

Mental Health and Lost Productivity: A Perfect Storm?

Synopsis

In recent years, society has become increasingly sensitized to issues surrounding mental health. As a result of this attention, there has been an upsurge of public and private sector resources designed to grapple with the multi-dimensional challenges posed by mental illness.

A relatively nascent, but rapidly expanding, body of Canadian and international commentary deals with lost labour productivity (lost output per unit of labour input) in the economy caused by mental health issues. The consensus view amongst those linking mental health with productivity is that society is facing a large and growing problem. And, consequently, it is deemed to be worth devoting significant public and private sector resources to treating the mental illnesses that are serving as a drag on productivity in the workforce and in the economy as a whole. The precise magnitude of the productivity shortfall remains uncertain because of the various methodologies employed and the different populations assessed over multiple time-periods that are covered in individual studies.

This paper seeks to establish beyond a reasonable doubt that lost productivity attributable to mental health challenges is considerable in magnitude, what in the private sector would be labelled 'material', and has indeed been increasing in Canada and elsewhere. What's more, traditional approaches to dissecting the individual components of productivity have tended to ignore the mental illness factor which does need to be taken into consideration by analysts more rigorously in future. Consequently, the eruption of mental health issues may be contributing to the productivity paradox that has emerged in recent years. Fundamentally, the paper argues for the importance of determining the true measure of the present and likely future lost productivity attributable to mental illness given the substantial commitment of public and private resources as well as the tendency of analyses to-date to simultaneously underestimate the absolute magnitude of

that loss and overestimate its impact relative to the size of the economy and to the influence of other drivers that may more readily boost productivity.

Public and private resources have been mobilized in the battle against mental illness with the express purpose, amongst others, of improving productivity but with less than entirely clear results so far. It also appears that a division of labor might be emerging between the public and private sectors as the public sector focuses on treating those with mental illness while the private sector tends to concentrate its efforts on protecting and enhancing the well-being of the remaining, mentally healthy work force.

Introduction: Global, US and Canadian Perspectives

The World Health Organization (WHO) has written that, “Depression and anxiety have a significant economic impact; the estimated cost to the global economy is \$ US 1 trillion per year in lost productivity.”¹ Similarly, a World Economic Forum/Harvard School of Public Health study projected that “...the cumulative global impact of mental disorder in terms of lost economic output will amount to US\$16.3 trillion between 2011 and 2030...these estimates illustrate the urgency that is needed to tackle mental illness.”²

Around the globe, there has been an upswing in public concern, research and data around the estimated negative impacts of mental illnesses on the economy’s output generating ability as well as in funding for measures to offset those impacts. For instance, a google search for “mental health and productivity” turns up 4.8 million results. And, the March 2018 Budget of the Ontario government allocated \$1.2 billion towards mental health issues building upon an estimated Cdn \$10 billion spent by the province over the preceding decade. This public and academic attention to mental illness has gone hand-in-hand with the flip side of

this concern, namely the positive impacts on productivity of mental well-being and happiness³.

In the US, estimates of lost productivity caused by mental health issues vary markedly from one another. These range from US\$100 billion⁴ and \$105 billion⁵ per annum at the low end to US\$193 billion⁶ and US\$ 225.8 billion⁷ at the upper reaches of the spectrum. These divergent figures regarding lost productivity mask an underlying consensus amongst analysts on the very considerable size of the annual cost in absolute dollar terms. There is also general agreement that lost productivity has been steadily rising in recent years and that estimates of lost productivity tend to err on the conservative side.

In Canada, calculations range from \$ 8 billion to \$50 billion per year. The Canadian experience does appear to track at a very rough ten percent of the US one and therefore approximately in line with the relative dimensions of the two economies.⁸ So, a 2002 report for the Global Business and Economic Roundtable on Addiction and Mental Health observed that, “ A conservative estimate of the net impact of depression, anxiety and substance abuse on productivity losses alone is around \$ 11 billion per year based on 1993 data ...the losses could be three times this conservative estimate or \$33 billion per year.”⁹ The Roundtable also quoted a Health Canada paper that tallied the productivity cost at \$ 8.1 billion per year in 2001¹⁰. A 2011 study claimed that, “Lost productivity accounts for about one-third of the annual \$ 51 billion (or, \$17 billion) cost of mental illness in Canada.”¹¹ A Mercer report citing a 2013 Conference Board study of absenteeism noted, “Canadian companies lose an estimated \$16.6 billion in productivity per year due to workers calling in sick, as a result of mental health issues.”¹² According to the Canadian Encyclopedia in 2014 “...stress and mental health issues are estimated to cost the Canadian economy \$33 billion a year in

lost productivity.”¹³ Finally, the Conference Board in Canada’s Canadian Alliance for Sustainable Healthcare, released a study in 2016 claiming that the lost productivity in Canada caused by depression and anxiety alone was almost \$50 billion per year.¹⁴

It might be argued that irrespective of the exact size of the estimated impact of mental illness on productivity, the lower end of the ranges for both the US and Canada strongly suggest a substantial multi-billion dollar annual drag on overall productivity, quite above and beyond the evident human suffering that often accompany poor mental health. As well, and taken together, studies point to there being a secular increase in the estimates of lost productivity in both the US and Canada over the past several years and decades.

The existing literature is largely silent on how closely the Canadian experience tracks the US one. What’s more, analyses also do not usually account for either inflation or fluctuating exchange rates in calculations of the size and growth of the productivity loss. Finally, studies often do not define what they mean by productivity or divulge details of the methodologies used to calculate the magnitude of the lost productivity, which places a further constraint on assessing the comparability of their findings.

Mental Illness Incidence: Which Conditions? Which Populations?

The assumed billions in lost productivity in the US and Canada are viewed as stemming from a lengthening list of conditions and of people who wrestle with mental illness, either themselves directly or indirectly as unpaid ‘family and friends’ caregivers .

A comprehensive accounting of the productivity impact of mental illness begins with the portion of the population that is affected, the conditions that are covered and its impact on the ability to work. The broad consensus is that that

portion stands at roughly 20% in advanced industrial economies like Canada, the US and Australia. As an Australian study put it, “It is estimated that, at any given time, one in five working-age adults has a mental health problem, with the lifetime prevalence rate reaching up to 50 percent. Interestingly, most individuals with mental health issues are employed.”¹⁵ In the US, a 2014 study claimed that almost one in five, or 18.1 percent of adults aged 18 and older had any mental illness in the past year.¹⁶ Another 2016 US report claimed that 18.5 percent of Americans were found to be experiencing some form of mental health issue, a slight increase over the 18.1 percent in 2015¹⁷. The newly-formed Mental Health Research Canada organization writes that, “...at Mental Health Canada, we will continue to support them (“leading researchers and institutions”) as they bring invaluable hope to the one in five Canadians who will face mental health problems this year.”¹⁸

Analysts consider the big three of mental health to be stress, depression and anxiety followed by a suite of disorders whose prevalence is considerably less, including bipolarity, borderline personality, autism, bulimia, anorexia and schizophrenia. Then, there are the addictions including alcohol, opiates (both prescribed and not-prescribed) and gambling. With an ageing society, there is increased focus on dementia and Alzheimer’s. Finally, and only recently receiving somewhat greater attention, are the productivity effects on caregivers, many of whom are family and female.

Much of the literature to-date has concentrated on only a subset of the above categories to the exclusion of the rest when calculating the ensuing lost productivity. As a result, it is difficult, if not impossible, to add the numbers up to come to an accurate enumeration of the people affected. Also making comparisons challenging are varying definitions, over time, of what constitutes or defines a given mental condition. Finally, disentangling the incidence of co-morbidity, that is the co-existence of two or more conditions (eg. depression and

substance abuse), can make accurately determining the size of the population experiencing mental illness even more challenging.

Revealing in this regard is the language in Statistics Canada's Canadian Community Health Survey: Mental Health (2012) which stated, "...in 2012, an estimated 10 percent of Canadians experienced a mental disorder (depression, bipolar disorder, generalized anxiety disorder or alcohol, cannabis or substance abuse or dependence) in the past year."¹⁹ So, no mention made of debilitating stress or other mental health states which would need to be included in order to present a fulsome picture.

The 2015 Canadian Community Health Survey found that 3.7 million Canadians, or 12.2 percent of those aged 12 and older, acknowledged that they had been diagnosed with either a mood disorder or an anxiety disorder by a health professional.²⁰

According to Statistics Canada 5.6 percent of the population in 2011 versus 6.3 percent in 2014 self-identified as being in poor or fair mental health. The highest percentages in 2014 were females from ages 35 to 44: 7.8 percent followed by women aged 45 – 64 and 20- 34: 7.2 percent.²¹ This finding of growth in self-reported mental ill-health appears to mesh with a CAMH (Centre for Addiction and Mental Health) survey that revealed a jump in self-rated poor mental health in Ontario – to 7.1 percent in 2013 from 4.7 percent a decade earlier, led by a surge among young adults.²²

Stress

One in three US adults report feeling chronically-stressed on the job according to a 2016 Work and Well-Being Survey conducted by the American Psychological Association.²³

Statistics Canada tallied the, “Perceived Life Stress, Quite a Lot, by Age and Sex” in the population aged 15 and older who reported quite a lot or extreme stress most days of their lives at 23 percent in 2014²⁴ .

According to the American Institute of Stress, “...job stress is far and away the major source of stress for American adults and...it has escalated progressively over the past few decades.”²⁵ The Institute also declares that three in four American workers believe there is more on the job stress today than a generation ago and that 26 percent of workers said they were, “... often or very often burned out or stressed by their work.”²⁶

The hypothesis linking stress to job performance is contained in what is known as Attention Theory, “ Attention theory asserts that the experience of stress has the effect of reducing an individual’s ability to concentrate on multiple tasks.”²⁷

As one article put it, “ The alarming spike in the incidence of stress among employees in recent years and its impact on the bottom line has made the management of stress an urgent business strategy for American companies.”²⁸ This conclusion was echoed by Canadian sources, “ Despite increased efforts to improve mental wellness, it seems Canada is still suffering from a stress epidemic after one new study revealed more than half of employees feel the strain on a daily basis.”²⁹ And, using similar terminology, Bill Wilkerson, President of the Global Business and Economic Roundtable on Addiction and Mental Health and Chair of the Workplace Advisory Board of the Mental Health Commission said “ Chronic job stress has emerged in what you might call epidemic terms.”³⁰

That same Roundtable enunciated what it called the Wilson principle namely, “It would be a shame to undo thirty years of great progress in physical health and safety as a result of massive losses of productive capacity due to untreated mental illness in the workplace.”³¹ This report also noted the rising rates of mental disorders that were leading to a high proportion of productivity costs, particularly amongst men and women in their prime working years. A January

2018 study commissioned by Morneau Shepell commented that, “In recent years, rates of stress have increased and, as a result, are affecting employees’ physical and mental health, engagement and productivity.”³²

A US source observed, “ Stressed workers have an elevated risk of mental health problems ranging from anxiety and substance abuse, and perhaps the most significant, depression...stress and clinical depression – the two often go hand-in-hand – trail family crisis as the second and third most significant problems in the workplace.”³³

Depression

In the US, it has been estimated that 7.6 percent of people aged 12 and older experienced depression in any two weeks over the 2009 – 12 period. This proportion rises to 9.8 percent for all who are in the 40 – 59 year age group and to 12.3 percent, the highest, for women in this age category. This study found that almost 43 percent of persons with severe depressive symptoms reported serious difficulties at work at home and in other social activities.³⁴

A 2013 article asserted that, “Depression alone is estimated to cost US\$ 83 billion annually in the US... the disorder is the highest cost health condition nationwide.”³⁵

Anxiety:

According to the Mental Health Commission of Canada, 11.6 percent of Canadians between the ages of 20 and 64 declared in 2011/2012 that they had an anxiety disorder or a mood disorder that had been diagnosed by a health care professional.³⁶ For its part, the Anxiety Disorders Association of Canada writes

that "...the 12-month prevalence of anxiety disorders is over 12 percent and one in four Canadians will have at least one anxiety disorder in their lifetime." ³⁷

In the U.S., the National Alliance on Mental Illness contends that over 18 percent of the adult US population live with anxiety disorder. ³⁸

Autism, Bipolarity, Borderline, Schizophrenia, etc.

There are large numbers of mental illnesses including autism, bipolar and borderline disorders, schizophrenia and various eating disorders whose individual incidence is considered to be quite low relative to stress, depression and anxiety. For instance, the Mental Health Research Association considers that, "More than two million American adults or one percent of the population age 18 or older in any given year have bipolar disorder." ³⁹ In Canada, public authorities believe that insofar as schizophrenia is concerned, "...a prevalence rate of one percent is generally accepted as the best rate." ⁴⁰ As a result, much less analytical work has been done on the links between these lesser-occurring conditions and productivity. And, no attempts have been made to aggregate the productivity impacts of these individual mental disorders.

The Addictions Crisis: Opioids, Alcohol and Gambling

According to the Canadian Centre on Substance Abuse and Addiction, "Productivity losses (attributable to substance abuse) amounted to \$24.3 billion (in 2002)." ⁴¹

Statistics Canada noted that the Canadian Community Health Survey of 2016 revealed that 19 percent of Canadians aged 12 and older reported alcohol consumption that classified them as heavy drinkers and that 10 percent reported using illicit drugs in the past year. ⁴² The US Substance Abuse and Mental Health

Services Administration (SAMHSA) found that in 2014, 10.2 percent of people 12 years and older reported using an illicit drug in the previous 30 days, a proportion that appears quite similar to that reported in Canada. According to SAMHSA, “This percentage in 2014 was higher than those in every year from 2002 through 2013.”⁴³

A not-inconsiderable proportion of the illicit drug consumption likely involves cannabis and in light of the evolving legal status of the substance in both Canada and the US, may involve considerable changes to the reported prevalence of illicit drug consumption in the future.

In March 2018, the Public Health Agency of Canada released a report on the number of projected deaths caused by opioid overdoses in Canada in 2017. The tally was 4,000, up by more than a third from 2016. The media coverage of this report serves as a case study in miniature of the broader discussion and analysis around mental health and productivity as it echoes many of the themes of this paper including,

- “The number of deaths has escalated despite a series of national efforts.” (a growing problem plus the questionable impact of public and private policy and practices);
- “The national numbers are imperfect because of differences in provincial reporting metrics and timelines but do provide a glimpse of emerging trends”(data challenges);
- According to the federal Health Minister, “ ‘ ... we’ve certainly recognized that stigma why people don’t go and get treatment because they feel judged and stigmatized’”(underreporting of mental health situation overall);

- And quoting a senior US government official, “...overdose rates are skyrocketing in the US and Canada, but the crisis is growing around the world.” And, compared to the heroin and crack epidemics in the 1970’ and 1980’ s “Opioids and other drugs are killing ten times more Americans every year...This is a health threat, this is a national security threat...The numbers are alarming.”(a burgeoning problem that affects many countries).⁴⁴

Alzheimer’s/Dementia:

The 2018 federal budget claimed that more than 400,000 Canadian seniors live with dementia, including Alzheimer’s. Women accounted for two thirds of this number. The budget also noted that many women take on caregiving responsibilities. It was not stated in the budget documents show many of these seniors and caregivers were employed within the previous twelve months although there appears to be a greater proportion of the senior population that is employed today than there has been formerly with Statistics Canada recently reporting that 14 percent of Canadians 65 and older were still in the workforce in 2016, up from 6 percent in 1996. This trend is likely to continue in light of a population with increasing life expectancy and decreasing availability of defined benefit retirement plans.

Third Parties: Family, Friends and Caregivers- A largely overlooked population

The Canadian Association for Suicide Prevention writes that, “For each death by suicide, it has been estimated that the lives of 7 – 10 bereaved ‘survivors’ are profoundly affected.”⁴⁵. This is roughly in line with the thinking of others such as Alcohol Anonymous which contends that up to 18 others may be affected by someone else’s alcoholism.

The 2012 General Social Survey – Caregiving found that the number of caregivers 45 years and older had gone up by 20 percent relative to 2007 and that eight million Canadians counted themselves as caregivers in 2012. Furthermore, thirteen percent of caregivers reported that mental illness and Alzheimer's/dementia together were regarded as the chief issues regarding caregiving. The Survey also discovered that 24 percent of caregivers looking after those with a mental illness and 32 percent of those caring for people with Alzheimer's/dementia spend more than ten hours a week in caregiving.⁴⁶ An August 2015 Globe and Mail article also tallied the number of Canadian caregivers at 8.1 million Canadians, of whom 6.1 million are in the workforce and most of whom are in the 45-64 age group (50% of the caregivers are helping ageing parents and the number of seniors is projected to double between 2012 and 2031). That article referenced "A 2012 Conference Board of Canada study{that} estimates the cost to employers in lost productivity because of caregiving responsibilities to be Cdn.\$1.28 billion a year."⁴⁷

According to the Family Caregiver Alliance "Caregiver absenteeism costs the US economy an estimated US\$25.2 billion in lost productivity(based on the average number of workdays missed per working caregiver and assuming \$200 in lost productivity per day)."⁴⁸

In the US, one commentator noted that "...as society ages and elderly caregiving grows, stress is likely to grow as an issue...As early as 2010, almost half the US workforce, mostly those in their 40's and 50's will be caring for an elderly parent. Well over 50 percent of US caregivers are women and 59 percent of them are employed too."⁴⁹. More conservatively, the Family Caregiver Alliance reports that one in six Americans working full or part-time assisted in the care of a disabled or elderly family member, relative or friend in 2011. The organization estimates that 70 percent of working caregivers suffer work-related difficulties while 60 percent

of caregivers are employed at one point while also caregiving. It also stated that in 2011, 69 percent of all working caregivers reported having to rearrange their work schedule to meet their caregiving responsibilities. Caregivers who care for someone with emotional or mental health issues are more likely to report having had to make work accommodations (77 percent versus 67 percent). Once again, women appear to be more adversely affected than men.⁵⁰

These findings were similar to those of the 2010 Met Life Study of Working Caregivers that found that 62 percent of caregivers reported going in late and/or leaving early, taking a leave of absence or dropping back to part-time work in order to care for a frail or impaired relative. The study also commented that, “...lost productivity may be considered a hidden and difficult to confirm consequence of caregiving.”⁵¹

Trend Lines

Some question whether or not the incidence of mental health has been rising in the general population, claiming that it is impossible to determine trend lines in mental health given that there is so little direct comparability between studies and conditions in different geographies across various time periods.

Stable, declining and/or unknown rates of mental illness, if confirmed, would break the link to presumed growing productivity losses. Thus, a Statistics Canada report commented that, “For both sexes, suicide rates remained fairly stable in the 50’s and then rose steadily between the 1960’s and 1980’s. Male suicide rates have generally been decreasing since 1999, while female rates have stabilized.”⁵² On the other hand, the Canadian Association for Suicide Prevention writes that, “...suicide is a critical public health issue in Canada...with rates increasing over the past 60 years.”⁵³ Or, as the 2012 Canadian Community Health Survey put it, “Since the measurement of certain disorders has changed since the last survey in

2002, and the disorders in 2012 are different, the rate of any mental or substance use disorder, as well as many other rates are not comparable over time.”⁵⁴ And, when discussing the differences between the 2002 and 2012 surveys, the authors wrote, “...the selection of disorders used to define certain complex measures of disorders, and the survey questions, differ on the two surveys.”⁵⁵.

In the same vein, a 2011 study appearing in Population Health Management stated that, “...methods to measure productivity differ and a validated method to monetize costs associated with lost work time, especially presenteeism, is still lacking...Findings also underscore the need for standardized measures for productivity loss and methods for monetizing that loss so that costs can be compared across studies.”⁵⁶

This view was echoed in the 2016 Report from the Chronic Disease Surveillance System: Mood and Anxiety Disorders in Canada, “In 2009 – 10 almost 3.5 million Canadians (or, 10 percent) used health services for mood and anxiety disorders. Although high, the proportion of Canadians using health services for these disorders remained relatively stable between 1996- 7 and 2009-10.”⁵⁷ However, the report then went on to caution that “...the data in this report likely underestimate the use of health services for mood and anxiety disorders in Canada.”⁵⁸. In the US, the US Centers for Disease Control and Prevention’s Mental Health Fast Stats noted that there were 65.9 million visits to physicians’ offices in 2014 where the primary diagnosis was mental disorders. This compares with 59.8 million visits in 2015 and suggests reasonable stability in overall mental illness levels, at least over the short-term.

All this being said, the case can be made for there being a secular increase in reported mental illness and consequently in the absolute number of affected people over the past several decades – which together are driving a greater amount of lost productivity. This case rests on: new awareness of an increasing number of individual mental disorders; heightened sensitivity to the impacts on

affected others and caregivers; secular changes in the macro economy and in demographics.

Macro Changes in the Modern Economy

Long-term trends in and out of the workplace appear to have conspired to increase the rate of mental illness. These developments would include the financial and economic crises of 2008 – 2009 that decimated the savings, housing ownership levels and livelihoods of millions. Much has been written about the lingering economic effects of this era (egs. the extended period of monetary policy easing; substandard growth rates) although far less attention has been paid to the ongoing psychosocial impacts across the population. Then, there has been the spectre of mass job insecurity brought on by the relentless technological change that has decimated entire industries (viz., Amazon) with the prospect that this force will only gather speed in the coming decades with more widespread adoption of artificial intelligence, the internet of things and robotics.

In much the same vein, observers point to the rise of the so-called ‘gig’ economy as self-employment and contract work have reached new heights. The President and CEO of TD Bank recently wrote that, “...an estimated 3.3 million Canadians experience monthly income swings by 25% or more. These people are often forced to make unconventional financial decisions to stabilize their situation today but that, in turn, makes it much harder for them to plan for tomorrow.”⁵⁹ This would appear to be a gauge for mass stress. Finally, some point to the seeming widening wage and wealth gap that has emerged in many countries, the decline of the middle class and the public controversy surrounding the top one percent of income earners that may have further contributed to rising rates of mental illness. According to the Centers for Disease Control, people living below the poverty line were nearly two and a half times more likely to experience

depression than those above the poverty level. Echoing this view, the World Economic Forum/Harvard study noted, “More than 80 per cent of this (mental health) disease burden is among people living in low and middle income countries.”⁶⁰

Media coverage of mental health has similarly greatly expanded, particularly in the social media age which has combined instantaneous coverage of mass killings, largely in the US, attributed to mentally ill individuals with ready access to firearms and other potential weapons, even delivery vans. Similarly, contact sports have led to huge public attention, including a major Hollywood film (Concussion) on the high incidence of CTE (chronic traumatic encephalopathy) amongst professional athletes that results from multiple head injuries. Major sports, political, business, entertainment and military (PTSD-post-traumatic stress disorder) figures have also lately gone public with their struggles against mental illness and addiction thereby further contributing to the widespread view of there being an ‘epidemic’ from which none are spared. Aiding and abetting the rapid rise of public concern has been the sometimes incendiary language and big numbers that have come to characterize the public discourse surrounding mental health and productivity which contributes to investing the topic with a heightened sense of urgency – ‘\$33 billion in lost productivity’; ‘stress epidemic’; “...the growing burden of mental illness is staggering.” (World Economic Forum); ‘mental health emergency’. And, according to the 2018 federal budget, “Canada is in the midst of an opioid crisis. In 2016 alone, more than 2,800 Canadian lives were lost to apparent opioid overdoses...Canada is the second highest per capital consumer of opioids in the world.” On the occasion of the first National Impaired Driving Week in Canada in March 2018, the federal government put out a press release stating that, “Every day, four Canadians die in a collision involving either drugs or alcohol.” As an Australian study that is equally relevant to North America summarized it, “It is popularly believed that we are in an epidemic of mental health problems.”⁶¹

An alternative explanation of rising rates of mental illness could be simply that calculations of mental illness have only become more refined, accurate and comprehensive as our medical understanding of mental health has improved and as society has come to deal with mental health on more than an episodic basis. As one researcher put it “Not long ago, efforts to promote workplace mental health across Canada were generally unsystematic, fragmented, and in some cases, frivolous – mental health in the workplace was often considered peripheral...the last decade has witnessed a tremendous burgeoning of policies, initiatives, approaches and strategies targeted at the improvement of mental health in the work environment.”⁶²

In addition, the range of mental conditions qualifying as mental health matters continues to expand. This may be most relevant for the discussion around dementia and Alzheimer’s as well as the role played by caregivers. However, modern technology may also be playing a role in enabling new forms of addictions to become manifest. Thus, media stories appeared in April 2018 on the World Health Organization’s (WHO) plan to add video gaming addiction to its International Classification of Diseases in its forthcoming June 2018 update of disease(s).⁶³ This development would further bolster the trend towards the expansion of the list of mental health conditions and thus of obstacles to productivity.

Or, the numbers may have increased because it has become somewhat more socially acceptable to speak openly about mental health and not continue to refrain from public discussion of what had heretofore been viewed as a private weakness or moral deficiency. There is some evidence to support the idea that the proportion of those people with mental health issues who are seeking treatment may be increasing. According to Mental Health America, 56 percent of Americans with a mental illness did not receive treatment in 2017 versus 59

percent of adults who did not receive treatment in 2011, “Lack of access to treatment is slowly improving.”⁶⁴

Consequently, it is probably time to re-examine one assumption in the literature – namely, that there is a fairly constant proportion of individuals with mental health issues who self-report and who actively seek treatment. This is the gap that exists between the roughly 7 – 8 percent of the population in Canada and the US who identify themselves as having mental issues (or, being in poor or fair mental health) in surveys and the generally-accepted 18 to 20 percent who are identified as being in that population.

Greater openness and willingness to seek treatment may be leading to a narrowing of the admitted/actual rate of mental health gap that is providing the impetus behind the presumed growth in the population of those grappling with mental illnesses. Or, researchers may be taking the greater frankness in talking about mental illness and applying the traditional gap calculation and in so doing coming up with a greater prevalence of mental health issues.

The co-morbidity issue is also relevant to the calculation of incidence. Care has to be taken not to lump together and simply add up those professing to have experienced more than one mental illness. The 2015 Canadian Community Health Survey noted that 1.1 million of the 3.7 million Canadians aged 12 and older reported having been diagnosed with both a mood and an anxiety disorder⁶⁵. In the same vein, a Statistics Canada paper concluded that, “Research shows that mental illness is the most important risk factor for suicide; and that more than 90 percent of people who commit suicide have a mental or addictive disorder.”⁶⁶

What is the evidence?

At one level, it could be argued that an entire industry has grown up that has a vested interest in drawing public attention to mental health and in so doing magnifying the rate of illness and the societal costs and consequences. The rise in mental health conditions then becomes a social construct and not an objective reality.

However, there are indicators of the mental health of the general population that can be used as proxies for measuring trends and that point to worrisome trends.

A listing of such indicators would include:

- Sales volumes for prescription medications dealing with depression, anxiety and stress;
- Suicide rates;
- Overdose rates;
- Self-reporting of mental issues in surveys;
- Rate of alcoholism;
- Growth in rate of medical mental health facility usage;
- Growth in Employee Assistance Programs'(EAP) clientele and the number of these corporate programs;
- An ageing population with increased statistical likelihood of dementia and Alzheimer's;
- Governmental funding for mental health facilities and treatment, including tax measures such as the federal Caregivers' Tax Credit;
- Absenteeism data from employers.

However, even such data must be approached with caution. To take but one example, it is widely-recognized that consumption of prescription medications has been rapidly increasing, “Anti-depressant use increased by 65 percent over a 15-year period – from 7.7 percent (1997-2002) to 12.7 percent. Females were twice as likely as males to have taken anti-depressants at all these time points. From 2011 to 2014, 68 percent of persons aged 12 years and older had been taking anti-depressants for two years or more and 21.4 percent of males and 27.2 percent of females had been taking them for 10 years or more.”⁶⁷. The New York Times provides confirming information, “Long-term use of anti-depressants is surging in the United States. The rate has almost doubled since 2010 and more than tripled since 2000. Nearly 25 million adults have been on anti-depressants for at least two years, a 60 percent increase since 2010...Across much of the developed world, long-term prescriptions are on the rise.”⁶⁸. The article goes on to note that, “ Many who try to quit say they cannot because of withdrawal symptoms they were never warned about...and citing a physician from Duke University, ‘ most people are put on these drugs...without clear symptoms of clinical depression.’”⁶⁹.

Absenteeism and Presenteeism

The direct evidence for lost productivity due to mental illness comes from absenteeism – not turning up for work. This factor is more readily captured by employer records although accounting for the growing army of the self-employed may prove more challenging. Nevertheless, even tracking absenteeism can result in widely divergent assessments of its incidence. Thus, the Mental Health Commission of Canada notes that 500,000 Canadians, in any given week, are unable to work because of mental health issues.⁷⁰. The American Institute of

Stress reports that an estimated one million workers are absent every working day due to stress alone⁷¹. Yet another report, based on polling data, claims that 68 million more work days per year are lost in the US on account of depression than occurs with non-depressed workers.⁷² Developing an accurate picture of absenteeism would also need to take individual firms' compensatory measures into account, including the work performed by temporary stand-ins for absent workers.

These difficulties pale by comparison with the challenges of capturing the costs of presenteeism – that is, turning up for work but unable to fully concentrate on the tasks at hand. The World Economic Forum /Harvard study observed that “...6 in 10 people say poor mental health impacts their concentration at work and estimates indicate that nearly 70 million work days are lost each year in the UK because of poor mental health.”⁷³

According to a 2009 article in Health Advocate, “Overall, the price tag related to presenteeism adds up to nearly US\$150 billion a year in lost productivity, according to the International Foundation of Employee Benefit Plans.”⁷⁴ A 2015 study in the Journal of Clinical Psychology claimed that presenteeism appeared to be a particularly large drain on productivity and estimated that those costs rose 21.5 percent from US\$64.7 billion in 2005 to US\$ 78.7 billion in 2010. The authors went on to estimate that presenteeism's cost was 6.1 times the cost associated with absenteeism, “which is consistent with previous approaches in the literature.”⁷⁵ Meanwhile, and using a different multiplier, one report of the Integrated Benefits Institute in the US calculated that on average, depression alone results in the affected employee incurring 2.2 days of absence per year and 7.5 days per year of presenteeism.⁷⁶ Another report of the Institute stated that, “...lost productivity for employees with depression is heavily influenced by presenteeism-nearly two-thirds of depression lost productivity occurs when people are at work. Absent sick days are the second largest source at 18 percent.”⁷⁷ In Canada, one firm in the employee mental health field notes that,

“\$6 billion...in lost productivity is seen by Canadian businesses each year in absenteeism due to physical or mental health issues with members of their teams...\$25 billion...(is)...how much lost productivity could be attributed to presenteeism, when employees are physically present at work, but due to an unaddressed physical or mental health issue, are distracted to the point of reduced productivity.”⁷⁸

A January 2018 Conference Board of Canada report on depression cited previous research estimating that of the 1.3 million Canadians with depression, “only 17 percent are working full-time and are fully-functioning. Another 40 percent are working full-time but at a reduced level of functioning while 20 percent work part-time because their illness prevents them from working full-time. The remaining 23 percent are unable to work.”⁷⁹

As can be seen from the above selection, studies in the field generally assume that presenteeism constitutes a larger drain on productivity than absenteeism. At the same time, there is no agreed upon methodology for capturing exactly how much larger presenteeism is. Absenteeism can be tracked in company records and with supporting documentation from medical personnel. Presenteeism depends on self-reporting and is subject to the vagaries of reluctance to divulge (in line with the social stigma that continues to surround mental illness and the subsequent underreporting), methodology, population and time-period. As well, presenteeism could be mistaken for lack of engagement and motivation at work – which may not necessarily be a result of mental illness but rather poor management. As such, presenteeism emerges as a potential key swing variable in studies linking mental illness and lost productivity. The magnitude of this particular factor is largely what determines the estimates of the impact of mental health on productivity and should be the focus of future research.

The Societal Response

As a result of the growing awareness of the perceived prevalence of mental health, more and more resources have been devoted to halting the seemingly relentless advances of mental illness and addiction. This has involved the commitment of public and private funds towards building the physical and human resources infrastructure of psychologists and psychiatrists, social workers and counsellors, Employment Assistance Program (EAP) staffers, and, indirectly, hospital emergency workers and even police and corrections officers. An as-yet-unexplored realm of research, and beyond the scope of this paper, is one that would deal with the contribution to productivity of this heterogeneous grouping both in terms of the growth in employment and their effectiveness at curbing the impacts of mental illness, including on foregone productivity, of the affected populations. In Canada and elsewhere, there has not been much attention to-date spent on measuring progress in treating mental health although there are signs that this may be changing.⁸⁰

How Serious Is It?

The sheer magnitude of the number of people affected by mental illness and the projected lost productivity plus the alarmist language sometimes used by participants in the public policy debates can result in a somewhat distorted overall view of matters. So, a \$50 billion reduction in productivity appears to be an enormous number but when set against the approximately \$ 2 trillion Canadian economy seems much less so. Put differently, poor mental health may result in, based on current estimates, only a 2.5 percent decline in annual productivity performance from what otherwise could have been achieved. The WHO figure of US \$1Trillion in lost productivity similarly looks gigantic but when set against the estimated US \$ 79 trillion size of global GDP similarly seems

somewhat more modest (1.3 percent) than would appear at first glance. These percentages may be small or large, depending upon one's perspective, background and expectations. In this regard, it is worth recalling that labour productivity in Canada rose by but a miniscule amount between 2015 and 2016 (from \$53.1 to \$53.3 per hour in 2007 dollars) and so substantially lessening or erasing the productivity loss engendered by mental ill health could potentially have a measurably positive impact on Canada's productivity performance.⁸¹

Major productivity gains may be generated more readily by means other than radical improvements in the public's mental health – improvements which, of course, can and must, be justified on their own merits, however difficult they may be to achieve. For instance, a recent article on a possible breakthrough pharmacological compound for treating hangovers claimed that “Over US \$170 billion worth of productivity is lost in the US each year alone to hangovers, and (technology company) 82 LABS believes the market could be worth up to US \$113 billion.”⁸² Similarly, a Gallup poll found that only 13 percent of employees are engaged at work and it has been estimated that the lack of engagement by US employees may be costing between US\$450 - US\$550 billion per year.⁸³ This would suggest that measures to strengthen employee engagement may be more efficient in bringing about productivity improvements from a societal perspective than focusing on the mentally ill.

To drive productivity gains in society and in the context of scarce public financial resources and uncertain outcomes, the question is whether or not those financial and policy resources are better deployed to improving the engagement/happiness/well-being of the large proportion employees who may be simply disaffected (or, lacking motivation) rather than on improving the mental wellness of the ill? Or, can we do both?

We may be witnessing a bifurcation of roles – with the private sector largely attending to raising employee wellness and commitment and the public sector dealing with the seemingly difficult, if not in many cases, intractable mental illnesses, including addictions. The public sector then takes the highest risk cases (as occurs with its backing the riskiest, most-likely-to-fail, earliest-stage start-up companies) with the private sector focusing on those who may need shorter-term, moderate assistance (to continue the analogy, the private sector tends to focus on financing less risky, later-stage firms). Of course, the division of labor is not black and white as the public sector is a major employer in its own right and wants to provide a work environment that is positive and conducive to maintaining high productivity while the private sector does provide for support for its employees facing serious mental health issues.

Conclusions

The growing body of studies, research and data, much of it not strictly comparable, may however permit some broad stroke conclusions to be drawn about what is known and what remains unknown and therefore worthy of further research.

What is known is that the population of those with mental illness and those affected by mental illness, either informally as caregivers (in French, *proches aidants* – nearby helpers - may better capture this subset of people) or more formally as paid medical staff in hospitals, clinics and EAPs is substantial. We also know that the professional consensus is that approximately 20 percent of adults in Canada and the US experience mental illness over the course of any twelve-

month period. Also known is the incidence of reporting mental illness is considerably less than 100 percent and may be no more than 50 percent at most.

We also know that the lost productivity per year in Canada reaches in the tens of billions of dollars neighborhood and in the hundreds of billions in the US. We know that the direct links between mental illness and productivity are contained in absenteeism and presenteeism. Also known is the growing list of conditions now falling under the rubric of mental illness. We also know that estimates of lost productivity have been growing, even discounting for the alarmist language that is oft employed by researchers, media and interested parties. For a host of reasons, many today consider that we are in the midst of a mental health epidemic that sometimes presents itself as substance abuse and at other times as an explosion of cases pertaining to certain conditions, including stress and depression. Also known is that mental illness tends to be associated with income levels, to which those at the lower rungs appear more likely to be susceptible.

What is unknown is a lengthier list of factors and includes the precise magnitude and exact growth rate of mental illness and the corresponding knock on effect on productivity. Traditional analyses of productivity have largely ignored the mental health issue, preferring to focus on issues like the level of competition and skills development. As a recent McKinsey report put it, "...unlocking the productivity potential of advanced economies requires a focus on promoting both demand and digital diffusion, in addition to interventions that help remove traditional supply side constraints such as red tape."⁸⁴ Greater accuracy in measuring the lost productivity stemming from mental illness would better encourage inclusion of this factor in the overall analysis of productivity by researchers and analysts.

What is unknown is the exact measure of presenteeism attributable to mental health issues versus what might be attributable to simple employee disengagement and low commitment to corporate and organizational objectives. In other words, the proper proportion of presenteeism to lost productivity relative to absenteeism remains unknown. Unknown is the precise magnitude of the productivity loss and the rate at which it has been growing over time. Similarly, key building blocks of arriving at a more precise calculation of the incidence of mental illness and its impacts on others are still missing – this includes caregivers and accounting for the combined effect of multiple mental health conditions (eg. schizophrenia) whose individual occurrence rates are quite small but who when combined may add up to a not-insignificant portion of the productivity losses. Also unknown are how the growth of the formal caring professions and organizations enter into the calculus, including the panoply of doctors, EAP professionals, social workers, etc. A full accounting of the effect of mental illness on productivity would also have to incorporate not just the offsetting rise of the caring economy in terms of employment but also its success rate at countering the effects of poor mental health. Also unknown, but suspected, is that mental illness has different effects on males and females – women tend to report a greater incidence of depression and greater consumption of prescription anti-depressants. Women also seem to be disproportionately cast in the roles of caregivers, especially insofar as parents with dementia and Alzheimer's are concerned. Just as the physical health system recognizes that there are gender-specific physical health matters, it may only be a matter of time before the mental health system comes to the same conclusion. The effects of changes in the broader economy, from recent economic and financial crises to what some refer to as the fourth industrial revolution on mental health are also relatively unknown. Similarly, there may be an evolving, almost imperceptible, division of labour in the societal response to mental illness with the public sector

taking on responsibility for dealing with the most intractable cases and the private sector focussing on promoting well-being measures to increase motivation levels amongst the workforce. The burgeoning public and private commitment of human and financial resources to the mental health field likely merits greater attention to compiling the data required to make better-informed and more effective public policy decisions

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