

SERVICE DELIVERY ABSTRACT TEMPLATE

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ARCHIE: Alcohol Relationship Change Interactive Engine

Authors:

Lisa Robins^{1,2}, Alex Mrvaljevich Lerga¹, Brenda Castro¹, Jessica Kirkman¹, Chris Raine¹, Jamie Moore¹, William Childs¹

¹*Hello Sunday Morning, Sydney, Australia*, ²*University of New South Wales, Sydney, Australia*

Presenter's email: lisa@hellosundaymorning.org

Background:

Hello Sunday Morning offers a digital membership service, Daybreak, for people wishing to make changes to their alcohol use. Daybreak mixes peer-to-peer support with access to a library of over 90 CBT and ACT-informed experiments, and optional real-time chat with health coaches.

To maximize the effectiveness of Daybreak, ARCHIE (the Alcohol Relationship Change Interactive Engine) has been incorporated into the service to facilitate a tailored, individualised approach to online care for people wishing to address alcohol use issues.

Description of model of care/intervention:

ARCHIE uses data points from members' engagement within Daybreak to:

- 1) Algorithmically predict relapse so that we can determine when it is timely for a clinician to step into the recovery process and assist consumers.
- 2) Topically classify member content and posting to algorithmically determine which style of intervention is most likely to be relevant and useful to the consumer.

Effectiveness:

Progress reports of 5776 members were matched to 78 dimensions about the member, and this data was then used to predict imminent risk of relapse. We were able to predict risk of relapse with 74% accuracy and an Area under Receiver Operating Characteristic (AUROC) score of 0.83 for predicting non-relapse and relapse. The model was more proficient in finding relapses than non-relapses with higher true positive rates (TPR) at lower false positive rates (FPR) for identifying relapse.

Conclusion and next steps:

Understanding when, and with what, to best intervene will help us to deliver online interventions which are responsive to individual consumer preferences and needs.

Disclosure of Interest Statement:

This project has been funded by Google through their Google Impact Challenge Programme, and has also received funding from National Australia Bank and the Vodafone Foundation.