

Community-based prevention system linked to reduced handgun carrying among youth growing up in rural areas

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Firearm injury is now the leading cause of death among U.S. children and adolescents. As its toll grows, researchers have focused on stopping

violence in the moments before it happens. But new research led by the University of Washington suggests that interventions made earlier in young people's lives may reduce the chances of it happening at all.

The study, published April 6 in *JAMA Network Open*, found that UW's Communities That Care (CTC) prevention system reduced [handgun](#) carrying among adolescents growing up in [rural areas](#). By the 12th grade, adolescents in CTC communities were 24% less likely to report carrying a handgun than those in communities without the program. Previous research has shown that handgun carrying is an important risk factor for [firearm injury](#) and harm.

"This provides yet another piece of evidence that science-based prevention systems such as CTC are worth further investments and scaling up, in different communities," said Ali Rowhani-Rahbar, UW professor of epidemiology and Interim Director of the UW's Firearm Injury & Policy Research Program. "Findings of this study suggest that community-based, science-based, upstream interventions focused on risk and protective factors early in life may play an important role in reducing firearm-related harm."

The study surveyed more than 4,000 adolescents across 24 [rural communities](#), 12 of which implemented a coordinated set of preventive interventions tailored to local priorities. Each year from 6th to 12th grade, researchers asked students about a wide range of behaviors, including whether they'd carried a handgun in the past year.

Adolescents in communities that implemented CTC were also 27% less likely to report carrying a handgun in a given grade than those in control communities.

Those findings, Rowhani-Rahbar said, merit deeper research into whether reduced handgun carrying in adolescence leads to a reduced risk

of firearm-related violence throughout a person's life. That's especially true in rural areas, where the context around firearms may be different than in urban settings.

Rowhani-Rahbar and his team have produced a [string](#) of [studies](#) on [firearm use](#) among adolescents growing up in rural areas. A previous paper showed that about one-third of young males and 1 in 10 females in rural communities have carried a handgun, and that some rural youth began carrying handguns as early as sixth grade.

"The overall burden of firearm mortality in rural areas is roughly the same as in urban areas, with differences seen in the manner in which it occurs at the [population level](#)," Rowhani-Rahbar said. "Unfortunately, rural communities continue to be under-researched and underserved."

Data for this analysis came from an ongoing evaluation of CTC's effectiveness over the past two decades.

Developed at the UW, CTC is an evidence-based prevention system that assists communities in using science-based solutions to foster the healthy development of young people. The UW's Center for Communities That Care is currently helping to implement the system in 150 communities nationwide, in addition to 14 countries.

The findings on handgun carrying stem from a long-term trial of CTC's effectiveness. Including more than 4,000 adolescents, that trial has shown that CTC leads to long-term reductions in alcohol and drug use, [antisocial behavior](#) and violence beginning in adolescence, among other benefits.

Reducing gun-related risk was not an explicit goal of CTC. That it did anyway, UW [social work](#) professor Margaret Kuklinski said, points to the power of focusing on upstream risk factors to create wide-ranging

change in the lives of young people—change that could last a lifetime.

"Behaviors in adolescence—both positive behaviors and behaviors we want young people to avoid—tend to share risk and protective factors," said Kuklinski, who is the UW Endowed Associate Professor of Prevention in Social Work and also director of the Social Development Research Group. "When CTC helps communities implement prevention approaches that—for example—strengthen commitment to school, increase positive activities for young people, reduce family conflict, or strengthen norms against alcohol and drug use, communities can expect to see a variety of positive behavior changes in young people. Now we know that those changes include reduced handgun carrying."

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More information: Ali Rowhani-Rahbar et al, Effect of the Communities That Care Prevention System on Adolescent Handgun Carrying, *JAMA Network Open* (2023). [DOI: 10.1001/jamanetworkopen.2023.6699](https://doi.org/10.1001/jamanetworkopen.2023.6699)

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