

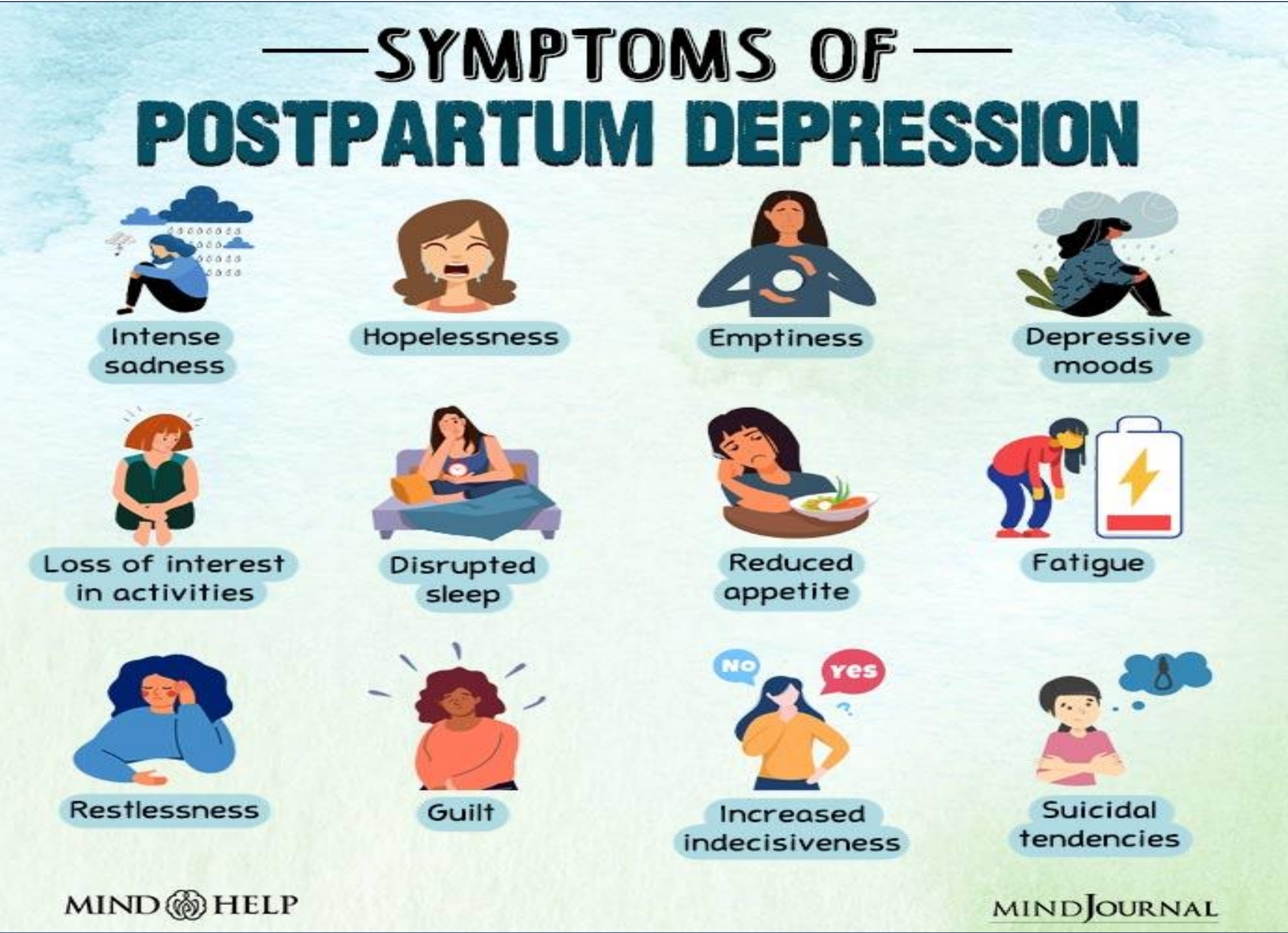
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ABSTRACT

Web-based cognitive-behavioral therapeutic (CBT) apps have demonstrated some efficacy but are often characterized by poor adherence. However, conversational agents or CHATBOTS are being increasingly used in a convenient and engaging way in clinical trials for people suffering from mental health and depression. Digital mental health has become a multibillion-dollar industry and includes more than 10,000 apps, according to an estimate by the American Psychiatric Association. The mental health apps range from guided meditation (Headspace), *Woebot* a “Chatbot” that used Cognitive Behavioral Therapy (CBT), or mood tracking (*MoodKit*) to text therapy by licensed counselors (*Talkspace*, *BetterHelp*). During the pandemic, about 4/10 adults in the US reported symptoms of anxiety or depression, according to Kaiser Foundation. This Poster attempts to show how an innovative CHATBOT using AI, ML and NLP is using learned responses to mimic conversation, remember past sessions and deliver advice around sleep, worry and stress.

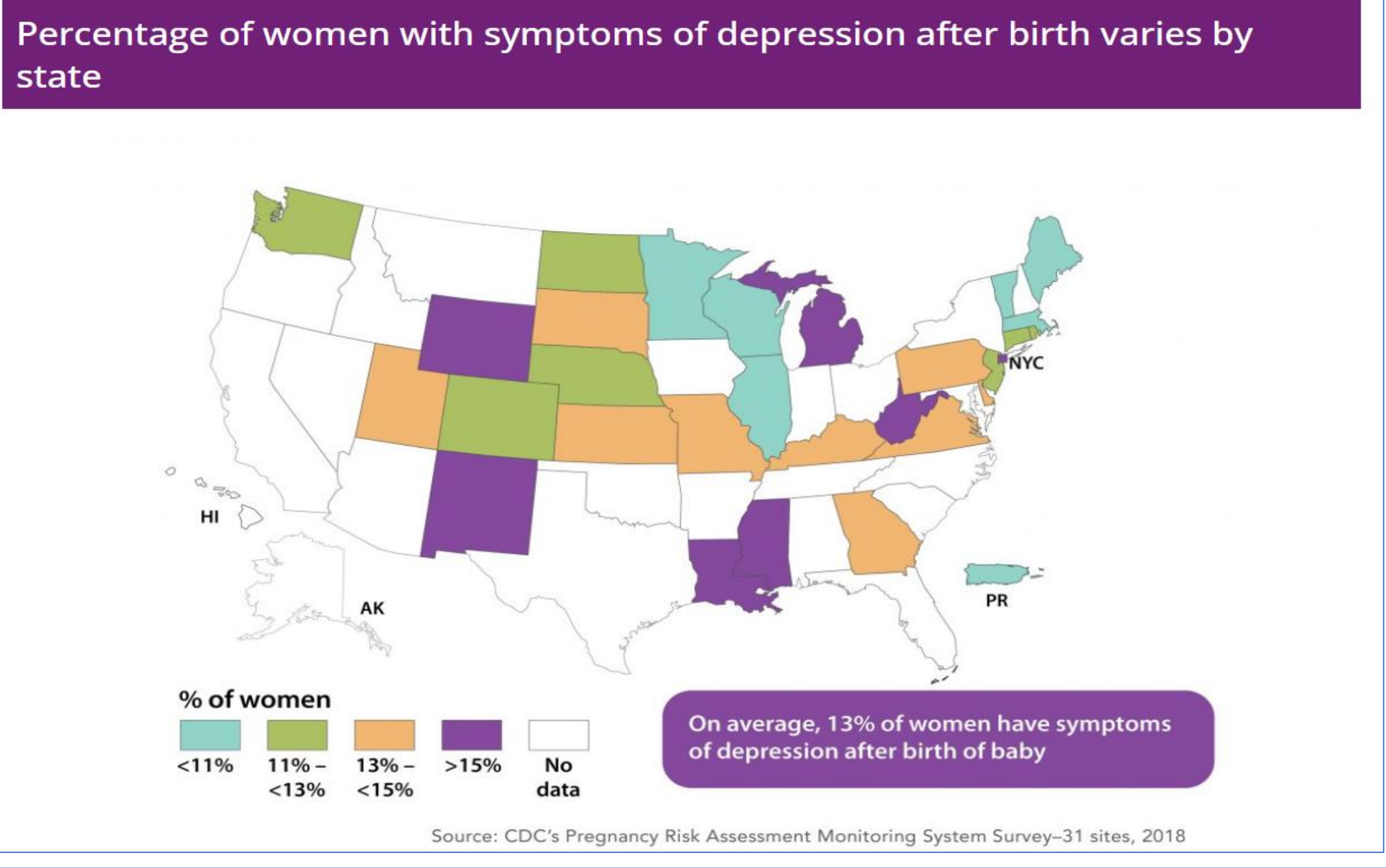
WHAT IS POST PARTUM DEPRESSION?

According to *New England Journal of Medicine* “Postpartum depression is a disabling but treatable mental disorder that represents one of the most common complications of childbearing. Postpartum depression is included in the American Psychiatric Association’s *Diagnostic and Statistical Manual of Mental Disorders*, fifth edition (DSM-5), as a major depressive episode “with peripartum onset if onset of mood symptoms occurs during pregnancy or within 4 weeks following delivery” In clinical practice and in clinical research, postpartum depression (i.e., nonpsychotic puerperal depression) is variably defined as depression that occurs within 4 weeks after childbirth, or 3 months, 6 months, or up to 12 months after childbirth.



FACTS AND DATA

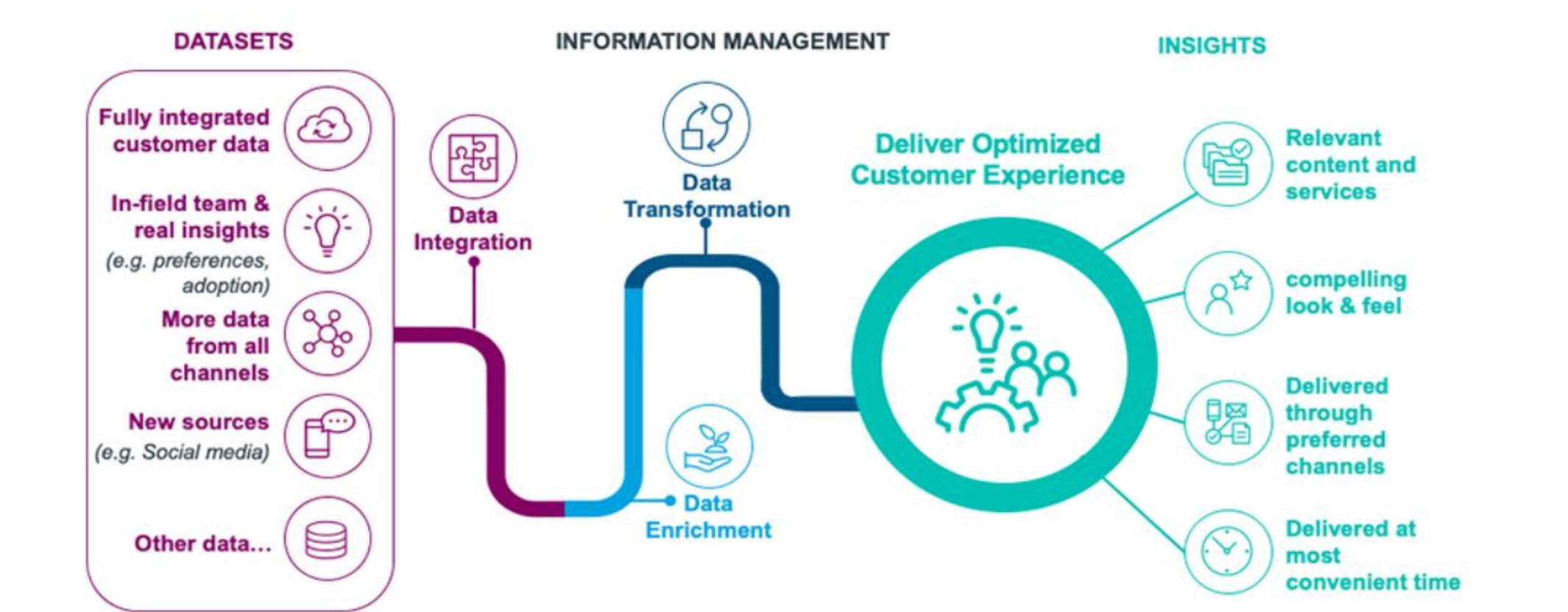
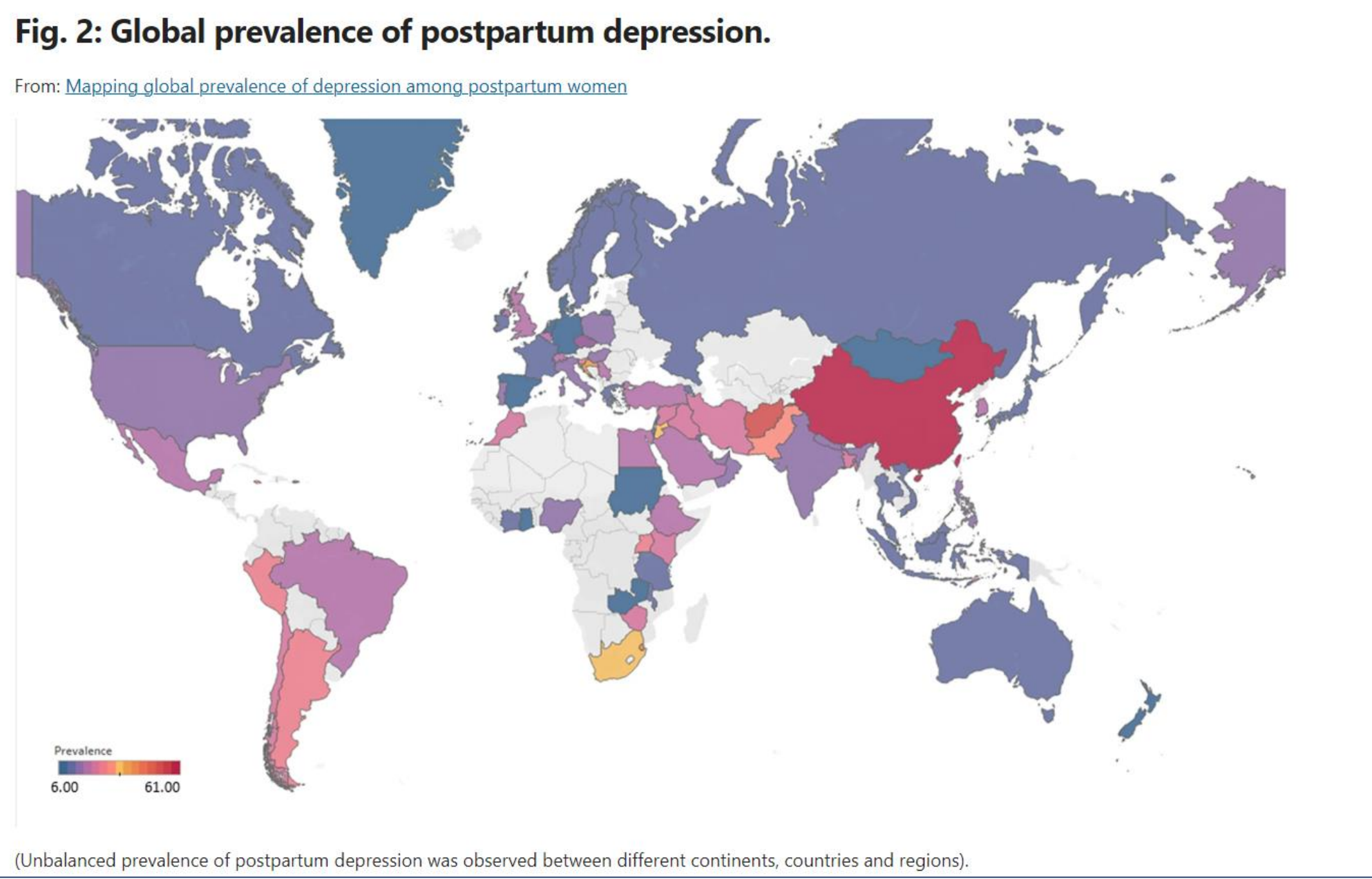
According to the Center for Disease Control (CDC) an average of 13% of women suffer postpartum depression in the US.



In the US alone, according to CDC:

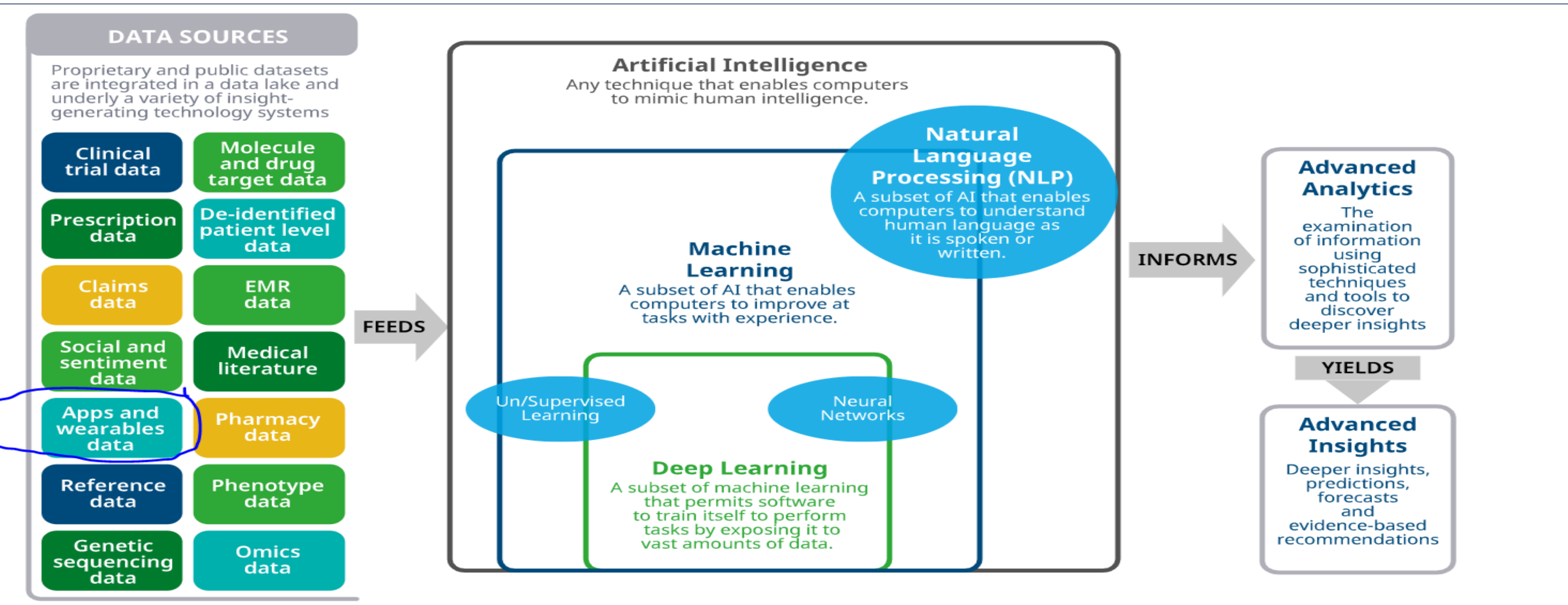
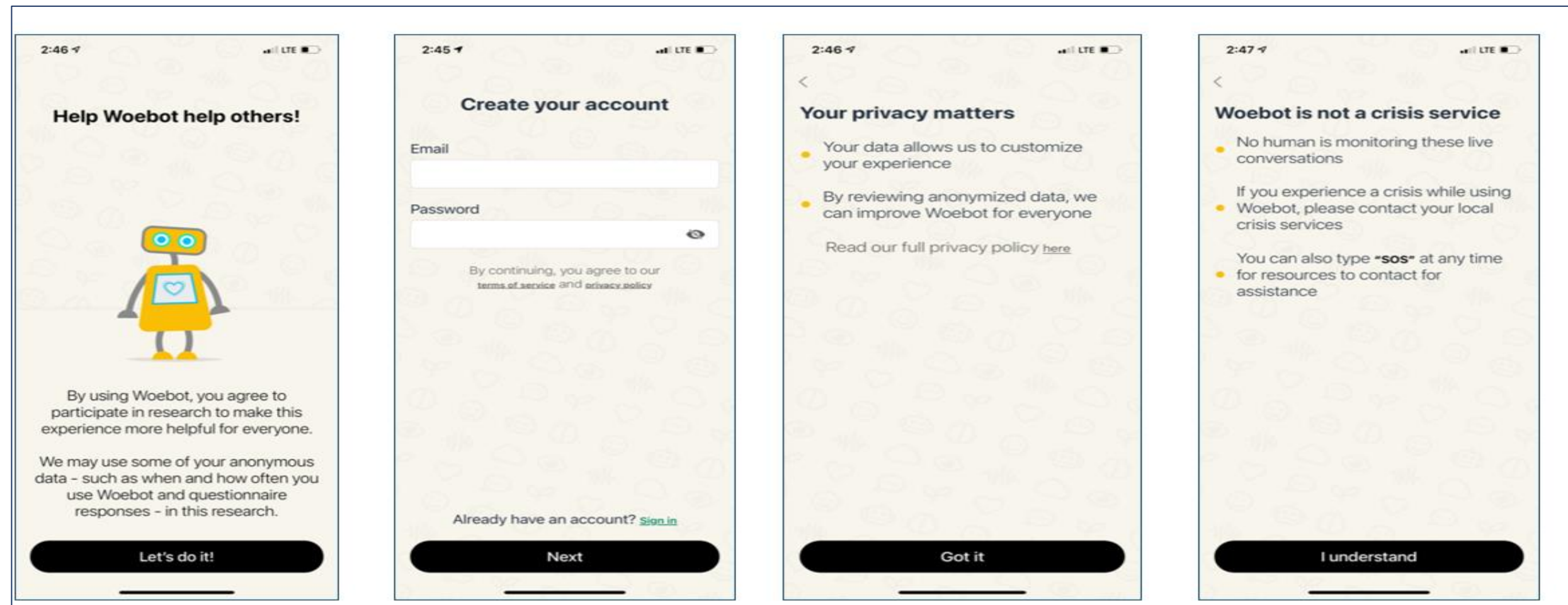
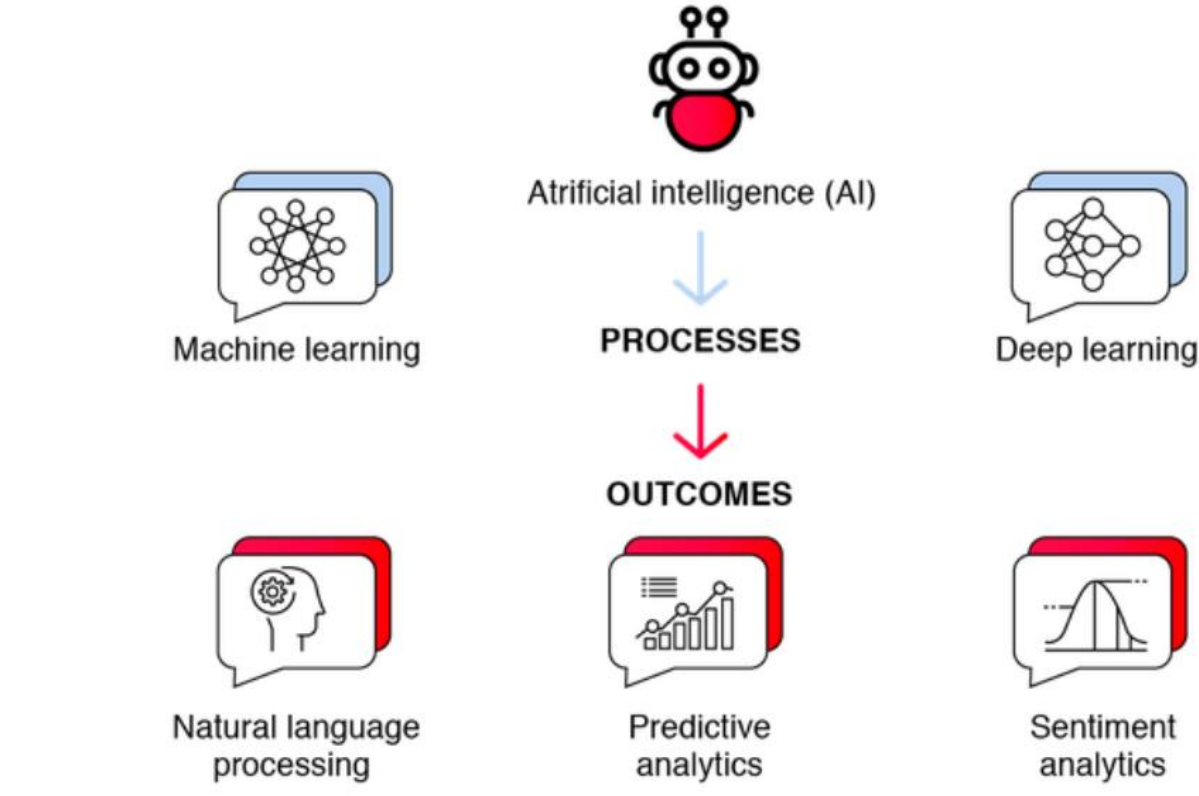


According to *Nature*, participants from a PPD study included 172,342 women from 80 countries, having a diagnosis of postpartum depression saw a high degree of heterogeneity among documented results with an overall prevalence rate of 17.22% (95% CI 16.00–18.51, $P = 99.70\%$).

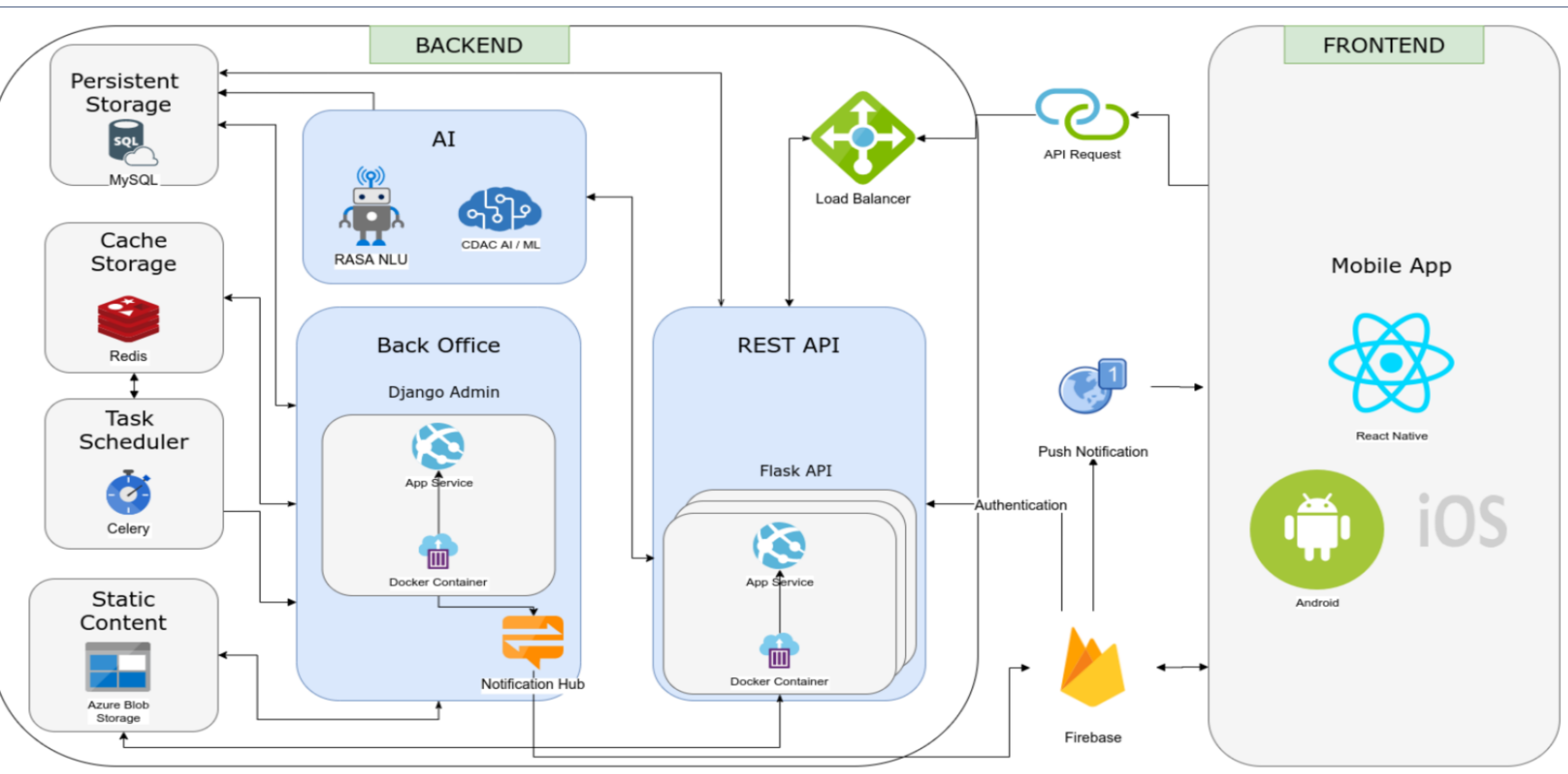


DYNAMICS OF BOTS WITH AI, ML, NLP

HOW AN AI CHATBOT WORKS



Source: IQVIA Institute, Feb 2021.
Report: Improving Decision-Making through Connected Intelligence. IQVIA Institute for Human Data Science, February 2022.



FINAL ANALYSIS

Mental health app market is still highly unregulated. Most apps are not required to have governmental oversight. In fact, in 2020, the FDA slackened the rules surrounding mental health apps to provide more remote mental health care during the pandemic. Until there is robust data to back up efficacy of chatbots, what therapy chatbots can do—and can’t—remains to be seen. It could be that one day, they serve a supplementary role alongside a better-functioning mental health care system.

REFERENCES

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