Stopping adolescent problems progressing to adulthood: Proven prevention programs must be embraced

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The burden of disease in adolescents worldwide is now much more centred on injuries and non-communicable disease, since infectious disease rates fell long ago in developed countries and are falling in most low-income and middle-income countries (LMIC). Problem behaviours implicated in most of this burden (alcohol, tobacco, drug misuse, mental health problems, unsafe sex, unsafe driving, and violence) are largely preventable. Evidence exists on a wide range of prevention policies and programmes, but as in other parts of health care, policy makers and parents are yet to embrace prevention programmes as useful and cost-effective. The challenges are discussed in the third paper in The *Lancet* Series on Adolescent Health, written by Professor Richard F Catalano, Director of the Social Development Research Group, School of Social Work, University of Washington, Seattle, WA, USA, and colleagues.

For some disorders such as alcohol misuse and dependence and antisocial personality disorder, more than 50% of lifetime first diagnoses are by age 25 years. These are just two of the examples that underline why interventions earlier in life are vital to prevent problems in adolescence and into adulthood. And while prevention programmes in adolescents had a difficult and ineffective start in high-income countries (HIC), across the last 30 years a substantial body of evidence has been built identifying risk and protective factors, potential root causes of behaviour problems, and showing prevention programmes that address risk and protection are efficacious and cost-effective. Much of this work

could, with the appropriate modifications, be transferred to LMIC where governments are only just beginning to recognise adolescent health as a distinct stage of life and where prevention efforts are few or absent. Today, globally, the focus remains on treatment rather than prevention.

Research suggests two clusters of risk across early life: one in infancy and early childhood, and one in early adolescence. Failing to prevent problem behaviours at one or both of these phases can result in issues cascading to cause health problems in adolescence and into adulthood. For example, a child neglected or abused in infancy could struggle to learn in primary school, then be rejected by peers due to these learning difficulties in secondary school, before progressing to alcohol, tobacco, and illicit drug use, violence, mental health problems, pregnancy or early school leaving.

The authors discuss a number of interventions tested in studies across the USA, Europe, Africa, Hong Kong, and Australia. Successful policies include providing minors (those under 18) with free or easily accessed contraception, raising taxes on alcohol (such as USA and UK general alcohol tax rises), and graduated licensing policies for driving, such as in the UK where those drivers who have just passed their driving test (mostly younger drivers) face tough sanctions if they commit driving offences within a 2 year period after qualifying. In Canada and the USA, driving laws require a minimum amount of driving time before qualifying, and also restrict the number of peer passengers and the amount of night driving. These policies have reduced unintended adolescent pregnancy, risky sex, harmful drinking, traffic crashes, and crime.

Examples of specific programs include the USA's Nurse Family Partnership, started in the 1980s, where trained nurses made regular visits to low-income first time mothers with a structured programme until their child was 2 years old. Women given this intervention had 43%

fewer subsequent pregnancies or significantly delayed subsequent pregnancy. They were also only a third as likely to be arrested for any crime than women in the control group, and smoked 25% less cigarettes. Children of these mothers were assessed at age 15 years, and were found to be less than half as likely to be arrested, drank less than half as much alcohol (measured by number of days consuming any alcohol), and had less than half as many sexual partners compared with control adolescents. In Australia, the Gatehouse project implemented a 2-year, 8-week school programme to build social, problem-solving and coping skills across 25 schools. More positive classroom environments were sought by training teachers to use more interactive teaching skills, cooperative learning strategies, and proactive classroom management. School-wide efforts included the introduction of mentoring, peer leadership, and student recognition programmes and increased student involvement in decision making. Students in the intervention group were 45% less likely to begin having sexual intercourse, 29% less likely to begin other risk behaviours (eg, substance use, antisocial behaviour) and a third less likely to report regular smoking. There have also been successes in low-income countries like Malawi, where the Zomba conditional cash transfer scheme (that paid school fees and about US$10 a month to mothers for ensuring their children attended school) showed children were more likely to stay in school, return to school if they had previously dropped out, and were less likely than children in the general population to become pregnant or get married. The authors say that the wide range of interventions and methods of implementation they highlight show that "Employing a combination of programmes and policies that engage schools, families, and communities will probably yield long-term beneficial effects."

The biggest challenge is getting governments and parents to buy into prevention. In the USA, almost half of schools (43%) don't have efficacious anti-drug programmes despite the evidence base. Government officials lack training in public health and focus spending

on treatment alone rather than treatment and prevention. And while the general public generally accept the need for 'physical' preventive measures like vaccines, they have little knowledge of, or support for, psychosocial interventions.

The authors say it is vital that the right interventions are selected based on a community's local need. They cite the Communities that Care (CTC) survey as a reliable and valid school survey method that can identify local levels of risk, protection and behaviour problems. This survey has been used in Australia, India, the Netherlands, the UK, and the USA. Other adolescent health surveys by WHO and the World Bank are also contributing to the ability to assess local community needs. The authors add that more research needs to be done on the specifics of adapting proven interventions across a range of settings in countries of all incomes.

The authors conclude: "Although there are many significant challenges to going to scale with efficacious prevention interventions, advances have been made. For continued progress, a change in attitude is needed to position the importance of preventive policies and programmes in the minds of parents, communities, professionals, and policy makers. Specific actions [are described that] might help support widespread adoption of preventive interventions."

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