



A PASSION FOR RESEARCH

Groundbreaking research

research
care
learning

Dr. Teresa Chan: Supporting doctors as learners

Dr. Teresa Chan has always been interested in helping others learn.

Even as a high school student, Dr. Chan acted as a mentor and a peer tutor for her classmates, including teaching her fellow students how to follow Robert's Rules of Order during model United Nations. It was this fascination with learning and with education systems that led her to pursue a teaching degree, before attending medical school at Western University.

Today, Dr. Chan blends her passion for teaching and her love of medicine as an emergency physician, an educator, and an education scientist.

Much of Dr. Chan's research has focused on training doctors to handle the busy and stressful environment of the emergency room. One of her recent research projects focused on how physicians teach and learn in multi-patient environments, and the creation of cognitive modelling on how to prioritize patients.

"I really try to understand how people are taught and learn the process of handling the busy department – and what is the thinking model that's really underpinning that," she said.

"In a clinic room – maybe you're bouncing between two and three different rooms, but you're doing one thing at a time," she said. "In emergency medicine – you're not really only doing one thing

at time. There's a whole bunch of different things going on at once. We probably also have the highest acuity, and therefore the highest amount of turnover."

This program of research led to the development of Dr. Chan's most well-known projects, a board game about emergency department flow called GridlockED.

The game requires players to direct patients to the appropriate area of the hospital – the resuscitation zone, step-down zone, intermediate zone, minor zone and waiting room – and earn points for completing tasks. The three goals of the game are to achieve 500 points, "survive" an eight-hour shift, and keep patients safe.

The board game allows doctors to learn how to manage the emergency department in a low-stakes, low-risk environment before being put in charge of the entire unit on their own.

"How do people go from seeing one patient at a time as a med student to handling a whole department of 16 patients at the same time? That skill set wasn't clearly articulated," she said.

Dr. Chan's other programs of research have focused on how doctors can use social media to enhance their learning, including how doctors can use apps like Slack to form tight research teams that aren't dependent on location. Her



next project will likely focus on how "to bring out the best in people," she says, and what it means to be "excellent" in health care.

Each of her research projects have acknowledged that while healthcare providers are incredibly driven and talented, "We're not perfect, and we need to be supported in our development," she said.

"To be a more inclusive teacher, you really have to understand that some of these skills are not obvious to everyone. It is to some people – the easy learner who just gets everything – but to be honest, those people don't really challenge me in learning. They're a privilege to teach, but you don't have to do very much," she said. "For me as an educator, the thing that drives me are the people that struggle. Helping those students succeed makes being an education researcher and teacher fulfilling." ■