An Economic Analysis of HB18-1136

HB18-1136 aims to add "residential and inpatient substance use disorder treatment to the Colorado Medical Assistance program", and to allocate funds to cover the costs of such treatment if recipients are not covered by public or private insurance. The bill states that doing so is necessary to preserve "public peace, health and safety". Our analysis suggests that in addition to achieving these worthy goals, HB18-1136 will also produce significant economic benefits for the State of Colorado. By mitigating societal costs associated with substance abuse, passing HB18-1136 would not amount to merely enacting a charitable donation to those most in need, but would instead represent a wise investment in public health that will strengthen Colorado's economy.

Substance abuse presents a major challenge to the economic vitality and social welfare of the United States. The National Institute on Drug Abuse estimates the combined economic cost at $425 billion dollars annually. Approximately $80 billion of these costs can be attributed to the growing problem of opioid abuse in the United States, and both of these numbers—based on data from over 5 years ago-- likely understate the scale of the of the problem, as illicit opioid use has continued to increase rapidly in recent years[i,ii].

While the costs of addiction borne by many addicts are obvious—mental health issues, homelessness, social isolation—it is important to consider that substance abuse also exacts a toll on the society in which these addicts live. For example, the CDC estimates that nearly one in three fatal accidents involves a driver with a blood alcohol concentration over 0.08%[iii]. Of these deaths, nearly 40% of people killed are not the impaired driver, but passengers, pedestrians, and occupants of other vehicles. [iv]

Or consider, for instance, the case of West Virginia, a state hit particularly hard by the opioid problem. In 2017, the state had to transport 4200 corpses at a cost of $900,000, more than double what it had paid in 2015 when it needed to transport 2200 corpses. Public health officials there pointed to overdoses as the reason behind the near doubling in transport needs[v].

Treating overdoses also costs society money. Under federal law, emergency rooms are required to render lifesaving medical care regardless of a patient's ability to pay or insurance status. One study estimated that in 2015 the cost to treat a single intensive care unit admission for opiate overdose averaged $92,408[vi]. Because nearly 20% of adults struggling with opiate addiction are uninsured, hospitals often go unreimbursed for treating these patients, and must pass on the costs of their treatment to other consumers. High rates of indigence and near-term mortality also thwart hospitals' ability to recoup costs from overdose patients[vii].

For those of a more punitive disposition who might suggest that we simply "lock up" all drug users, even this measure would not free society from the costs of substance abuse. Incarceration costs money: a recent report estimated that the cost of housing one inmate costs US taxpayers an average of $32,274 per year. In Colorado, that number climbs to $39,303[viii].

These are but a few examples of how substance abuse not only costs those caught in the cycle of addiction, but also extracts resources from society. Because substance abusers are not forced to take into account the burden their addiction places on society, their behavior represents an externality. Therefore, it is possible that government intervention may be necessary to reduce these societal costs.

One possible way of reducing these costs would be to help substance abusers break their addictions by making treatment more accessible and affordable, as HB18-1136 intends.

Even if we ignore the direct benefits accrued to treatment recipients (better physical and mental health, better job marketability and earnings potential, etc.), if the costs of providing these programs was less than associated societal benefits realized from treatment, this alone would constitute a more efficient economic outcome. This sort of cost/benefit analysis has already been performed by researchers and shows compelling evidence that substance abuse treatment does, in fact, "pay for itself."

A 2003 report by researchers at the University of Miami reviewed 11 studies aimed at calculating the costs and benefits of treatment programs found that across a wide range of treatment modalities—residential, outpatient, routine medical assistance, and methadone maintenance programs—the benefits to society in terms of reduced criminal activity, motor vehicle accidents, increased employment, and avoided hospitalizations all outweighed the costs of the interventions. The benefit/cost ratio ranged widely among these studies, from 23.4:1 to 1.33 to 1, but all yielded net economic benefits, even for costlier residential treatment interventions[ix].

A 2006 study of 43 substance-abuse treatment providers in California corroborated these findings, estimating a net benefit to society of $12,026 dollars per consumer of treatment services. 65% of the reduction in societal burden was attributed to lowered criminal activity and incarceration costs [x].

It is clear, then, that in the case of treating existing substance abusers, providing treatment access to addicts represents a step towards a more efficient solution, regardless of whether they are able to fund their own treatment or require public assistance. Economic costs

to the rest of society are reduced, while quality of life improves for those undergoing treatment.

Despite the promise of providing addicts with treatment, it is necessary to address some common criticisms of this sort of intervention. One of these is the contention that by providing insurance and care for substance abusers, the government is, in effect, encouraging drug use by lowering the costs associated with addiction. This particular concern is one variation of the moral hazard, a well-documented economic phenomenon in which the insured are more likely to engage in risky behavior if they know the costs of such risk will be borne by their insurer, leading to inefficiency.

While this type of moral hazard is a legitimate concern, and a well-documented phenomenon in other insurance markets, the data suggest that it is not a significant problem in the case of insuring and treating substance abuse disorders. A 2017 study by researchers at RAND found that the expansion of coverage under the 2010 Affordable Care Act did not produce any increase in risky substance use among young adults, one of the most vulnerable populations[xi].

For some, the idea of providing treatment subsidies for substance abusers may seem to absolve them from any personal responsibility for the actions that led to their addiction. This might seem like an unfair redistribution from law-abiding, morally upright citizens to less scrupulous characters who have no regard for upholding their side of the social contract. However, even if one accepts this view, it is important to understand that neither inaction nor deterrence is free. Indeed, as noted above, reducing incarceration rates accounts for a substantial portion of the savings from providing treatment.

Furthermore, we do not believe that addicts are wholly responsible for their condition. Redistributive measures could be justified in trying to help substance abusers break free from chemical dependency. Though the degree to which socioeconomic stressors, liberal prescription practices, cultural upheaval or any other set of factors are responsible for increased drug abuse is still a matter of much debate, the notion that addiction is simply the result of bad character is generally no longer widely accepted. Indeed, the US government is unambiguous in its conception of addiction, stating:

> *"Addiction is a chronic disease…the initial decision to take drugs is voluntary for most people, but repeated drug use can lead to brain changes that challenge an addicted person's self-control and interfere with their ability to resist intense urges to take drugs."*[xii]

And because addiction so often leaves its sufferers destitute, addressing substance abuse often requires the use of public funds.

In conclusion, HB18-1136 presents an effective and economically sensible partial solution to the problem of substance abuse in Colorado. While determining the moral responsibility and ethical questions associated with addiction is a difficult philosophical problem, fraught with grey areas and the subject of much debate, this discussion is largely irrelevant to the bill at hand. As a society, we have already decided that a humane response to addiction is a cause worth pursuing, as evidenced by the costs we are currently willing to shoulder through hospitalizations and due process afforded to addicts who have committed crimes. HB18-1136 would lower these societal costs, correcting an inefficiency in the State's economy, all while improving outcomes for those struggling with substance use disorders.

[i] *Trends & Statistics: Costs of Substance Abuse.* Accessed March 3rd, 2018. Retrieved from: https://www.drugabuse.gov/related-topics/trends-statistics#supplemental-references-for-economic-costs

[ii] *Opioid Overdoses Treated in Emergency Departments.* Accessed March 3rd, 2018. Retrieved from: https://www.cdc.gov/vitalsigns/opioid-overdoses/

[iii] *Sobering Facts: Drunk Driving State Fact Sheets.* Accessed March 5th, 2018. Retrieved from: https://www.cdc.gov/motorvehiclesafety/impaired_driving/states.html

[iv] *2015 Alcohol-Impaired Driving Traffic Safety Fact Sheet* (2016, December). NHTSA's National Center for Statistics. Washington, DC. Retrieved from: https://crashstats.nhtsa.dot.gov/Api/Public/Publication/812350

[v] *Opioid crisis: Morgue transport costs double in West Virginia* (2017, September). Accessed March 5th 2018. Retrieved from: http://www.bbc.com/news/world-us-canada-41421993

[vi] Stevens, J.P., Wall, M.J., Novack, L., Marshall, J., Hsu, D. J., Howell, M.D. (2017, December). The Critical Care Crisis of Opioid Overdoses in the United States. *Annals of the American Thoracic Society*, *14*(12), 1803-1809.

[vii] *6 Things to Know About Uninsured Adults with Opioid Addiction* (2017, May). Accessed March 4th, 2018. Retrieved from: https://www.kff.org/uninsured/fact-sheet/6-things-to-know-about-uninsured-adults-with-opioid-addiction/

[viii] Henrichson, C., Delaney, R. (2012, October). The Price of Prisons: What Incarceration Costs Taxpayers. *Federal Sentencing Reporter, 25*(1), 68-80.

[ix] McCollister, K.E., French, M.T. (2003, June). The relative contribution of outcome domains in the total economic benefit of addiction interventions: a review of first findings. *Addiction, 98*(12), 1647-1659.

[x] Ettner, S.L., Huang, D., Evans, E., Ash, D.R., Hardy, M., Jourabchi, M., Hser, Y. (2006, February). Benefit-cost in the California treatment outcome project: Does substance abuse treatment "pay for itself?". *Health Services Research, 41*(1), 192-213.

[xi] Breslau, J., Yu, H., Han, B., Pacula, R.L., Burns, R.M., Stein, B.D. (2009, February). Did the dependent coverage expansion increase risky substance use among young adults? *Drug and Alcohol Dependence, 178*, 556-561.

[xii] *Understanding Drug Use and Addiction* (2016, August). Accessed March 3rd, 2018. Retrieved from: https://www.drugabuse.gov/publications/drugfacts/understanding-drug-use-addiction