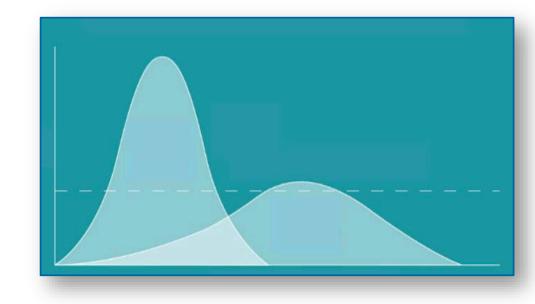


Today's Discussion

- 1. Mental Wellbeing Pre-Pandemic
- 2. Impact COVID-19
- 3. Does Early Intervention Work?
- 4. Example
- 5. A Population Health Approach
- 6. Discussion



The U.S. Mental Health System is Broken Resulting in Excess Costs, Lost Productivity, and Suffering



Half of adults have mental health issues in their lifetime; 1 in 5 each year



Workplace stress alone produces \$190B in U.S. health cost and \$1T in global productivity loss each year¹



Yet, **56% of the**population lacks
access to mental
health services

Covid-19 has Made the Mental Health Problem Worse Resulting in depression, anxiety, and ongoing mental health impacts



Incidence of anxiety and depression and other mental health issues have **grown by**4x since Covid-19

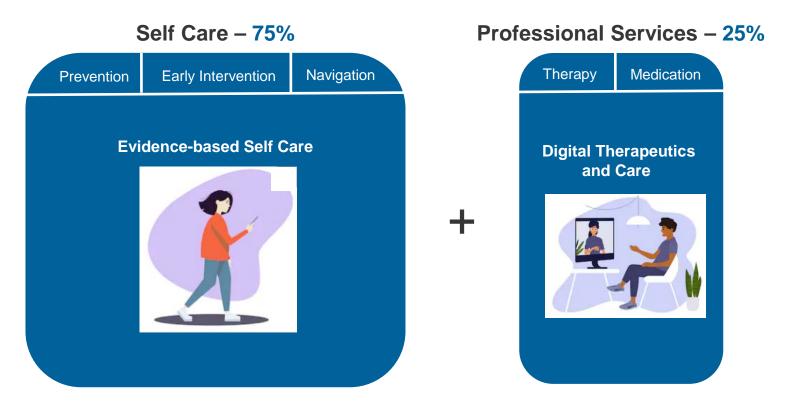


60% of Americans now say they are suffering from Anxiety or Stress



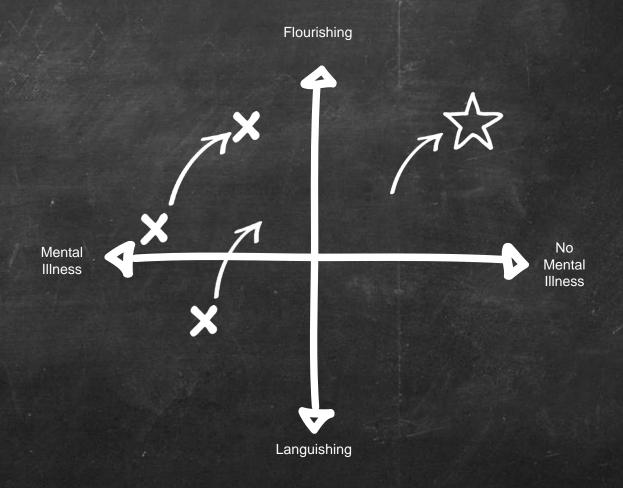
Mental health effects of COVID likely to last 3-7 years post-pandemic

Population-basedMental Health



2-D Positive Framework

- People can see themselves in this framework
- Engages people to care about themselves
- Reduces stigma of single dimensional labeling



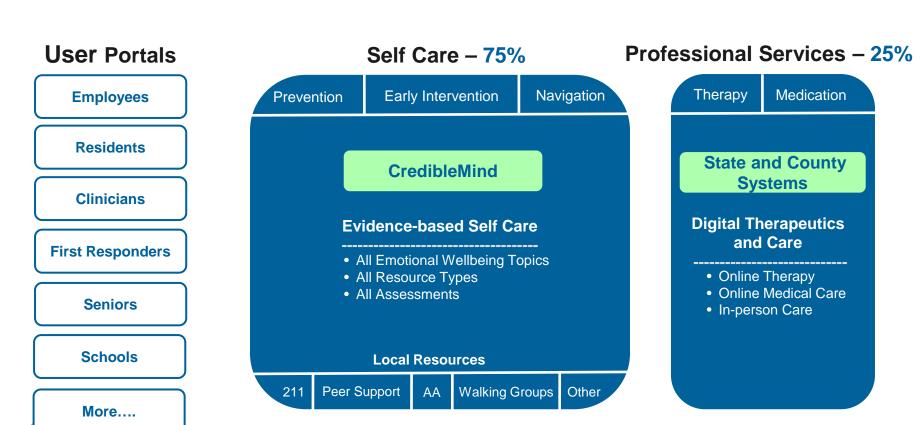
Does Early-Intervention "Population Mental Health" Work?

- Exercise. 34% reduction in depression, as effective as antidepressant medication and psychotherapy.
- Meditation/Mindfulness. NIH review report, meditation can reduce blood pressure, symptoms of irritable bowel syndrome, anxiety, depression, chronic pain, and insomnia.
- Art Therapy. 81% of Creative Art Therapy studies report reduction of stress.
- Being in Nature. Across 36 studies, outdoor, nature-based exposures found to have a positive effect on stress relief.
- Tai Chi. Randomized controlled trials conducted with older adults show that tai chi improves multiple outcomes including sleep quality and duration, daytime functioning, depression, quality of life, and cognitive functioning.
- Yoga. Meta study of 35 trials, 74% note significant decrease in stress and/or anxiety symptoms with Yoga.
- Mindfulness-based Therapy. improved outcomes for depression, large meta analysis, Canada's 2016 Guideline for Depression.
- Mindfulness-based Therapy. To treat substance misuse relapse, 64% decrease risk of drug relapse, 69% decrease risk for alcohol relapse.

Can The Use Of Web and Mobile Technology Make Positive Impact?

- Prevent people with sub-threshold depression from progressing to major depression, reduction of 59%
- Cost-effectively reduce occupational stress and improved depression, anxiety, emotional exhaustion, sleeping problems, worrying, mental health-related quality of life, psychological detachment, emotion regulation skills and presenteeism
- Meta-analysis of 26 studies with n = 4,226 total "provide evidence that Web and computer-based stress management interventions can be effective to reduce stress-related mental health problems on a large scale."
- Self-Help Web-Based Training improved sleep in 177 people in general working population. Also improved cognitive activity and "work-related health", but not absenteeism
- 6 weekly self-help, internet-based emails with links to resources was compared with 6 online sessions with a psychotherapist for COVID-19 related depression and anxiety. Both resulted in statistically significant improvement among n=60 sufferers.

Population-basedMental Health



Summary of Findings

- Mental health and emotional distress is a growing crisis in California; the costs are staggering, and so is the pain and suffering
- COVID mental health crisis at our doorstep will last roughly 5 years
- Prevention and early intervention works ample evidence
- Community stakeholders want to help but have been challenged with costs of largescale clinical programs and are looking for effective community-based programs
- Keys for State and counties 1) is to support behavioral health and public health to work together – "Population-based Mental Health Strategy"; 2) engagement
- Many technologies exist that can help Help@Hand technologies (like CredibleMind) are good examples



The Population Mental Health Platform Company

Contact Information

Deryk Van Brunt, DrPH Co-founder, Chief Executive Officer Clinical Professor, University of California, Berkeley, School of Public Health

deryk@crediblemind.com 415-517-6922









CredibleMind Content Team



Jonathan Adler, MD
Chief Medical
Officer, Co-Editor in
Chief

Dr. Jonathan Adler is a dedicated clinician and award-winning teacher at Massachusetts
General Hospital and Harvard Medical School for 22 years. He has served as editor of The New England Journal of Medicine, NEJM Journal Watch, eMedicine.com (now the Medscape Reference by WebMD) and has authored or edited 14 books. Jon earned his MS in Aerospace Engineering and his MD from the University of Colorado. He is an emergency physician at Beth Israel Lahey Medical Center.



Hmellisa Mlo, MPH Content Manager

Hmellisa has worked in mental health and public health settings for 10 years. Prior to joining CredibleMind, she was did research in maternal mood disorders; exploring how tech and innovation can be used to improve and promote health among underserved mothers, children, and families; and completing a 6-month project with Google Search on the quality and reliability of prevalence data for hundreds of health conditions. She holds an MPH in Maternal and Child Health from UC Berkeley and BS in Psychology from UNC Chapel Hill.



<u>Dustin DiPerna, MA</u> Co-Editor in Chief, Stanford Lecturer

Educated at Cornell University and Harvard University, Dustin DiPerna is a visionary leader, entrepreneur, and recognized expert in world religions. He is author of the books Streams of Wisdom, Evolution's Ally, and Earth is Eden and co-editor of The Coming Waves and Purpose Rising. For the past 12 years, Dustin has been practicing and studying under the direction of pioneering meditation teacher Dr. Daniel P. Brown. He currently teaches at Stanford University.



Patricia Patsel, RN Clinical Director, Resources

Patty has worked in the healthcare industry for more than 15 years, and is a registered nurse. Patty manages the research of current medical standards, reviewing applications and websites pertaining to medical and clinical topics for the company, and validating best practices in the industry. She holds her BA from the University of California at Santa Barbara.

A Proven Team With Demonstrated Results













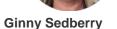
Dustin DiPerna

Aisha Rasul

Deryk Van Brunt Marcos Athanasoulis Clayton Nicolas

Dr. Nicholas Beard







Dr. Jonathan Adler



Sonja Cary



Hmellisa Mlo



Patricia Patsel



Kathi deFremery



Karin van Brunt



Chloe Leng CredibleMind



Eric Zimmerman



Scott Dahl



Kathy Carlton



Carrie Zeitlin



Andrew Bibian



Robert Murphy crediblemind.com