What is the goal of this health note?

Decisions made in sectors outside of public health and health care, such as in education, housing, and employment, can affect health and well-being. Health notes are intended to provide objective, nonpartisan information to help legislators understand the connections between these various sectors and health. This document provides summaries of evidence analyzed by the Health Impact Project at The Pew Charitable Trusts while creating a health note for Colorado Senate Bill (SB) 20-014. Health notes are not intended to make definitive or causal predictions about how a proposed bill will affect health and well-being of constituents. Rather, legislators can use a health note as one additional source of information to consider during policy-making. Health notes do not examine the fiscal impacts of proposed policies; however, the fiscal note for SB 20-014 determined that this bill would have no fiscal impact.

How and why was this bill selected?

The Health Impact Project identified this bill as one of several important policy issues being considered by the Colorado General Assembly. The health note screening criteria were used to confirm the bill was appropriate for analysis. (See Methodology Appendix on Page 5.)

One of the Health Impact Project’s focus areas for health notes is education. There is a strong and robust evidence base linking education and health over a lifetime. Research has consistently demonstrated that people with more education live longer, healthier lives than those with fewer years of education. Completing more years of education leads to better jobs with higher earnings that can provide access to healthy food, safer homes and neighborhoods, and better benefits and medical care. Due to the strong ties between educational attainment and higher income, people with more education are less likely to experience stress related to social and economic hardship.

SUMMARY OF HEALTH NOTE FINDINGS

Behavioral health concerns—such as substance misuse, attention deficit hyperactivity disorder, conduct disorders, and mental health issues like anxiety and depression—affect 20 percent of youth ages 3 to 17. Mental health concerns and substance use disorders can also increase risk of suicide – a leading cause of death among youth ages 15 to 19. Behavioral health concerns among youth substantially impact health care costs in the United States: Although less than 10 percent of children enrolled in Medicaid use behavioral health services, the costs of these services account for 38 percent of total child Medicaid expenditures. Many Coloradan youth face behavioral health challenges: For example, in 2015, one in four middle school and high school students reported feeling so sad or hopeless almost every day for at least two weeks in a row that they stopped doing their usual activities.

In response, states including Utah, Oregon, Florida, and Washington have enacted or are exploring policies to allow students to take excused absences from school for behavioral health reasons. Currently, school
districts in Colorado are required to allow for extended absences due to physical, mental, or emotional disabilities; Colorado SB 20-014 would require school districts’ attendance policies to allow temporary and extended excused absences for behavioral health concerns. This health note explores the evidence regarding excused absence policies, the relationship between youth behavioral health and absenteeism, and factors affecting youth behavioral health.

Because SB 20-014 and similar legislation proposed or enacted in other states are a relatively new approach, there is no research specifically examining policies that allow excused absences for behavioral health concerns and their effects on health and well-being. This review identified a large body of evidence related to student behavioral health as well as absenteeism that may provide relevant information as policymakers consider SB 20-014. Below is a summary of key findings:

- The effects of allowing excused absences for behavioral health concerns in school attendance policies are not well researched. Research for this analysis did not yield any studies specifically examining the effects of these policies on academic or health outcomes. If implemented, Colorado could evaluate the policy’s effects on student health and on educational attainment to begin to generate an evidence base on these policies.
- There is strong evidence that behavioral health challenges are associated with increased risk of students missing school, including excused and unexcused absences. For example, a meta-analysis of 75 studies found significant associations between several behavioral health challenges, including substance misuse and psychiatric symptoms or disorders, and risk of absenteeism. Research suggests that school absences, regardless of whether excused or unexcused, are detrimental to student’s academic performance.
- There is strong evidence of a shortage of appropriate services and supports for youth with behavioral health problems. Research suggests that only half of youth experiencing behavioral health challenges receive needed treatment, and there is not a single state in the U.S. with an adequate number of child psychiatrists.
- Taken together, the available research highlights the complex and overlapping factors that put students at risk for behavioral health concerns, absenteeism, and academic challenges, and suggests that multiple, complementary strategies may be needed to effectively promote youth behavioral health and well-being.

Methods Summary: To complete this health note, Health Impact Project staff conducted an expedited literature review using a systematic approach to minimize bias and identify studies to answer each of the identified research questions. In this note, “health impacts” refer to effects on determinants of health, such as education, employment, and housing, as well as effects on health outcomes, such as injury, asthma, chronic disease, and mental health. The strength of the evidence is qualitatively described and categorized as: not well researched, mixed evidence, a fair amount of evidence, strong evidence, or very strong evidence. A detailed description of the methods is provided in the Methodology Appendix on Page 5.

WHY DO THESE FINDINGS MATTER FOR COLORADO?

In Colorado in 2016, approximately one of four high school and middle school students reported poor mental health. Youth in Colorado also face obstacles to accessing behavioral health services, including costs, lack of insurance, and limited service availability, and nearly 70 percent of the state’s 178 school districts do not meet national recommended ratios for school mental health or health professionals. As described in depth below, research shows that behavioral health is one factor that can increase students’
risk of absenteeism. During the 2018-2019 school year in Colorado, students in grades K-12 totaled nearly 4.4 million days of unexcused absences, and nearly 200,000 students were chronically absent.17

WHAT IS THE RELATIONSHIP BETWEEN BEHAVIORAL HEALTH, ABSENTEEISM, AND ACADEMIC PERFORMANCE?

- Behavioral health concerns are one of many complex factors at the individual, family, and neighborhood levels that can increase the risk of chronic absenteeism, or missing at least 10 percent of the school year.18
  - A meta-analysis of 75 studies examining risk factors for absenteeism found significant associations between several behavioral health concerns, including substance misuse and psychiatric symptoms or disorders, and risk of absenteeism.19
  - A systematic review and meta-analysis of data from 19 studies that explored the relationship between youth depression and school attendance suggests that depression is associated with absenteeism and truancy, and among studies that explored the chronology of this relationship, depression preceded poor attendance.20 The association between depression and absenteeism and depression and unexcused absences was small-to-moderate in size, while the association between depression and refusing to attend school was moderate-to-large in size.19 Evidence of the association between depression and excused absences was mixed.19
  - A longitudinal study in Florida that followed students from kindergarten to eight grade found that physical and mental health challenges and substance misuse were the largest factors in how often a student was absent from school.21 Other factors such as having a parent with severe mental illness and living in neighborhoods with high rates of violent crime and fewer social and economic opportunities are also linked to higher rates of absenteeism.

- Students who are chronically absent are more likely to earn lower grades in school and are less likely to complete high school.22 Educational attainment can have significant health effects throughout one's lifetime: the average college graduate lives nine years longer than individuals who leave high school.23

- Young people with behavioral health challenges often have difficulty performing in school and face other barriers that can affect academic performance and well-being throughout their lives, such as difficulty forming interpersonal relationships.24

WHAT FACTORS AFFECT STUDENTS’ BEHAVIORAL HEALTH AND ACCESS TO CARE?

- Students’ behavioral health is affected by and interrelated with an array of factors at the individual, family, school, and neighborhood levels.25
  - Factors such as poverty and abuse put students at risk for mental health concerns as well as increasing the risk for co-occurring behaviors such as substance misuse and violence.26
  - A systematic review of five qualitative research studies on the role of schools in self-harm and suicide among students found that anxiety and stress related to school performance may escalate students' self-harm and risk of suicide, and that bullying in the school environment can contribute to self-harm.27
  - Studies examining the relationship between school bullying or cyberbullying and self-harm have shown that victimization is a risk factor for deliberate self-harm in youth, including
suicidal behaviors. Youth who self-harm may also report depressive symptoms, which complicates the relationship between self-harm and school bullying victimization.

- Research on cyberbullying also shows that the perpetrators are at greater risk of suicidal behavioral and suicidal ideation compared with peers that do not perpetrate cyberbullying. Furthermore, students targeted by cyberbullying are less likely to seek help than those who face bullying at school.

- Access to appropriate services and supports remains a challenge for youth with behavioral health problems.
  - Evidence suggests that only half of youth with a behavioral health issue receive needed treatment, and there is not a single state in the U.S. with an adequate number of child psychiatrists.
  - Research suggests that anticipated and experienced stigma can negatively affect efforts to increase access to mental health care through school-based interventions.
  - A review of research on barriers to accessing mental health care among at-risk youth such as those who are homeless, misusing substances, or residing in rural areas identified challenges including lack of awareness of services, lack of support for treatment, concerns about confidentiality, and treatment costs.

WHICH POPULATIONS ARE MOST LIKELY TO BE AFFECTED BY THIS BILL?

There is a large body of research documenting that factors that increase students’ risk of behavioral health concerns, such as poverty and abuse, also increase their risk of other challenges to academic performance, health, and well-being. Research has found that youth who have been in the care of the child welfare system are more likely to attempt suicide than children who have not been in care. In Colorado, people living in rural and frontier communities, LGBT youth, and transgender individuals have higher than average risk of suicide. Thirty-one percent of Hispanic high school students and 28 percent of American Indian and Alaska Native high school students in the state has seriously considered attempting suicide. Research on risk factors for student absenteeism shows that certain population groups are more likely to be chronically absent. For example, data on absenteeism in the fourth and eighth grades among students in the U.S. suggest that American Indian students have higher rates of absenteeism than their peers in other racial and ethnic groups, and that students with disabilities are also more likely to be chronically absent than their peers without disabilities. The same analysis found that students in schools where more than half of students are eligible for free or reduced-price lunch were more likely to be chronically absent than youth in schools where fewer than 10 percent of these students were eligible, and that children who were themselves eligible for free or reduced-price lunch were also more likely to be chronically absent compared to those who were not eligible for the program.

HOW LARGE MIGHT THE IMPACT BE?

Where possible, the Health Impact Project describes how large the impact may be based on the bill language and literature, such as describing the size, extent, and population distribution of an effect. It is difficult to predict the number of students that would be affected by SB 20-014, if implemented, as this would depend on factors including district-specific policies and students’ use of these absences. As previously described, researchers estimate that approximately 20 percent of youth ages 3 to 17 have a behavioral health concern.
APPENDIX: METHODOLOGY

Once the bill was selected, a research team from the Health Impact Project hypothesized a pathway between the bill, health determinants, and health outcomes. The hypothesized pathway was developed using research team expertise and a preliminary review of the literature. The bill components were mapped to steps on this pathway and the team developed research questions and a list of keywords to search. The research team reached consensus on the final conceptual model, research questions, contextual background questions, keywords, and keyword combinations. The conceptual model, research questions, search terms, and list of literature sources were peer-reviewed by two external subject matter experts. One external subject matter expert also reviewed a draft of the note. A copy of the conceptual model is available upon request.

The Health Impact Project developed and prioritized seven research questions related to the bill components examined:

- To what extent do excused absences affect access to behavioral or mental health care among school-age children?
- To what extent does behavioral or mental health affect academic performance and achievement?
- To what extent do excused absences for behavioral or mental health challenges affect rates of chronic absenteeism?
- To what extent does access to behavioral or mental health care affect rates of bullying?
- To what extent do student mental or behavioral health challenges affect exposure to violence in schools?
- To what extent do behavioral or mental health challenges contribute to truancy rates?
- What factors could contribute to uptake and use of excused absences for mental and behavioral health concerns?

Next the research team conducted an expedited literature review using a systematic approach to minimize bias and answer each of the identified research questions. The team limited the search to systematic reviews and meta-analyses of studies first, since they provide analyses of multiple studies or address multiple research questions. If no appropriate systematic reviews or meta-analyses were found for a specific question, the team searched for nonsystematic research reviews, original articles, and research reports from U.S. agencies and nonpartisan organizations. The team limited the search to electronically available sources published between January 2015 and January 2020.

The research team searched PubMed and EBSCO databases along with the following leading journals in public health, education, and youth health and development to explore each research question: American Journal of Public Health, Social Science & Medicine, Health Affairs, Early Childhood Research Quarterly, Journal of Child and Adolescent Mental Health, and Journal of School Health. For all searches, the team

---


used the following key terms: behavioral health, mental health, excused absences, academic achievement, academic performance, K-12, behavioral or mental health care access, high school drop-out, bullying, violence, schools, school safety, and chronic absenteeism. The team also searched ChildTrends, Urban Institute, Youth.gov, and Substance Abuse and Mental Health Services Administration.

After following the above protocol, the team screened 9045 titles and abstracts, identified 72 abstracts for potential inclusion, and, after reviewing each of these abstracts, identified 35 articles for full-text review. After applying the inclusion criteria, 23 articles were excluded. In addition, the team identified two peer-reviewed articles through the original articles and identified eight resources with relevant research outside of the peer-reviewed literature. A final sample of 22 resources was used to create the health note. In addition, the team used 3 references to provide contextual information.

Of the studies included, the strength of the evidence was qualitatively described and categorized as: not well researched, mixed evidence, a fair amount of evidence, strong evidence, or very strong evidence. The evidence categories were adapted from a similar approach from another state.\(^4^0\)

**Very strong evidence:** the literature review yielded robust evidence supporting a causal relationship with few if any contradictory findings. The evidence indicates that the scientific community largely accepts the existence of the relationship.

**Strong evidence:** the literature review yielded a large body of evidence on the association, but the body of evidence contained some contradictory findings or studies that did not incorporate the most robust study designs or execution or had a higher than average risk of bias; or some combination of those factors.

**A fair amount of evidence:** the literature review yielded several studies supporting the association, but a large body of evidence was not established; or the review yielded a large body of evidence but findings were inconsistent with only a slightly larger percent of the studies supporting the association; or the research did not incorporate the most robust study designs or execution or had a higher than average risk of bias.

**Mixed evidence:** the literature review yielded several studies with contradictory findings regarding the association.

**Not well researched:** the literature review yielded few if any studies or yielded studies that were poorly designed or executed or had high risk of bias.

**EXPERT REVIEWERS**

This health note benefited from the insights and expertise of Dr. Ashley Brooks-Russell, Assistant Professor at the Colorado School of Public Health and Dr. Jenn Leiferman, Associate Professor and Director of Rocky Mountain Prevention Research Center at the Colorado School of Public Health. Although they reviewed the health note and conceptual model, respectively, and found the approach to be sound, neither they nor their organizations necessarily endorse its findings or conclusions.

**ACKNOWLEDGEMENTS**

The Health Impact Project thanks the Colorado School of Public Health for its role in identifying appropriate subject matter experts to review the health note and for providing insights into Colorado-specific data and the policy context of SB 20-014.

\(^{40}\) Many of the searches produced duplicate articles. The number of sources screened does not account for duplication across searches in different databases.


11. Ibid.


15. The Colorado Health Foundation, “Data Spotlight: Mental Health.”


22 Derian, “People and Place Matter.”
23 Robert Wood Johnson Foundation, “The Relationship between School Attendance and Health” (2016),
30 John et al., “Self-Harm, Suicidal Behaviours, and Cyberbullying.”
36 The Colorado Health Foundation, “Data Spotlight: Mental Health.”
40 Washington State Board of Health, “Executive Summary: Health Impact Review of Hb 2969” (2016),