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Waiting in Line Can Harm Your Health

An interview with Professor David Stanford
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How can research reduce lineups?

Waiting, whether it's healthcare related or whether it's just related to waiting in a bank or waiting in a call centre, we know that waiting is not what we want to do, right? We don't want to hear at the end of our lives that we spent two years waiting.

Emerge works on something called the Canadian Triage and Acuity Scale, and it basically cuts patients into five groups, and depending on which category you're in, the docs know which target they want to try and work towards. Now these key performance indicators are typically stipulated with the when and the how many. The when is what's the target time I'm trying to work with. If you're considered to be an emergency patient, that's the second highest category, then you're expected to be seen within 50 minutes. And the how many is what's the compliance target, because weird stuff can happen all the time and you can't absolutely ensure with 100% probability that you're going to meet that. There is a set of rules that pays no attention to the rate at which people are walking into emerge. So our goal is to come in with that and be able to respond to it by saying here's how you should arrange things to factor in two things: both the patient's acuity – how serious their illness is – and also how long have they already waited, because if you don't do that, then people can be waiting excessively long times.

How can math solve wait times?

If you really want to solve a problem, you need to be able to understand the problem. I can understand that probably this is right up there with people sort of scraping their nails on the blackboard or contemplating their next visit to the dentist, like I want to spend time actually thinking about wait times? Well it's good that there are certain people who are actually interested in the mathematical structure of the problem, as I am, so that you can come up with sane proper responses to this, because if you don't do that, the only thing you're left with is the old lever approach: people are waiting too long, let's pour more money into it.

You can only do that for so long. Otherwise you need a systemic analysis, and that is what I do. I am interested by what makes people wait and what can we do about figuring out ways that they don't wait as much or that they wait in a more fair way or a better way. That's what I go in every day to do, and my hope is that at the end of the day, this has a direct impact on the lives of Canadians