Reflection Paper #2

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HINF140: Introduction to The Canadian Health Care System

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Introduction

In this paper I write about my reflections on Canadian healthcare, the opioid epidemic, addiction, and the social determinants of health. Following up on my initial paper four months ago, I discuss how these reflections have changed during my time in Dr. Trudy Pauluth-Penner's class, HINF140. Moreover, I present this material from a personalized, informal, and uncited perspective to curiously explore the actions I might take if I were miraculously appointed Health Minister of Canada—primarily, I would establish new funding models for hospitals using data analysis and machine learning.

Discussion

In my previous paper, I talked about my initial understanding of health, well-being, and healthcare. Before starting HINF140, I was fortunate enough to come across two different longitudinal studies on health over the life-course and learned about the social dimensions of health—namely, that strong relationships help determine an individual's wellbeing. This perspective was strongly reinforced by the course material and further cemented by the research I found during the main term-project, which also revealed how the opioid epidemic is related to healthcare financial systems. During the project, I discovered more evidence that early life trauma increases an individual's risk of addiction—as such, I believe the distribution of funds in Canada Social Transfer should be analyzed for effectiveness, refocused on at-risk populations, and increased significantly.

My current understanding of health, well-being, and healthcare now also includes a financial lens. The Canadian healthcare system is complex and many of its problems come down to

money. Hospitals get better patient reviews when pain is treated, and hospitals with better reviews tend to get more funding—a bit of an over-simplification, but essentially there are financial incentives for hospitals to prescribe opioids liberally; they reduce treatment times and take away pain. From the other side, pharmaceutical companies spend tremendous amounts of money researching breakthroughs in medical drugs; not only do they need to recover these costs, but they need to inform doctors and the public of these discoveries. These needs, however, led to the over-marketing of prescription opioids two decades ago and caused a massive surge in addiction rates and overdoses. Numerous pharmaceutical companies were sued to the point of bankruptcy for unethical advertising practices; Purdue Pharma settled for approximately $12B and had to give up control of the company due to civil lawsuits. The multifaceted financial origins of the opioid epidemic need to be considered along with how they relate to health funding models. This was a surprising perspective for me; it gives me hope that opioid addiction rates may be reduced by recalibrating funding formulas for hospitals and establishing restrictions on marketing practices for pharmaceutical companies—perhaps even the establishment of a national drug plan.

In general, I believe the values constituting the Canada Health Act are something to be proud of, but there is much to be improved within Canadian healthcare. Though coverage is universal, Canadians face some of the longest hospital wait times in the world, which delays the assessment and treatment of conditions until they become critical and expensive to handle. This problem leads to a compounding toll on healthcare systems, population wellbeing, and the economy; it concerns me greatly. A part of me even wonders if long wait times are a short-term survival

strategy for hospitals to turn away non-emergency cases while they desperately manage their funds.

Conclusion

If I were Health Minister of Canada, I would first begin with a large audit and analysis of how the current funding formulas influence patient outcomes, then limit unethical beneficiaries. At the same time, I would invest heavily into electronic health systems and utilize machine learning for predictive medicine—patients with anticipated heart and lung disease would be given priority as they are the most expensive and most common ailments in healthcare. This would become a foothold for preventative treatment and slowly reduce financial strain on hospitals and expand to other conditions over time. Finally, once predictive healthcare replaces reactive healthcare, I would establish new hospital funding formulas based on machine learning and the anticipated needs of populations.

In short, I believe that systemic healthcare inefficiencies are a result of the time it takes for individuals to assess, communicate, plan, and implement changes across large, national organizations. The Canadian Healthcare System could be made more flexible and responsive if machine learning was ethically implemented through new policies.