

# Practicing Proactive Medicine: Making Primary Prevention Our Primary Goal

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The importance of primary prevention has long been recognized by healthcare providers and patients alike. As the name suggests, primary prevention is concerned with the prevention of disease using a combination of healthy lifestyle measures, avoidance of risky behaviours (e.g., tobacco use, unsafe sexual practices), and the enactment of several system-level changes such as banning harmful substances and implementing publicly-funded routine vaccination programs for infants and children.<sup>1</sup> Despite the abundance of evidence in support of primary prevention, its vast importance often goes unnoticed as per the old proverb: “you never know what you’ve got till it’s gone.” Take the growing vaccine hesitancy movement for example, which has led to alarming global increases in measles cases by 30%, including a recent outbreak in Vancouver, British Columbia.<sup>2</sup> This is not to mention the estimated 1.5 million deaths that could be avoided each year with widespread vaccination, and the two to three million deaths that are currently prevented by vaccines.<sup>3</sup> Indeed, the advantages of certain primary prevention measures often must be taken away in order for society to truly feel the impact. Unfortunately, as demonstrated by ongoing vaccine hesitancy, such lessons often come at a significant cost.

Garnering far less media attention than the anti-vaccination movement is the equally worrisome global epidemic of so-called “lifestyle” or non-communicable diseases (NCD),<sup>4</sup> named as such for their strong associations with modifiable risk behaviours, including tobacco use, physical inactivity, harmful use of alcohol, psychological stress, and unhealthy diet.<sup>5</sup> Of these NCDs, cardiovascular disease (namely myocardial infarction and stroke) was the leading killer, claiming an estimated 17.5 million lives worldwide in 2012.<sup>5</sup> Regardless of the major impact these modifiable risk factors have on disease onset and progression, their importance is often underestimated by physicians and patients. Indeed, national U.S. survey data collected from 2000 to 2010 demonstrated that only 32% of patients seen by a clinician in the past year received physical activity counselling,<sup>6</sup> while other studies have similarly reported infrequent exercise, smoking, and diet counselling, and a lack of appropriate follow-up care by primary care physicians.<sup>7,8</sup> To explain why these statistics are low, physicians have reported barriers such as a lack of competence and training in lifestyle counselling,<sup>9,10</sup> reluctance to counsel patients who are unlikely to be motivated,<sup>11,12</sup> and limited appointment time.<sup>13</sup> Despite these barriers, evidence continues to demonstrate a measurable benefit from lifestyle counselling on the elimination of modifiable risk factors and subsequent improvements to health outcomes.<sup>14</sup> Given the large volume of clinical evidence linking these modifiable risk factors to adverse health outcomes, it is perhaps unsurprising to learn of ongoing initiatives to promote their uptake among the general public. One such example is Healthy Get-Together, a free monthly educational

workshop based out of Thunder Bay Regional Health Sciences Centre in Ontario that provides education on chronic disease prevention and healthy living strategies.<sup>15</sup> There is also substantial evidence to support the use of pharmacologic therapy for primary prevention, the most notable example being the use of statins for the prevention of cardiovascular disease.<sup>16</sup> However, as with lifestyle counselling, statins remain underutilized despite their efficacy and safety.<sup>15-17</sup>

More recently, studies have started to elucidate the downstream socioeconomic impacts of these NCDs, particularly with respect to the financial burden of disease. For example, according to a recent Canadian Medical Association Journal study, individuals who were hospitalized for acute myocardial infarction, cardiac arrest, or stroke were significantly more likely than non-hospitalized matched individuals to lose the ability to work and suffer consequential income deficits, with lower-income individuals being particularly susceptible.<sup>19</sup> Unfortunately, this relationship tends to be self-perpetuating, whereby adverse health events lead to physical disability and financial losses which themselves contribute to deleterious effects such as poor medication adherence and significant psychosocial stress,<sup>20,21</sup> thus worsening and creating new health problems.<sup>21,22</sup> Financial losses inevitably lead to heightened financial stress, particularly for lower-income individuals, demonstrating the bi-directionality of the social determinants of health. That is, although income and employment invariably contribute to the overall state of health and wellbeing of an individual, the inverse relationship (i.e., the impact of health on income and employment) is also of equal importance.

Effective primary prevention is paramount in preventing disease and the associated burdens on social wellbeing and financial stability. The exact understanding of this topic continues to evolve as researchers learn more about the complex socioeconomic impacts of disease. Indeed, socioeconomic outcomes are often equally or more devastating than the physical manifestations of the disease itself, particularly with respect to growing financial costs compounded with a reduced ability to work and earn income. In these scenarios, primary preventative measures should expand to focus on preventing these downstream socioeconomic impacts and the new or worsening health problems that might arise as a result. Clearly, the management of such burdens is complex and will undoubtedly require a multifaceted approach. Going forward, early priorities should involve the development of screening tools to improve our ability to detect patients at risk of these downstream outcomes. One such example can be found in the Toronto suburb of North York, where a group of family physicians led by Dr. Kimberly Wintemute has piloted a targeted poverty screening tool to help identify patients who are struggling financially in order to help them gain access to government social programs.<sup>23</sup> Initiatives such as this demonstrate the growing emphasis placed on primary prevention and the associated socioeconomic impacts of disease, though a sustained and nationwide effort will be required for larger-scale change. In the meantime, one thing is certain: by ensuring primary prevention does not take the back seat, physicians will ensure

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their patients do not either.

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