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OVERVIEW OF POTENTIAL APPLICATIONS OF AI IN MENTAL HEALTH CARE

Artificial intelligence (AI) is reshaping health care, offering an unprecedented opportunity to positively transform mental health services when used to support clinicians and other mental health providers under the direction of human clinicians. Recognizing the rapidly evolving landscape of AI in mental health care and that many applications still require more rigorous testing and validation in clinical settings, this document is intended to provide a broad overview of current and potential opportunities for AI to support the continuum of mental health care.

Clinical Application		Description
Workflow Automation	Clinical Documentation	AI tools can transcribe and summarize session notes and automate intake data, including recording symptoms, documenting medical history, and documenting screening results, greatly relieving provider workload.
	Administrative Tasks	AI tools can streamline administrative tasks, facilitating care coordination through record sharing, referrals, registering patients, billing, and scheduling.
Provider Education & Quality Improvement	Provider Training	AI tools can provide more consistent and reliable high-quality training for clinicians, peers, and other mental health providers through content personalization, specific feedback and coaching, and realistic, adaptive, patient-simulated training to increase learning and retention.
	Provider Quality Monitoring	AI tools can assess providers' fidelity to evidence-based practices and support continuous learning and feedback to improve outcomes.
Clinical Decision Support & Predictive Tools	Intake Assessment & Care Placement	AI tools can screen and stratify patients by risk level to prioritize urgency, assess need to determine level of care needed, and connect patients to the best provider based on specialty, availability, insurance, and more.
	Diagnostic Support	AI tools can analyze facial, voice/speech patterns, movement, or other data (e.g., screening results, EHR data) to inform clinicians and help them make more precise diagnostic decisions regarding mental health conditions. AI can also be used to keep prescribers and patients mindful of potential medication side effects.

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Clinical Decision Support & Predictive Tools	Measurement & Outcomes Monitoring	AI tools can support more reliable and seamless data collection for clinicians and help them better use data to inform clinical decision-making by aggregating and analyzing data, and by providing visualization of symptom measures used in measurement-informed care to support more personalized treatment. Tools can also help clinicians better identify and predict emerging risks, monitor patient engagement, encourage medication adherence, improve outcomes, and ensure patients are receiving appropriate care.
	Treatment-Protocol Support	AI tools can help translate evidence-based treatment guidelines to support consistent delivery of best practices into everyday practice. AI tools can make recommendations to clinicians on next steps in care pathways, suggest treatment adjustments based on symptom changes, identify potential side effects from medications, and help clinicians utilize standardized protocols.
Patient-Facing Tools	Patient Monitoring	When a patient opts in, AI can analyze patient data from smartphones or wearables to screen or monitor for mental health issues, response to treatment, and/or relapse. This may include tracking a variety of physiological, social, and behavioral data, such as heart rate, sleep, movement patterns, and facial and vocal characteristics.
	Personalized Digital Mental Health Support Tools	AI tools can help personalize digital mental health apps to tailor intervention activities, such as mindfulness, cognitive behavioral interventions, or psychoeducation, to act as an adjunct or enhancement to clinician care.
	Purpose-built Mental Health Chatbots[1] with Clinician Oversight	Chatbots specifically designed and validated for mental health applications can be employed and directed by clinicians across a range of applications, from guiding patients through skill-building between therapy sessions to conducting therapeutic conversations under clinician direction and control to reduce mental health symptoms. While these tools hold promise in extending clinical care, additional research on effectiveness and safety is necessary. Purpose-built chatbots differ from other chatbot models by design, expressly keeping the clinician in the control seat for close monitoring and quality control.
Population Health	Population & Systems Level Health Analytics	AI tools can help health systems manage population health goals by detecting population-level trends to inform decision-making, such as how to target programs or interventions. AI can also better enable and reduce clinician burden on quality measurement and reporting for value-based payment models.
Research	AI & Neuroscience	AI can enhance computing power to analyze large volumes of complex data, such as brain images, to better understand potential causes and impacts of mental health conditions and predict responses to treatment.

[1] Chatbots refer to computer programs designed to simulate conversation with human users.