Needs to be made into a PDF

Active Geelong Ambassador GP’s Project

The Active Geelong Ambassador GP’s project saw a network of GP’s from Geelong and the Surf Coast in Victoria to come together to consider how local doctors can take a role in the physical activity of their patients.

GP’s prompting their patients to be more active is an effective way of motivating people, however there are many reasons why it can be a difficult conversation to have. Unfortunately, previous research offers little or no practical help on how doctors should broach the subject and what resources are most effective.

An initial group of 15 GPs came together for a series of [systems thinking](https://preventioncentre.org.au/resources/learn-about-systems/) workshops to:

1. Delve deeper into the various reasons why GPs might find it difficult to start these conversations
2. Identify possible solutions that could make it easier to do so

Together, the GPs identified eight strategies that could serve as conversation starters and included the elements of:

* Fliers
* Posters
* Physical activity prescription pads
* Coaching mentors
* Self-assessment tool
* Online information

To determine which (if any) of the eight strategies would work, a Machine Learning study was designed with the help of the [Applied Artificial Intelligence Institute](https://www.deakin.edu.au/a2i2) (A2I2) at Deakin University Waurn Ponds. The initial group of GPs expanded to 26 doctors, across 13 clinics to test the effectiveness of the ideas.

Over a 10-week study, the Machine Learning algorithm recommended different strategies to be trialled week to week. Every week, results were fed back into the algorithm, which learned in real time about which strategies were performing best.

At the end of the 10-week study, the algorithm found that two strategies were effective:

1. The patient is handed information about the benefits of physical activity at reception, which they bring into their appointment and discuss with the doctor
2. The patient is given a short physical activity questionnaire, which helps create a snapshot of current physical activity levels, which they similarly bring into the appointment

This study was the first of its kind to combine participatory methods with machine learning. It enabled the people experiencing the problem (the doctors) to generate potential solutions. Then the best interventions were identified swiftly using a process that otherwise would have taken years to test.

Active Geelong would like to acknowledge the following contributors:

* [Dr Josh Hayward](https://www.deakin.edu.au/about-deakin/people/josh-hayward) (Research Fellow, Global Obesity Centre, Deakin University Waterfront Campus)
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* [A2I2](https://www.deakin.edu.au/a2i2)
* [The Western Victoria Primary Health Network](https://westvicphn.com.au/)
* The participants whose contributions made this study possible.

Read the full report:

[Allender, S., Hayward, J., Gupta, S. et al. Bayesian strategy selection identifies optimal solutions to complex problems using an example from GP prescribing. npj Digit. Med. 3, 7 (2020). https://doi.org/10.1038/s41746-019-0205-y](Allender%2C%20S.%2C%20Hayward%2C%20J.%2C%20Gupta%2C%20S.%C2%A0et%20al.%C2%A0Bayesian%20strategy%20selection%20identifies%20optimal%20solutions%20to%20complex%20problems%20using%20an%20example%20from%20GP%20prescribing.%C2%A0npj%20Digit.%20Med.%C2%A03%2C%C2%A07%20%282020%29.%20https%3A/doi.org/10.1038/s41746-019-0205-y)