

Richard F. Catalano
Director

Kevin P. Haggerty
Associate Director

J. David Hawkins
Founding Director

MISSION of SDRG

To understand and promote healthy behaviors and positive social development among diverse populations, we:

- ◆ Conduct research on factors that influence development
- ◆ Develop and test the effectiveness of interventions
- ◆ Study service systems and work to improve them
- ◆ Advocate for science-based solutions to health and behavior problems
- ◆ Disseminate knowledge, tools, and expertise produced by this research

Achieving Better Adolescent Health Worldwide: Global Application of the Prevention Science Research Base

Original research published in *The Lancet* (2012)

In a special series in The Lancet focusing on adolescent health, Catalano and colleagues provide a broad overview of prevention science and summarize research on the effectiveness of policies and programs that reduce adolescent health problems in high-, low-, and middle-income countries. They also offer illustrative examples of particular interventions that, if widely implemented, have the potential to dramatically improve global adolescent health.

Global investment in child health and concerted worldwide efforts to prevent and treat infectious diseases have resulted in more children surviving into adolescence. The worldwide disease burden has shifted to non-communicable diseases. Behavior problems are implicated in this burden, including unsafe driving, mental health issues, violence, alcohol, tobacco and drug misuse, and unsafe sex. Many of these behavior problems begin in adolescence and affect not only adolescents, but also adult morbidity and mortality. Preventing

adolescent problem behaviors and reducing the risks that lead to them hold promise for lessening the burden of illness and death in adolescence and adulthood, both in the United States and throughout the world.

Advances in prevention science over the past 30 years have shown that certain policies and programs can be implemented to address risk and protective factors underlying problem behaviors. Risks may be structural, family, school, peer, or individual, and occur throughout life. Protective factors decrease the likelihood of problem behavior.

Key Messages

- Behavior problems are important causes of adolescent illness and death.
- Carefully designed and tested prevention policies and programs can improve adolescent health.
- Greater public education is needed to increase awareness of the health and social benefits and cost savings from evidence-based preventive interventions.
- Research is needed to understand how to take effective policies and programs to scale to reach more youth worldwide.
- Research is especially warranted to understand adaptations needed when programs developed in high-income countries are used in low- and middle-income countries.
- An international agency like WHO, UNICEF, or The World Bank should be encouraged to convene an expert group that would develop guidelines for promoting adolescent health and preventing adolescent problems.
- Databases of community surveys measuring risk and protective factors underlying adolescent health and behavior problems, as well as effective prevention policies and programs and the concerns they address, need to be developed in support of better adolescent health.

Table 1. Illustrative Preventive Interventions Addressing Different Risks and Developmental Periods*

	Preadolescence (0-10)	Early Adolescence (11-13)	Mid and Late Adolescence (14-18, 19-24)
<u>Prevention Policies</u>			
Address Structural Risks		<ul style="list-style-type: none"> • Access to Contraceptives • Increased Tax on Alcohol 	<ul style="list-style-type: none"> • Graduated Driving & Licensing • Legal Drinking Age: 21
<u>Prevention Programs</u>			
Address Intermediate and Individual Risks			
Family/Individual	<ul style="list-style-type: none"> • Nurse Family Partnership • Early Childhood Education • New Beginnings 	<ul style="list-style-type: none"> • Functional Family Therapy • Strengthening Families Program 10-14 	<ul style="list-style-type: none"> • Functional Family Therapy • Nurse Family Partnership (Adolescent Mother Impact)
School/Individual	<ul style="list-style-type: none"> • Seattle Social Development Project 	<ul style="list-style-type: none"> • Gatehouse Project 	<ul style="list-style-type: none"> • Conditional Cash Transfer Programs
Peer/Individual	<ul style="list-style-type: none"> • Computer-Based Intervention 	<ul style="list-style-type: none"> • Unplugged • Life Skills Training 	<ul style="list-style-type: none"> • Stepping Stones • Sistering, Informing, Healing, Loving and Empowering

* Effective prevention programs and policies have been shown to significantly reduce adolescent delinquency, violence, substance use, mental health problems, pregnancy, and sexually transmitted infections. Additional examples are provided in the Lancet article.

Many outcomes share risk factors, so addressing common correlates can prevent multiple problems.

Table 1 illustrates programs and policies that significantly improved adolescent outcomes in experimental or quasi-experimental trials. As a group they have been delivered in many different contexts and countries using a variety of formats, including laws, in-person delivery, and electronic media. Key factors in many approaches are the promotion of new opportunities; development of cognitive, emotional, and social skills; and recognition of positive behavior in family, school, and community settings. Several programs have been found cost beneficial, estimated to return \$2.11 to \$42.13 per dollar invested, and savings per participant ranging from \$1,348 to \$31,036.

Employing a combination of effective policies and programs addressing local needs and engaging schools, families, and communities could dramatically reduce the global burden of adolescent and later adult illness and

death, yet challenges must be overcome to do so. Across nations, there has been a lack of controlled trials examining long-term outcomes of interventions, comparing different prevention strategies, and replicating results with diverse participants. A paradigm shift is needed to position the importance of prevention and its effectiveness in the minds of parents, communities, professionals, and policymakers to support further development and widespread adoption of effective prevention policies and programs. Stable funding streams are critical, as is increased professional and local capacity for assessing needs and carrying out effective preventive interventions.

Widespread dissemination of effective prevention programs and policies targeting risk and protective factors should have a dramatic effect on improving adolescent health in countries worldwide, thereby reducing the burden of health problems well into adulthood.

For additional information on this topic, please refer to the original article:

Catalano, R. F., Fagan, A. A., Gavin, L. E., Greenberg, M. T., Irwin, C. E., Ross, D. A., & Shek, D. T. (2012). Worldwide application of prevention science in adolescent health. *The Lancet*, #35, 1653-1664.