

**The Stanford Center for Precision Mental Health and Wellness 4th Annual Symposium:**  
***From Data to Care: Precision Medicine in Action for Mental Health (Recordings)***  
**Stanford University School of Medicine**

**Bibliography**

*All of Us for all of us - Advancing Precision Medicine and Human Health While Serving a Diverse Community of Participants and Researchers*

- All of Us Research Program. (2024). Researcher Workbench. *All of Us Research Hub, National Institutes of Health.* <https://researchallofus.org/data-tools/workbench/>
- All of Us Research Program Genomics Investigators (2024). Genomic data in the All of Us Research Program. *Nature*, 627(8003), 340–346. <https://doi.org/10.1038/s41586-023-06957-x>
- Barr, P. B., Bigdeli, T. B., & Meyers, J. L. (2022). Characterizing and Coding Psychiatric Diagnoses Using Electronic Health Record Data-Reply. *JAMA psychiatry*, 10.1001/jamapsychiatry.2022.2739. Advance online publication. <https://doi.org/10.1001/jamapsychiatry.2022.2739>
- Barr, P. B., Bigdeli, T. B., & Meyers, J. L. (2022). Prevalence, Comorbidity, and Sociodemographic Correlates of Psychiatric Disorders Reported in the All of Us Research Program. *JAMA psychiatry*, 79(6), 622–628. <https://doi.org/10.1001/jamapsychiatry.2022.0685>
- Brittain, E. L., Han, L., Annis, J., Master, H., Hughes, A., Roden, D. M., Harris, P. A., & Ruderfer, D. M. (2024). Physical Activity and Incident Obesity Across the Spectrum of Genetic Risk for Obesity. *JAMA network open*, 7(3), e243821. <https://doi.org/10.1001/jamanetworkopen.2024.3821>
- Lee, Y. H., Liu, Z., Fatori, D., Bauermeister, J. R., Luh, R. A., Clark, C. R., Bauermeister, S., Brunoni, A. R., & Smoller, J. W. (2022). Association of Everyday Discrimination With Depressive Symptoms and Suicidal Ideation During the COVID-19 Pandemic in the All of Us Research Program. *JAMA psychiatry*, 79(9), 898–906. <https://doi.org/10.1001/jamapsychiatry.2022.1973>
- Lennon, N. J., Kottyan, L. C., Kachulis, C., Abul-Husn, N., Arias, J., Belbin, G., Below, J. E., Berndt, S., Chung, W., Cimino, J. J., Clayton, E. W., Connolly, J. J., Crosslin, D., Dikilitas, O., Velez Edwards, D. R., Feng, Q., Fisher, M., Freimuth, R., Ge, T., GIANT Consortium, ... Kenny, E. (2023). Selection, optimization, and validation of ten chronic disease polygenic risk scores for clinical implementation in diverse populations. *medRxiv : the preprint server for health sciences*, 2023.05.25.23290535. <https://doi.org/10.1101/2023.05.25.23290535>
- Master, H., Annis, J., Huang, S., Beckman, J. A., Ratsimbazafy, F., Marginean, K., Carroll, R., Natarajan, K., Harrell, F. E., Roden, D. M., Harris, P., & Brittain, E. L. (2022). Association of step

**The Stanford Center for Precision Mental Health and Wellness 4th Annual Symposium:  
From Data to Care: Precision Medicine in Action for Mental Health (Recordings)**  
**Stanford University School of Medicine**

counts over time with the risk of chronic disease in the All of Us Research Program. *Nature medicine*, 28(11), 2301–2308. <https://doi.org/10.1038/s41591-022-02012-w>

- Mills, M. C., & Rahal, C. (2020). The GWAS Diversity Monitor Tracks diversity by disease in real time. *Nature Genetics*, 52, 242-43. <https://doi.org/10.1038/s41588-020-0580-y>
- Observational Health Data Sciences and Informatics (OHDSI). (2024). Standardized Data: The OMOP Common Data Model. *Observational Health Data Sciences and Informatics*. <https://www.ohdsi.org/data-standardization/>
- Qiao, S., Zhang, J., Liang, C., & Li, X. (2023). Using *All of Us* data to examine the mental health change during COVID-19 pandemic among people living with HIV: A longitudinal study protocol. *BMJ open*, 13(10), e071285. <https://doi.org/10.1136/bmjopen-2022-071285>
- Schulkey, C. E., Litwin, T. R., Ellsworth, G., Sansbury, H., Ahmedani, B. K., Choi, K. W., Cronin, R. M., Kloth, Y., Ashbeck, A. W., Sutherland, S., Mapes, B. M., Begale, M., Bhat, G., King, P., Marginean, K., Wolfe, K. A., Kouame, A., Raquel, C., Ratsimbazafy, F., Bornemeier, Z., ... Garriock, H. A. (2023). Design and Implementation of the All of Us Research Program COVID-19 Participant Experience (COPE) Survey. *American journal of epidemiology*, 192(6), 972–986. <https://doi.org/10.1093/aje/kwad035>
- Tran, N. K., Lunn, M. R., Schulkey, C. E., Tesfaye, S., Nambiar, S., Chatterjee, S., Kozlowski, D., Lozano, P., Randal, F. T., Mo, Y., Qi, S., Hundertmark, E., Eastburn, C., Pho, A. T., Dastur, Z., Lubensky, M. E., Flentje, A., & Obedin-Maliver, J. (2023). Prevalence of 12 Common Health Conditions in Sexual and Gender Minority Participants in the All of Us Research Program. *JAMA network open*, 6(7), e2324969. <https://doi.org/10.1001/jamanetworkopen.2023.24969>
- Wang, X., Ryu, J., Kim, J., Ramirez, A., Mayo, K. R., All of Us Research Program, Condon, H., Vaitinadin, N. S., Ohno-Machado, L., Talavera, G. A., Ellinor, P. T., Lubitz, S. A., & Choi, S. H. (2023). Common and rare variants associated with cardiometabolic traits across 98,622 whole-genome sequences in the All of Us research program. *Journal of human genetics*, 68(8), 565–570. <https://doi.org/10.1038/s10038-023-01147-z>
- Wu, P., Feng, Q., Kerchberger, V. E., Nelson, S. D., Chen, Q., Li, B., Edwards, T. L., Cox, N. J., Phillips, E. J., Stein, C. M., Roden, D. M., Denny, J. C., & Wei, W. Q. (2022). Integrating gene expression and clinical data to identify drug repurposing candidates for hyperlipidemia and hypertension. *Nature communications*, 13(1), 46. <https://doi.org/10.1038/s41467-021-27751-1>

**The Stanford Center for Precision Mental Health and Wellness 4th Annual Symposium:**

***From Data to Care: Precision Medicine in Action for Mental Health (Recordings)***

**Stanford University School of Medicine**

- Zeng, C., Schlueter, D. J., Tran, T. C., Babbar, A., Cassini, T., Bastarache, L. A., & Denny, J. C. (2024). Comparison of phenomic profiles in the All of Us Research Program against the US general population and the UK Biobank. *Journal of the American Medical Informatics Association : JAMIA*, 31(4), 846–854. <https://doi.org/10.1093/jamia/ocad260>
- Zheng, N. S., Annis, J., Master, H., Han, L., Gleichauf, K., Ching, J. H., Nasser, M., Coleman, P., Desine, S., Ruderfer, D. M., Hernandez, J., Schneider, L. D., & Brittain, E. L. (2024). Sleep patterns and risk of chronic disease as measured by long-term monitoring with commercial wearable devices in the All of Us Research Program. *Nature medicine*, 30(9), 2648–2656. <https://doi.org/10.1038/s41591-024-03155-8>

*Computational Neuroimaging of Population Mental Health:*

- Dutt, R. K., Hannon, K., Easley, T. O., Griffis, J. C., Zhang, W., & Bijsterbosch, J. D. (2022). Mental health in the UK Biobank: A roadmap to self-report measures and neuroimaging correlates. *Human brain mapping*, 43(2), 816–832. <https://doi.org/10.1002/hbm.25690>
- Easley, T., Luo, X., Hannon, K., Lenzini, P., & Bijsterbosch, J. (2024). Opaque Ontology: Neuroimaging Classification of ICD-10 Diagnostic Groups in the UK Biobank. *bioRxiv : the preprint server for biology*, 2024.04.15.589555. <https://doi.org/10.1101/2024.04.15.589555>
- Hannon, K., Easley, T., Zhang, W., Lew, D., Sotiras, A., Sheline, Y. I., Marquand, A., Barch, D. M., & Bijsterbosch, J. D. (2022). Parsing clinical and neurobiological sources of heterogeneity in depression. *bioRxiv : the preprint server for biology*, 2022.12.07.22283225. <https://doi.org/10.1101/2022.12.07.22283225>
- Jahanshad, N., Lenzini, P., & Bijsterbosch, J. (2024). Current best practices and future opportunities for reproducible findings using large-scale neuroimaging in psychiatry. *Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology*, 10.1038/s41386-024-01938-8. Advance online publication. <https://doi.org/10.1038/s41386-024-01938-8>
- Miller, K. L., Alfaro-Almagro, F., Bangerter, N. K., Thomas, D. L., Yacoub, E., Xu, J., Bartsch, A. J., Jbabdi, S., Sotiropoulos, S. N., Andersson, J. L., Griffanti, L., Douaud, G., Okell, T. W., Weale, P., Dragonu, I., Garratt, S., Hudson, S., Collins, R., Jenkinson, M., Matthews, P. M., ... Smith, S. M.

**The Stanford Center for Precision Mental Health and Wellness 4th Annual Symposium:  
From Data to Care: Precision Medicine in Action for Mental Health (Recordings)**  
**Stanford University School of Medicine**

(2016). Multimodal population brain imaging in the UK Biobank prospective epidemiological study. *Nature neuroscience*, 19(11), 1523–1536. <https://doi.org/10.1038/nn.4393>

- Sudlow, C., Gallacher, J., Allen, N., Beral, V., Burton, P., Danesh, J., Downey, P., Elliott, P., Green, J., Landray, M., Liu, B., Matthews, P., Ong, G., Pell, J., Silman, A., Young, A., Sprosen, T., Peakman, T., & Collins, R. (2015). UK biobank: an open access resource for identifying the causes of a wide range of complex diseases of middle and old age. *PLoS medicine*, 12(3), e1001779. <https://doi.org/10.1371/journal.pmed.1001779>
- Zhang, W., Dutt, R., Lew, D., Barch, D., & Bijsterbosch, J. (2024). Distinct Brain Functional Networks are Associated With State-and Trait-Depression. *Biological Psychiatry*, 95(10), S97. <https://doi.org/10.1016/j.biopsych.2024.02.231>

*Digital Therapeutics for Mental Health:*

- Andrade, L. H., Alonso, J., Mneimneh, Z., Wells, J. E., Al-Hamzawi, A., Borges, G., Bromet, E., Bruffaerts, R., de Girolamo, G., de Graaf, R., Florescu, S., Gureje, O., Hinkov, H. R., Hu, C., Huang, Y., Hwang, I., Jin, R., Karam, E. G., Kovess-Masfety, V., Levinson, D., ... Kessler, R. C. (2014). Barriers to mental health treatment: results from the WHO World Mental Health surveys. *Psychological medicine*, 44(6), 1303–1317. <https://doi.org/10.1017/S0033291713001943>
- Bröcker, E., Olff, M., Suliman, S., Kidd, M., Greyvenstein, L., & Seedat, S. (2024). A counsellor-supported 'PTSD Coach' intervention versus enhanced Treatment-as-Usual in a resource-constrained setting: A randomised controlled trial. *Global mental health (Cambridge, England)*, 11, e7. <https://doi.org/10.1017/gmh.2023.92>
- Cernvall, M., Sveen, J., Bergh Johannesson, K., & Arnberg, F. (2018). A pilot study of user satisfaction and perceived helpfulness of the Swedish version of the mobile app PTSD Coach. *European journal of psychotraumatology*, 9(Suppl 1), 1472990. <https://doi.org/10.1080/20008198.2018.1472990>
- Degenhard, J. (2024). Number of smartphone users worldwide 2014-2029. *Statista*. <https://www.statista.com/forecasts/1143723/smartphone-users-in-the-world>
- Health Resources & Services Administration. (2024). Health Professional Shortage Areas (HPSA) - Mental Health. *Health Resources & Services Administration*. <https://data.hrsa.gov/ExportedMaps/MapGallery/HPSAMH.pdf>

**The Stanford Center for Precision Mental Health and Wellness 4th Annual Symposium:**

***From Data to Care: Precision Medicine in Action for Mental Health (Recordings)***

**Stanford University School of Medicine**

- Hensler, I., Sveen, J., Cernvall, M., & Arnberg, F. K. (2022). Efficacy, Benefits, and Harms of a Self-management App in a Swedish Trauma-Exposed Community Sample (PTSD Coach): Randomized Controlled Trial. *Journal of medical Internet research*, 24(3), e31419.  
<https://doi.org/10.2196/31419>
- Hensler, I., Sveen, J., Cernvall, M., & Arnberg, F. K. (2023). Longitudinal follow-up of the randomized controlled trial of access to the trauma-focused self-management app PTSD Coach. *Internet interventions*, 32, 100618. <https://doi.org/10.1016/j.invent.2023.100618>
- Hoffman, J. E., Kuhn, E., Ramsey, K., Jaworski, B., Owen, J., Wald, L. J., Greene, C., Ruzek, J. I., & Weingardt, K. (2011-19). PTSD Coach (Version 1.0-3.0). [Mobile Application Software].  
<https://itunes.apple.com/us/app/ptsd-coach/id430646302?mt=8>
- Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *The New England journal of medicine*, 351(1), 13–22. <https://doi.org/10.1056/NEJMoa040603>
- Jacobson, N. C., Kowatsch, T., & Marsch, L. A. (2023). Introduction: A vision for the field of digital therapeutics. In Jacobsen, N. C., Kowatsch, T., & Marsch, L. A. (Eds.), *Digital therapeutics for mental health and addiction*, pp. 1-4, Academic Press. <https://doi.org/10.1016/B978-0-323-90045-4.00008-3>
- Keisler-Starkey, K., & Bunch, L. N. (2021). Health Insurance Coverage in the United States: 2020 Current Population Reports. *United States Census Bureau, U.S. Department of Commerce*.  
<https://www.census.gov/content/dam/Census/library/publications/2021/demo/p60-274.pdf>
- Kim, J., Aryee, L. M. D., Bang, H., Prajogo, S., Choi, Y. K., Hoch, J. S., & Prado, E. L. (2023). Effectiveness of Digital Mental Health Tools to Reduce Depressive and Anxiety Symptoms in Low- and Middle-Income Countries: Systematic Review and Meta-analysis. *JMIR mental health*, 10, e43066. <https://doi.org/10.2196/43066>
- Kuhn, E., Kanuri, N., Hoffman, J. E., Garvert, D. W., Ruzek, J. I., & Taylor, C. B. (2017). A randomized controlled trial of a smartphone app for posttraumatic stress disorder symptoms. *Journal of consulting and clinical psychology*, 85(3), 267–273.  
<https://doi.org/10.1037/ccp0000163>
- Kuhn, E., van der Meer, C., Owen, J. E., Hoffman, J. E., Cash, R., Carrese, P., Olff, M., Bakker, A., Schellong, J., Lorenz, P., Schopp, M., Rau, H., Weidner, K., Arnberg, F. K., Cernvall, M., & Iversen,

**The Stanford Center for Precision Mental Health and Wellness 4th Annual Symposium:  
*From Data to Care: Precision Medicine in Action for Mental Health (Recordings)***  
Stanford University School of Medicine

T. (2018). PTSD Coach around the world. *mHealth*, 4, 15.

<https://doi.org/10.21037/mhealth.2018.05.01>

- Lorenz, P., Schindler, L., Steudte-Schmiedgen, S., Weidner, K., Kirschbaum, C., & Schellong, J. (2019). Ecological momentary assessment in posttraumatic stress disorder and coping. An eHealth study protocol. *European journal of psychotraumatology*, 10(1), 1654064.  
<https://doi.org/10.1080/20008198.2019.1654064>
- McGrath, J. J., Al-Hamzawi, A., Alonso, J., Altwaijri, Y., Andrade, L. H., Bromet, E. J., Bruffaerts, R., de Almeida, J. M. C., Chardoul, S., Chiu, W. T., Degenhardt, L., Demler, O. V., Ferry, F., Gureje, O., Haro, J. M., Karam, E. G., Karam, G., Khaled, S. M., Kovess-Masfety, V., Magno, M., ... WHO World Mental Health Survey Collaborators (2023). Age of onset and cumulative risk of mental disorders: a cross-national analysis of population surveys from 29 countries. *The lancet. Psychiatry*, 10(9), 668–681. [https://doi.org/10.1016/S2215-0366\(23\)00193-1](https://doi.org/10.1016/S2215-0366(23)00193-1)
- van der Meer, C. A. I., Bakker, A., van Zuiden, M., Lok, A., & Olff, M. (2020). Help in hand after traumatic events: a randomized controlled trial in health care professionals on the efficacy, usability, and user satisfaction of a self-help app to reduce trauma-related symptoms. *European journal of psychotraumatology*, 11(1), 1717155.  
<https://doi.org/10.1080/20008198.2020.1717155>
- Miner, A., Kuhn, E., Hoffman, J. E., Owen, J. E., Ruzek, J. I., & Taylor, C. B. (2016). Feasibility, acceptability, and potential efficacy of the PTSD Coach app: A pilot randomized controlled trial with community trauma survivors. *Psychological trauma : theory, research, practice and policy*, 8(3), 384–392. <https://doi.org/10.1037/tra0000092>
- Mohr, D. C., Zhang, M., & Schueller, S. M. (2017). Personal Sensing: Understanding Mental Health Using Ubiquitous Sensors and Machine Learning. *Annual review of clinical psychology*, 13, 23–47. <https://doi.org/10.1146/annurev-clinpsy-032816-044949>
- Moshe, I., Terhorst, Y., Philippi, P., Domhardt, M., Cuijpers, P., Cristea, I., Pulkki-Råback, L., Baumeister, H., & Sander, L. B. (2021). Digital interventions for the treatment of depression: A meta-analytic review. *Psychological bulletin*, 147(8), 749–786.  
<https://doi.org/10.1037/bul0000334>
- Nahum-Shani, I., Smith, S. N., Spring, B. J., Collins, L. M., Witkiewitz, K., Tewari, A., & Murphy, S. A. (2018). Just-in-Time Adaptive Interventions (JITAs) in Mobile Health: Key Components and Design Principles for Ongoing Health Behavior Support. *Annals of behavioral medicine : a*

**The Stanford Center for Precision Mental Health and Wellness 4th Annual Symposium:  
From Data to Care: Precision Medicine in Action for Mental Health (Recordings)**  
**Stanford University School of Medicine**

*publication of the Society of Behavioral Medicine*, 52(6), 446–462.

<https://doi.org/10.1007/s12160-016-9830-8>

- Owen, J., Ramsey, K., Jaworski, B., Kuhn, E., McGee-Vincent, P., Juhasz, K., & Taylor, K. (2020). PTSD Coach (Version 3.1). [Mobile Application Software]. <https://itunes.apple.com/us/app/ptsd-coach/id430646302?mt=8>
- Pauley, D., Cuijpers, P., Papola, D., Miguel, C., & Karyotaki, E. (2023). Two decades of digital interventions for anxiety disorders: a systematic review and meta-analysis of treatment effectiveness. *Psychological medicine*, 53(2), 567–579.  
<https://doi.org/10.1017/S0033291721001999>
- Pelchen, L., & Allen, S. (Ed.). (2024). Internet Usage Statistics In 2024. *Forbes, Internet Usage Statistics*. <https://www.forbes.com/home-improvement/internet/internet-statistics/>
- Possemato, K., Johnson, E., Barrie, K., Ghaus, S., Noronha, D., Wade, M., Greenbaum, M. A., Rosen, C., Cloitre, M., Owen, J., Jain, S., Beehler, G., Prins, A., Seal, K., & Kuhn, E. (2023). A Randomized Clinical Trial of Clinician-Supported PTSD Coach in VA Primary Care Patients. *Journal of general internal medicine*, 38(Suppl 3), 905–912. <https://doi.org/10.1007/s11606-023-08130-6>
- Possemato, K., Kuhn, E., Johnson, E., Hoffman, J. E., Owen, J. E., Kanuri, N., De Stefano, L., & Brooks, E. (2016). Using PTSD Coach in primary care with and without clinician support: a pilot randomized controlled trial. *General hospital psychiatry*, 38, 94–98.  
<https://doi.org/10.1016/j.genhosppsych.2015.09.005>
- Richter, D., Wall, A., Bruen, A., & Whittington, R. (2019). Is the global prevalence rate of adult mental illness increasing? Systematic review and meta-analysis. *Acta psychiatrica Scandinavica*, 140(5), 393–407. <https://doi.org/10.1111/acps.13083>
- Schomerus, G., Schwahn, C., Holzinger, A., Corrigan, P. W., Grabe, H. J., Carta, M. G., & Angermeyer, M. C. (2012). Evolution of public attitudes about mental illness: a systematic review and meta-analysis. *Acta psychiatrica Scandinavica*, 125(6), 440–452.  
<https://doi.org/10.1111/j.1600-0447.2012.01826.x>
- Shakespeare-Finch, J., Alichniewicz, K. K., Strodl, E., Brown, K., Quinn, C., Hides, L., White, A., Gossage, G., Poerio, L., Batras, D., Jackson, S., Styles, J., & Kavanagh, D. (2020). Experiences of Serving and Ex-Serving Members With the PTSD Coach Australia App: Mixed Methods Study. *Journal of medical Internet research*, 22(10), e18447. <https://doi.org/10.2196/18447>

**The Stanford Center for Precision Mental Health and Wellness 4th Annual Symposium:**

***From Data to Care: Precision Medicine in Action for Mental Health (Recordings)***

**Stanford University School of Medicine**

- Silar, T. (2020). Where Did All the Community Bulletin Boards Go?. *Medium*.  
<https://medium.com/@tedsilar/where-did-all-the-community-bulletin-boards-go-ae498d0ffad>
- Smith, S. K., Kuhn, E., O'Donnell, J., Koontz, B. F., Nelson, N., Molloy, K., Chang, J., & Hoffman, J. (2018). Cancer distress coach: Pilot study of a mobile app for managing posttraumatic stress. *Psycho-oncology*, 27(1), 350–353. <https://doi.org/10.1002/pon.4363>
- Smith, S. K., Somers, T. J., Kuhn, E., Laber, E., Sung, A. D., Syrjala, K. L., Feger, B., Kelleher, S. A., Majestic, C., Gebert, R., LeBlanc, M., Owen, J. E., & Applebaum, A. J. (2021). A SMART approach to optimizing delivery of an mHealth intervention among cancer survivors with posttraumatic stress symptoms. *Contemporary clinical trials*, 110, 106569.  
<https://doi.org/10.1016/j.cct.2021.106569>
- Spruijt-Metz, D., Hekler, E., Saranummi, N., Intille, S., Korhonen, I., Nilsen, W., Rivera, D. E., Spring, B., Michie, S., Asch, D. A., Sanna, A., Salcedo, V. T., Kukafka, R., & Pavel, M. (2015). Building new computational models to support health behavior change and maintenance: new opportunities in behavioral research. *Translational behavioral medicine*, 5(3), 335–346.  
<https://doi.org/10.1007/s13142-015-0324-1>
- Sriprada, R. K., Smith, K., Walters, H. M., Ganoczy, D., Kim, H. M., Grau, P. P., Nahum-Shani, I., Possemato, K., Kuhn, E., Zivin, K., Pfeiffer, P. N., Bohnert, K. M., Cigrang, J. A., Avallone, K. M., & Rauch, S. A. M. (2023). Testing adaptive interventions to improve PTSD treatment outcomes in Federally Qualified Health Centers: Protocol for a randomized clinical trial. *Contemporary clinical trials*, 129, 107182. <https://doi.org/10.1016/j.cct.2023.107182>
- Strodl, E., Shakespeare-Finch, J., Alichniewicz, K. K., Brown, K., Quinn, C., Hides, L., White, A., Gossage, G., Poerio, L., Batras, D., Jackson, S., Styles, J., & Kavanagh, D. J. (2020). Clinicians' perceptions of PTSD Coach Australia. *Internet interventions*, 21, 100333.  
<https://doi.org/10.1016/j.invent.2020.100333>
- Thornicroft G. (2007). Most people with mental illness are not treated. *Lancet (London, England)*, 370(9590), 807–808. [https://doi.org/10.1016/S0140-6736\(07\)61392-0](https://doi.org/10.1016/S0140-6736(07)61392-0)
- Wang, Q., Zhang, W., & An, S. (2023). A systematic review and meta-analysis of Internet-based self-help interventions for mental health among adolescents and college students. *Internet interventions*, 34, 100690. <https://doi.org/10.1016/j.invent.2023.100690>

**The Stanford Center for Precision Mental Health and Wellness 4th Annual Symposium:  
From Data to Care: Precision Medicine in Action for Mental Health (Recordings)**  
**Stanford University School of Medicine**

- Werntz, A., Amado, S., Jasman, M., Ervin, A., & Rhodes, J. E. (2023). Providing Human Support for the Use of Digital Mental Health Interventions: Systematic Meta-review. *Journal of medical Internet research*, 25, e42864. <https://doi.org/10.2196/42864>
- World Health Organization, & UNICEF. (2024). Psychiatrists per 100,000 people, 2020. *WHO Mental Health Atlas 2020 via UNICEF* (2023). <https://ourworldindata.org/grapher/psychiatrists-working-in-the-mental-health-sector>

*Target-Based, Personalized Treatment Development For Mood Disorders:*

- Bruijnzeel A. W. (2009). kappa-Opioid receptor signaling and brain reward function. *Brain research reviews*, 62(1), 127–146. <https://doi.org/10.1016/j.brainresrev.2009.09.008>
- Carlezon, W. A., Jr, Béguin, C., DiNieri, J. A., Baumann, M. H., Richards, M. R., Todtenkopf, M. S., Rothman, R. B., Ma, Z., Lee, D. Y., & Cohen, B. M. (2006). Depressive-like effects of the kappa-opioid receptor agonist salvinorin A on behavior and neurochemistry in rats. *The Journal of pharmacology and experimental therapeutics*, 316(1), 440–447. <https://doi.org/10.1124/jpet.105.092304>
- Carlezon, W. A., Jr, & Krystal, A. D. (2016). Kappa-Opioid Antagonists for Psychiatric Disorders: From Bench to Clinical Trials. *Depression and anxiety*, 33(10), 895–906. <https://doi.org/10.1002/da.22500>
- Chartoff, E., Sawyer, A., Rachlin, A., Potter, D., Pliakas, A., & Carlezon, W. A. (2012). Blockade of kappa opioid receptors attenuates the development of depressive-like behaviors induced by cocaine withdrawal in rats. *Neuropharmacology*, 62(1), 167–176. <https://doi.org/10.1016/j.neuropharm.2011.06.014>
- Denys, D., & de Geus, F. (2005). Predictors of pharmacotherapy response in anxiety disorders. *Current psychiatry reports*, 7(4), 252–257. <https://doi.org/10.1007/s11920-005-0078-4>
- Ebner, S. R., Roitman, M. F., Potter, D. N., Rachlin, A. B., & Chartoff, E. H. (2010). Depressive-like effects of the kappa opioid receptor agonist salvinorin A are associated with decreased phasic dopamine release in the nucleus accumbens. *Psychopharmacology*, 210(2), 241–252. <https://doi.org/10.1007/s00213-010-1836-5>
- Fan, J. M., Woodworth, K., Murphy, K. R., Hinkley, L., Cohen, J. L., Yoshimura, J., Choi, I., Tremblay-McGaw, A. G., Mergenthaler, J., Good, C. H., Pellionisz, P. A., Lee, A. M., Di Ianni, T.,

**The Stanford Center for Precision Mental Health and Wellness 4th Annual Symposium:  
From Data to Care: Precision Medicine in Action for Mental Health (Recordings)**  
**Stanford University School of Medicine**

Sugrue, L. P., & Krystal, A. D. (2024). Thalamic transcranial ultrasound stimulation in treatment-resistant depression. *Brain stimulation*, 17(5), 1001–1004. Advance online publication.

<https://doi.org/10.1016/j.brs.2024.08.006>

- Fitzgerald, P. B., Segrave, R., Richardson, K. E., Knox, L. A., Herring, S., Daskalakis, Z. J., & Bittar, R. G. (2018). A pilot study of bed nucleus of the stria terminalis deep brain stimulation in treatment-resistant depression. *Brain stimulation*, 11(4), 921–928.  
<https://doi.org/10.1016/j.brs.2018.04.013>
- Insel T. R. (2006). Beyond efficacy: the STAR\*D trial. *The American journal of psychiatry*, 163(1), 5–7. <https://doi.org/10.1176/appi.ajp.163.1.5>
- Insel, T., Cuthbert, B., Garvey, M., Heinssen, R., Pine, D. S., Quinn, K., Sanislow, C., & Wang, P. (2010). Research domain criteria (RDoC): toward a new classification framework for research on mental disorders. *The American journal of psychiatry*, 167(7), 748–751.  
<https://doi.org/10.1176/appi.ajp.2010.09091379>
- Insel, T. R., & Scolnick, E. M. (2006). Cure therapeutics and strategic prevention: raising the bar for mental health research. *Molecular psychiatry*, 11(1), 11–17.  
<https://doi.org/10.1038/sj.mp.4001777>
- Jiménez, F., Nicolini, H., Lozano, A. M., Piedimonte, F., Salín, R., & Velasco, F. (2013). Electrical stimulation of the inferior thalamic peduncle in the treatment of major depression and obsessive compulsive disorders. *World neurosurgery*, 80(3-4), S30.e17–S30.e25.  
<https://doi.org/10.1016/j.wneu.2012.07.010>
- Kessler, R. C., Nelson, C. B., McGonagle, K. A., Liu, J., Swartz, M., & Blazer, D. G. (1996). Comorbidity of DSM-III-R major depressive disorder in the general population: results from the US National Comorbidity Survey. *The British journal of psychiatry. Supplement*, (30), 17–30.
- Koob, G. F., & Volkow, N. D. (2010). Neurocircuitry of addiction. *Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology*, 35(1), 217–238.  
<https://doi.org/10.1038/npp.2009.110>
- Krystal, A. D., Pizzagalli, D. A., Mathew, S. J., Sanacora, G., Keefe, R., Song, A., Calabrese, J., Goddard, A., Goodman, W., Lisanby, S. H., Smoski, M., Weiner, R., Iosifescu, D., Nurnberger, J., Jr, Szabo, S., Murrough, J., Shekhar, A., & Potter, W. (2018). The first implementation of the NIMH FAST-FAIL approach to psychiatric drug development. *Nature reviews. Drug discovery*, 18(1), 82–84. <https://doi.org/10.1038/nrd.2018.222>

**The Stanford Center for Precision Mental Health and Wellness 4th Annual Symposium:  
*From Data to Care: Precision Medicine in Action for Mental Health (Recordings)***  
Stanford University School of Medicine

- Krystal, A. D., Pizzagalli, D. A., Smoski, M., Mathew, S. J., Nurnberger, J., Jr, Lisanby, S. H., Iosifescu, D., Murrough, J. W., Yang, H., Weiner, R. D., Calabrese, J. R., Sanacora, G., Hermes, G., Keefe, R. S. E., Song, A., Goodman, W., Szabo, S. T., Whitton, A. E., Gao, K., & Potter, W. Z. (2020). A randomized proof-of-mechanism trial applying the 'fast-fail' approach to evaluating κ-opioid antagonism as a treatment for anhedonia. *Nature medicine*, 26(5), 760–768.  
<https://doi.org/10.1038/s41591-020-0806-7>
- Maisonneuve, I. M., Archer, S., & Glick, S. D. (1994). U50,488, a kappa opioid receptor agonist, attenuates cocaine-induced increases in extracellular dopamine in the nucleus accumbens of rats. *Neuroscience letters*, 181(1-2), 57–60. [https://doi.org/10.1016/0304-3940\(94\)90559-2](https://doi.org/10.1016/0304-3940(94)90559-2)
- Mayberg, H. S., Brannan, S. K., Mahurin, R. K., Jerabek, P. A., Brickman, J. S., Tekell, J. L., Silva, J. A., McGinnis, S., Glass, T. G., Martin, C. C., & Fox, P. T. (1997). Cingulate function in depression: a potential predictor of treatment response. *Neuroreport*, 8(4), 1057–1061.  
<https://doi.org/10.1097/00001756-199703030-00048>
- Meng, Y., Hynnen, K., & Lipsman, N. (2021). Applications of focused ultrasound in the brain: from thermoablation to drug delivery. *Nature reviews. Neurology*, 17(1), 7–22.  
<https://doi.org/10.1038/s41582-020-00418-z>
- Muschamp, J. W., Van't Veer, A., & Carlezon, W. A., Jr (2011). Tracking down the molecular substrates of stress: new roles for p38 $\alpha$  MAPK and kappa-opioid receptors. *Neuron*, 71(3), 383–385. <https://doi.org/10.1016/j.neuron.2011.07.018>
- National Advisory Mental Health Council's Workgroup. (2010). From Discovery to Cure: Accelerating the Development of New and Personalized Interventions for Mental Illnesses. *National Advisory Mental Health Council's Workgroup, National Institutes of Health*.  
<https://www.nimh.nih.gov/sites/default/files/documents/about/advisory-boards-and-groups/namhc/reports/fromdiscoverytocure.pdf>
- Paul, S. M., Mytelka, D. S., Dunwiddie, C. T., Persinger, C. C., Munos, B. H., Lindborg, S. R., & Schacht, A. L. (2010). How to improve R&D productivity: the pharmaceutical industry's grand challenge. *Nature reviews. Drug discovery*, 9(3), 203–214. <https://doi.org/10.1038/nrd3078>
- Rao, V. R., Sellers, K. K., Wallace, D. L., Lee, M. B., Bijanzadeh, M., Sani, O. G., Yang, Y., Shanechi, M. M., Dawes, H. E., & Chang, E. F. (2018). Direct Electrical Stimulation of Lateral Orbitofrontal Cortex Acutely Improves Mood in Individuals with Symptoms of Depression. *Current biology : CB*, 28(24), 3893–3902.e4. <https://doi.org/10.1016/j.cub.2018.10.026>

**The Stanford Center for Precision Mental Health and Wellness 4th Annual Symposium:  
*From Data to Care: Precision Medicine in Action for Mental Health (Recordings)***  
Stanford University School of Medicine

- Regier, D. A., Narrow, W. E., Clarke, D. E., Kraemer, H. C., Kuramoto, S. J., Kuhl, E. A., & Kupfer, D. J. (2013). DSM-5 field trials in the United States and Canada, Part II: test-retest reliability of selected categorical diagnoses. *The American journal of psychiatry*, 170(1), 59–70.  
<https://doi.org/10.1176/appi.ajp.2012.12070999>
- Sartorius, A., & Henn, F. A. (2007). Deep brain stimulation of the lateral habenula in treatment-resistant major depression. *Medical hypotheses*, 69(6), 1305–1308.  
<https://doi.org/10.1016/j.mehy.2007.03.021>
- Scangos, K. W., Khambhati, A. N., Daly, P. M., Makhoul, G. S., Sugrue, L. P., Zamanian, H., Liu, T. X., Rao, V. R., Sellers, K. K., Dawes, H. E., Starr, P. A., Krystal, A. D., & Chang, E. F. (2021). Closed-loop neuromodulation in an individual with treatment-resistant depression. *Nature medicine*, 27(10), 1696–1700. <https://doi.org/10.1038/s41591-021-01480-w>
- Scangos, K. W., Makhoul, G. S., Sugrue, L. P., Chang, E. F., & Krystal, A. D. (2021). State-dependent responses to intracranial brain stimulation in a patient with depression. *Nature medicine*, 27(2), 229–231. <https://doi.org/10.1038/s41591-020-01175-8>
- Tomasiewicz, H. C., Todtenkopf, M. S., Chartoff, E. H., Cohen, B. M., & Carlezon, W. A., Jr (2008). The kappa-opioid agonist U69,593 blocks cocaine-induced enhancement of brain stimulation reward. *Biological psychiatry*, 64(11), 982–988. <https://doi.org/10.1016/j.biopsych.2008.05.029>
- Tozzi, L., Zhang, X., Pines, A., Olmsted, A. M., Zhai, E. S., Anene, E. T., Chesnut, M., Holt-Gosselin, B., Chang, S., Stetz, P. C., Ramirez, C. A., Hack, L. M., Korgaonkar, M. S., Wintermark, M., Gotlib, I. H., Ma, J., & Williams, L. M. (2024). Personalized brain circuit scores identify clinically distinct biotypes in depression and anxiety. *Nature medicine*, 30(7), 2076–2087.  
<https://doi.org/10.1038/s41591-024-03057-9>
- Trivedi, M. H., Rush, A. J., Wisniewski, S. R., Nierenberg, A. A., Warden, D., Ritz, L., Norquist, G., Howland, R. H., Lebowitz, B., McGrath, P. J., Shores-Wilson, K., Biggs, M. M., Balasubramani, G. K., Fava, M., & STAR\*D Study Team (2006). Evaluation of outcomes with citalopram for depression using measurement-based care in STAR\*D: implications for clinical practice. *The American journal of psychiatry*, 163(1), 28–40. <https://doi.org/10.1176/appi.ajp.163.1.28>
- Woosley, R. L., & Cossman, J. (2007). Drug development and the FDA's Critical Path Initiative. *Clinical pharmacology and therapeutics*, 81(1), 129–133.  
<https://doi.org/10.1038/sj.cpt.6100014>

**The Stanford Center for Precision Mental Health and Wellness 4th Annual Symposium:  
From Data to Care: Precision Medicine in Action for Mental Health (Recordings)**  
**Stanford University School of Medicine**

*Targeting Cognition in Depression:*

- Cottingham, C., & Wang, Q. (2012). α2 adrenergic receptor dysregulation in depressive disorders: implications for the neurobiology of depression and antidepressant therapy. *Neuroscience and biobehavioral reviews*, 36(10), 2214–2225.  
<https://doi.org/10.1016/j.neubiorev.2012.07.011>
- Fox, H. C., Seo, D., Tuit, K., Hansen, J., Kimmerling, A., Morgan, P. T., & Sinha, R. (2012). Guanfacine effects on stress, drug craving and prefrontal activation in cocaine dependent individuals: preliminary findings. *Journal of psychopharmacology (Oxford, England)*, 26(7), 958–972. <https://doi.org/10.1177/0269881111430746>
- Hack, L. M., Tozzi, L., Zenteno, S., Olmsted, A. M., Hilton, R., Jubeir, J., Korgaonkar, M. S., Schatzberg, A. F., Yesavage, J. A., O'Hara, R., & Williams, L. M. (2023). A Cognitive Biotype of Depression and Symptoms, Behavior Measures, Neural Circuits, and Differential Treatment Outcomes: A Prespecified Secondary Analysis of a Randomized Clinical Trial. *JAMA network open*, 6(6), e2318411. <https://doi.org/10.1001/jamanetworkopen.2023.18411>
- McAllister, T. W., McDonald, B. C., Flashman, L. A., Ferrell, R. B., Tosteson, T. D., Yanofsky, N. N., Grove, M. R., & Saykin, A. J. (2011). Alpha-2 adrenergic challenge with guanfacine one month after mild traumatic brain injury: altered working memory and BOLD response. *International journal of psychophysiology : official journal of the International Organization of Psychophysiology*, 82(1), 107–114. <https://doi.org/10.1016/j.ijpsycho.2011.06.022>
- Mineur, Y. S., Bentham, M. P., Zhou, W. L., Plantenga, M. E., McKee, S. A., & Picciotto, M. R. (2015). Antidepressant-like effects of guanfacine and sex-specific differences in effects on c-fos immunoreactivity and paired-pulse ratio in male and female mice. *Psychopharmacology*, 232(19), 3539–3549. <https://doi.org/10.1007/s00213-015-4001-3>
- Schulz, K. P., Clerkin, S. M., Fan, J., Halperin, J. M., & Newcorn, J. H. (2013). Guanfacine modulates the influence of emotional cues on prefrontal cortex activation for cognitive control. *Psychopharmacology*, 226(2), 261–271. <https://doi.org/10.1007/s00213-012-2893-8>
- Tozzi, L., Bertrand, C., Hack, L. M., Lyons, T., Olmsted, A. M., Rajasekharan, D., Chen, T., Berlow, Y. A., Yesavage, J. A., Lim, K., Madore, M. R., Philip, N. S., Holtzheimer, P., & Williams, L. M. (2024). A cognitive neural circuit biotype of depression showing functional and behavioral

**The Stanford Center for Precision Mental Health and Wellness 4th Annual Symposium:  
From Data to Care: Precision Medicine in Action for Mental Health (Recordings)**  
**Stanford University School of Medicine**

improvement after transcranial magnetic stimulation in the B-SMART-fMRI trial. *Nature Mental Health*, (2), 987-998. <https://doi.org/10.1038/s44220-024-00271-9>

- Tozzi, L., Zhang, X., Pines, A., Olmsted, A. M., Zhai, E. S., Anene, E. T., Chesnut, M., Holt-Gosselin, B., Chang, S., Stetz, P. C., Ramirez, C. A., Hack, L. M., Korgaonkar, M. S., Wintermark, M., Gotlib, I. H., Ma, J., & Williams, L. M. (2024). Personalized brain circuit scores identify clinically distinct biotypes in depression and anxiety. *Nature medicine*, 30(7), 2076–2087.  
<https://doi.org/10.1038/s41591-024-03057-9>
- Williams L. M. (2017). Defining biotypes for depression and anxiety based on large-scale circuit dysfunction: a theoretical review of the evidence and future directions for clinical translation. *Depression and anxiety*, 34(1), 9–24. <https://doi.org/10.1002/da.22556>
- Williams L. M. (2016). Precision psychiatry: a neural circuit taxonomy for depression and anxiety. *The lancet. Psychiatry*, 3(5), 472–480. [https://doi.org/10.1016/S2215-0366\(15\)00579-9](https://doi.org/10.1016/S2215-0366(15)00579-9)
- Williams, L. M., & Whitfield Gabrieli, S. (2024). Neuroimaging for precision medicine in psychiatry. *Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology*, 10.1038/s41386-024-01917-z. Advance online publication.  
<https://doi.org/10.1038/s41386-024-01917-z>

*Through the Looking Glass: Psilocybin for Mood Disorder Episodes:*

- Petri, G., Expert, P., Turkheimer, F., Carhart-Harris, R., Nutt, D., Hellyer, P. J., & Vaccarino, F. (2014). Homological scaffolds of brain functional networks. *Journal of the Royal Society, Interface*, 11(101), 20140873. <https://doi.org/10.1098/rsif.2014.0873>
- White, T. (2023). Falling for Psychedelics. *Stanford Magazine*.  
<https://stanfordmag.org/contents/falling-for-psychadelics>