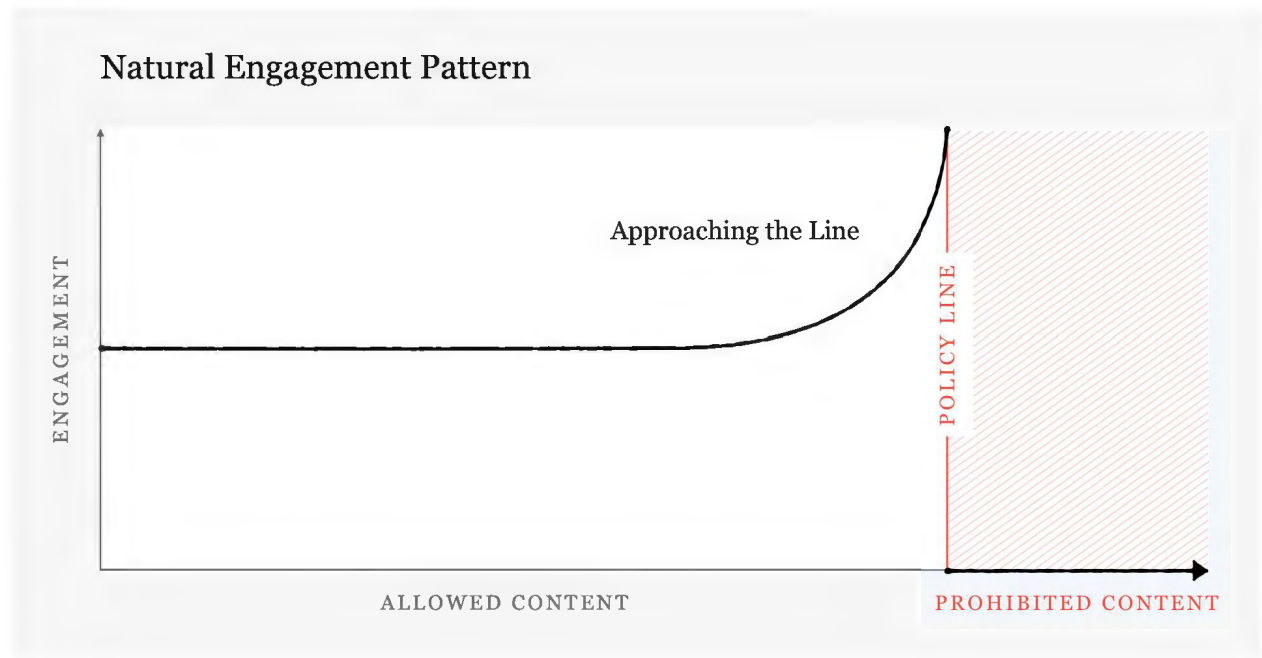
⁹⁵ Raffoul, *op. cit.*, 2023.

44. Scaling the national revenue estimates to the New Mexico population yields estimated annual revenue estimates of nearly \$34 million from Facebook and Instagram (combined) for ages 0-17, and nearly \$6 million for ages 0-12 in New Mexico.

5.2 Amplification of Borderline and Dangerous Content

45. The attention-seeking profit motive leads to amplification of borderline and dangerous content. Zuckerberg acknowledged in a blog post that people naturally engage more with sensationalist content, with engagement increasing the closer content comes to crossing the line of being banned.⁹⁶

Figure 13: Natural Engagement Pattern with ‘Borderline’ Content



5.3 Minimal Incentives for Age Verification

46. Given the financial incentives to maximize user engagement, there are minimal incentives for age verification. Only recently have efforts at more robust age verification been

⁹⁶ M. Zuckerberg, "A Blueprint for Content Governance and Enforcement," 2021 (<https://www.facebook.com/notes/mark-zuckerberg/a-blueprint-for-content-governance-and-enforcement/10156443129621634/>).

publicized, and data on Instagram use provided by Meta only have age-specific estimates beginning in 2022 – prior to that, only estimates for “teen” versus “non-teen” were available in the data provided.

IV. Conclusion:

47. In conclusion, based on the body of evidence from the medical literature, my own analysis of New Mexico data, and Meta’s internal documents indicates a causal link between SM and a range of adverse mental health outcomes in children and adolescents.

A handwritten signature in black ink, appearing to read "Zachary Ward", is positioned above a horizontal line.

Zachary Ward, MPH, PhD

July 11, 2025