Genuine co-design to develop a generative AI chatbot to support young people's mental health

LaMonica HM[1], Poulsen A[1], Hickie IB[1], Iorfino F[1]

[1]Brain and Mind Centre, University of Sydney, Sydney, Australia

Background:
The Lancet Psychiatry Commission on youth mental health called for the adoption of advanced technologies, including AI, to drive mental health system reform. While there is some evidence of the effectiveness of mental health AI chatbots for young people, notable weaknesses include limited and/or repetitive content, poor understanding of human language, robotic responses, and user interface limitations. Prior to widespread implementation of AI chatbots in youth mental health care, it is critical to adopt responsible design practices.

Methods:
Nine co-design workshops were conducted with 32 young people to inform the development of a direct-to-consumer generative-AI chatbot – i.e., the Mental-health Intelligence Agent or 'Mia'. The workshops were two hours in length and conducted online, using prompted discussion, active user testing, and interactive workspaces and design tools (e.g., Miro). The workshops were audio recorded and transcribed, with qualitative data then analysed using content and thematic methods to build understanding of use cases and user design preferences.

Results:
Participants consistently agreed that Mia would be a valuable tool to assist with intake and service navigation, though there was less certainty about how Mia could be integrated within the care setting. The preferred features included personalised recommendations and insights, a timeline of critical events, and visualisation of outcomes. Young people emphasised the importance of transparency in relation to data privacy and security and sought choice in relation Mia's tone of voice and interaction style, purpose, and modality.

Conclusion:
AI chatbots are poised to bring precision, consistency, and real-time intelligence to mental health care, improving outcomes for young people. Genuine co-design ensures Mia's assessments, recommendations, and care plans are both grounded in best-practice clinical standards and relevant, meaningful and personalised to young people. Indeed, through increased personalisation, Mia can help empower young people to take a bigger role in managing their own mental health.