

# Evidence for gender responsive actions to prevent and manage **injuries and substance abuse**

Young people's health as a whole-of-society response



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## **Keywords**

GENDER IDENTITY

SEX FACTORS

ADOLESCENT

WOUNDS AND INJURIES

SUBSTANCE ABUSE

# Abstract

The WHO Regional Office for Europe supports Member States in improving adolescent health by recommending comprehensive, multisectoral and evidence-informed adolescent health approaches; by delineating the critical contribution of the health sector; by fostering actions towards reducing inequalities; and by addressing gender as a key determinant of adolescent health. This publication aims to support this work in the framework of the *European strategy for child and adolescent health and development*, and is part of the WHO Regional Office for Europe contribution to the development of a new policy framework for Europe, *Health 2020*, for which the WHO Regional Office for Europe has been mandated by the 53 Member States.

The publication summarizes current knowledge on what works in preventing and managing injuries and substance abuse. It is part of a series that includes social and

emotional well-being, chronic conditions and disabilities, adolescent pregnancy, HIV/STIs, overweight and obesity, violence, injuries and substance abuse.

The publication assumes the position that young people's health is the responsibility of the whole society, and that interventions need to be gender responsive in order to be successful. It therefore looks at actions at various levels, such as cross-sector policies, families and communities actions, and interventions by health systems and health services. The publication does not prescribe nor recommend any particular course of action, which needs to be informed by the country specific context. It rather provides a basis to stimulate countries to further refine national policies so that they contribute effectively to the health and well-being of young people.

# Acknowledgement

This publication was developed under the guidance of Valentina Baltag (Adolescents' health) and Isabel Yordi Aguirre (Gender and health) from the WHO Regional Office for Europe.

Many international experts and WHO staff members have contributed to the series **Young people's health as a whole-of-society response**, and we are very grateful for their valuable inputs, support and guidance. The conceptual foundation for this publication was based on the Action Tool of the European strategy for child and adolescent health and development [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0011/81848/Action\\_Tool.pdf](http://www.euro.who.int/__data/assets/pdf_file/0011/81848/Action_Tool.pdf), which evolved to become a tool to support the implementation of overarch-

ing priorities of the WHO Regional Office for Europe such as the European health policy Health2020 and gender mainstreaming.

For the Injuries and substance abuse part of the series, we are particularly grateful to prof. Pierre-Andre Michaud and EUTEACH group [http://www.euteach.com/euteach\\_home/euteach\\_network.htm](http://www.euteach.com/euteach_home/euteach_network.htm) who developed the first draft of the summary table of interventions and good practices, Piroška Östlin who conducted the literature review on gender, adolescents and injuries and substance abuse, and Dinesh Sethi and Petra Kolip for their valuable comments during the peer review process.



# Foreword

In May 2011, the World Health Assembly adopted a resolution urging Member States to accelerate the development of policies and plans to address the main determinants of young people's health.

This series of publications, advocating a whole-of-society response to young people's health, and looking at the evidence for gender responsive actions, will be a timely resource for Member States as they implement both the resolution and the European strategy for child and adolescent health and development. The publications clearly show that not only are the health, education, social protection and employment sectors jointly responsible for the health of adolescents, but that effective interventions do exist. Ensuring that adolescents who are pregnant or have children can stay in or return to school, or enacting regulations to limit unhealthy snacks and soft drinks in school cafeterias are examples of policies that are beyond the mandate of health systems and yet generate health. By bringing evidence to the attention of policy-makers, these publications take a practical step toward achieving one of the core aims of the new European policy for health, Health 2020: to promote and strengthen innovative ways of working across sector and agency boundaries for health and well-being.

A common shortcoming of adolescent health programmes across the WHO European Region is that they often look at adolescents as a homogeneous cohort. Far too often programmes are blind to the fact that boys and girls differ in their exposure and vulnerability to health risks and conditions, such as depressive disorders, injuries, substance abuse, eating disorders, sexually transmitted infections, violence and self-inflicted injuries, including suicide. They are affected differently not only by the socioeconomic circumstances of their community and their ethnicity but also by gender norms and values. Research shows this, yet there is insufficient progress in transforming knowledge into policy action. I hope this publication will be a useful tool to facilitate this transformation.

Dr Gauden Galea  
Director  
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# Introduction

The WHO Regional Office for Europe supports Member States in improving adolescent health in four main ways: by recommending comprehensive, multisectoral and evidence-informed adolescent health approaches; by delineating and supporting the critical contribution of the health sector, including the leadership role of ministries of health to influence other sectors, such as education, employment and social protection policies; by fostering actions towards reducing inequities in health both within and between countries; and by addressing gender as a key determinant of adolescent health.

By bringing together and coherently interconnecting knowledge and evidence on effective interventions and good practices for the better health, equity and well-being of young people, this publication aims to support this work using the framework of the European strategy for child and adolescent health and development. It is also part of the WHO Regional Office for Europe's contribution to the development of a new policy framework for Europe, Health 2020, for which the WHO Regional Office for Europe has been mandated by the 53 Member States (resolution EUR/RC60/R5).

The publication summarizes current knowledge on what is effective in preventing and managing injuries and substance abuse. It is part of a series that includes social and emotional well-being, chronic conditions and disabilities, adolescent pregnancy, HIV/STIs, mental health, overweight and obesity, violence, and injuries and substance abuse.

The publication includes two parts. The first part is a summary table of effective interventions and good practices for preventing and managing injuries and substance abuse. The table emphasizes intersectoral governance and accountability for young people's health and development, and takes a whole-of society approach to young people's health. It therefore looks at actions at various levels such as cross-sector policies, families and communities actions, and interventions by health systems and health services. It demonstrates that health systems in general, and health min-

istries in particular, can work proactively with other sectors to identify practical policy options that maximize the positive health effects of other policies on young people's well-being, and minimize any negative effects. Interventions need to be gender responsive in order to be successful; the publication therefore looks at presented practices through a distinct gender perspective.

The second part explains the impact of gender norms, values and discrimination on the health of adolescents relevant to prevention and management of injuries and substance abuse. Through a review of the existing evidence, it looks at why is it important to look at gender as a determinant of adolescence health, what are the main differences between girls and boys in exposure to risk, norms and values and access to services, and what are the different responses from the health sector and the community. It complements the Gender Tool of the European strategy for child and adolescent health and development [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0020/76511/EuroStrat\\_Gender\\_tool.pdf](http://www.euro.who.int/__data/assets/pdf_file/0020/76511/EuroStrat_Gender_tool.pdf). It gives the readers a deeper understanding of the gender dimension of actions listed in Part I.

The evidence base of this publication includes a review of existing literature, such as scientific and research articles and books, policy reviews, evaluations, and 'grey' literature. It needs to be emphasized that this is not a comprehensive and systematic review of the evidence in the area of prevention and management of injuries and substance abuse, nor of approaches to support policies and their implementation. The publication does not rank presented interventions and good practices in any priority order, and does not assess them against the strengths of the evidences behind them. The publication does not prescribe nor recommend any particular course of action, which needs to be informed by country specific context. It rather provides a basis to stimulate countries to further refine national policies and strategies so that they contribute effectively to the health and well-being of young people.

## SUBSTANCE USE & MISUSE

PRIORITY	CROSS SECTOR ACTIONS		FAMILY & COMMUNITY ACTIONS	HEALTH SYSTEM ACTIONS	HEALTH SERVICES ACTIONS
	HEALTH IN ALL POLICIES	SCHOOL SETTING			
<b>Prevent substance use and misuse and its consequences</b>	Enact and monitor legislation against smoking [1, 2] including protection from exposure to second-hand tobacco smoke [33]	Promote healthy school environment /mental health [6-10]	Encourage family skills training interventions [16] and parenting programmes with certain characteristics to prevent substance use [32]	Develop programs and services targeting drug-using youth [3, 18]	Ensure family involvement in substance use programmes [22, 23]
	Use taxation and pricing policies and implement the prohibition of advertisements promoting alcohol and tobacco use [3]	Implement life skills approaches within the school setting [7, 10-13]	Implement early screening and motivational interviewing within the community [14]	Ensure access for young people to appropriate substance use programmes [19, 20]	Develop group therapy for adolescents abusing drugs [3], adjusted for girls' and boys' specific needs
	Limit the legal age of access to alcohol [3]	Ensure that health promotion messages are gender responsive <sup>1</sup> [30]	Develop specific interventions for high risk youth [9]	Train professionals to meet the needs of young people using drugs; professional training should be informed by knowledge about the differential exposure and vulnerability to substance abuse among girls and boys, and communication needs to be adjusted for girls and boys specific needs [21]	Build family therapy programs with a focus on substance use by adolescents [18]
	Implement drug trafficking legislation [4, 5]	Implement early screening and motivational interviewing within the school [14, 15]	Build family home visitation and early interventions programs, including those targeting at risk mothers to reduce pre-birth maternal use [3, 17]	Develop policies and services for young female that are victims of violence or vulnerable to adverse health and social consequences resulting from the drinking behaviour of their boyfriends [31]	Implement brief interventions targeting young people admitted to emergency wards with high alcohol levels [24]
	Ensure that national data systems and individual research projects collect, disaggregate and analyse data on substance use/abuse by sex/gender and factors such as socioeconomic group, ethnicity, age and residential area [25, 26, 27]	Ensure that appropriate referral pathways are in place [15]	Implement harm-reducing approaches in the community (e.g. providing needle exchange and sterile syringes)[3]	Among boys, focus on behavioural self-control or regulation and community environment to influence the pathways to substance misuse. Among girls, implement family focused preventive programmes targeting family bonding, supervision, and communication [28]	Consider the possibility of substance abuse in adolescents treated for of stress related illness and depression (especially in girls), and adjust treatment accordingly [29]

<sup>1</sup> i.e. girls may benefit more from messages destroying the myth of the 'light' cigarette, while boys may be concerned by tobacco's threats to virility

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## INJURIES

PRIORITY	CROSS SECTOR ACTIONS		FAMILY & COMMUNITY LEVEL	HEALTH SYSTEM	HEALTH SERVICES
	HEALTH IN ALL POLICIES	SCHOOL SETTING			
<b>Injury prevention</b>	<p>Enact policies for road safety, e.g. mandatory helmet use, drink-driving legislation &amp; speed limits[1-6]</p> <p>Implement graduated driver licensing and seat belt use[7]</p> <p>Reduce access by minors to alcoholic beverages[1, 8]</p> <p>Promote a legislative frame which encourages mandatory wearing of protection devices e.g. helmets use, belt use, etc. while driving or engaging in sports activity [1]</p> <p>Interventions might entertain sex-specific policies of graduated licensing (also for mopeds), and a policy of zero-tolerance for drinking and driving. [18]</p> <p>Ensure that national data systems and individual research projects collect disaggregate and analyse data on injuries by sex/gender and factors such as socioeconomic group, ethnicity, age and residential area. [19, 20, 21]</p>	<p>Implement global injury prevention program in the school setting, e.g. safe ways for bicycles, safe playground &amp; effective first aid, and education on preventing injuries [9-13]</p> <p>Gender issues in injury prevention in schools should be included in professional training of teachers and continuing education programs for prevention specialists. Certificate programs for injury prevention should also include gender issues. [22]</p>	<p>Promote measures to moderate traffic in specific areas[4]</p> <p>Improve the wearing of protections in specific sports disciplines[1]; protection in sports should be designed according to girls respectively boys physiology.</p> <p>Implement warm up activities before engaging in sports activity[1]</p> <p>Develop multi-faceted community based approaches, e.g. environmental plus gender sensitive educational approaches[1, 14, 15]</p> <p>Socially deprived families, communities and residential areas should receive strengthened support for injury prevention interventions and programmes. [21]</p> <p>Challenge gender-stereotypes and work with boys and men through innovative programmes for the transformation of harmful masculinity' norms, high risk behaviours, and violent practices. [20]</p>	<p>Improve access to emergency wards[16]</p> <p>Develop training sessions for health professionals to enhance their counselling skills[17]</p> <p>Such training sessions should be informed by knowledge about the differential exposure and vulnerability to injuries among girls and boys, and communications need to be adjusted for girls and boys specific needs.</p>	<p>Promote motivational intervention in emergency wards for adolescents abusing alcohol/substance and ensure proper referral. Motivational interventions must consider that boys and girls may respond to differently to motivations offered to them. [17]</p>



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# Gender impacts on adolescent health with focus on injuries and substance abuse

*“In order to ensure that women and men of all ages have equal access to opportunities for achieving their full health potential and health equity, the health sector needs to recognize that they differ in terms of both sex and gender. Because of social (gender) and biological (sex) differences, women and men face different health risks, experience different responses from health systems, and their health-seeking behaviour, and health outcomes differ.”*

Source: Strategy for integrating gender analysis and actions into the work of WHO. Geneva, World Health Organization, 2009.

## Why should injury and substance abuse policies and interventions pay attention to gender?

There is overwhelming evidence from all fields of health research that adolescent girls and boys are different as regards their biology (sex differences), as well as socially and culturally constructed gender norms, roles and relationships (gender differences). Together, gender and sex, often in interaction with the socioeconomic circumstances of their community and family, influence adolescents' exposure and

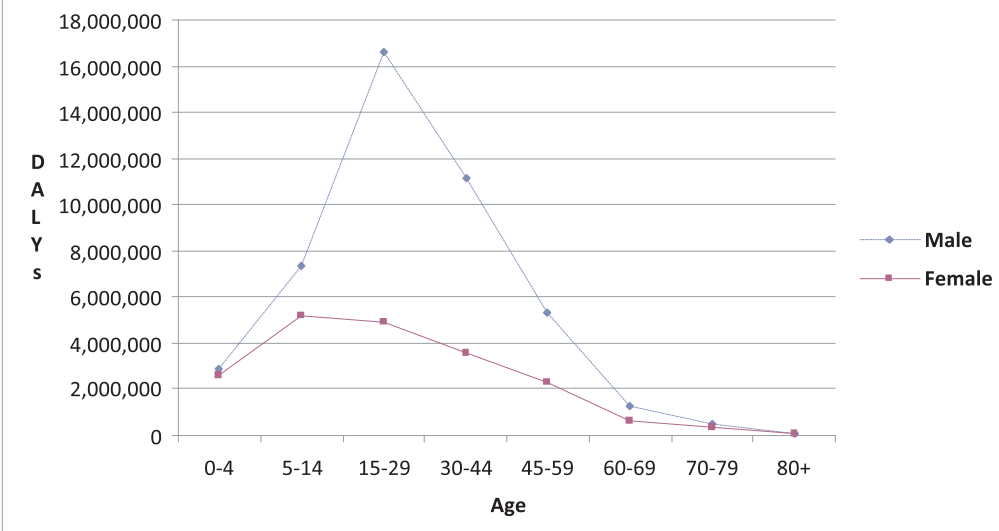
vulnerability to health risks, such as injuries and substance abuse. Recognizing the root causes of differences between adolescent girls and boys in regard to exposure and vulnerability to health risks is therefore crucial when designing responses from the health and other sectors in order to be effective.

## Injuries and substance abuse among adolescent girls and boys – what do we know?

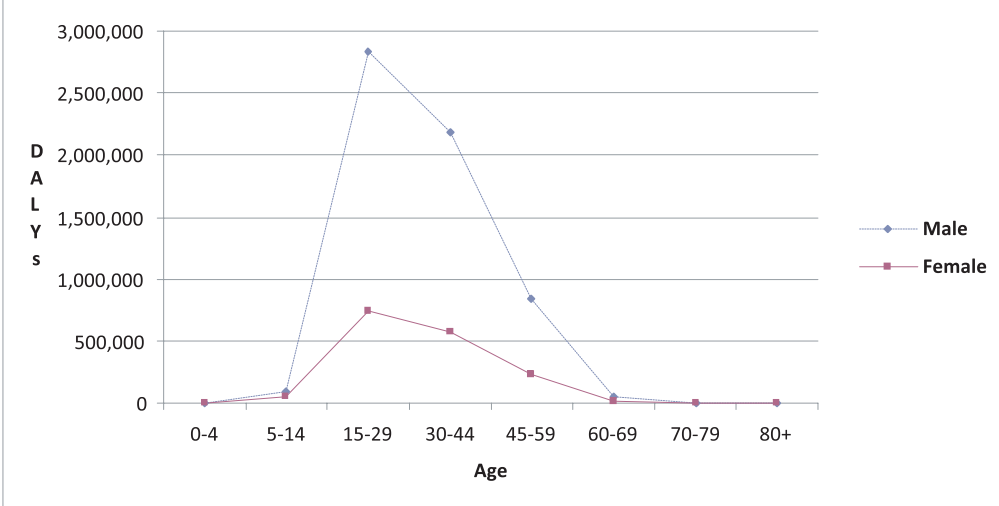
According to the 2002 global data on disability adjusted life years (DALYs) the greatest sex differences for injuries (e.g. caused by road traffic accidents) and for substance abuse (e.g. drug abuse and alcohol abuse) can be found among adolescents and young adults (Figures 1-3) (Snow, 2009).

The sheer magnitude of global DALYs lost to road traffic accidents and substance abuse among adolescent males and the male to female ratios for each condition calls for special attention and requires gender sensitive policies to address them.

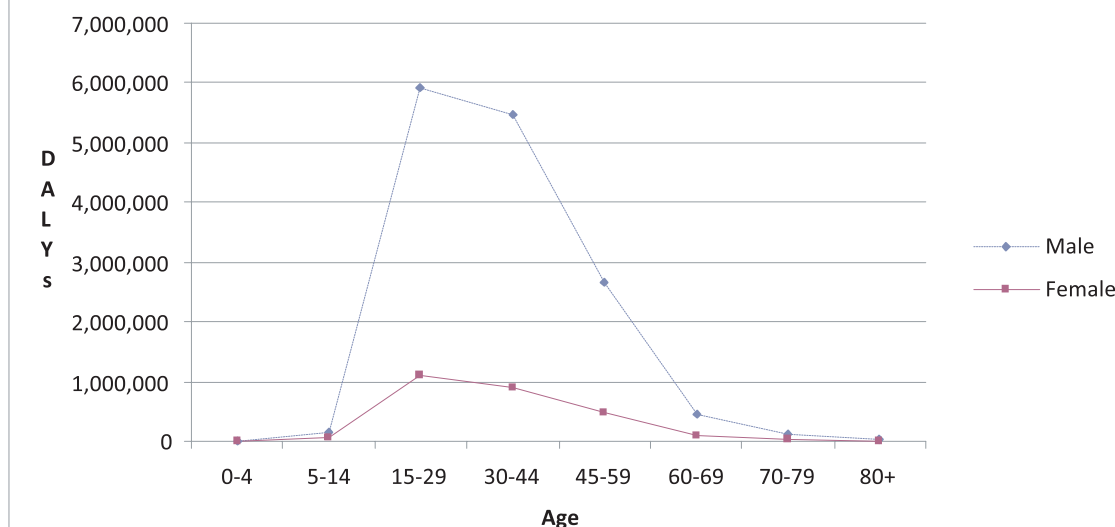
**Figure 1. Sex differences in global DALYs [0,0] lost to road traffic accidents, by age (GBD 2002). Source: Snow, 2009.**



**Figure 2. Sex differences in global DALYs [0, 0] lost to drug use disorders, by age (GBD 2002). Source: Snow, 2009.**



**Figure 3. Sex differences in global DALYs lost to alcohol use disorders, by age (GBD 2002). Source: Snow, 2009.**

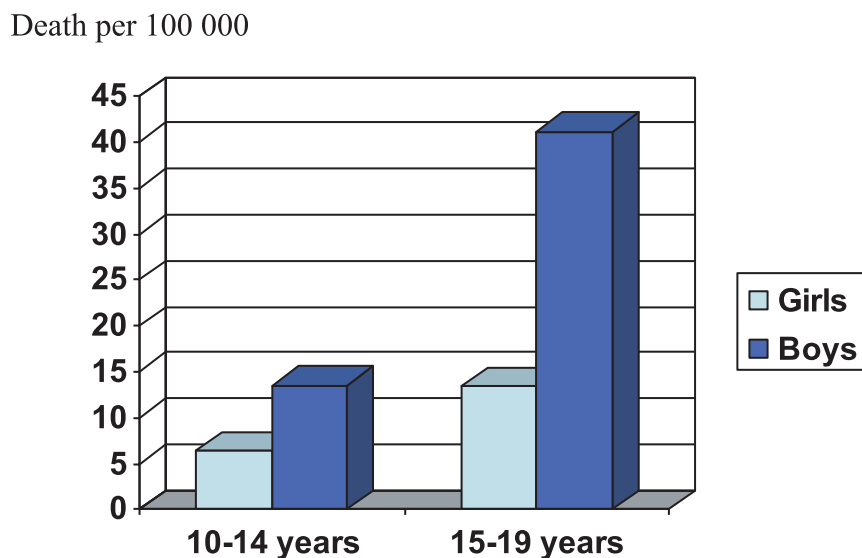


The global situation regarding male dominance among adolescents in mortality and morbidity related to injuries and substance abuse is also reflected in European figures. The Community Action on Adolescents and Injury Risk (AdRisk) project reports that in Europe, unintentional and intentional injuries account for 65% of all deaths among adolescents (defined in the project as young people aged 15-24). Injury is also the leading cause of hospitalization in this age group

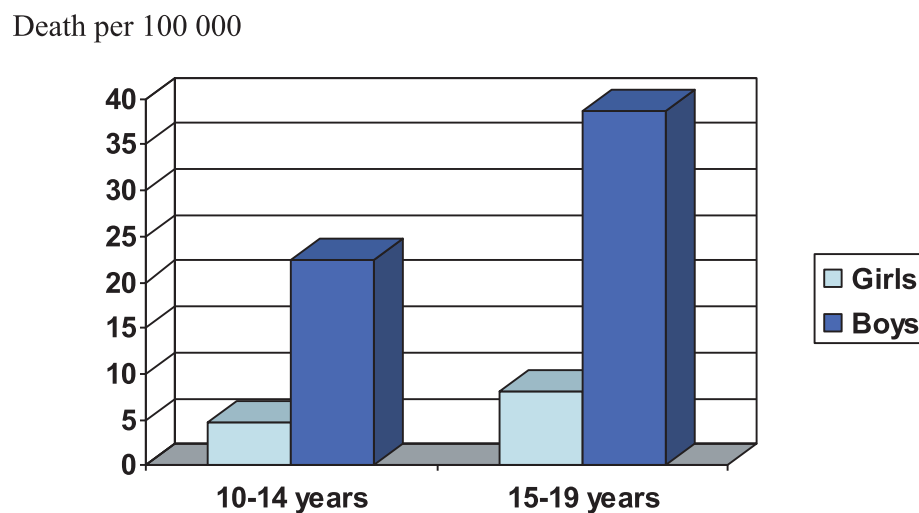
accounting for 20% of all visits to emergency departments in most EU-Member States. For example, the mortality rate of adolescents from unintentional injuries (39.5/100,000) is considerably higher than the mortality rate of the whole population (34.6/100,000). The sex differences in mortality and morbidity from these conditions are substantial as illustrated in Figures 4, 5 and 6, yet preventive policies and programmes are often gender neutral.



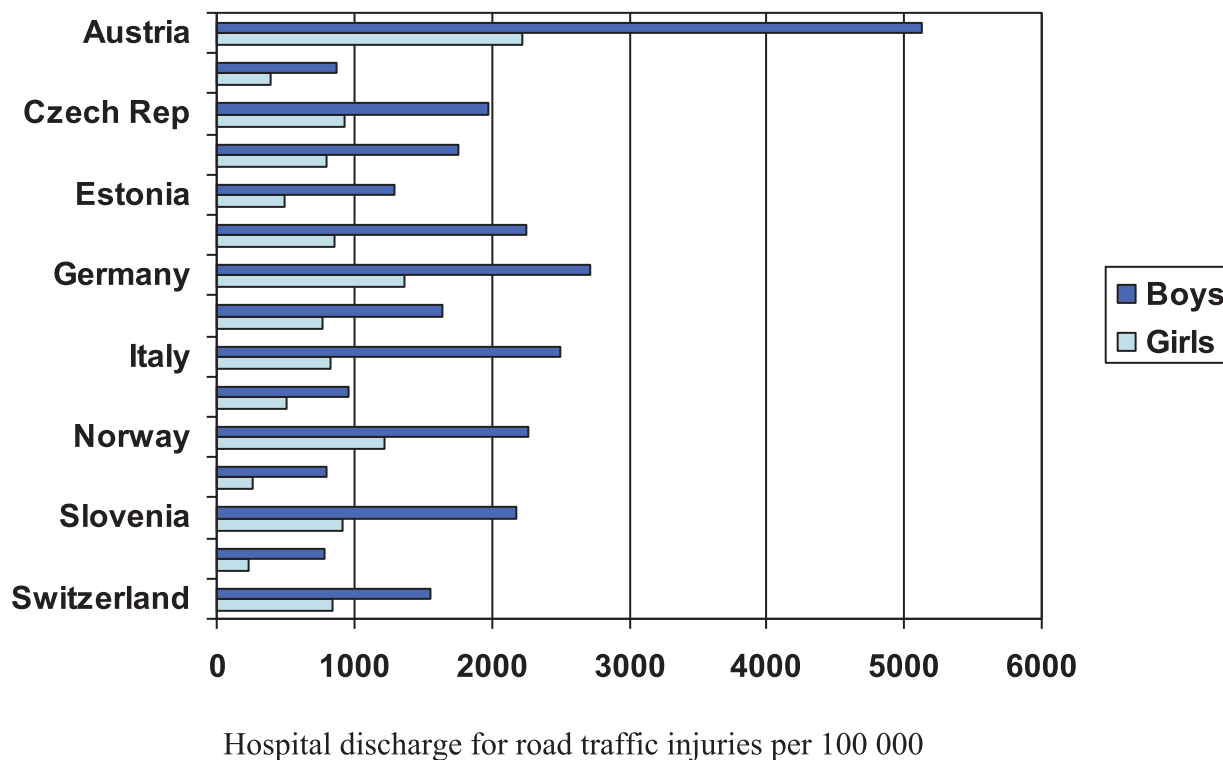
**Fig. 4. Estimated mortality rate for all unintentional injuries per 100 000 population among adolescents by sex and age group in the WHO European Region 2004. Source: WHO, 2008.**



**Fig. 5. Estimated mortality rate for road traffic injuries per 100 000 population among adolescents by sex and age group in the WHO European Region, 2004. Source: WHO, 2008.**



**Fig. 6. Hospital discharge rates per 100 000 population among adolescents aged 15-19 years by sex in selected European countries, 2004. Source: WHO, 2008.**



The massive overrepresentation of adolescent males in all forms of fatal and non-fatal injuries resulting from road traffic accidents, falls, drowning, poisoning and violence should receive special policy attention from a gender perspective. It is also worth noting that among adolescents 15-19 year old males are the most prone to injuries. Moreover, an increasing body of evidence suggests that adolescents from socially disadvantaged families are at higher risk of injuries compared to adolescents from more affluent families. For example, a Swedish study found the greatest differences in motorcycle injury risk between socioeconomic groups in the age category 17-19 years. At the age of 18, those belonging to low socioeconomic positions run a risk of injury occurrence 2.5 times higher than those belonging to the highest socioeconomic category (Zamboni and Hasselberg, 2006). Another study from Sweden found the high-

est absolute socioeconomic differences in traffic injuries, especially among 15-19 year old boys, and in self inflicted injuries among 15-19 year old girls (Engström et al., 2002). The policy implication of these findings, call for interventions and programmes that take both gender and socioeconomic circumstances into consideration. The findings also imply that national data systems and data collections for individual studies should not only disaggregate data on injuries by sex but also by socioeconomic status in order to be able to analyse the intersections between gender and social circumstances.

The relative and absolute importance of accident and injury to male adolescents' health in particular emerges under many separate conditions in the Global Burden of Disease (GBD) statistics. For example, alcohol and other substance

abuse contribute to road traffic injuries, especially fatal unintentional injuries. A cluster of health outcomes that include substance abuse (alcohol or drug) and their direct or indirect consequences (such as traffic accidents) are consistently in excess among males (Snow, 2009).

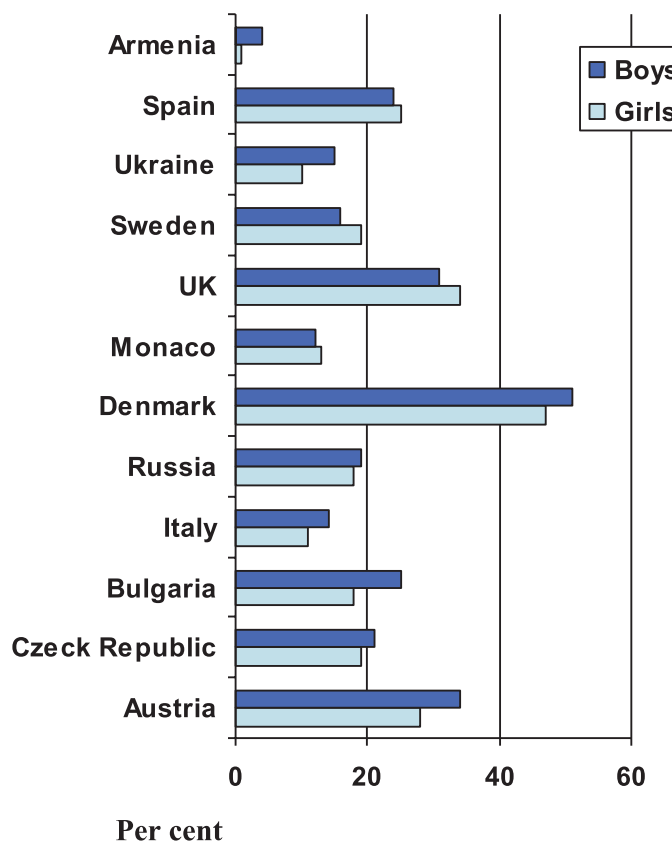
A recent study from the European School Survey Project on Alcohol and Other Drugs (ESPAD) collected comparable data on substance use among 15–16 year-old European students in order to monitor trends within, as well as between, countries (Hibell et al., 2007). The 2007 data collection was performed in 35 countries. All data in the ESPAD report is disaggregated by sex and differences between girls and boys are commented.

The report shows, that as regards alcohol consumption, in nearly all 35 European countries boys drink larger quantities than girls. Beer is the dominant beverage among boys while spirits is the most significant beverage among girls in a little over half of the countries. Gender differences were found in the frequencies of drunkenness within countries, with higher figures for boys in some countries (e.g. Denmark, Austria and Bulgaria) and for girls in others (e.g. United Kingdom and Sweden). Overall, gender differences in drunkenness during the last 30 days were relatively small (Fig. 7). However, it is alarming that heavy episodic drinking has increased considerably among girls in many countries in the study. On average, drunkenness during the last 30 days has increased among girls from 35 per cent in 2003 to 42 per cent in 2007 (Hibell et al., 2007). The significant differences between countries with regard to both boys and girls drinking habits are notable (e.g. Denmark vs. Armenia in Fig. 7).

The ESPAD report also shows that most alcohol-related problems are on average more common among boys. This is most pronounced in the cases of “physical fights” and “trouble with the police”. The evidence concerning the excess occurrence of injuries among boys is another reflection of the fact that boys seem to suffer more physical harm from alcohol-related problems.

<sup>1</sup>In the 2007 ESPAD data collection more than 100,000 students took part from the following countries: Armenia, Austria, Belgium (Flanders), Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, the Faroe Islands, Finland, France, Germany (7 Bundesländer), Greece, Hungary, Iceland, Ireland, the Isle of Man, Italy, Latvia, Lithuania, Malta, Monaco, the Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, the Slovak Republic, Slovenia, Sweden, Switzerland, Ukraine and the United Kingdom.

**Figure 7: Having been drunk during the last 30 days by sex in selected European countries, 2007. Source: Hibell et al., 2007.**



The ESPAD study reports high prevalence of smokers among boys in Latvia, Austria and the Russian Federation (around 42%) and among girls Austria, the Czech Republic and Bulgaria (around 46%). As shown in Fig. 8, girls reported higher 30-days prevalence for smoking than boys in most the countries.

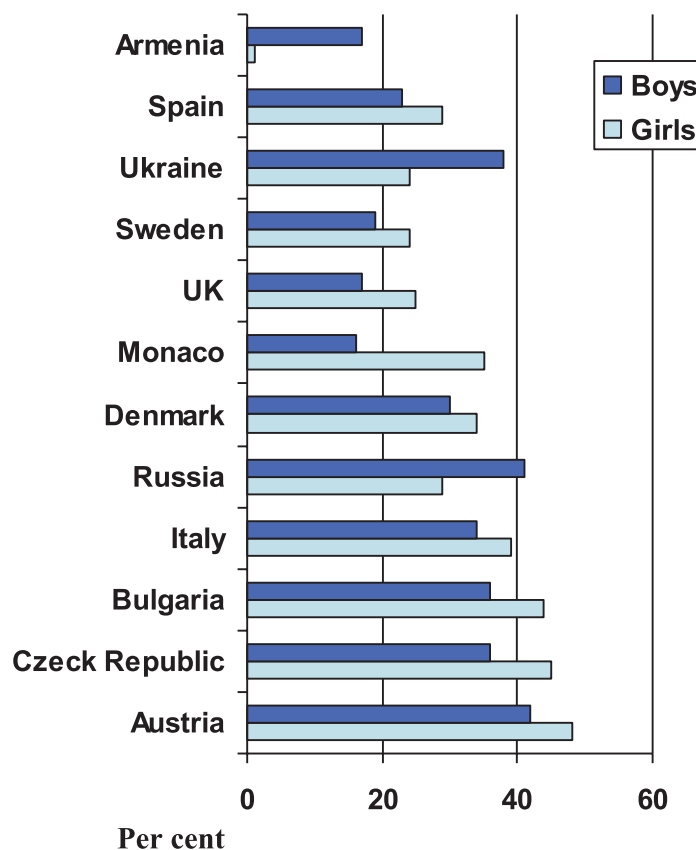
Smoking prevention policies should note that the proportion of students who had tried cigarettes at the age of 13 or younger varies considerably across countries, from around 58% in the Czech Republic, Estonia and Latvia to some 15% in Armenia and Greece (Hibell et al., 2007). It is noticeable that, on average, more boys (38%) than girls (33%) report an early smoking debut – a finding that should have implications for the ages of boys and girls at which smoking preventive interventions should be intensified the most.

Alcohol abuse among adolescents is not only associated with increased risks for injuries, but also with smoking. These associations look different for boys and girls. For example, in a study that investigated the relationship between alcohol and tobacco use among Romanian adolescents, alcohol and cigarette use were found to be linked reciprocally and this interrelationship differed across genders. Among girls, smoking predicted alcohol use better than the converse, while for the boys it was the other way around (Lotrean et al., 2009).

Socioeconomic background and gender seem to intersect also when the trends in social inequality in daily smoking among adolescents are studied. A recent Danish study of 15 year old adolescents found that the prevalence of daily smoking decreased from 15.9% to 10.9% among boys and from 20.1% to 10.6% among girls between 1991 to 2006 (Rasmussen et al., 2009). The social inequality fluctuated over time and was different for boys and for girls. The prevalence difference between boys from low and high social class was 5.2% in 1991 and 9.3% in 2006; corresponding figures for girls were 4.8% and 7.0%. The prevalence ratio among boys was 1.38 (in 1991) and 2.19 (in 2006), among girls 1.28 and 1.95. These findings have clear implications for smoking policies among adolescents, so that the inter-

play between gender and socioeconomic circumstances are taken into consideration.

**Fig. 8: Cigarette use during the last 30 days by sex in selected European countries in 2007.**  
Source: Hibell et al., 2007.





# What are the explanations behind the differences in injuries and substance abuse among adolescent girls and boys?

Understanding the way in which biological sex (e.g. sex hormones) and social factors (e.g. gender norms) interact in different aspects of health related behaviours and health outcomes is central to our understanding of how gender operates in health and health related behaviours (Sen et al., 2002). In order to be able to provide guidance in identifying appropriate responses from public policy to address injury and substance use/abuse among adolescent girls and boys, it is necessary to distinguish biological and social factors while exploring their interactions.

For example, the high injury-related mortality and morbidity rate among adolescent males have been partly attributed to their risk taking behaviour and lifestyles (d'Acremont and Van der Linden, 2006; Rowe et al., 2004). To what extent is such risk-taking associated with boys' biological predisposition to risk taking or encouraged by masculine norms, expectation and identity? The evidence on the biological basis of male risk-taking has been largely inconclusive. It has been hypothesized that male testosterone and other sex-hormones may affect men's, in particular adolescent males', tendency toward aggressive behaviour (Parsons, 1982) which may contribute to the excess male mortality from accidental deaths (Parsons, 1982 and Waldron, 1983 cited in Hemström, 2001). However, there is no conclusive evidence that the increased rate of accidents among adolescent males is caused by an upsurge of male sex-hormones or is due to socialization (a way of looking at male gender). The most plausible explanation based on the current knowledge is that testosterone, and other sex-hormones, can be affected by social factors (Fausto-Sterling, 1992), which in turn, suggests that biology may act in combination with other factors (Hemström, 2001). For example, a recent study by Granié (2009), which explored the differences in risk taking among adolescent pedestri-

ans aged 12-16 years showed an effect of sex-stereotype conformity on the internalization of traffic rules and risky behaviour. The study suggests that it is the level of masculinity and the level of internalization of the rules, rather than biological sex, that explain gender differences in risk taking among adolescent pedestrians.

Socially constructed maleness reflected in risk taking may also include experimentation with and consumption of alcohol and drugs, which highly increases adolescents' exposure to accidents, such as road traffic accidents. The excess risk for fatal crashes among adolescent males is largely attributable to high speed in combination with intake of alcohol (Maio, 1997; Otero, 1998). Males are not only more likely than females to drive after they have been drinking but when simulated driving was evaluated among 18-year-olds who had their blood alcohol raised experimentally, girls drove more cautiously as they got drunker, while boys became more reckless (Oei, 1990 cited in Snow, 2009). These findings suggest that alcohol intake impacts differently on girls' and boys' traffic behaviour.

Also as regards the uptake of smoking and alcohol consumption, this usually starts in adolescence; both biological and social circumstances (e.g. gender norms) play crucial roles. For example, young girls are usually more affected by alcohol and have higher concentrations of alcohol in their blood than young boys given the same alcohol intake. This is because girls tend to have lower body weights, smaller livers and a higher proportion of fat to muscle (WHO, 2005). In many countries, smoking and drinking marks the transition to manhood, and is deeply embedded in everyday male social relations (WHO, 2003). Changing gender norms, such as, greater female autonomy and changes in women's roles may put girls at risk of taking up smoking or

drinking alcohol. Uptake of smoking by both young boys and girls is strongly backed up by the gendered marketing of cigarette companies. Smoking is seen as both emancipatory and a coping strategy for women and this gender shift is most notable among the young (Sen et al., 2007). On one hand, tobacco advertisers target women and use seductive but false images of vitality, slimness, emancipation, sophistication, and sexual allure. Studies show that young girls are more likely to fear weight gain than boys, and to initiate smoking for weight control. On the other

hand, in advertisements by the tobacco industry targeting men and boys, smoking is portrayed as a masculine habit associated with happiness, fitness, power, and financial and sexual success. Dismissing risks in general is a crucial means by which males construct their gender (Courtenay, 2000). Snow (2002) argues that “recognizing that some degree of risk-taking has positive value in modern life, the outstanding question may be whether and how risk-taking tendencies might be shaped or regulated to avoid endangering males and society more generally”.

# Are policies and programmes that address risk for injuries and substance abuse gender sensitive?

In most European countries there is amounting evidence on gender differences among adolescents with regard to exposure and vulnerability to injuries and substance abuse, however, preventive policies and programmes remain in many instances gender neutral. Generally, there seems to be an assumption that interventions and programmes will be just as effective for boys as for girls. Many policy recommendations and health promotion programmes are gender-neutral and focus on 'youths', 'children', or 'adolescents'. This is particularly the case when policy recommendations, preventive policies and programmes are scrutinized within the field of injury prevention. Gender sensitivity is more prevalent in the field of smoking (Greaves and Jategaonkar, 2006; Greaves and Hemsing, 2009; WHO, 2004). However, research and policies within injury and substance abuse prevention still do not address adequately the intersections between gender and other social hierarchies (e.g. socio-economic position, or ethnicity) that differentially affect the risks adolescent girls and boys face in relation to injuries and substance abuse (WHO, 2005).

In relation to preventing risky driving behaviours by young males, Snow (2009) suggests that licensing laws and punishments for driving under the influence of alcohol and drugs should not be sex neutral. Based on evidence on the positive effects of restrictive licensing on road traffic injuries, Snow suggests that interventions might entertain sex-specific policies of graduated licensing, a higher age for licensing males, a higher age for legal consumption of alcohol by males, or a policy of zero-tolerance for male drinking and driving. The rationale for sex-specific restrictions should be supported particularly by those who argue that male risk-taking is genetically/ hormonally programmed (Snow, 2009).

The few existing evidence-based studies on successful gender-sensitive programmes for preventing substance

abuse among girls and boys suggest that the most effective programs for girls are family focused targeting family bonding, supervision, and communication (Kumpfer et al., 2008). Recent gender-specific prevention programs with positive results for girls addressed stress, depression, social assertiveness, and body image. Behavioral self-control or regulation and community environment appeared to have a greater influence on boys as pathways to substance misuse (Kumpfer et al., 2003).

Tobacco programs that were demonstrated as effective for girls were those that incorporated teaching adolescents' social resistance skills, reducing the effect of social influences, and/or altering the negative influence of perceived social norms (Kumpfer et al., 2008).

Based on their review of effective interventions to prevent substance abuse among adolescents Kumpfer et al. (2008) recommend that awareness of gender issues in prevention should be included in professional training and continuing education programs for prevention specialists. Certificate programs for substance use prevention should also include gender issues. Gender sensitive strategies are recommended as well to prevent (dating) violence and knife crime (Foshee et al., 2001; WHO, 2011).

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## The WHO Regional Office for Europe

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