

*ECONOMIC  
ANALYSIS OF  
HB19-1203*

Concerning the creation of a grant program to increase the number of school nurses

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HB19-1203 creates a grant program that provides funding for school nurse positions at public elementary, middle, and high schools throughout Colorado. The program is to be run by the Department of Public Health and Environment and will award grants on five-year cycles to qualified applicants. The bill allocates \$3 million per year to the program, and stipulates that any funds awarded will supplement, not supplant, any current funding in place for these positions. It also stipulates that applicants from low-income and rural communities will be prioritized above applicants from other areas.

This bill primarily seeks to address negative externalities imposed on society by children who are unable to receive adequate levels of medical attention. It does this by decreasing the external costs borne by society from these children, allowing the perceived marginal social cost paid by society for having children attend public school to more closely reflect the actual marginal social cost society pays when negative externalities are accounted for.

In addition to addressing externalities, this bill is also justified by the fact that it redistributes goods to groups that society believes need them most. These adjustments help resources to be allocated in ways that more closely adhere to society's values. The rest of this paper will explore the economic justifications for HB19-1203 and ultimately find that passing it would both allow for more efficient market outcomes and a more socially acceptable society.

Studies have shown that children living in poverty are negatively impacted when it comes to their physical health, cognitive development and educational attainment (Yoshikawa, Aber & Beardslee, 2012). Other research has found that children in rural areas are often negatively affected by their living situations as well because these areas have far fewer pediatricians than urban areas (Johnson & O'Hare, 2004). This makes it more difficult for them to get treated when

medical conditions arise (Johnson & O'Hare, 2004). The lack of healthcare provided to children in low-income and rural communities makes them more likely to have students with undiagnosed mental or physical health conditions in attendance on a given day. These unhealthy students can then negatively affect others who choose to attend when they interact with them.

Research has proven that students who are unfit to attend school but still choose to go impose significant physical, psychological and economic burdens to the students and teachers around them (Mental Health America, 2016). Examples of these negative impacts include getting students and teachers sick when the child has an infectious disease or wasting classroom time when a child's mental disorder distracts students from focusing on a lesson. When students and teachers are negatively impacted, society as a whole suffers as well due to factors such as productivity loss and the further spread of infectious diseases. Therefore, when those in close proximity to unhealthy students are affected because of children's medical conditions, society is forced to bear costs that it would not incur had the child received the medical attention he or she needed.

By definition, an externality is "a cost or benefit incurred by a third party who has no control over the factors that created the cost or benefit" (Investopedia, 2018). In this context, when unhealthy children negatively affect other teachers and students at their school, they impose negative externalities on these individuals. When externalities arise, the market as a whole suffers since resources are not allocated as they would be if the external cost was accounted for in the price individuals pay for the good. This results in a decrease in market efficiency.

Pigouvian taxes are often used to address negative externalities. They do so by creating a monetary tax on individuals or groups whose decisions negatively affect others. This tax forces those who are creating these implicit costs to pay for them. However, because the externalities caused by unhealthy children attending school arise from the inability of poor families to pay for the basic healthcare needed to prevent them, creating a tax would only force the poor to pay for the negative effect that them being poor has on society. A tax such as this would be ineffective since the poor would not be able to pay it.

Instead, HB19-1203 proposes a Pigouvian subsidy. This attempts to combat these negative externalities by using government resources to hire school nurses that are trained in identifying and treating physically and mentally ill patients. In doing so, school nurses may be able to treat unhealthy students before their illness can widely impact others. This reduces the cost borne by society to only being those costs associated with healing unhealthy students and not those associated with correcting the negative externalities these students create.

Various studies support the claim that hiring school nurses actually decreases the overall cost incurred by society. In one study, the presence of full-time nurses (which cost the school district \$79 million annually) prevented an estimated \$20 million in medical care costs, \$28.1 million in parents' productivity loss, and \$129.1 million in teachers' productivity loss (Wang et al., 2014). The study ultimately concluded that for every dollar spent on school nurses, there was a \$2.20 net benefit received by society because of the costs that were prevented (Wang et al., 2014).

Because the governmental action laid out in HB19-1203 mitigates the negative impacts that sick children have on society, it helps to decrease the overall cost that society bears. The

subsidy it proposes uses funds to prevent potential externalities from arising. In addition to this, the bill can also be justified on the grounds of redistribution.

Another role of government is to allocate funds to people or groups that society generally believes need them most. Oftentimes, this means transferring money from the rich to the poor, but in the case of this bill also means redistributing money to benefit children living in rural areas. This is justified because across history, Americans have been shown to believe that it is important for everyone to have access to basic healthcare no matter where you live or how wealthy you are (Blendon & Benson, 2001).

It is never true that there is unanimous consensus about which individuals or groups deserve resources more than others. There does, however, seem to be a generally held belief that some groups are in more need than others. For example, one study showed that the majority of Americans believe that poverty is a big problem that needs to be alleviated but varied in how they believed it should be dealt with (NPR, 2001). Other studies have also suggested that most Americans believe changes need to be made to the healthcare system, although they again do not agree on what changes to enact (Blendon & Benson, 2001).

By specifically targeting schools in low-income and rural communities, HB19-1203 aims to take taxpayer dollars and reallocate them to communities that society believes need to be helped. While this redistribution does not help the market to run any more efficiently than it otherwise would, it changes the endowment of resources the government gives to children living in these areas and allows those that are desperate to receive basic medical care.

Despite being quite effective in its current form, I recommend that the bill be amended to include more funding to go toward the program than it currently stipulates. As of today,

Colorado averages over 2,100 students per school nurse (NEA, 2018). This is sad reality for the 905,000 students in Colorado's 1,888 schools (CDE, 2018). This leaves the state with one of the highest student to school nurse ratios in the country (NEA, 2018).

According to online salary estimation tools, school nurses can expect to make around \$75,000 per year (Glassdoor, 2017). This means that at most the state will be able to hire 40 full-time nurses per year. While this may appear to be making good progress, it will leave the state below the benchmark of one nurse per school set by the American Academy of Pediatrics for years to come (AAP, 2016). The addition of more funding would allow more nurses to be added hired in public schools more quickly so that the negative externalities caused by unhealthy children are mitigated as soon as possible.

In conclusion, HB19-1203 effectively addresses externalities brought about by physically and mentally ill students that attend public schools. It does so by addressing the costs these students create for society before they have time to have far-reaching effects through their effects on other people. Furthermore, the bill is socially justified because it provides funding in a way that supports the generally held belief that poor children should be at least partially supported. As a result, I recommend that the Colorado General Assembly pass this bill into law.

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