Tinker Fellowship Final Report 2018

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I've always wanted to visit Chile, with its unique shape, and its capital city near the mountains. Being in Santiago feels a little bit like being in North America: similar geography, climate, and health problems. As a health policy student, I am interested in countries burdened by non-communicable and diet-related diseases, an issue that is arguably most pressing in the Americas. Chile's health problems are similar to those of the United States: a huge burden of hypertension and diabetes attributed to an aging, overweight population, and generally poor diet.

Where Chile differs from the United States is in its healthcare: about three quarters of the population uses the public healthcare system, called FONASA, funded primarily by a 7% tax on wages (for those above a certain income threshold). Like all people with government-run healthcare, Chileans love to complain about their system. Growing up in Canada I am familiar with public healthcare love-hate relationship: it is constant criticisms about inefficiencies and long waiting times until you're speaking to a non-Canadian, when suddenly the system is nothing but a national treasure.

As an outsider, Chile's healthcare system is home to what I consider several very innovative policies: in 2016 the Nutritional Composition of Food and Food Advertising act was passed, requiring among other things the labelling of all processed foods that are high in sodium, sugars, saturated fats, and/or calories (per 100g). See above for the labels on a jar of Nutella and a can of soda.

The Food Act also contains restrictions on advertising of processed and unhealthy (as defined by the warning labels) foods to children under the age of 14, as well as restriction on the sale of these foods in preschools, elementary schools, and high schools.

The Food Act was the government's responses to rapidly worsening health statistics: Chileans have the highest per capita soft drink consumption in the world, and 60% of the adult population is overweight or obese. Whether these policies cause substitution away from these foods is yet to be seen – as far as I know several academics in addition to the ministry of health are currently evaluating the Food Act.

A second innovative health policy – and one I worked on evaluating this summer while in Santiago – is the Programma de Salud Cardiovascular (PSCV) appointment reminder program. This program, which was phased in to primary care clinics over the past three years, signs up patients with non-communicable diseases for text message reminders. Patients receive a reminder via text message before their scheduled appointment: they can respond to confirm the appointment, or reply that they wish to reschedule for a later date. The text message also serves as a reminder to take their medications.

The idea is that not only does this text message serve as a 'nudge' to keep NCD patients in care, it also allows the primary care center to reallocate appointment slots if the patient texts back that they wish to reschedule the appointment. As the Programma de Salud Cardiovascular takes up a very large portion of healthcare costs nationwide, and all missed appointments lead to waste of valuable physician and nurse hours, our hypothesis is that this program will not only improve health, but also be cost-saving. Finally, the text-messaging program may cause positive spillovers to patients not directly enrolled in the program who are now able to get same-day primary care appointments.

Indeed, the last hypothesis is what I found in the data this summer: while the text message reminders did not cause any change in the number of appointments attended by patients in the PSCV program, it did increase the number of appointments attended by patients not in the PSCV program. I am continuing to work with collaborators in Santiago to disseminate these findings to the ministry of health, as well as to publish in a peer-reviewed journal.

An area where the PSCV system is not so innovative is in its information sharing with patients: at the end of each appointment patients receive a generic, difficult to understand sheet with their biometric measurements and prescriptions. In a system like Chile's, where healthcare and non-communicable disease medications are free, an avenue to improve disease control is in patient understanding and education. In order to hopefully continue my work in Chile I am teaming up with a local health technology company to run an experiment that provides personalised, interesting, and easy to read feedback sheets to patients at the end of each of their PSCV appointments. These sheets are automatically generated using the patients' electronic medical records, and include suggestions to improve diet, and free exercise programs near to the patient's home address. We are hoping that in providing tailored feedback with patients' health status results over time, presented in a way they can easily understand, we can improve both appointment attendance rates and patient health. While I have now left Chile, I

am writing a grant with collaborators at Universidad Catolia de Chile and the ministry of health to fund this next, exiting project.

My summer -- actually, my very cold winter -- spent in Santiago working in collaboration with researchers at the Universidad Catolia de Chile was an enriching experience, and left me with more questions than I began. Great news for a second-year doctoral student! I will be continuing to work with the mentors and peers I met this summer, and am grateful to the Tinker Field Research Grant for their support.