New Zealand to design risk-prediction tool to help patients predict asthma attacks

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Patients with asthma will be able to see what's happening with their asthma attack risk in real-time

A project to develop a real-time risk-prediction tool that takes information from the environment and smart devices and uses it to help patients predict asthma attacks is one University of Auckland (New Zealand) project to gain a Health Research Council (HRC) Emerging Researcher First Grant.

School of Pharmacy senior clinical research fellow Dr Amy Chan is getting the project under way with $249,984 over three years from the HRC to develop the model.

"Asthma attacks are still the main cause of loss of life from asthma and loss of quality of life," Dr Chan says. "At the moment, we don't have any good tools that can predict when someone will have an attack."

In the first stage, Dr Chan will work out an algorithm that draws on data from mobile phones and devices, such as smart watches. These could include step counts, sleep patterns, breathing rate, medication use, peak flow and weather information.

An important part of the research will be ascertaining what information is most predictive of the risk of asthma attacks. Chan will also seek feedback from patients, clinicians and health providers.

She will then test the prediction tool by integrating it into a smartphone app and testing it in a clinical trial.