



Substance Use Disorders

ATLAS on substance use (2010)

Resources for the prevention and treatment
of substance use disorders

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FOREWORD

The global burden of disease attributable to alcohol and illicit drug use is significant by any measure; it amounts to 5.4% of the total burden of disease, according to the latest WHO estimates (WHO, 2009a). Another 3.7% of the global burden of disease is attributable to tobacco use. And disorders due to psychoactive substance use – including alcohol, drug and tobacco dependence – are the main underlying conditions ultimately responsible for the largest proportion of the global burden of disease attributable to substance use.

Effective strategies and interventions exist to prevent and treat substance use disorders. However, effective implementation of such strategies and interventions relies on several health system levels, including policy frameworks, the organization of prevention and treatment systems, and provision of prevention and treatment interventions in health care and other settings.

WHO's key functions include monitoring health situations and assessing trends. In recent years the WHO Department of Mental Health and Substance Abuse has produced a series of ATLAS reports on global resources for mental health and neurological conditions. The WHO project ATLAS-SU used a similar methodology to collect, compile and disseminate information from countries on resources that are available for the prevention and treatment of substance use disorders. This report has been developed on the basis of that information and provides a general overview of the availability and organization of prevention and treatment services for substance use disorders around the world, with particular focus on low- and middle-income countries.

The data presented in this report indicate that mental health services are the main providers of treatment for substance use disorders in less-resourced countries. In high-income countries, specialized services play a significant role in service provision for substance use disorders through a broad range of providers. Specialized services are important for consolidating and developing expertise and human resources, but improving the health and well-being of persons with substance use disorders – and their families – requires easily accessible and affordable services for those in need. Besides, in many less-resourced countries, specialization for health professionals in substance use disorders or addiction medicine is not available, or is available on only a very limited scale. In view of this situation, the most feasible way to improve coverage of treatment is to integrate prevention and treatment services for substance use disorders into health and social welfare systems, to make them available and implement them routinely in primary health care and other non-specialized settings as well as in the criminal justice system, and to ensure an appropriate provision of treatment or referral to treatment at different points of entry into the health and social care systems.

Recent initiatives and programmes of WHO, such as the mhGAP programme (WHO, 2008) and the development of the *mhGAP intervention guide for mental, neurological and substance use disorders in non-specialized health settings* (WHO, 2010), or the Joint UNODC-WHO programme on drug dependence treatment and care (UNODC/WHO, 2009),

are expected to improve the coverage and quality of prevention and treatment interventions for substance use disorders in low- and middle-income countries. They are also expected to contribute to bridging the gap between population needs and available services, particularly in health care systems.

Improving the coverage and quality of prevention and treatment interventions for substance use disorders requires well-developed and well-governed health care systems, properly educated and trained human resources, financial resources that are commensurate with population needs, supportive policy and legislative frameworks, and the availability of appropriate essential medicines. This publication is WHO's first attempt to cover all these areas at global level with information collected from 147 countries from around the world, representing 88% of the world population.

The data presented in this report are based on results of the questionnaire survey of focal points identified in WHO Member States, and on the efforts of WHO staff to ensure validity of data. There are many challenges in collecting and presenting this type of information, from the boundaries of prevention and treatment systems in different countries to ensuring a common understanding of the terms and concepts used in the data collection tools. It is acknowledged that these challenges result in limitations to the presented data. However, the focus of the report is on presenting an overall picture of available resources for treatment and prevention of substance use disorders globally, in WHO regions, and in groups of countries with different levels of economic development. In each subsequent round of data collection, all efforts will be made to improve the validity and comparability of the data so that trends can be monitored in the development of prevention and treatment resources for substance use disorders around the world. We hope that this report will be useful to a wide range of stakeholders, particularly those engaged in international efforts to improve the prevention and treatment of substance use disorders in low- and middle-income countries.

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This report was produced in the framework of ATLAS-SU project implemented by the Management of Substance Abuse team of the Department of Mental Health and Substance Abuse of WHO headquarters in collaboration with WHO regional offices. The ATLAS-SU project builds on the mental health ATLAS project and aims to further the development of the global information system on resources for prevention and treatment of substance use disorders.

The ATLAS-SU project is implemented under the overall direction of Vladimir Poznyak. Shekhar Saxena and Benedetto Saraceno provided vision and guidance to the project. The principal writing of this report was done by Daniela Fuhr and Nicolas Clark. Other main contributors included Vladimir Poznyak and Alexandra Fleischmann. Data collation, compilation and statistical data analyses were carried out by Daniela Fuhr.

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EXECUTIVE SUMMARY

Background

This report provides for the first time comparable global information on the availability of a range of resources required for the prevention and treatment of substance use disorders by drawing together information from 147 countries that represent 88% of the world population.

A questionnaire was developed to measure a wide range of different resources that benefit the prevention and treatment of substance use disorders at country level, including:

- *administrative and financial resources* such as the presence of government units, funding and ways of financing treatment and prevention services in countries;
- *health service resources* such as the availability and coverage of different treatment services, the presence of pharmacological treatment, the number of beds and the length of stay for treatment;
- *human resources* such as the involvement of health professionals for the treatment of substance use disorders, and the presence of other institutionalized and non-institutionalized groups providing care for persons with substance use disorders;
- *policy and legislative resources* such as the presence of different policies and legislative provisions for prevention and treatment of substance use disorders;
- *resources for prevention* of substance use disorders, such as availability and coverage of different prevention services, implementation of screening and brief interventions in primary care, and presence of harm reduction programmes;
- *information resources* such as knowledge of epidemiological aspects of substance use in the country, and knowledge of treatment service delivery.

Key findings

Chapter 1. Psychoactive substance use: epidemiology and burden of disease

- *Point prevalence of alcohol and drug use disorders*

Globally, the prevalence of alcohol use disorders is significantly higher than the prevalence of drug use disorders. Generally, alcohol and drug use disorders are more common among males than among females.

- *Psychoactive substance accountable for treatment demand*

From the majority of countries in every WHO region¹ but one, alcohol was reported to be the main psychoactive substance responsible for demand for treatment. In the Region of the Americas, treatment demand was chiefly due to cocaine.

- *Number of deaths and disability-adjusted life years lost due to psychoactive substance use*

Globally, some 39 deaths per 100 000 population are attributable to alcohol and illicit drug use, out of which 35 deaths are attributable to alcohol use and four are attributable to illicit drug use. The use of alcohol and illicit drugs accounts globally for almost 13 disability-adjusted life years (DALYs) lost per 1000 population. Approximately 11 DALYs per 1000 population are lost due to alcohol use, and approximately two DALYs are lost due to illicit drug use.

Chapter 2. Health services

- *Government administration and budget for treatment services*

The presence of a government unit or a government official responsible for treatment services for substance use disorders was reported by 66.2% of countries. Fewer than half of the countries in the survey reported having a specific budget line allocated to the treatment of substance use disorders.

- *Financing of treatment services*

Countries identified tax-based funding, out-of-pocket payments and social health insurance to be among the foremost methods of funding treatment for alcohol and drug use disorders. Africa appears to be the only region in which out-of-pocket payments were reported to be the main funding method for alcohol and drug use disorder treatment services.

- *Treatment setting for alcohol and drug use disorders*

Nominated focal points in countries reported a variety of treatment settings for persons with alcohol and drug use disorders. In the majority of responding countries (39.8%), mental health services are the most common treatment setting for alcohol use disorders. A higher proportion of countries reported specialized treatment services as the main setting for the treatment of drug use disorders (51.5%) compared with treatment of alcohol use disorders (34.6%).

- *Treatment services and coverage of alcohol and drug use disorder treatment*

Among different treatment services, inpatient detoxification for alcohol and drug use disorders appears to be the most frequently present in countries; it was reported to be

¹ For the list of countries in WHO regions see page 135.

present in over 90% of countries responding to the survey. However, coverage of the population in need with alcohol and drug use disorder treatment services seems to be low. For example, in low-income countries the majority of persons with alcohol and drug use disorders are not covered by the respective treatment services.

- *Number of beds and length of stay*

Among the responding countries, the median number of beds for alcohol and drug use disorders was 1.7 per 100 000 population (range of 0–52 beds per 100 000 population). The median length of stay for alcohol and drug detoxification was 10.3 days and 14.0 days respectively.

- *Care for special populations*

Substance use disorder treatment services for prisoners were reported from 55.9% of surveyed countries, followed by substance use disorder treatment services for young people (47.6%) and for injecting drug users (40.0%). Specialized substance use disorder treatment services for pregnant women and commercial sex workers were reported to be present in 31.0% and 25.5% of countries respectively. Approximately 11.0% of countries reported having substance use disorder treatment services for indigenous populations.

Specialized treatment services for persons with drug use disorders and HIV/AIDS were reported in 43.2% of countries. Around a quarter of countries (24.6%) reported having treatment services for people with both drug use disorders and tuberculosis.

Chapter 3. Pharmacological treatment

- *Policy framework and guidelines for the pharmacological treatment of substance use disorders*

Policy documents on the pharmacological treatment of substance use disorders were reported by 40.2% of countries, with Europe reporting the highest proportion of countries with policy documents on the pharmacological treatment of substance use disorders. Guidelines on the pharmacological treatment of substance use disorders were reported by approximately half of the surveyed countries (51.8%).

- *Availability of therapeutic drugs for alcohol and drug use disorders*

With regard to the pharmacological treatment of alcohol withdrawal, benzodiazepines were reported to be used for the management of alcohol withdrawal in 90.9% of countries.

For the treatment of opioid dependence, availability of methadone was reported by 41.6% of surveyed countries, buprenorphine by 27.7%, and buprenorphine/naloxone by 20.8% of countries. The highest proportion of countries reporting availability of methadone (88.6%), buprenorphine (59.1%) and buprenorphine/naloxone (50.0%) was in Europe.

- *Administration of opioid agonist pharmacotherapy*

Length of treatment with opioid agonist pharmacotherapy was reported to be open-ended in the majority of countries, with 74.1% of countries reporting no time limit for opioid agonist pharmacotherapy. Over 55% of countries in the survey reported using methadone syrup/solution for the treatment of opioid dependence. Approximately 60% of countries in the survey reported commencing opioid agonist pharmacotherapy on an outpatient basis.

- *Supervision and prescription requirements for opioid agonist pharmacotherapy*

Supervision of methadone for the treatment of opioid dependence was required by 85.4% of countries in the survey. In 60.6% of countries buprenorphine supervision was required, while 71.4% of countries required buprenorphine/naloxone supervision.

More than 20% of countries in which methadone is used reported that doctors without special training are allowed to prescribe methadone. In approximately 10% of countries surveyed, it was reported that non-doctors are given the authority to prescribe opioid agonists.

Chapter 4. Human resources

- *Health professionals*

A variety of health professionals seem to be responsible for the management of alcohol and drug use disorders in different countries. The majority of countries reported psychiatrists, general practitioners and addictologists/narcologists to be the health professionals chiefly involved in the treatment of alcohol and drug use disorders.

- *Standards of care and supervision for health professionals*

Approximately half of the countries in the survey (47.6%) reported having national standards of care for health professionals working with persons with substance use disorders. The lowest proportions of countries with standards of care were reported in the regions of South-East Asia (20.0%), Africa (20.9%) and the Eastern Mediterranean (28.6%).

The clinical supervision of nurses was reported in 57.1% of countries in the survey, followed by clinical supervision of doctors (52.5% of countries), social workers (44.4% of countries) and psychologists (43.5% of countries). Across the regions, Eastern Mediterranean and Europe reported having the highest proportions of countries with clinical supervision of health professionals.

- *Nongovernmental organizations and self-help groups for substance use disorders*

A high proportion of countries have nongovernmental organizations (NGOs) that focus on alcohol and drug prevention, with 74.8% and 81.6% of countries reporting to have them for alcohol prevention and drug use prevention, respectively. Approximately 70% of

surveyed countries reported the presence of NGOs focusing on rehabilitation of alcohol and drug use disorders. NGOs involved in treatment of alcohol disorders and drug use disorders were reported from 54.5% and 59.9% of countries respectively.

Alcoholics Anonymous was reported to be active in the majority of countries (71.1%). Narcotics Anonymous was reported to be active in approximately half of the countries in the survey (56.7%), and Cocaine Anonymous in 11.5% of countries.

“Ex-addicts” or “recovering addicts” were reported to provide formal care for persons with substance use disorders in 59.9% of countries in the survey, and this situation appears to be most common in high-income countries. The highest proportion of traditional healers providing care for persons with substance use disorders was reported from low-income countries (44.7%). Religious groups or NGOs based on religious groups providing formal care for substance use disorders are reported most commonly among countries in the higher middle-income group (79.3%).

Chapter 5. Policy and legislation

○ *Policy frameworks and special legislative provisions*

The majority of countries in the survey (68.0%) reported having a national substance abuse policy, with 100% of high-income countries reporting that they have one. The highest proportion of countries in the survey reporting substance abuse policies was in the European Region (93.2%). The African Region (32.6%) reported the lowest proportion of countries with substance abuse policies.

Special legislation for the compulsory treatment of substance use disorders was reported from 42.5% of countries in the survey. Of these countries, 30% reported having special legislation for the compulsory treatment of both alcohol and drug use disorders together.

Government benefits for persons with alcohol and drug use disorders were reported from 40.6% of countries in the survey. The Western Pacific (78.6% for alcohol, 73.3% for drugs) and Europe (69.0% for alcohol, 70.5% for drugs) reported having the highest proportions of countries providing government benefits for persons with alcohol and drug use disorders.

○ *The criminal justice system and substance use disorders*

The presence of drug courts was reported in 20.5% of countries. The highest proportion of countries with drug courts was in the Eastern Mediterranean Region (38.5%). Africa (14.0%) and the Americas (14.3%) had the lowest proportions of countries with drug courts.

Half of the countries in the survey (52.2%) reported having programmes referring or diverting clients from the criminal justice system towards treatment. The highest proportions of countries in the survey with programmes referring or diverting clients from the criminal justice system towards treatment were reported by Europe (66.6%), the Western Pacific (66.6%), the Eastern Mediterranean (61.6%) and South-East Asia (60.0%).

Chapter 6. Prevention

○ *Administration and budget*

In 72.4% of countries in the survey, one or more government units responsible for the prevention of substance use disorders were reported. Half of the countries in the survey (50.0%) reported having a budget line in the annual budget for the prevention of substance use disorders. The lowest proportion of countries reporting budget lines was in Africa (30.2%).

○ *Availability and coverage of prevention services*

School-based programmes, community-based programmes, and workplace programmes for the prevention of substance use disorders were reported by 77.9%, 68.5% and 58.6% of countries respectively. However, coverage of the population in need with school-based programmes, community-based programmes, and workplace programmes for the prevention of substance use disorders appears to be low. For example, over 50% of the countries indicated that the coverage of school-based programmes for the prevention of substance use disorders would be provided for less than half of the population in need.

○ *Prevention services in special populations and harm reduction*

The most commonly reported prevention programmes were those for children and families at risk (45.2% of countries), followed by prevention programmes for prisoners (43.2%), for people living with HIV/AIDS (41.1%), for pregnant women (32.2%), for commercial sex workers (29.5%) and for minority groups (17.8%).

The presence of needle/syringe exchange programmes differs within countries. In 41.1% of countries, community-based needle/syringe exchange programmes were reported. Some 6.6% of countries reported having syringe exchange programmes in prisons.

○ *Screening and brief intervention programmes*

Screening and brief interventions implemented in primary health care for hazardous and harmful alcohol use and for drug use were reported by 47.9% and 46.2% of countries respectively. The Americas and the Western Pacific reported the highest proportions of countries with screening and brief interventions for harmful alcohol use (76.2% and 69.2% respectively) and drug use (65.0% and 71.4% respectively).

○ *Groups and agencies involved in prevention of substance use disorders*

Different groups and agencies appear to be involved in the prevention of substance use disorders in countries. In 78.1% of countries, schools are involved in the prevention of substance use disorders, followed by community groups (49.3%) and employers (29.5%). The involvement of law enforcement agencies in the prevention of substance use disorders was reported by 68.5% of countries. Involvement of international organizations in the prevention of substance use disorders was reported by 56.8% of countries, followed by the involvement of labour organizations (19.2%).

INTRODUCTION

Dimensions of psychoactive substance use and dependence

The use of alcohol and other psychoactive substances alters both the function and, ultimately, the structure of the brain by the altered stimulation of particular pathways in the central nervous system. Mood, perception and consciousness are affected by the use of psychoactive substances, which can influence the capacity of persons to exert control over their drug use. The result can lead to physical and psychological dependence, coercing the person to continue taking the drug despite adverse consequences. Besides profound impairment and loss of physical health, people with alcohol and drug use disorders may suffer severely from psychological and psychosocial problems, interpersonal problems, loss of employment, difficulty in participating in education, and legal problems.

Given the complexity of substance use disorders and their effects on the health and social aspects of the person, treatment and prevention of alcohol and drug use disorders may involve a range of treatment and prevention modalities which may be delivered in a variety of settings. Treatment modalities may involve pharmacological treatment but may also include other components of health care, such as psychological support and counselling, as well as rehabilitation to respond to the stage of the illness and to the different needs of the person with the substance use disorder. Delivery of adequate care and treatment for persons with alcohol and drug use disorders requires a well functioning treatment and prevention system that has the capacity to respond to the needs of these persons.

What constitutes resources for the treatment and prevention of substance use disorders?

The effective prevention and treatment of substance use disorders requires the availability of a range of resources at the national or subnational level. Resources therefore comprise financial capital of national authorities to fund treatment and prevention services for substance use disorders, but also include human and institutionalized resources such as the availability of health care staff and nongovernmental organizations (NGOs) assisting in the delivery of care and treatment for the population in need. Within the health care setting, clinical management of substance use disorders may involve a variety of services and treatment approaches; treatment may also be differentiated by the use of different classes of pharmacological drugs used for detoxification or for the treatment of alcohol and drug dependence. Other resources include the knowledge of national authorities about the epidemiological situation in the country regarding substance use disorders, and data on national service delivery data and associated treatment service information. The know-how of health professionals and the use of national standards of care for health professionals also comprise resources, as do guidelines, policy documents and special legislative provisions regulating the context in which treatment is provided.

Why monitoring of resources is essential

Globally, there is an impression that there is a large treatment gap for substance use disorders – i.e. that only a small proportion of those people in need of treatment, or those who would benefit from prevention measures, are receiving treatment or prevention measures. The ATLAS on Substance Use (ATLAS-SU) attempts both to explore the size of the treatment gap and to examine the underlying reasons for that gap. Any

significant prevention and treatment gap suggests a shortage of resources for the treatment and prevention of substance use disorders. Given the competition for scarce health resources, both low-income and high-income countries can benefit from a more detailed awareness of what resources are being made available for the treatment of substance use disorders, so that this can be compared to other health priorities or other models of resource distribution (as may be used in other countries, for instance). In view of this, the ATLAS-SU project seeks to map those resources at national, regional and global levels to highlight the specific resources available for treatment and prevention of substance use disorders. As such, it represents an essential tool for national authorities, health professionals and policy-makers in helping to assess the priority of needs, and in increasing the quality of care for people with substance use disorders. For the first time, information about the resources available for the treatment and prevention of substance use disorders in all WHO regions has been collected and analysed, making national, regional and global comparisons possible. A structured description of available prevention and treatment resources for substance use disorders is also a prerequisite for a more detailed assessment of treatment systems, and for improving treatment and prevention systems for substance use disorders at national, regional and global levels.

The objective of the ATLAS-SU project and the structure of the report

The objective of the ATLAS-SU project was to collect, compile, analyse and disseminate basic information from WHO Member States on the following resources and assets required for substance use treatment and prevention:

- *administrative and financial resources* such as the presence of government units, funding and ways of financing treatment and prevention services in countries;
- *health service resources* such as the availability and coverage of different treatment services, the presence of pharmacological treatment, and the number of beds and length of stay for treatment;
- *human resources* such as the involvement of health professionals for the treatment of substance use disorders, and the presence of other institutionalized and non-institutionalized groups providing care for persons with substance use disorders;
- *policy and legislative resources* such as the presence of different policies and legislative provisions for prevention and treatment of substance use disorders;
- *resources for prevention* of substance use disorders, such as availability and coverage of different prevention services, implementation of screening and brief interventions in primary care, and presence of harm reduction programmes;
- *information resources* such as knowledge of epidemiological aspects of substance use in the country, and knowledge of treatment service delivery.

In accordance with the information collected from national authorities and experts in the field, the ATLAS-SU report is divided into six chapters. Chapter 1 introduces the epidemiological aspects and the burden of disease attributable to alcohol and drug use and provides information on the level of need for treatment of substance use disorders. Chapter 2 illustrates health service resources such as financing and availability of treatment services, and the number of beds and length of stay for treatment of substance use disorders. Data on implementation of pharmacological treatment for substance use

disorders are presented in chapter 3. Chapter 4 covers human resource aspects, and provides information about the health workforce for substance use disorders. Policy and legal resources for people with substance use disorders are discussed in chapter 5, before concluding with resources for the prevention of psychoactive substance use in chapter 6. Each chapter begins with an expert introduction before data from the ATLAS-SU survey are presented. Data from the ATLAS-SU survey are presented graphically in bar and pie charts. Salient findings are described, and notes and comments on the data are given.

The raw data on which the ATLAS-SU report was prepared will be available in a searchable online database on the web site of the Management of Substance Abuse programme at WHO (www.who.int/substance_abuse/en). This will enable more detailed analyses to be conducted.

METHODOLOGY

Procedures of the ATLAS-SU project and sequence of action

The ATLAS project has involved staff at WHO headquarters and WHO regional and country offices in collecting data and information on national resources for the treatment and prevention of alcohol- and drug-related problems. The ATLAS survey instrument, which is a paper-based survey instrument designed specifically for this purpose, is the project's core component. The ATLAS-SU project was conducted according to different administrative and methodological steps, starting from the development of the questionnaire and ending with the statistical analyses and presentation of data. The sequence of action is briefly outlined below.

- *Stage 1: Questionnaire development.* The ATLAS-SU questionnaire was developed in collaboration with WHO regional offices. Categories of resources for the treatment and prevention of substance use disorders were defined and indicators were developed accordingly. Standardized answers were provided for the respective indicators in order to facilitate data compilation. Response options for close-ended questions were exhaustive and mutually exclusive. Alongside the questions, a glossary was provided to standardize terms and to ensure that the conceptualizations of resources were understood equally by all respondents. The questionnaire was drafted in English, and was translated into four official United Nations languages – Arabic, French, Russian and Spanish.
- *Stage 2: Focal point nomination.* In the respective countries, WHO headquarters together with WHO regional offices requested ministries of health or other responsible ministries to appoint a focal point to complete the ATLAS-SU questionnaire. The focal point was encouraged to contact other experts in the field to obtain information relevant to answering the survey questions. In a few WHO Member States, focal point nominations could not be obtained; in these countries, other prominent technical experts in the field of psychoactive substance use were identified through WHO collaborating centres and professional associations (such as the World Psychiatric Association and the International Society of Addiction Medicine) and were contacted and requested to provide the relevant information. This step was taken to enhance the response rate of the survey.
- *Stage 3: Questionnaire submission.* Close contact with the focal points was maintained during the course of their nomination and through to questionnaire submission. A service desk was set up at WHO headquarters to respond to focal point enquiries, to provide additional guidance, and to assist focal points in filling out the ATLAS-SU survey instrument. Upon expiry of a timeline, focal points were required to submit the questionnaire electronically or by postal mail to WHO headquarters or to the respective WHO regional office.
- *Stage 4: Clarification process.* Once received, the questionnaire and the questionnaire responses were screened for incomplete and inconsistent answers. To ensure high quality data, respondents were contacted again and were asked to respond to the requests for clarification and to correct their responses.

- *Stage 5: Data management.* Upon receipt of final questionnaires, data were entered into a statistical package (SPSS 16). For the ease of statistical analyses, some questions were regrouped. An identifier was applied to the responses of each country to facilitate disaggregation of data by WHO region and by the World Bank list of economies (based on the World Bank list of economies of 2007). Economies are divided according to gross national income per capita. According to the World Bank these groups are low-income countries (having a gross national income of US\$ 935 or less), lower middle-income countries (US\$ 936 to US\$ 3,705), higher middle-income countries (US\$ 3,706 to US\$ 11,455) and high-income countries (US\$ 11,455 or over). Lists of countries by WHO region and by the World Bank list of economies are provided at the end of this report.
- *Stage 6: Statistical analyses of data and presentation of data.* Frequency distributions and measures of central tendency were calculated as appropriate, and data were disaggregated according to WHO regions and different income groups of countries. To illustrate the information obtained, data were exported into Microsoft Office Excel to produce bar and pie charts.
- *Stage 7: Data availability on a searchable database.* Data will be uploaded to a searchable database (i.e. to a global information system) on the WHO web site. Within the global information system indicators of the ATLAS project can be selected and presented according to country and WHO regions.

Representativeness and limitations of data

The questionnaire was developed in 2007, and sent out to the countries for completion in 2008. Data were obtained from all WHO regions, although not all WHO Member States within the regions responded to the survey questionnaire. Data presented in the ATLAS report reflects information from countries which responded to the survey. In total, 147 out of 193 countries took part in the ATLAS-SU project and submitted a questionnaire, thus covering 76% of all WHO Member States and 88% of the world population. However, for some questions the denominator was below the overall number of questionnaires received. Numbers in the respective categories (i.e. region and income group) are indicated if no more than 15% of countries responded to the survey question.

In the WHO African Region 43 countries responded to the ATLAS-SU questionnaire (93% coverage of countries in the region), in the WHO Region of the Americas 21 countries responded (58% coverage of countries in the region), in the WHO Eastern Mediterranean Region 14 countries responded (67% coverage of countries in the region), in the WHO European Region 44 countries responded (83% coverage of countries in the region), in the WHO South-East Asia Region 10 countries responded (91% coverage of countries in the region), and in the WHO Western Pacific Region 15 countries responded (54% coverage of countries in the region).

Data were collected from countries which nominated a national focal point to respond to the survey. Data reflect expert opinion in the majority of cases. However, respondents to the survey were encouraged to consult with other technical experts in the field, and to support their data with scientific evidence.

CHAPTER 1. PSYCHOACTIVE SUBSTANCE USE: EPIDEMIOLOGY AND BURDEN OF DISEASE

1.1 Alcohol

Jürgen Rehm and Jayadeep Patra

Alcohol is possibly the oldest psychoactive substance used by mankind (McGovern, 2009). Currently, it is also the most prevalent psychoactive substance, although the majority of the world adult population abstains. Globally, 46% of all men and 73% of all women abstain from alcohol, and most of these persons have not consumed any alcoholic beverage during their entire lives. There are huge variations in abstention around the world. The overwhelming majority of people in a belt stretching from Northern Africa, over the Eastern Mediterranean, South Central Asia and South-East Asia to the islands of Indonesia abstain for reasons often attributable to religion and culture. In other parts of the world such as Europe, less than 20% of the population abstains on average.

The level of abstention is relatively strongly associated with the level of overall adult per capita consumption. Total adult per capita consumption is highest in countries in Eastern Europe where total adult per capita consumption ranges from 15 to 21 litres per year, and is lowest in Northern Africa, the Eastern Mediterranean, South Central Asia, South-East Asia and the Indonesian islands where also the majority of the population abstains.

The burden of disease attributable to alcohol

The burden of disease attributable to alcohol was based on the Comparative Risk Assessment (CRA) methods (Rehm, Klotsche & Patra, 2007; Rehm et al., 2009b) which were also used in the WHO Report on Global Health Risks to compare with other risk factors (WHO, 2009a). In 2004, 7.6% of the global burden of disease and injury was attributable to alcohol consumption among men and 1.4% to consumption among women. Neuropsychiatric disorders, including alcohol use disorders, account for 36.4% of all disability-adjusted life years (DALYs)¹ caused by alcohol (Rehm et al., 2009b).

Alcohol-attributable harm is determined not only by the overall level of consumption but also by the drinking pattern (e.g. by heavy drinking occasions) (Rehm et al., 2010). Both level and pattern of alcohol consumption are related to many disease categories, but alcohol use disorders, cancers, cardiovascular diseases, liver cirrhosis and injuries constitute the most important disease categories which are causally related to alcohol consumption (Rehm et al., 2009b). Globally, the Russian Federation and the surrounding countries – a region with high overall volume and detrimental drinking patterns – have the highest level of alcohol-attributable harm. Almost one out of every five years of life lost due to premature mortality or disability is attributable to alcohol in this region; for the Russian Federation this toll is even higher. Latin America is another region with a relatively high

¹ The sum of years of potential life lost due to premature mortality and the years of productive life lost due to disability.

impact from alcohol. The least alcohol-attributable harm can be found in Africa, the Eastern Mediterranean and in the southern part of Asia, especially in countries with predominantly Muslim populations. In evaluating these numbers it should be recognized, however, that these data are based on the CRA of the year 2000, in which the detrimental impact of alcohol on infectious diseases such as tuberculosis was not sufficiently established and the Global Burden of Disease study had fewer categories which resulted in exclusion of some of the impact of alcohol (e.g. on pancreatitis) (Rehm & Mathers, 2009). Inclusion of alcohol-attributable infectious disease categories would change the picture to a great extent (Rehm et al., 2009a; Rehm & Parry, 2009). Even without considering the effect of alcohol on infectious diseases, harmful use of alcohol is one of the most important contributors to the global burden of disease (WHO, 2009a) and most recently (2004) ranked third behind childhood underweight and unsafe sex.

Alcohol use disorders and global estimates

Alcohol use disorders comprise alcohol dependence and the harmful use of alcohol. Global estimates for alcohol use disorders are based on epidemiological studies which assess these disorders through diagnostic assessment instruments and define alcohol use disorders through international disease classification systems such as the International Classification of Diseases (ICD) and the Diagnostic and Statistical Manual of Mental Disorders (DSM) (Kehoe, Rehm & Chatterji, 2007; Rehm et al., 2009b).

The highest prevalence rates of alcohol use disorders in the population can be found in parts of Eastern and Central Europe (highest prevalence rates of alcohol use disorders in some countries reaching up to 16%), in the Americas (prevalence rates in some countries in this region reaching up to 10%), South-East Asia (prevalence rates reaching up to 10%) and in some countries in the Western Pacific (prevalence rates in some countries reaching up to 13%). In India, for example, in spite of high abstention rates with almost all women abstaining from alcohol, a pattern of frequent and heavy drinking is observed among those who drink, resulting in high rates of alcohol use disorders among drinkers (Prasad, 2009; Rehm et al., 2009b).

1.2 Illicit drugs

Louisa Degenhardt

Illicit drugs are used by only a minority of the global population. The United Nations Office on Drugs and Crime (UNODC) estimated that between 172 and 250 million people aged 15–64 years had used an illicit drug at least once in 2007 (UNODC, 2009). Cannabis was by far the most commonly used illicit drug (3.3–4.4% of the population aged 15–64 years), with the highest prevalence in North America, Western Europe and Oceania. Some 16–53 million people aged 15–64 years were estimated to have used amphetamines (0.4–1.2%), with the highest levels in South-East Asia. An estimated 16–21 million people used cocaine (0.4%–0.5%) with use concentrated in North America, followed by Western and Central Europe, and South America. The number of opiate users was estimated at 16–20 million, with the main drug trafficking routes out of Afghanistan having the highest levels of use (UNODC, 2009).

Those who use drugs once or twice have, at most, a very small increase in morbidity and mortality, with the concentration of harms occurring among those who use drugs regularly. The commonly used expression “problematic drug use” could be defined as corresponding to the WHO’s International Classification of Diseases (ICD) categories “harmful drug use” and “drug dependence” (WHO, 1993).

Risk factors for drug dependence

Studies examining the level of risk for dependent use among lifetime drug users are limited, but studies in the USA and Australia have suggested that perhaps one in five people who ever use an illicit drug might meet criteria for dependence at some point (Glantz et al., 2008; Hall et al., 1999). The extent of this risk varies across drug types, with greater risks for drugs with a rapid onset and shorter duration of effect. Using drugs by smoking or via injection carries greater dependence risk (Anthony, Warner & Kessler, 1994; Volkow et al., 2004; McKetin, Kelly & McLaren, 2006).

Risk factors for drug dependence may differ between countries, although few studies have directly examined this (Degenhardt et al., 2010). A study of initiation to use and progression to dependence in the WHO World Mental Health Surveys found a range of variables that were common to the development of illicit drug dependence among users (Degenhardt et al., 2010): earlier onset of drug use; using more types of illicit drugs; and onset before age 15 years of externalizing (e.g. conduct disorder) and internalizing mental disorders (e.g. depression) (Degenhardt et al., 2010). These findings are consistent with those from cohort studies in high-income countries, which have found that early onset drug use, and mental health problems, are risk factors for later dependent drug use (Toumbourou et al., 2007), and that mental health problems increase the risk of developing problem use if drug use begins. Less-studied risk factors include structural determinants such as high unemployment, poverty and social and cultural factors.

Global estimates of “problem drug use”

Global and regional estimates have been made of the number of “problematic drug users”. A systematic review of data on the prevalence of injecting drug use estimated

that, globally, 11–21 million people injected drugs¹ in 2007 (Mathers et al., 2008). In 2007, UNODC estimated that there were between 18 and 38 million “problem drug users” (i.e. injecting drug users or problem users of opioids, cocaine or amphetamine) (UNODC, 2009). “Illicit drug dependence” was assessed in the WHO’s World Mental Health Surveys, in 27 countries in five WHO regions (Kessler & Üstün, 2008), with significant geographic variation in rates of illicit drug use (Degenhardt et al, 2008) and drug dependence (Demyttenaere et al., 2004), and higher rates of drug dependence in developed countries (Kessler & Üstün, 2008). These differences may reflect a combination of actual differences, as well as cultural differences in the understanding of, and preparedness to report, illicit drug use and related problems in surveys.

To date, no estimates of the prevalence of specific forms of drug dependence have been made regionally and globally, and few countries have made estimates for specific drug types. This is a major gap in knowledge that severely limits our capacity to make evidence-based decisions about the extent of need for interventions to address drug dependence. Interventions shown to be effective differ in important ways across drug types, with opioid pharmacotherapy being the mainstay of treatment for heroin dependence, and psychosocial interventions being more appropriate for cannabis and psychostimulant dependence. There is a need to improve our understanding of these basic epidemiological questions about illicit drug use and dependence in order to improve our capacity to respond, nationally and globally.

¹ Injecting drug use: use of a drug by injection, which may be intravenous, intramuscular or subcutaneous.

1.3 Epidemiology of psychoactive substance use and burden of disease

(Figures 1.1–1.7)

Background

- Estimates of the numbers of deaths and the amounts of loss of healthy life for major diseases, including the use of alcohol and illicit drugs are provided by the Global Burden of Disease project which was initiated during the 1990s (WHO, 2004).
- Alcohol and drug-attributable DALYs represent a measure of overall disease burden, quantifying mortality and morbidity due to alcohol and illicit drug use in a single disease measure. The burden of disease expressed in DALYs quantifies the gap between the current health status of the population and an ideal situation where everyone lives to old age in full health (WHO, 2009a).

Salient findings

Prevalence of alcohol and drug use disorders in the population (point prevalence)

- Across countries, the point prevalence of alcohol use disorders (in the population aged 15 years and over) is generally higher than the point prevalence of drug use disorders in the same population and is generally higher among men than among women.
- Global prevalence rates of alcohol use disorders were estimated to range from 0% to 16%, with the highest prevalence rates to be found in Eastern Europe.
- Among males, the point prevalence of alcohol use disorders for males is estimated to be highest (i.e. $\geq 6.4\%$) in Eastern European countries, in parts of Asia and among countries in the Americas. Among females, the highest estimated prevalence rates of alcohol disorders (i.e. $\geq 1.6\%$) were found in Eastern European countries and in selected countries in the Americas and in the Western Pacific.
- Among men and women, the estimated prevalence of alcohol use disorders was found to be lowest in the African and Eastern Mediterranean regions.
- Global prevalence rates of drug use disorders were estimated to range from 0% to 3%, with the highest prevalence rates found in the Eastern Mediterranean Region.
- The highest estimated prevalence rates of drug use disorders among men ($\geq 1.6\%$) and women ($\geq 0.4\%$) were found in parts of the Americas. Selected countries in Africa, Eastern Mediterranean, Europe and the Western Pacific were found to have high rates of drug use disorders among men and women in addition.

Number of deaths and disability-adjusted life years lost

- Globally, approximately 39 deaths per 100 000 population are attributable to alcohol and illicit drug use, out of which 35 deaths are attributable to alcohol use, and four deaths to illicit drug use.
- The highest numbers of deaths due to alcohol and illicit drug use were found in Europe where 70 deaths per 100 000 population are attributable to alcohol use and approximately five deaths per 100 000 to illicit drug use.
- In almost all regions, numbers of deaths attributable to alcohol use are higher than those for illicit drug use. In the Eastern Mediterranean Region, however, nine deaths per 100 000 population are attributable to illicit drug use, and approximately four deaths per 100 000 population are attributable to alcohol use.
- Use of alcohol and illicit drugs accounts for almost 13 DALYs lost per 1000 population worldwide. Approximately 11 DALYs per 1000 population are lost due to alcohol use, and approximately two DALYs are lost due to illicit drug use.
- DALYs lost due to alcohol and illicit drug use were found to be highest in Europe (approximately 23 DALYs lost per 1000 population) and the Americas (approximately 18 DALYs lost per 1000 population).
- In the Eastern Mediterranean Region more DALYs are lost due to illicit drug use (four DALYs lost per 1000 population) than due to alcohol use (approximately 1.5 DALYs lost per 1000 population).
- The number of DALYs lost due to alcohol and illicit drug use varies by country income. Higher middle-income countries were found to have the greatest number of DALYs lost due to alcohol and illicit drug use (24 DALYs lost per 1000 population due to alcohol use and approximately three DALYs lost due to illicit drug use).

Notes and comments

- Prevalence estimates for alcohol and drug use disorders are standardized and comparable across countries and regions of the world. Prevalence data are taken from the Global Burden of Disease study (WHO, 2004).
- Alcohol use disorders included in the Global Burden of Disease analysis included alcohol dependence and harmful use of alcohol. Drug use disorders included in the Global Burden of Disease analysis included opioid dependence and harmful use of opioids, and cocaine dependence and harmful use of cocaine. The definitions of dependence and harmful use that were used were the ICD-10 definitions (WHO, 1993).
- As a single measure of disease burden, DALYs do not capture all dimensions of the health burden and do not take the suffering of patients and their relatives due to psychoactive substance use into account.

FIGURE 1.1
PREVALENCE OF ALCOHOL USE DISORDERS (%), ADULT MALES (15 YEARS AND ABOVE), 2004

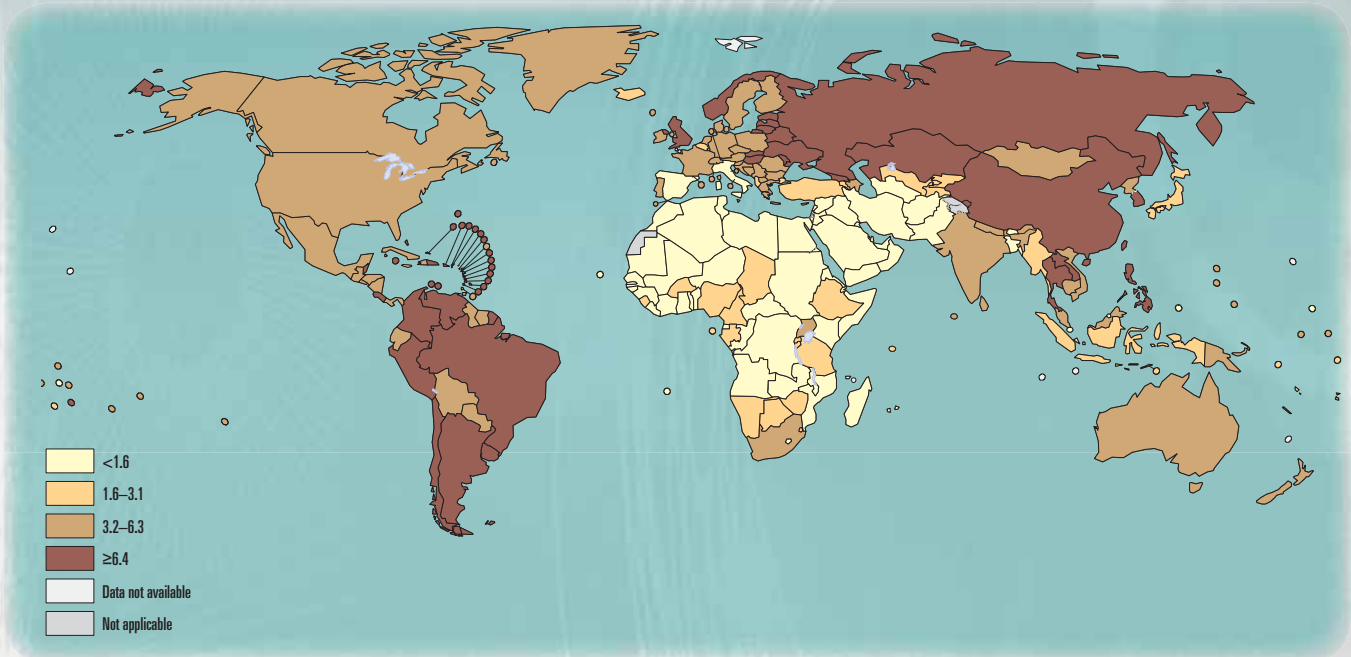
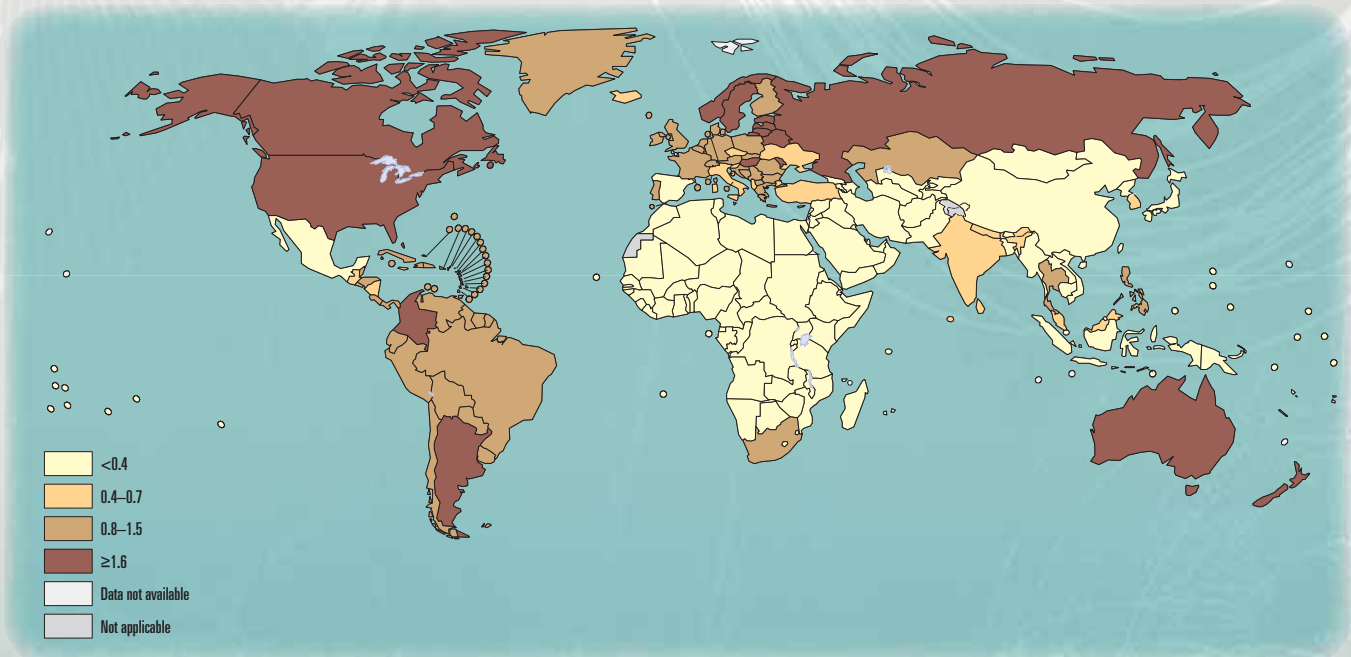


FIGURE 1.2
PREVALENCE OF ALCOHOL USE DISORDERS (%), ADULT FEMALES (15 YEARS AND ABOVE), 2004



The boundaries and names shown and the designations used on these maps do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

FIGURE 1.3
PREVALENCE OF DRUG USE DISORDERS (%), ADULT MALES (15 YEARS AND ABOVE), 2004

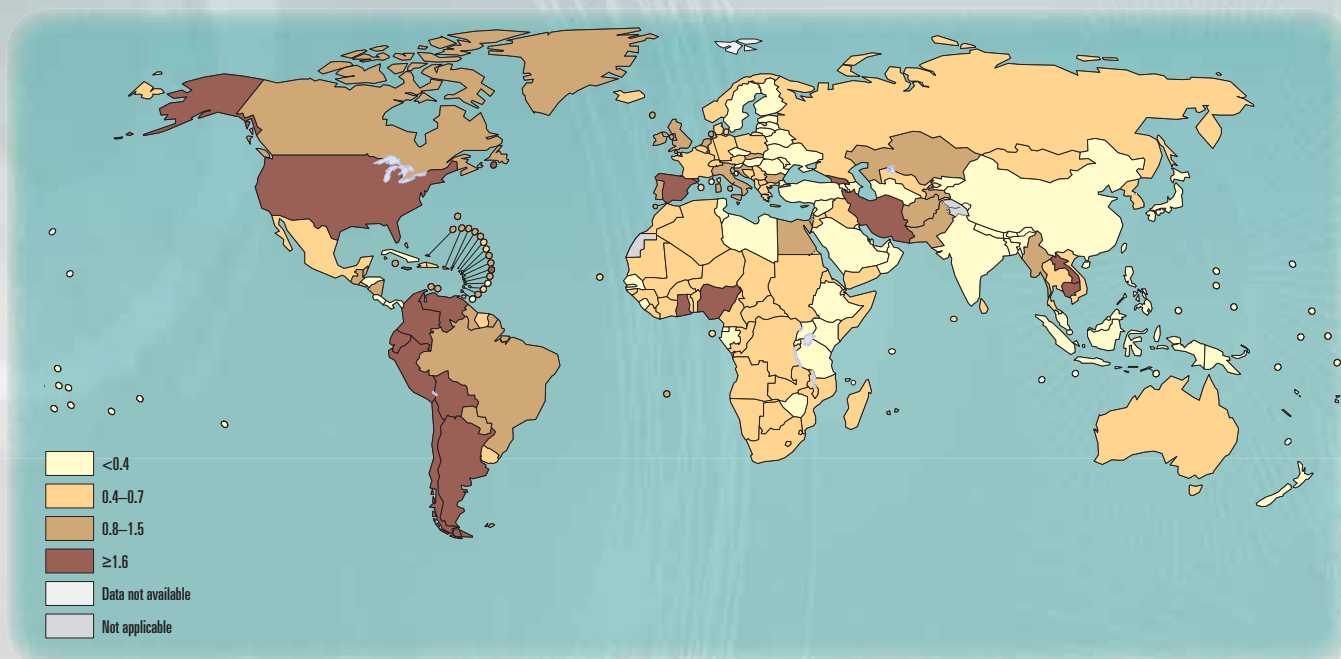
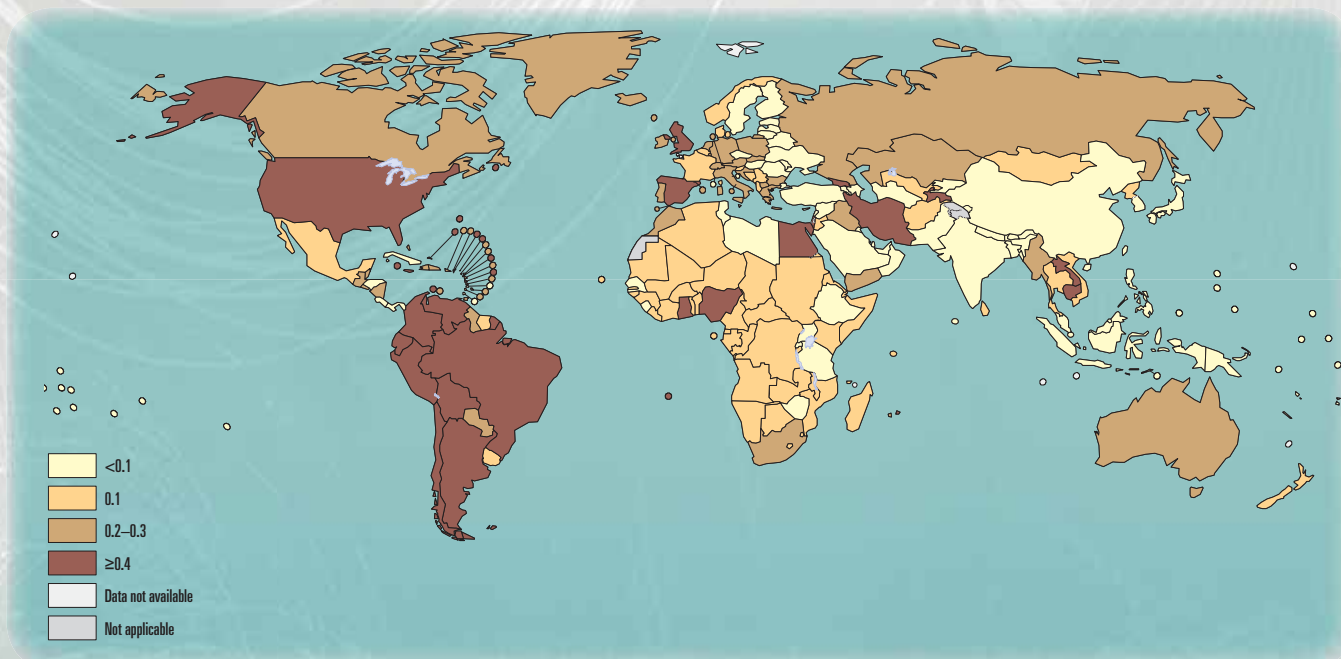


FIGURE 1.4
PREVALENCE OF DRUG USE DISORDERS (%), ADULT FEMALES (15 YEARS AND ABOVE), 2004



The boundaries and names shown and the designations used on these maps do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

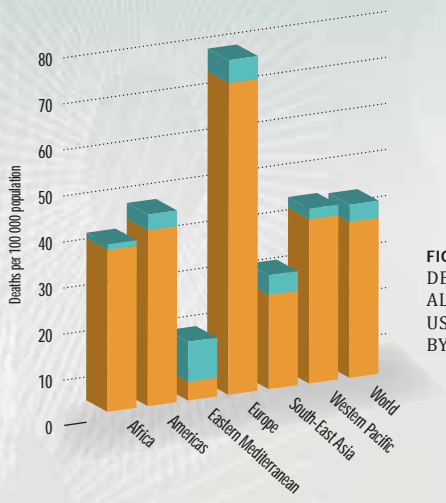
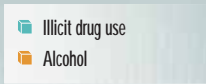


FIGURE 1.5
DEATHS ATTRIBUTABLE TO ALCOHOL AND ILLICIT DRUG USE, PER 100 000, BY REGION, 2004

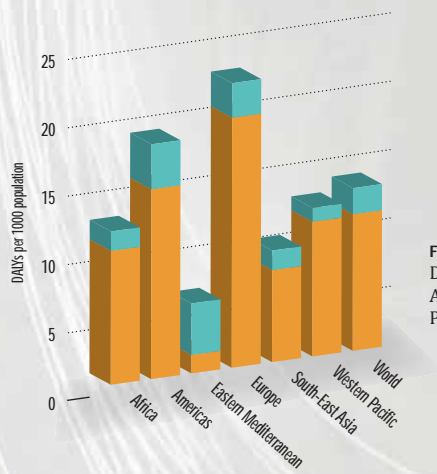


FIGURE 1.6
DALYs LOST BY ALCOHOL AND ILLICIT DRUG USE, PER 1000, BY REGION, 2004

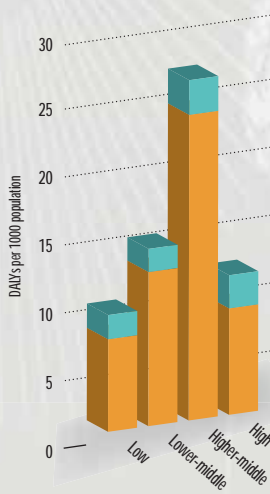


FIGURE 1.7
DALYs LOST BY ALCOHOL AND ILLICIT DRUG USE, BY INCOME GROUP, PER 1000, 2004

1.4 Main psychoactive substances used in the treatment population

(Figures 1.8–1.9)

Background

- Nominated focal points in countries were asked to report the main psychoactive substances accountable for entry into treatment.

Salient findings

- In the majority of countries (53.9%) alcohol was identified as the main psychoactive substance at entry into treatment. Alcohol was reported to be the main psychoactive substance responsible for treatment demand in the majority of countries in every region, with the exception of the Americas.
- The majority of countries in the Region of the Americas (50%) reported cocaine to be the main psychoactive substance at treatment entry.
- In the Eastern Mediterranean Region, alcohol and cannabis were identified by the majority of countries as being most frequently the main psychoactive substances at treatment entry. Opioids were reported as the main psychoactive substance at treatment entry in 20% of countries in the Eastern Mediterranean Region.
- In the African Region, cannabis appears to be the most frequent psychoactive substance at treatment entry in approximately 40% of countries.
- In the South-East Asia and European regions, opioids were identified as the most frequent psychoactive substance behind the demand for treatment in 42.9% and 26.5% of countries respectively.
- In the Western Pacific Region, cannabis and amphetamine-type stimulants (ATS) were reported to be the most frequent psychoactive substance accountable for treatment entry in 16.7% of countries.
- No country in the survey identified inhalants, sedatives or prescribed opioids as the main psychoactive substance at treatment entry among persons in treatment.
- In contrast to high-income and higher middle-income countries, cannabis appears to be the most frequent psychoactive substance accountable for treatment entry in around one third of low-income and lower middle-income countries in the survey. Besides this finding, there is no distinct effect of country income level on the main psychoactive substance at treatment entry across different income groups of countries.

Notes and comments

- Information on the main psychoactive substance at treatment entry was completed by 89 countries, just over half the number of countries that responded to the survey, probably reflecting the lack of data collection systems for treatment in many countries (see section 1.5).

- The question aimed to identify the single most common psychoactive substance behind substance use disorders that cause entry into treatment in countries. The combination of multiple psychoactive substances accountable for treatment entry by patients – such as the combined use of alcohol and other psychoactive drugs – was not specifically examined.
- Other main psychoactive substances in the treatment population include local or regional-specific psychoactive drugs. A number of African countries indicated that the main psychoactive substance at treatment entry was khat, which is included under this category.
- Treatment data may not necessarily correlate closely with data on the prevalence of the respective disorder and underlying substance use in populations. Treatment data may be influenced by what treatment is available, and may also reflect the patient group with substance use disorders who seek treatment, and the perceived value of treatment. An example is the Eastern Mediterranean Region where 40% of countries identified alcohol as being the most common substance at treatment entry despite the lower rates of alcohol use in these countries (see section 1.3).

FIGURE 1.8
MAIN PSYCHOACTIVE SUBSTANCE ACCOUNTABLE FOR TREATMENT ENTRY IN COUNTRIES, BY REGION, 2008

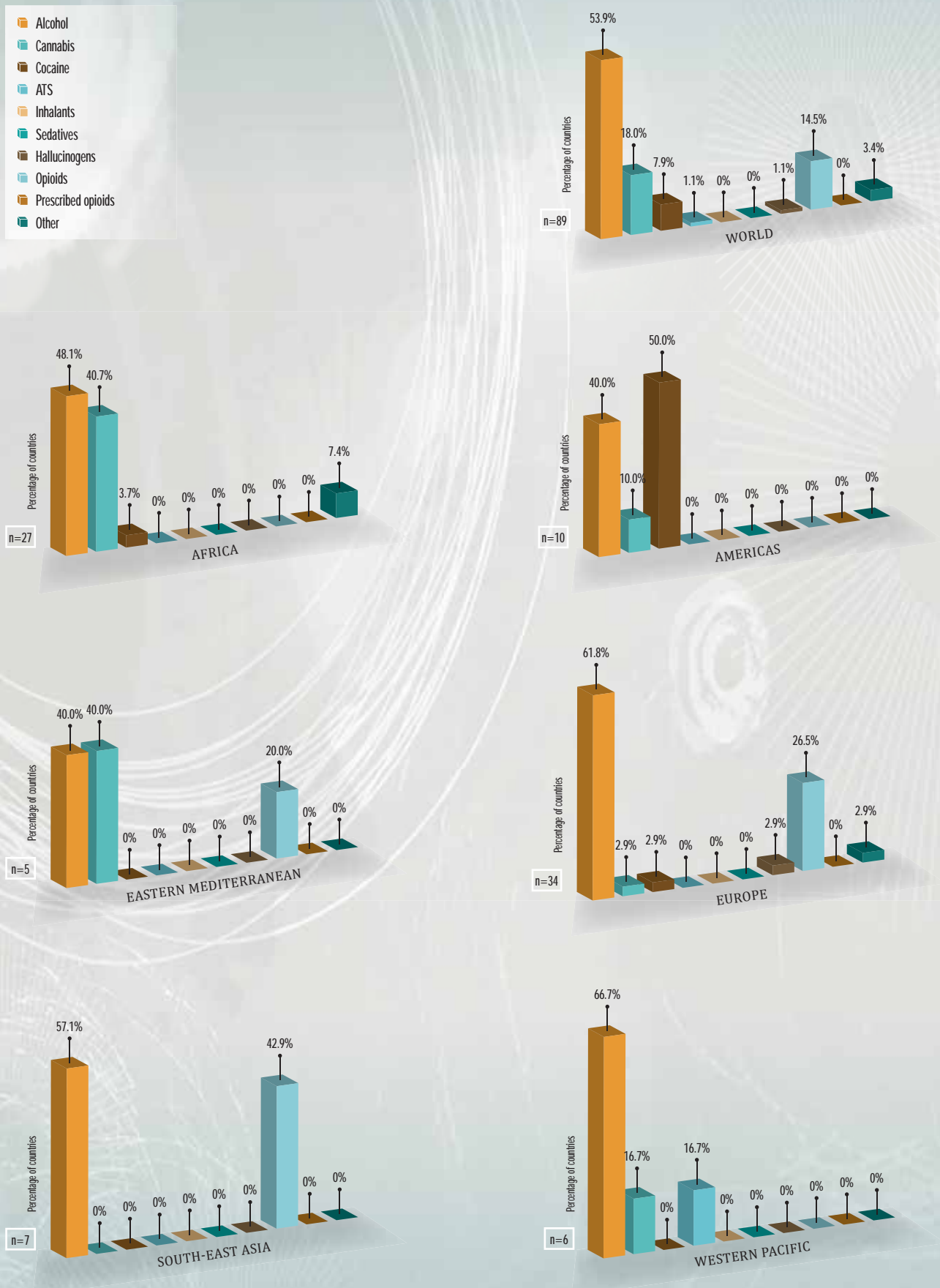
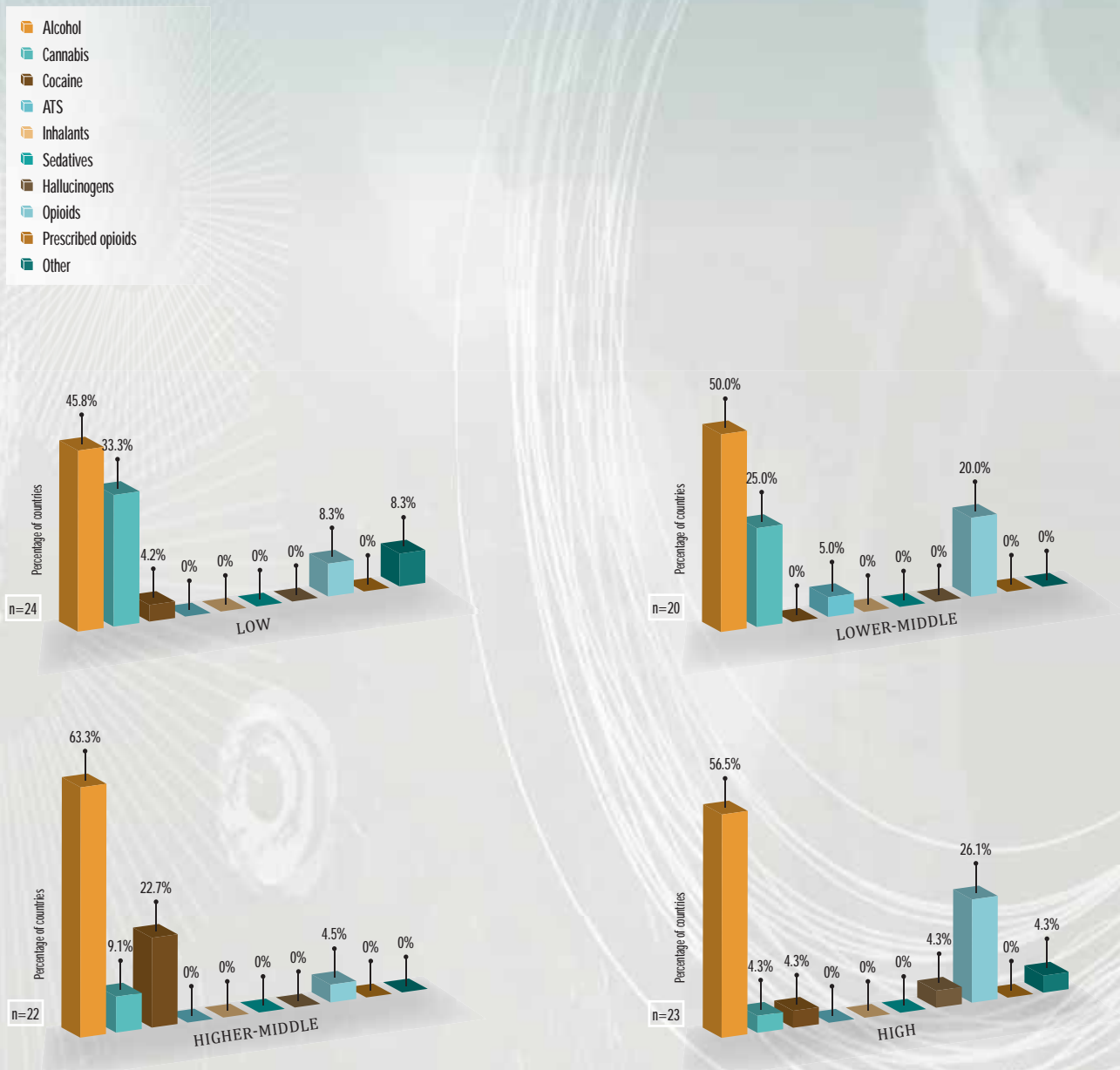


FIGURE 1.9
MAIN PSYCHOACTIVE SUBSTANCE ACCOUNTABLE FOR TREATMENT ENTRY IN COUNTRIES, BY INCOME GROUP, 2008



1.5 Substance use monitoring and surveillance

(Figures 1.10–1.15)

Background

- Nominated focal points in countries were asked about the presence of national data collection systems that collect epidemiological data on alcohol and drugs, as well as treatment data from health systems in their respective areas. No request was made regarding the existence of information at subnational level.
- Epidemiological data can be obtained through national surveillance systems. These can be composed of national surveys collecting information on alcohol and drug use among the adult or the adolescent population.
- Treatment data relating to alcohol and drug use can be obtained from national service delivery data collection systems that compile admission and discharge data, the number of outpatient contacts and similar service information from the health care system.

Salient findings

- Less than 50% of countries reported having national data collection systems collecting epidemiological data or treatment data.
- The regions with the highest proportion of countries (approximately 60%) reporting national epidemiological data collection systems for alcohol and drug use were the Americas and Europe.
- The lowest proportions of countries reporting national surveys on alcohol and drug use among adolescents were in Africa (5–7%), in Eastern Mediterranean (less than 20%) and in South-East Asia (less than 20%).
- Treatment data on both alcohol and drug use disorders appear to be most often collected in the Americas and in Europe, with around 65–77% of countries in these regions reporting the collection of treatment data. Collection of treatment data on alcohol and drug use disorders seems to be balanced across regions, except in the Eastern Mediterranean and South-East Asia regions where higher proportions of countries indicated collection of treatment data on drug use than on alcohol use.
- There is a strong effect of country income level on the presence of national data collection systems across different income groups. For example, national epidemiological data collection systems have been reported more frequently among countries in the higher middle-income and high-income groups (50–76%), than in the low-income and lower middle-income groups (11–31%).

Notes and comments

- National epidemiological data collection systems may focus on alcohol and drug use exclusively. However, epidemiological data collection systems which cover a range of health issues may not have been detected by this survey.
- Information on alcohol and drug use among youth can be collected among students going to school. A number of countries reported national school health surveys as a way of collecting information on alcohol and drug use among young people.
- National data collection systems on epidemiology and treatment of substance use and substance use disorders appear to be lacking. This is especially evident in low-income and lower middle-income countries, which may hamper efforts to plan effective responses.

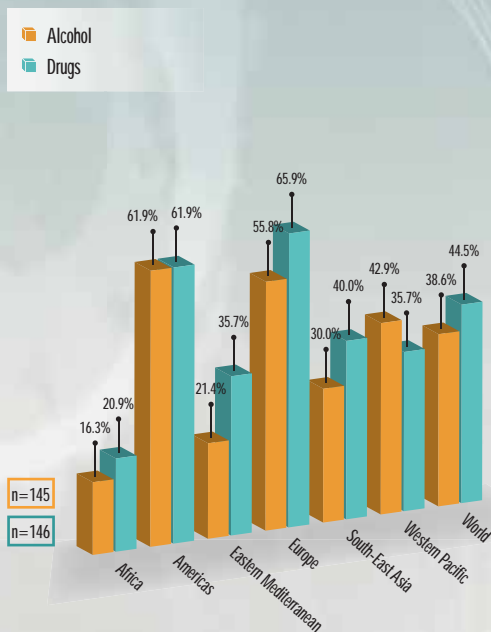


FIGURE 1.10
PROPORTION OF COUNTRIES WITH A NATIONAL EPIDEMIOLOGICAL DATA COLLECTION SYSTEM FOR SUBSTANCE USE, BY REGION, 2008

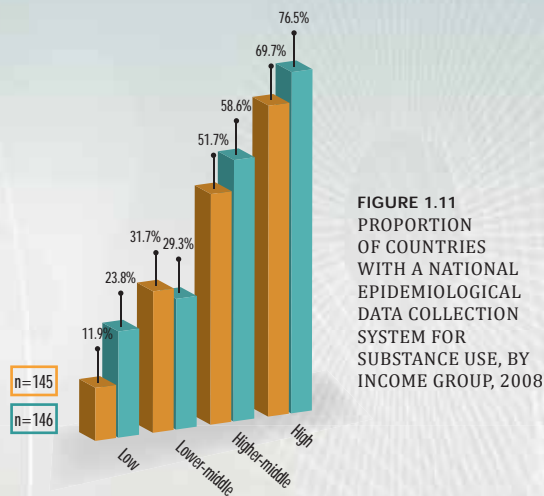


FIGURE 1.11
PROPORTION OF COUNTRIES WITH A NATIONAL EPIDEMIOLOGICAL DATA COLLECTION SYSTEM FOR SUBSTANCE USE, BY INCOME GROUP, 2008

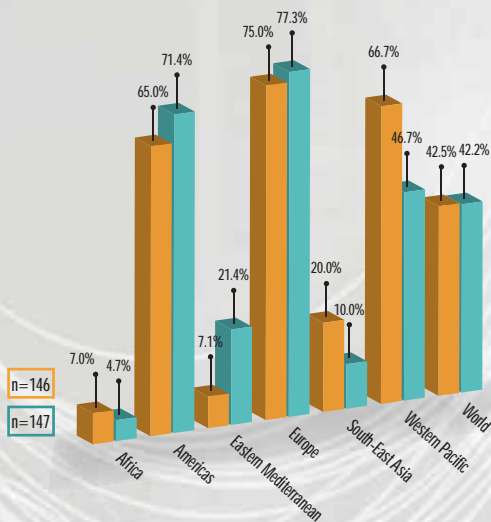


FIGURE 1.12
PROPORTION OF COUNTRIES WITH A NATIONAL SURVEY ON ALCOHOL AND DRUG USE AMONG ADOLESCENTS, BY REGION, 2008

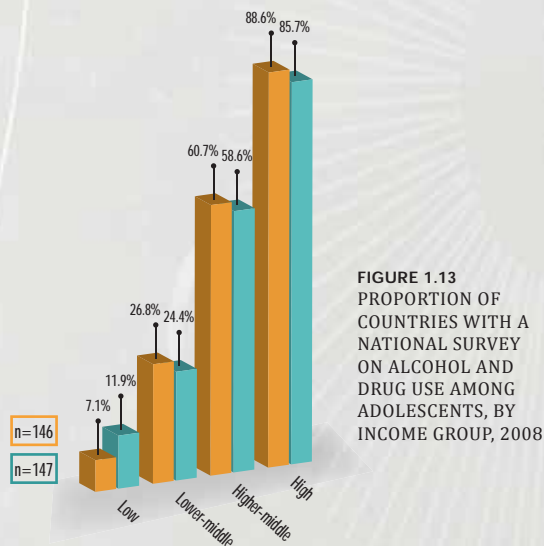


FIGURE 1.13
PROPORTION OF COUNTRIES WITH A NATIONAL SURVEY ON ALCOHOL AND DRUG USE AMONG ADOLESCENTS, BY INCOME GROUP, 2008

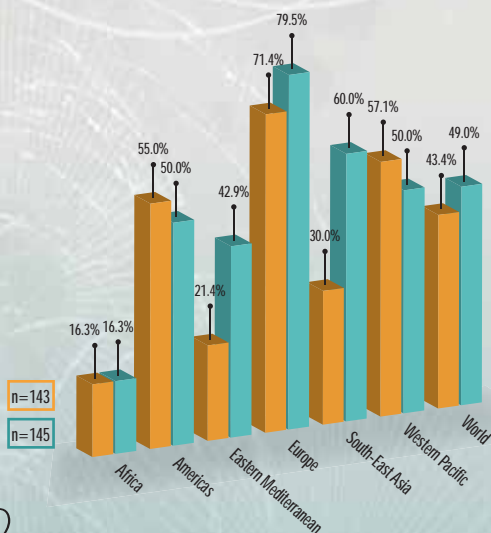


FIGURE 1.14
PROPORTION OF COUNTRIES WITH A NATIONAL SUBSTANCE ABUSE TREATMENT DATA COLLECTION SYSTEM, BY REGION, 2008

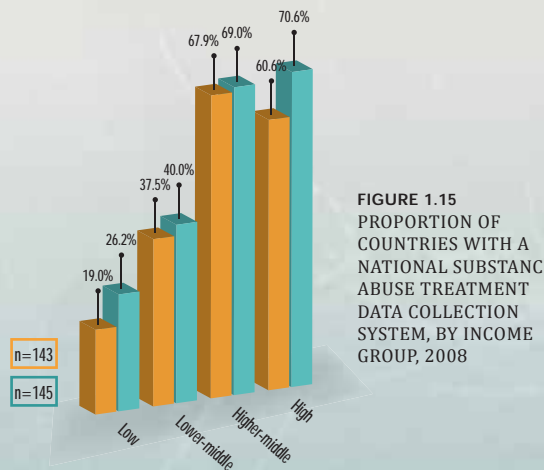


FIGURE 1.15
PROPORTION OF COUNTRIES WITH A NATIONAL SUBSTANCE ABUSE TREATMENT DATA COLLECTION SYSTEM, BY INCOME GROUP, 2008

CHAPTER 2. HEALTH SERVICES

2.1 Treatment of substance use disorders within health services

Thomas F Babor and Kerstin Stenius

Overview

Since the end of the Second World War there has been a consistent growth of specialized medical, psychiatric or social services for individuals with substance use disorders, particularly in the more affluent parts of the world where disorders due to alcohol and illicit drugs are prevalent (Mäkelä et al., 1981). In low-income and lower middle-income countries, specialized treatment services are often lacking and the general health care systems are not prepared to manage patients with substance use disorders. There is good evidence that treatment can reduce the health burden attributable to substance use and possibly the amount of alcohol and drugs consumed in a country, even if treatment alone cannot completely solve the alcohol or drug problem (Babor et al., 2010a; Smart & Mann, 2000; Reuter & Pollack 2006).

Attempts to build service systems that adequately respond to substance use disorders in the population face several challenges. While epidemiological knowledge has increased, it is still incomplete in many countries, making it difficult to estimate the amount and type of treatment that is needed in a particular country. Consequently, treatment services are often established without any overall planning or a general concept of how they fit present and future population needs. Treatment services tend to be fragmented, without sufficient coordination between different services. Access to treatment can vary according to location, financial resources and type of substance. Services are sometimes provided in a way that increases stigma and at times they may lack the necessary respect for basic human rights.

ATLAS-SU data

The ATLAS figures presented in this chapter provide a global view of key indicators of treatment services and systems within the six WHO regions. As such, they are a valuable source of information about how treatment for substance use disorders is financed and organized at national and regional levels. Although two-thirds of the WHO Member States included in the survey report having a government unit responsible for alcohol and drug treatment services, only 45.8% of the countries have an annual budget appropriation for treatment programmes, and in many areas that budget is combined with funding allocations for mental health services. Financing mechanisms vary by WHO region, but most countries use tax revenues, user fees and private insurance to pay for alcohol and drug services.

Low-income countries are less likely to have a government unit for alcohol and drug treatment and a dedicated treatment budget that is separate from the mental health budget. Tax funding is more important in higher middle-income and high-income countries, while out-of-pocket financing is more common in the poorer countries. In high-income countries specialized services play the most important role in first treatment, while mental

health plays a more important role in treatment provision in low-income countries (for both alcohol and drugs). The availability of both inpatient and outpatient treatment is much higher in the more affluent countries, even if there is a relative lack of availability in many of these countries. There is a large difference between the low-income and high-income countries in the median number of beds available for alcohol and drug treatment. In addition, specialized treatment for people with substance use disorders and infectious diseases is often not delivered, with the data showing a lack of treatment capacity for persons with HIV/AIDS, especially in the WHO African Region.

Towards a public health model

As suggested by these data, countries differ markedly in the extent, organization and nature of the health services provided to persons with substance use disorders. Although there has been a considerable amount of clinical research on specific therapeutic interventions, little attention has been devoted to the optimal amount, type and organization of services necessary to meet the public health needs of a particular country. Nevertheless, recent comparative research and descriptive studies have begun to focus on such critical issues as availability, accessibility, coordination, service quality, cost-effectiveness and degree of coerciveness (Babor, Stenius & Romelsjo, 2008). Much of this research can be characterized in terms of system qualities, which are defined by linkages between different facilities and levels of care, and by the extent of integration with other types of services, such as primary health care, mental health, and mutual help organizations (Gossop, 1995; Klingemann, Takala & Hunt, 1992; 1993; Klingemann & Hunt, 1998).

According to a public health model proposed by Babor, Stenius & Romelsjo (2008), treatment policies affect system qualities by specifying not only where services are located (e.g. separate alcohol and drug services, or combined alcohol and drug services with or without mental health services), but also how they are organized and integrated. System qualities include equity (the extent to which services are equally available and accessible to all population groups), efficiency (the most appropriate mix of services) and economy (the most cost-effective services). These qualities in turn influence the general effectiveness of a system of services. When they are available and accessible to persons with substance use disorders, the cumulative impact of these services should translate into population health benefits, such as reduced mortality and morbidity, as well as benefits to social welfare, such as reduced unemployment, disability, crime, suicide and health care costs.

These considerations suggest the need for a public health view of treatment services – one that avoids an exclusive focus on expensive residential, medical or psychiatric care in favour of a broader system of services that includes self-help, outpatient treatment, harm reduction, and preventive health services such as screening and brief intervention delivered in primary health care. Although long-term residential care for some patients may be warranted, most people with substance use disorders can be managed with a combination of outpatient treatment and continuing care with the support of mutual help organizations (Babor et al., 2010a).

Conclusion

Health services for substance use disorders form a vital part of effective national responses to the burden of disease and disability resulting from substance use disorders. While information on the structure and functioning of these services is needed to guide the development and modification of service systems, this information is often not available in low-income and middle-income countries. The ATLAS data collected for this report not only represent an important first step in the development of reliable data on treatment services at an international level but they also point to the need for more comprehensive methods of data collection and analysis. Continued efforts to collect user-friendly treatment service data could provide a basis for improved service planning and could stimulate system reform in countries attempting to maximize their health services for persons affected by substance use disorders.

2.2 Government administration and budget of treatment services for substance use disorders

(Figures 2.1–2.4)

Background

- Nominated focal points were asked about the presence of a special government unit or the presence of a governmental official in their countries responsible for substance use disorder treatment services.
- In addition, focal points were asked to provide information about the presence of a specific budget line in the annual budget of the government which could be allocated for actions directed towards the treatment of substance use disorders.

Salient findings

Government unit for substance use disorder treatment services

- A government unit or a government official responsible for substance use disorder treatment services was reported by 66.2% of surveyed countries. For the majority of these countries (50%), the government unit was taking care of alcohol and drug use disorder treatment services together. Separate government units for alcohol treatment services and drug use disorder treatment services exist in a few countries only. Few countries (7%) reported having a government unit for the treatment of drug use disorders only. No country in the survey reported having only a government unit focusing on the treatment of alcohol use disorders.
- The presence of government units for the treatment of alcohol and drug use disorders appears to be least likely among countries in the African Region.
- There seems to be an effect of country income level on the presence of government units for substance use disorder treatment services across different income groups of countries. Countries in the higher income groups report more frequently on the presence of government units for substance use disorder treatment services than countries in the lower income groups.

Budget line for treatment services

- Less than half of the countries reported having a budget line allocated for actions directed towards the treatment of substance use disorders.
- Specific budget lines for the treatment of substance use disorders appear to be most common in South-East Asia (70%) and in Western Pacific (66.6%). The lowest proportion of specific budget lines reserved to finance alcohol and drug use disorder treatment services were reported among countries in the African Region (32.6%).
- Some countries reported having budget lines which are exclusively allocated to financing treatment services for drug use disorders. However, no country in the survey reported having budget lines allocated to finance treatment services for alcohol use disorders only.

- There is no clear country income effect on the presence of budget lines for substance use disorder treatment services across different income groups of countries.
- The majority of low-income countries appear to finance substance use disorder treatment services through an integrated budget line (i.e. a budget line which is reserved for financing mental health, alcohol and drug use disorder treatment services together). The presence of an integrated budget line seems to decrease with increasing country income.

Notes and comments

- A third of responding countries reported having no government unit responsible for substance use disorder treatment services. A government unit responsible for mental health treatment services which includes substance use disorders might, however, still be present in such countries.
- Budget lines specifically allocated to the treatment of substance use disorders seem to be absent, even in higher middle-income and high-income countries.
- The presence of a budget line does not mean that information is available about the amount of financial resources that are ultimately allocated to substance use disorder treatment services.

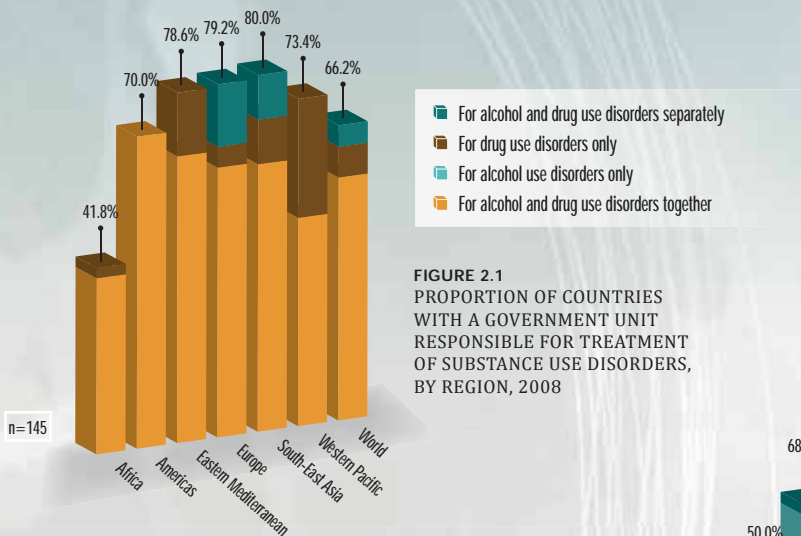


FIGURE 2.1
PROPORTION OF COUNTRIES WITH A GOVERNMENT UNIT RESPONSIBLE FOR TREATMENT OF SUBSTANCE USE DISORDERS, BY REGION, 2008

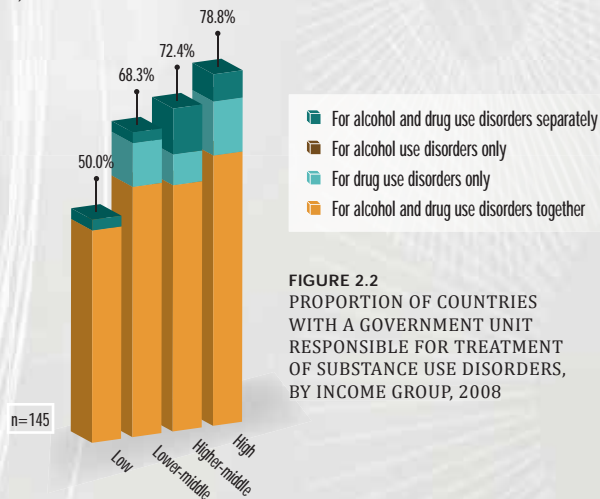


FIGURE 2.2
PROPORTION OF COUNTRIES WITH A GOVERNMENT UNIT RESPONSIBLE FOR TREATMENT OF SUBSTANCE USE DISORDERS, BY INCOME GROUP, 2008

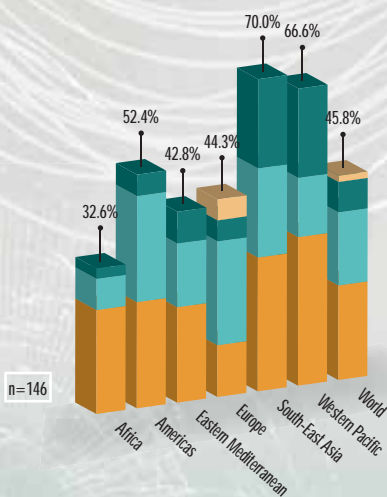
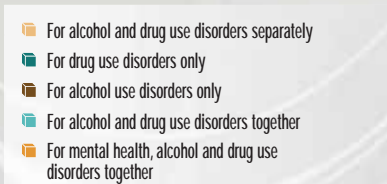


FIGURE 2.3
PROPORTION OF COUNTRIES WITH A BUDGET LINE IN THE ANNUAL BUDGET FOR TREATMENT OF SUBSTANCE USE DISORDERS, BY REGION, 2008

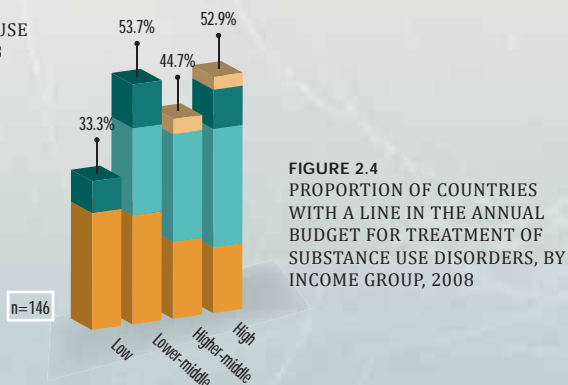


FIGURE 2.4
PROPORTION OF COUNTRIES WITH A LINE IN THE ANNUAL BUDGET FOR TREATMENT OF SUBSTANCE USE DISORDERS, BY INCOME GROUP, 2008

2.3 Financing treatment services for substance use disorders

(Figures 2.5–2.8)

Background

- Nominated focal points were asked to rank the three most common funding or financing methods for the treatment services of alcohol and drug use disorders in their countries.
- Different sets of figures are presented in this section:
 - Figs. 2.5 and 2.7 present the foremost methods in countries of funding the treatment of alcohol and drug use disorder treatment services.
 - Figs. 2.6 and 2.8 indicate the relative importance of the three most common methods in countries of funding the treatment of alcohol and drug use disorders, presenting this information across different income groups of countries.

Salient findings

- Countries identified tax-based funding, out-of-pocket payments and social health insurance as being among the foremost methods of funding treatment for alcohol as well as drug use disorders.
- In Africa, approximately 40% of countries reported out-of-pocket payments to be the main funding method for alcohol and drug use disorder treatment services. Across the regions, however, out-of-pocket payments were also reported to be the main financing method for alcohol and drug use disorder treatment from a high proportion of countries in the Americas (approximately 41%) and in Eastern Mediterranean (33% for alcohol disorder treatment, 45% for drug use disorder treatment).
- A high proportion of countries in Europe reported that social health insurance and tax-based funding were the foremost methods of financing alcohol disorder treatment services (47% and 42% respectively) and drug use disorder treatment services (42% and 45% respectively).
- The bar graphs presenting the relative importance of the three most important financing methods for alcohol and drug use disorder treatment services indicate that tax-based funding, out-of-pocket payments and NGOs appear to be the first, second and third most frequent funding methods for alcohol and drug use disorder treatment services in the majority of countries responding to the survey.
- Out-of-pocket payments seem to play a major role in funding substance use disorder treatment services for a high number of low-income and lower middle-income countries. This appears to be in contrast to high-income countries in which out-of-pocket payments were reported to be among the first and second most common financing method in less than 10% of responding countries.
- A high proportion of higher middle-income countries reported tax-based funding to be the main financing method for alcohol and drug use disorder treatment services.

- The biggest proportion of high-income countries finance alcohol and drug use disorder treatment services through tax-based funding and social health insurance. Financing alcohol and drug use disorder treatment services through social health insurance seems to increase with increasing country income.

Notes and comments

- In many countries, no single financing method for substance use disorder treatment services seems to be used exclusively. Countries appear to combine several methods to fund treatment for substance use disorders.
- In low-income and lower middle-income countries, treatment services appear to be financed primarily with out-of-pocket payments. A number of people with alcohol and drug use disorders and their families may, however, not have sufficient financial resources to pay for substance use disorder treatment. This may restrict access to treatment for a large part of the population.

FIGURE 2.5
FOREMOST METHOD IN COUNTRIES OF FUNDING THE TREATMENT OF ALCOHOL USE DISORDERS, BY REGION, 2008

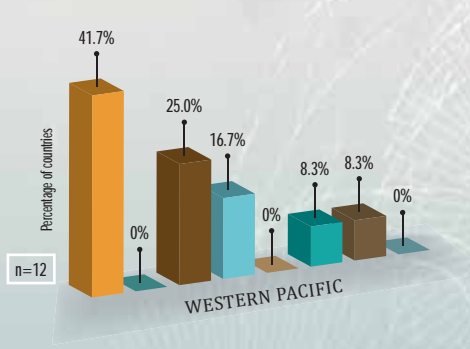
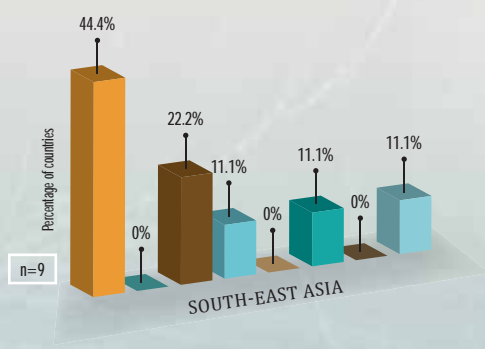
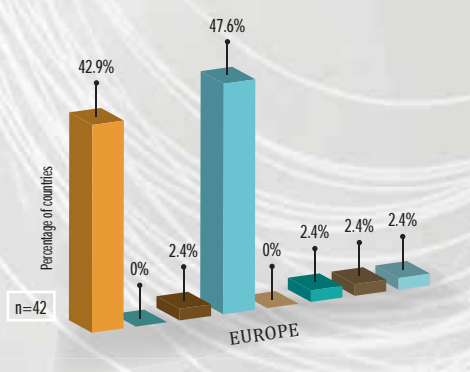
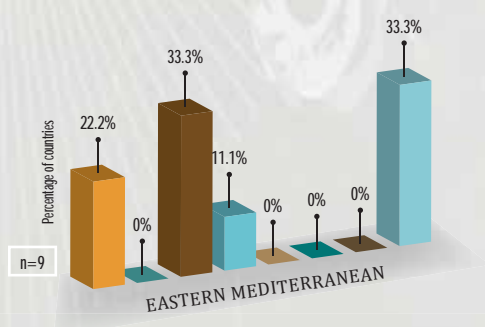
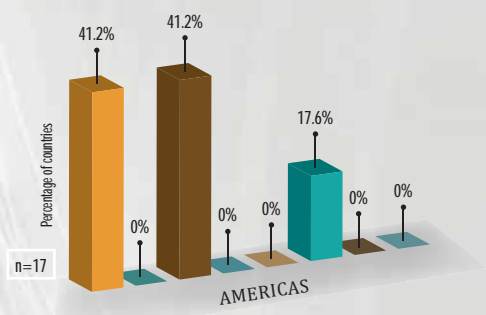
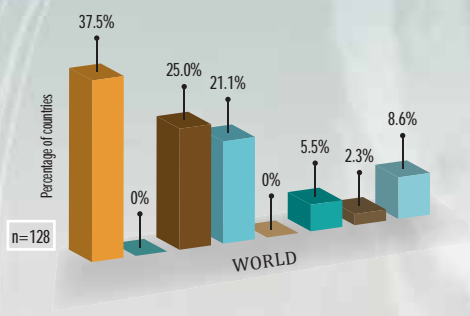
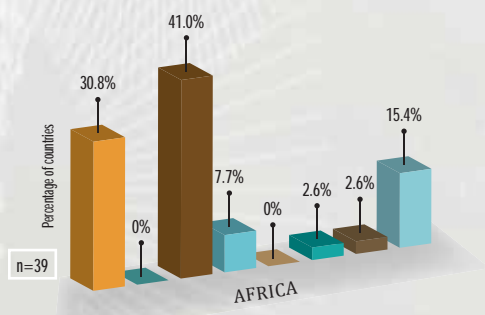
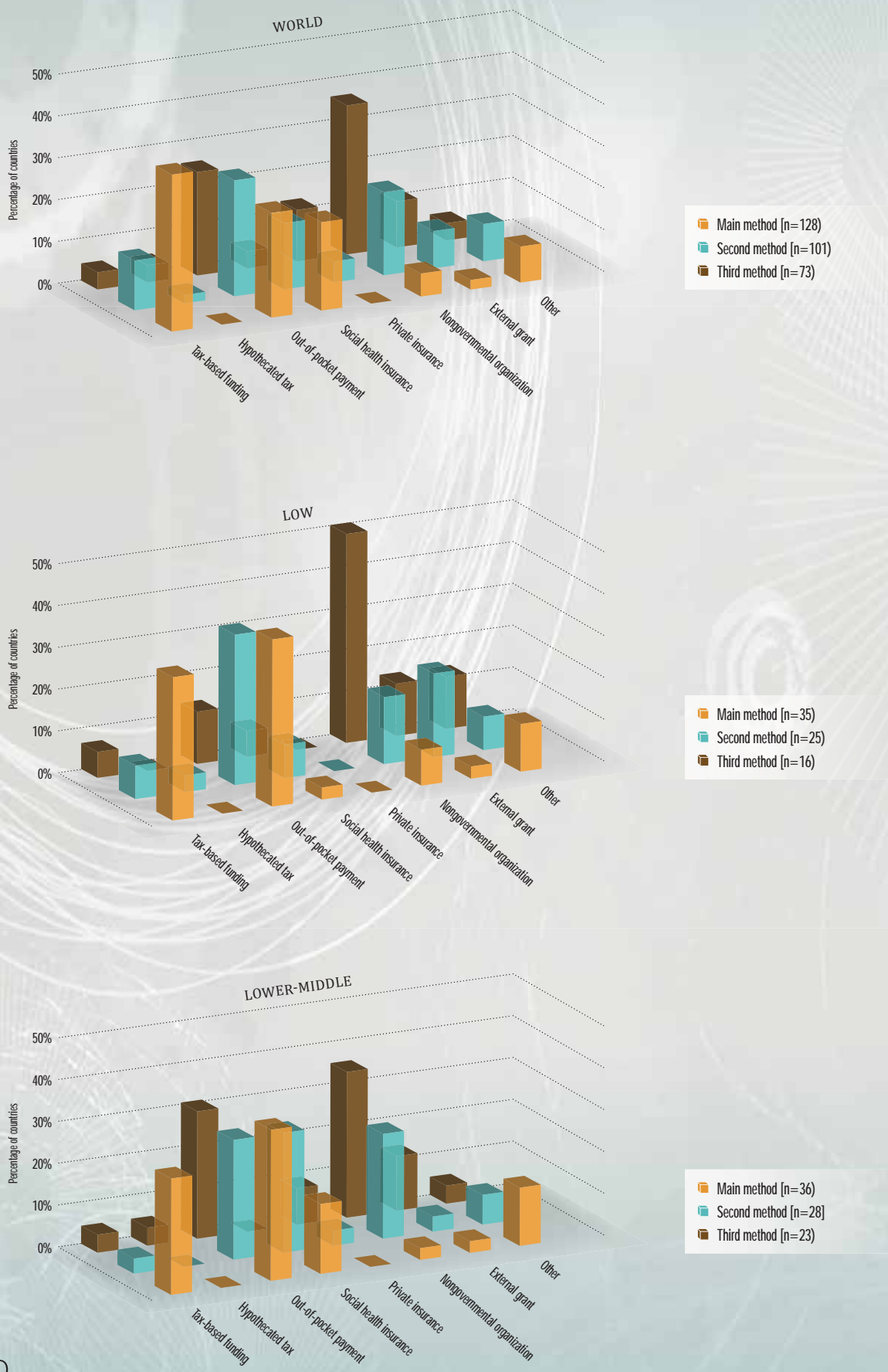


FIGURE 2.6
THREE MOST COMMON METHODS IN COUNTRIES OF FUNDING THE TREATMENT OF ALCOHOL USE DISORDERS, BY INCOME GROUP, 2008



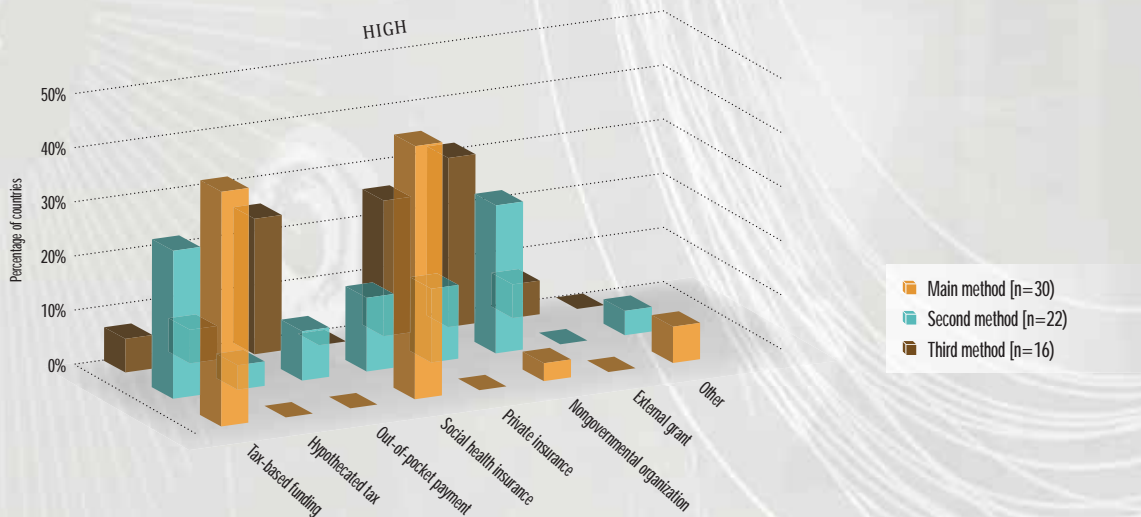
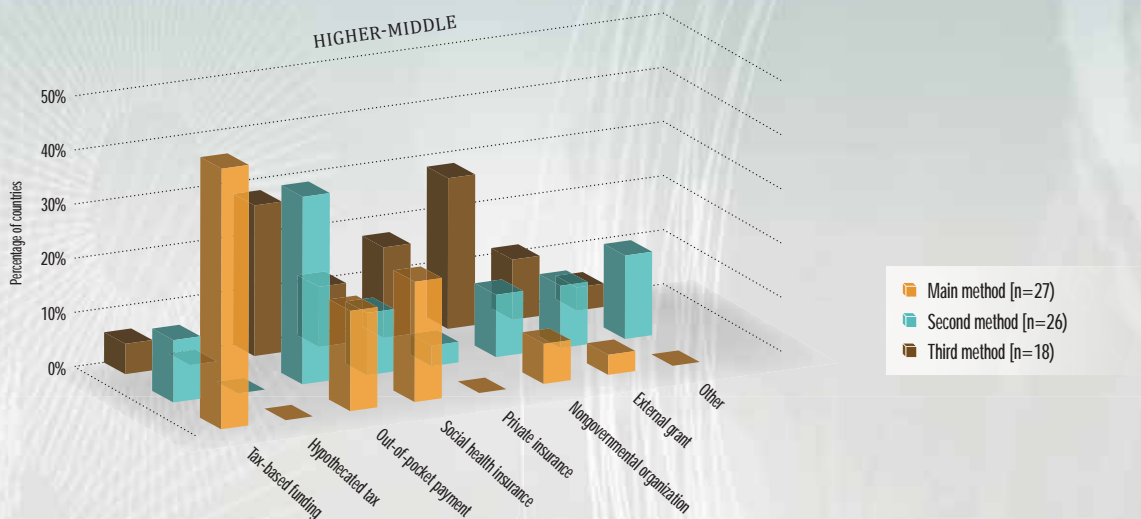


FIGURE 2.7
FOREMOST METHOD IN COUNTRIES OF FUNDING THE TREATMENT OF DRUG USE DISORDERS, BY REGION, 2008

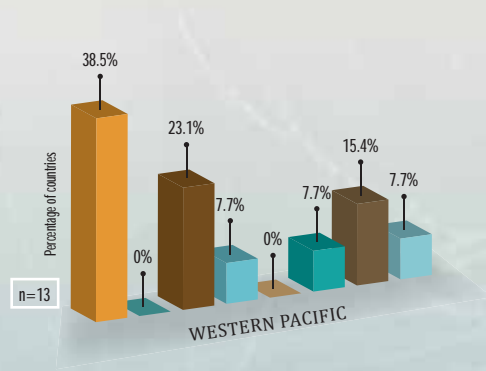
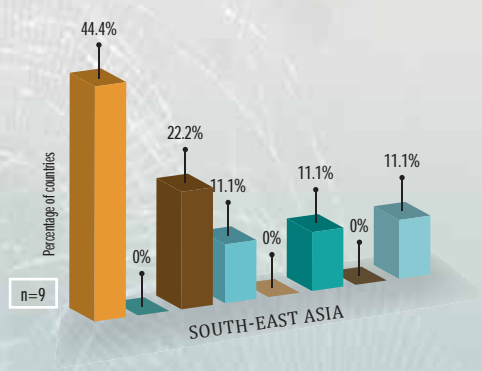
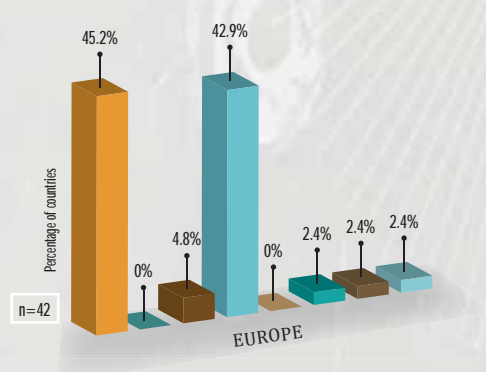
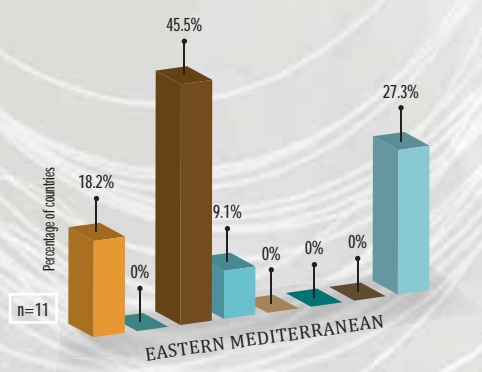
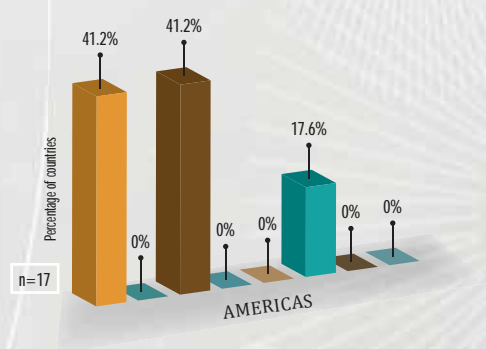
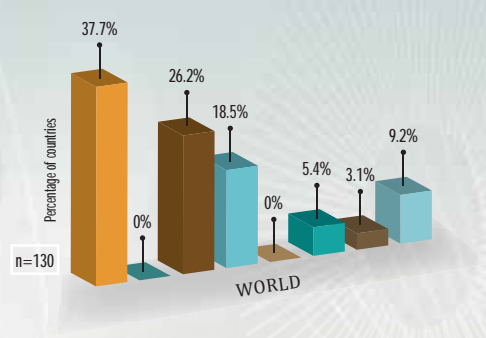
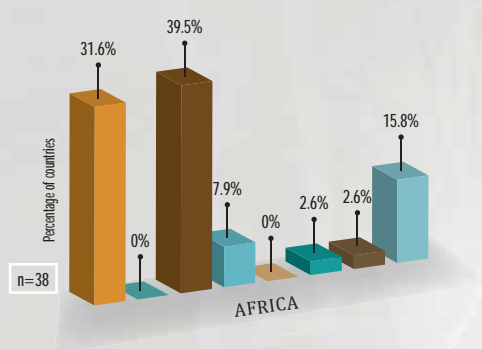
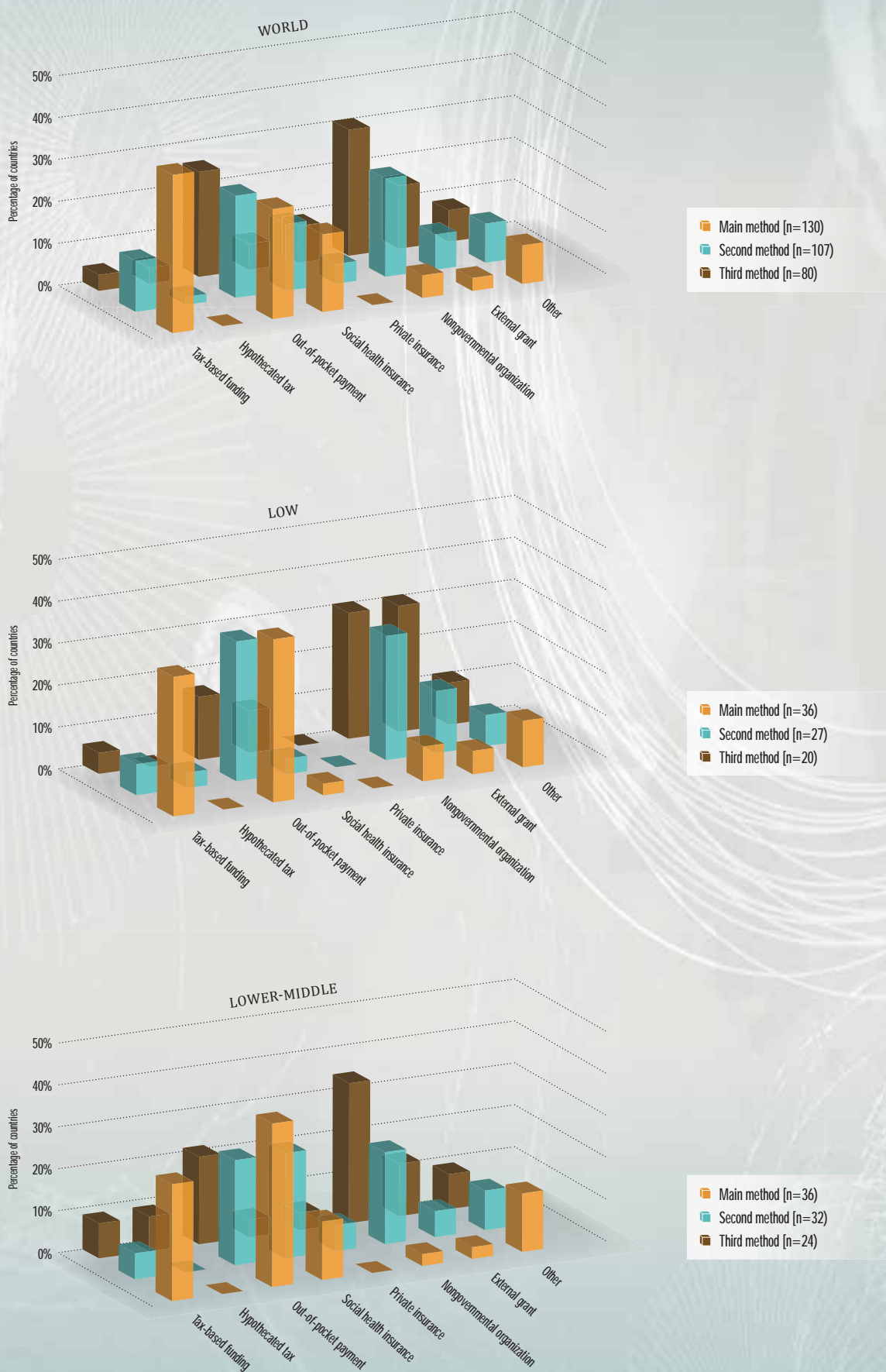
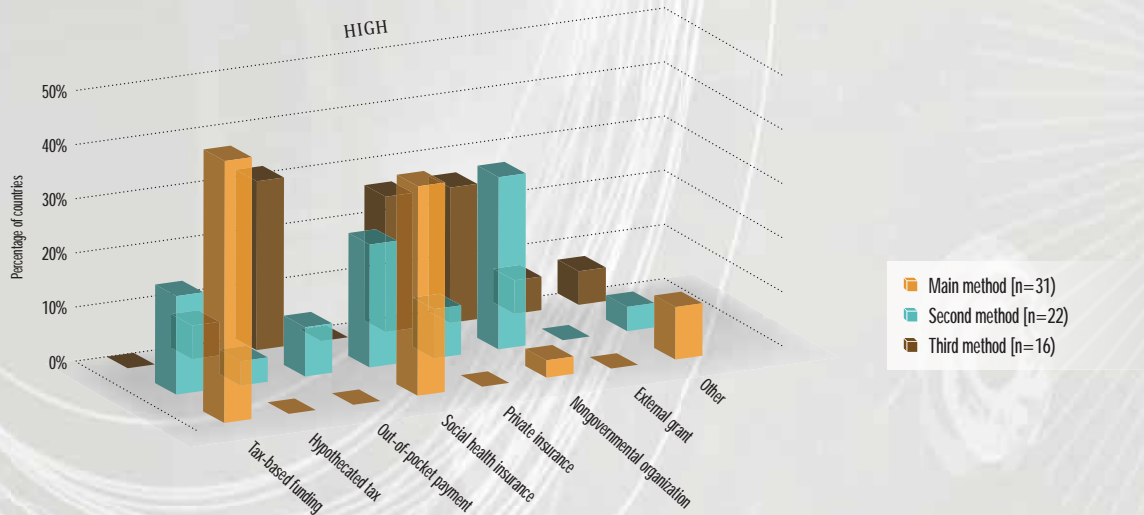
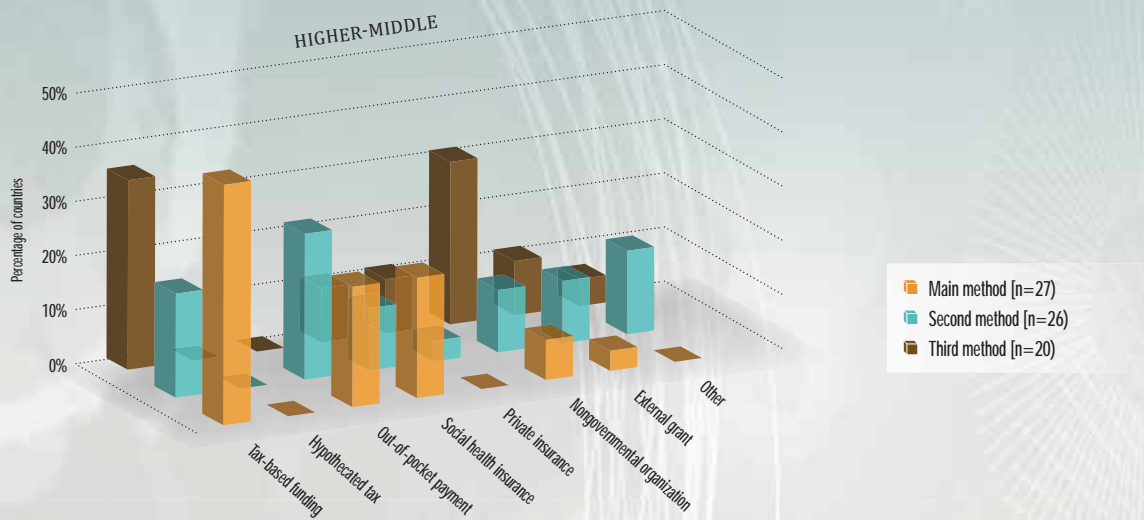


FIGURE 2.8
THREE MOST COMMON METHODS IN COUNTRIES OF FUNDING THE TREATMENT OF DRUG USE DISORDERS, BY INCOME GROUP, 2008





2.4 Treatment settings for alcohol and drug use disorders

(Figures 2.9–2.12)

Background

- Nominated focal points were requested to indicate the most commonly used treatment settings for persons with alcohol and drug use disorders in their countries. In the context of this report, the treatment settings were: specialized treatment services for alcohol and drug use disorders, mental health services, general health services (such as treatment delivered in district hospitals), primary health care, and other treatment services.
- Different sets of figures are presented in this section:
 - The pie graphs (Figs. 2.9 and 2.11) present the most common settings in countries for the treatment of alcohol disorders and drug use disorders respectively.
 - The bar graphs (Figs. 2.10 and 2.12) indicate the relative importance of the three most common treatment settings in countries, presenting this information across different income groups of countries.

Salient findings

- Nominated focal points in countries reported a variety of treatment settings for persons with alcohol and drug use disorders. With few exceptions, all treatment settings are used for the treatment of alcohol and drug use disorders across different income groups of countries.
- In the majority of responding countries (39.8%), mental health services are the most common treatment setting for alcohol use disorders.
- A higher proportion of countries reported specialized treatment services to be the main setting for the treatment of drug use disorders (51.5%) than for alcohol use disorders (34.6%).
- Approximately 10% of countries in the survey reported primary health care to be the most commonly used setting for treatment of alcohol and drug use disorders.
- In high-income countries, specialized treatment services for the treatment of drug use disorders seem to play a prominent role, with almost 90% of high-income countries reporting specialized services to be the main setting for the treatment of drug use disorders.
- A number of countries reported traditional medicine to be the main treatment method for alcohol and drug use disorders. Traditional medicine is included under the category “other treatment settings”.

Notes and comments

- Treatment of alcohol and drug use disorders in surveyed countries involved different treatment settings with mental health services and specialized alcohol and drug services as main providers of treatment for people with alcohol and drug use disorders. The role of primary health care is still limited.
- The majority of low-income countries identified mental health services to be the main setting for alcohol and drug use disorder treatment. The importance of mental health services as the most common treatment setting for alcohol and drug use disorders appears to decrease with increasing country income, which is especially evident for the treatment of drug use disorders.
- The importance of specialized treatment services in treating alcohol and drug use disorders gains in importance as a country's income level rises.
- Because the majority of focal points for the ATLAS survey are working in the specialist system, there may have been a tendency to overemphasize the role of the specialist system in provision of treatment for substance use disorders.

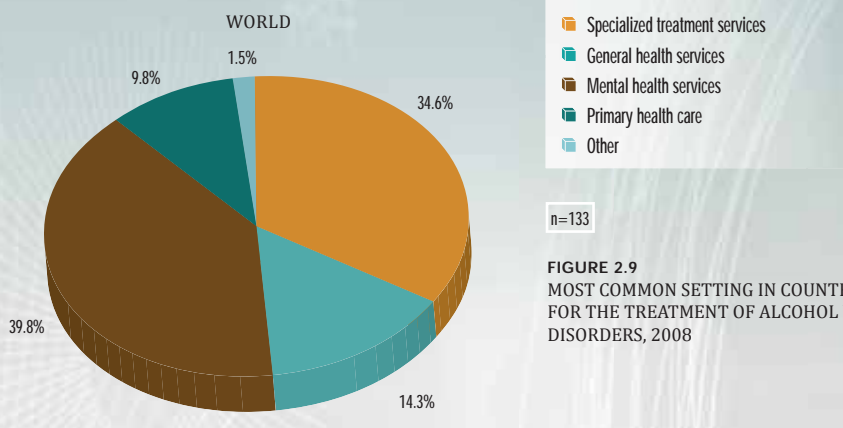
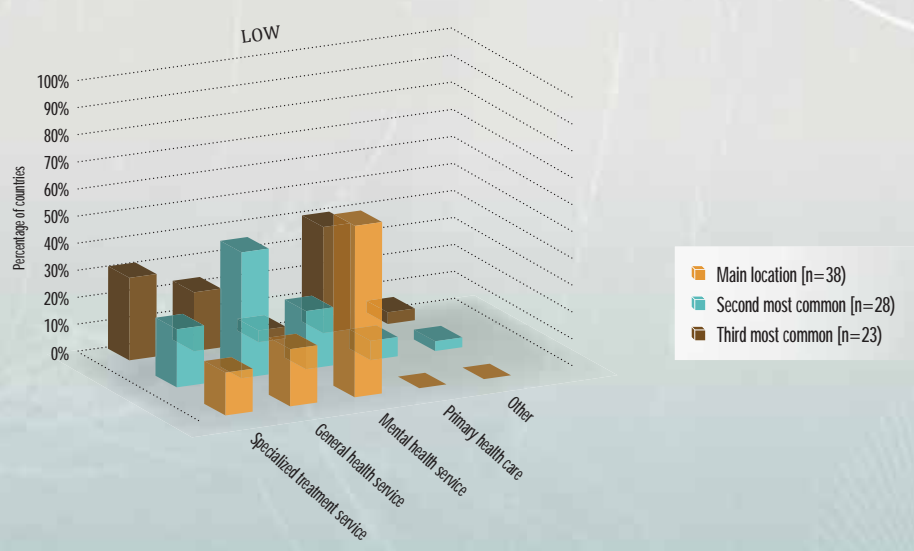
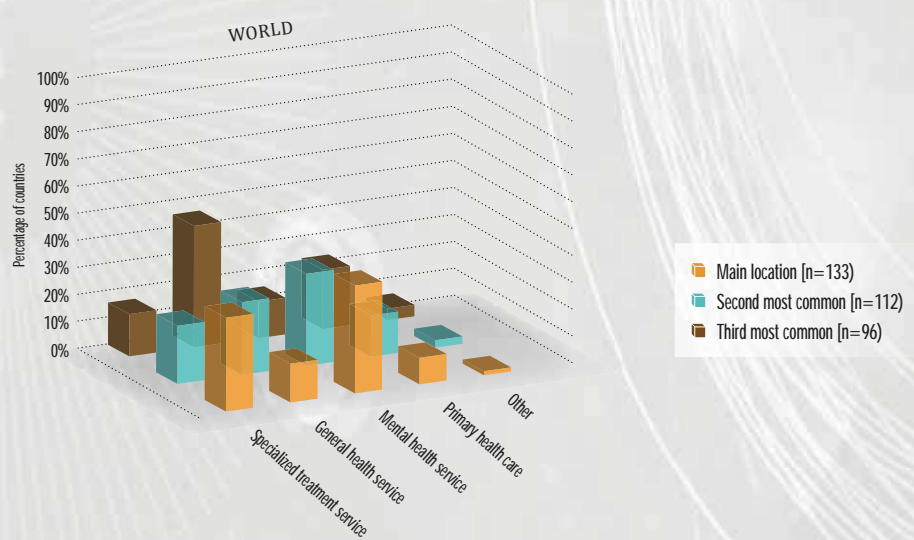
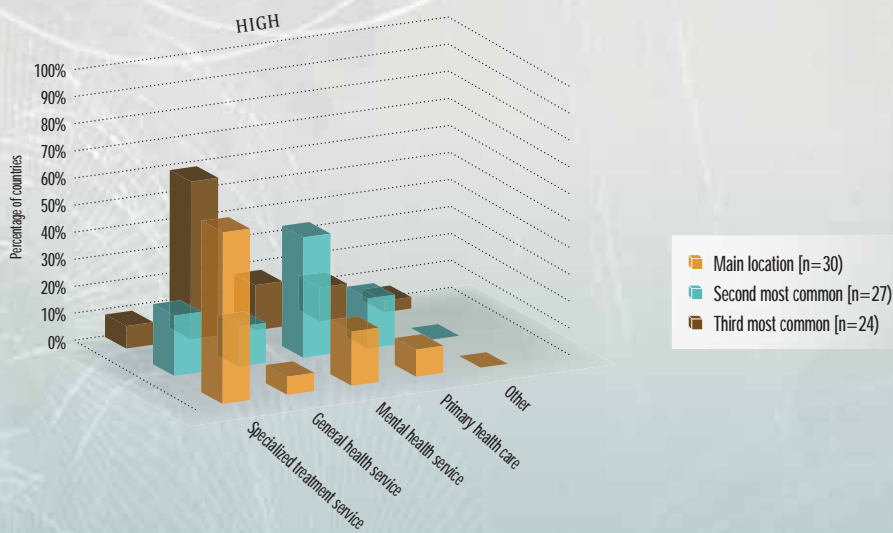
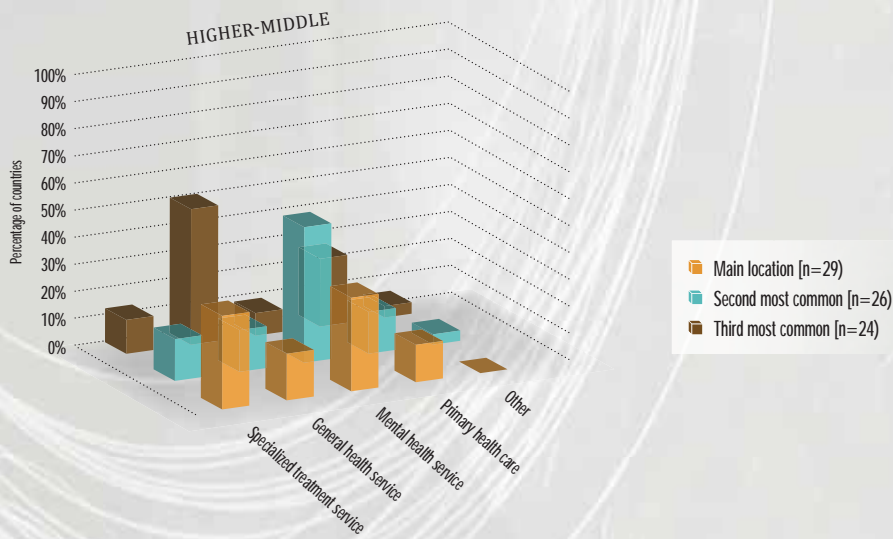
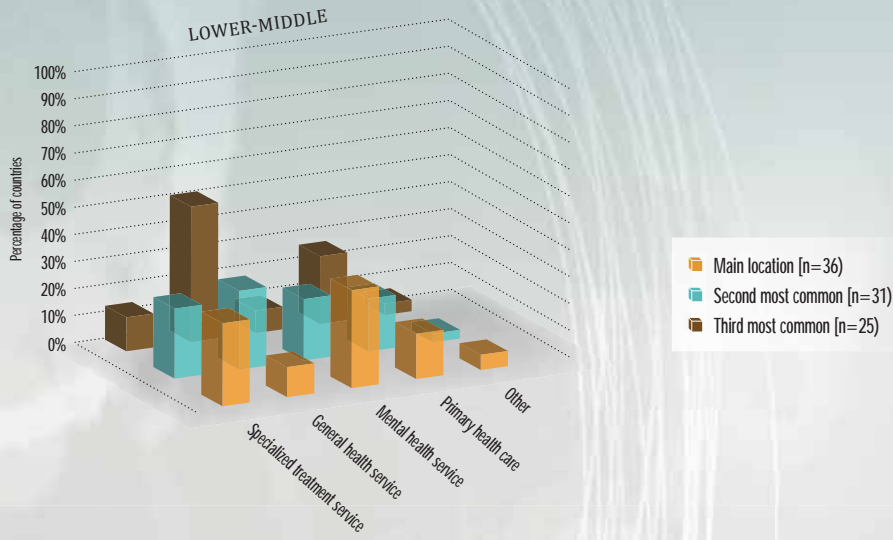


FIGURE 2.9
MOST COMMON SETTING IN COUNTRIES FOR THE TREATMENT OF ALCOHOL USE DISORDERS, 2008

FIGURE 2.10
THREE MOST COMMON SETTINGS IN COUNTRIES FOR THE TREATMENT OF ALCOHOL USE DISORDERS, BY INCOME GROUP, 2008





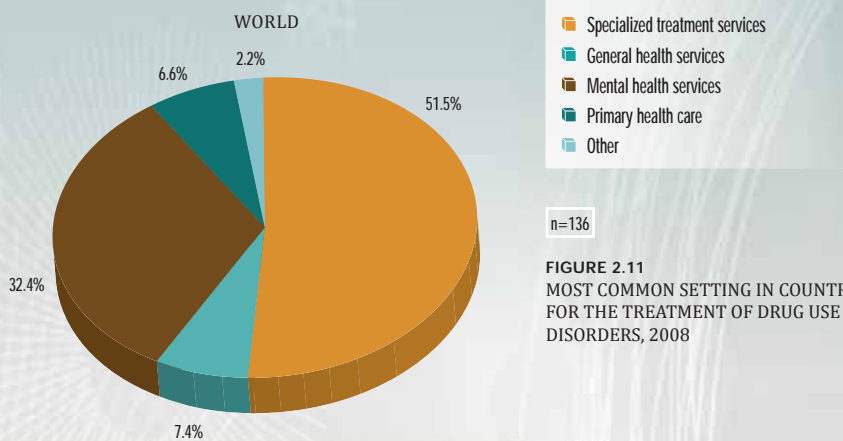
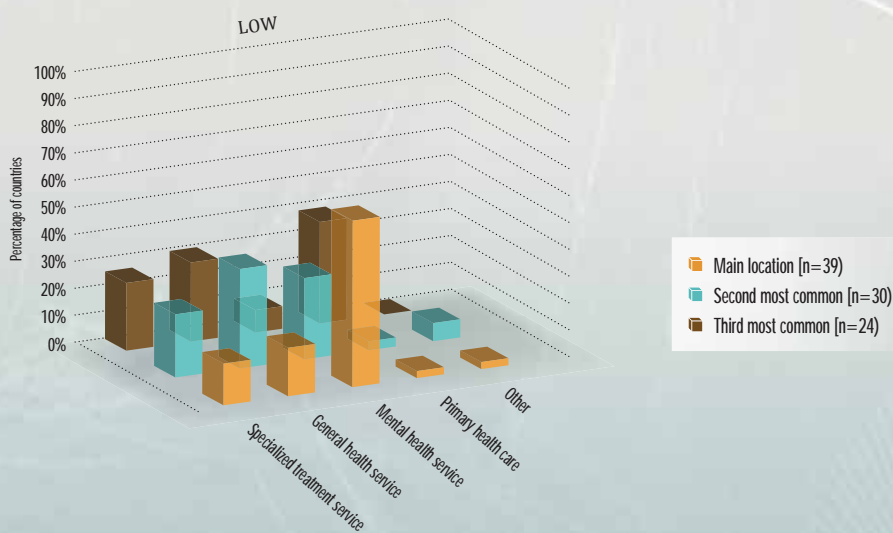
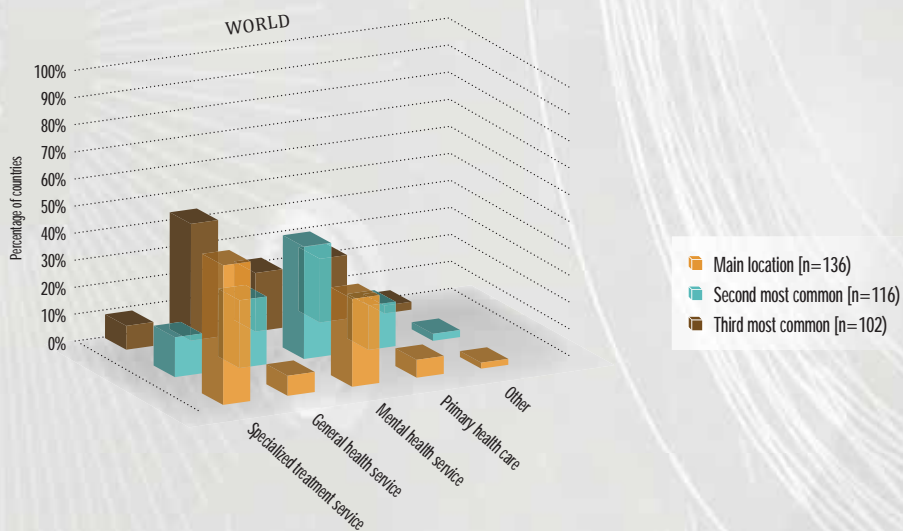
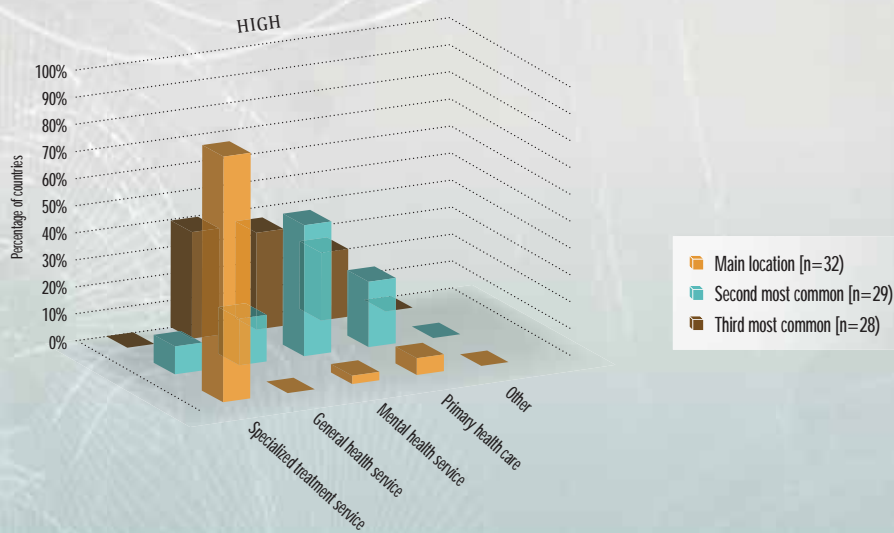
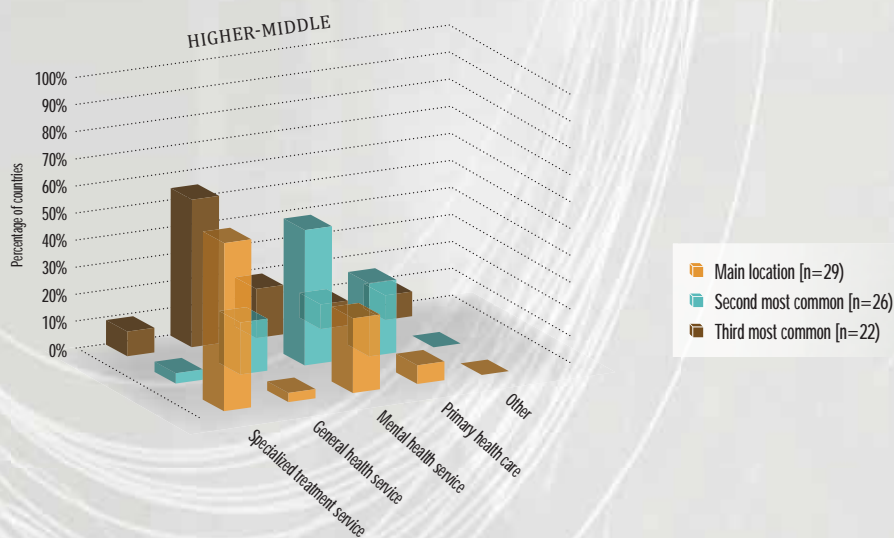
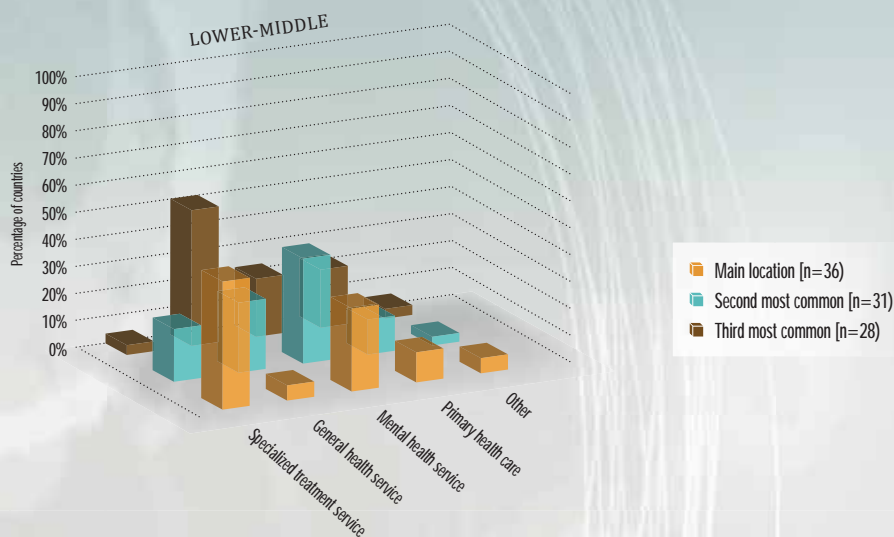


FIGURE 2.11
MOST COMMON SETTING IN COUNTRIES
FOR THE TREATMENT OF DRUG USE
DISORDERS, 2008

FIGURE 2.12
THREE MOST COMMON SETTINGS IN COUNTRIES FOR THE TREATMENT OF DRUG USE DISORDERS, BY INCOME GROUP, 2008





2.5 Treatment services and coverage of alcohol and drug use disorder treatment

(Figures 2.13–2.23)

Background

- Focal points were requested to indicate the presence of different treatment services available for the treatment of alcohol and drug use disorders. In the context of this report, treatment services were categorized as: inpatient medical detoxification, outpatient treatment and long-term residential rehabilitation (for alcohol and drug use disorders), and opioid agonist maintenance therapy (for the treatment of opioid dependence).
- The number, distribution and accessibility of treatment services for alcohol and drug use disorders may vary considerably in countries, and within regions. Nominated focal points were therefore asked to indicate the coverage of the population in need with these services (i.e. to estimate the coverage of persons with alcohol and drug use disorders in their countries receiving these services).

Salient findings

Presence of treatment services for substance use disorders

- Among different treatment services, inpatient detoxification for alcohol and drug use disorders appears to be frequently present in countries, and was reported to be present in over 90% of countries responding to the survey.
- Long-term residential rehabilitation and opioid agonist maintenance therapy for opioid dependence appear to be least present of the treatment services presented. The presence of opioid agonist maintenance therapy for opioid dependence was reported in 44.6% of countries.
- With the exception of long-term residential rehabilitation and opioid agonist maintenance therapy, the presence of treatment services for alcohol and drug use disorders did not vary greatly across the regions. However, the presence of long-term residential rehabilitation was less common in the African and Eastern Mediterranean regions. Similarly, opioid agonist maintenance therapy for opioid dependence was reported most often among countries in the European Region (86.4%), and was less present in the African Region (12.2%) and the Eastern Mediterranean Region (16.7%).
- Countries' income levels seem to have an effect on the presence of treatment services for alcohol and drug use disorders. The presence of treatment services for alcohol and drug use disorders as described in this section increases with increasing country income.

Coverage of treatment services for substance use disorders

- Coverage of the population in need with alcohol and drug use disorder treatment services seems to be low. In low-income countries the majority of persons with alcohol and drug use disorders are not covered by the respective treatment services. For example, in over 50% of low-income countries less than 10% of persons with alcohol use disorders have access to inpatient medical detoxification. Similarly, in around 60% of low-income, lower middle-income and higher middle-income countries, substitution maintenance therapy for opioid dependence is reaching less than 10% of opioid-dependent persons.

Notes and comments

- Although a high proportion of countries reported having some services for treating substance use disorders, coverage of the population in need appears to be low, even in the higher middle-income and high-income groups of countries.
- Information about the presence of treatment services for alcohol and drug use disorders in countries does not indicate the number of treatment services which are available at national level. Treatment services for alcohol and drug use disorders might be more often present in urban areas, for example, especially in low-income countries.

- Inpatient medical detoxification [n=131]
- Outpatient treatment [n=130]
- Long-term residential rehabilitation [n=131]

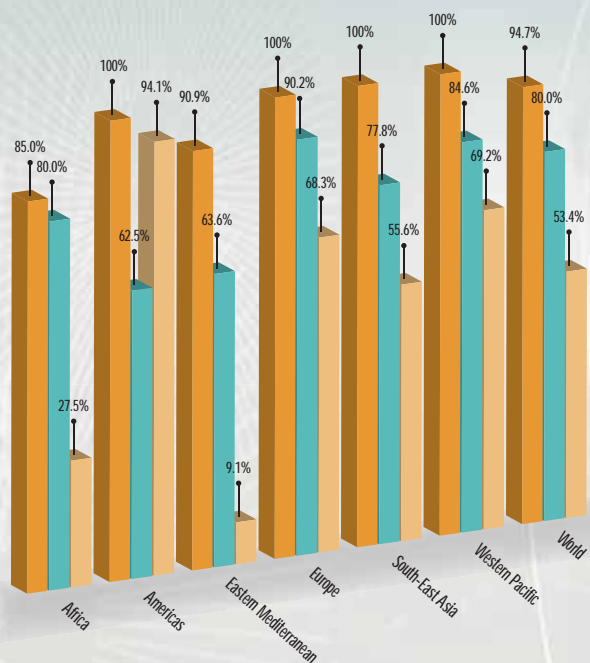


FIGURE 2.13
PROPORTION OF COUNTRIES WITH TREATMENT SERVICES FOR ALCOHOL USE DISORDERS, BY REGION, 2008

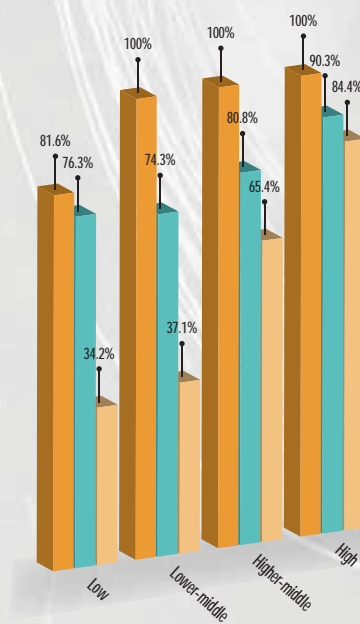


FIGURE 2.14
PROPORTION OF COUNTRIES WITH TREATMENT SERVICES FOR ALCOHOL USE DISORDERS, BY INCOME GROUP, 2008

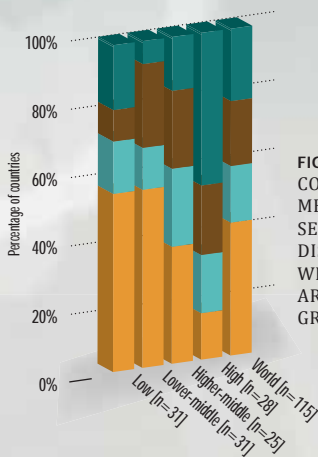
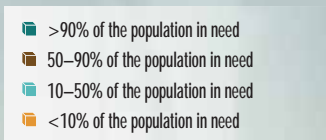


FIGURE 2.15
 COVERAGE OF INPATIENT
 MEDICAL DETOXIFICATION
 SERVICES FOR ALCOHOL USE
 DISORDERS IN COUNTRIES
 WHERE THESE SERVICES
 ARE AVAILABLE, BY INCOME
 GROUP, 2008

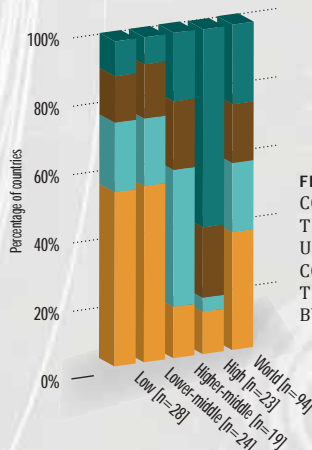


FIGURE 2.16
 COVERAGE OF OUTPATIENT
 TREATMENT FOR ALCOHOL
 USE DISORDERS IN
 COUNTRIES WHERE THIS
 TREATMENT IS AVAILABLE,
 BY INCOME GROUP, 2008

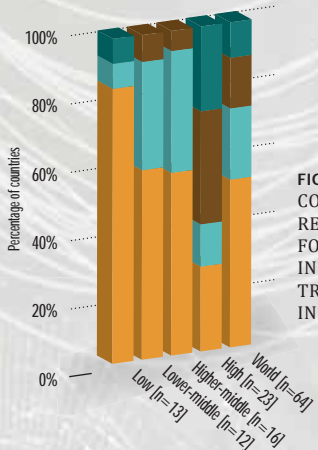


FIGURE 2.17
 COVERAGE OF LONG-TERM
 RESIDENTIAL REHABILITATION
 FOR ALCOHOL USE DISORDERS
 IN COUNTRIES WHERE THIS
 TREATMENT IS AVAILABLE, BY
 INCOME GROUP, 2008

- Inpatient medical detoxification [n=137]
- Outpatient abstinence oriented treatment [n=134]
- Long-term residential rehabilitation [n=135]
- Substitution maintenance therapy for opioid dependence [n=139]

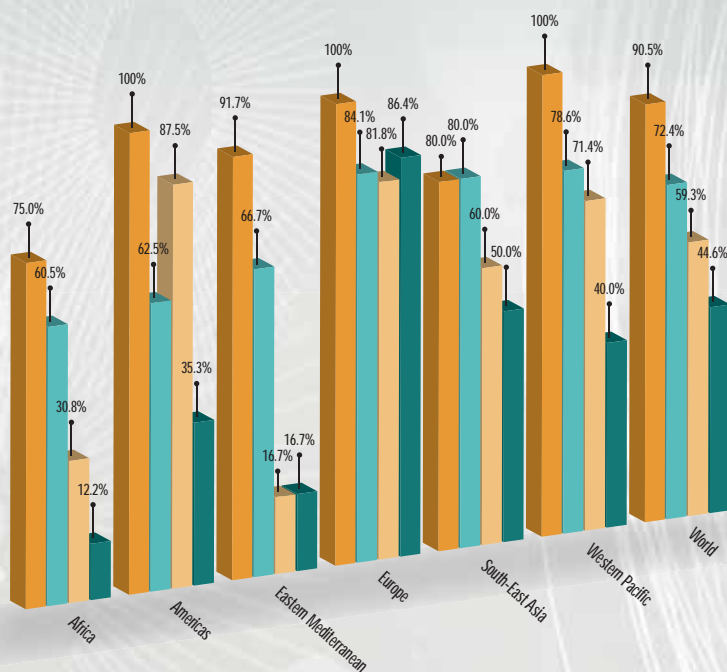


FIGURE 2.18
PROPORTION OF COUNTRIES WITH TREATMENT SERVICES FOR DRUG USE DISORDERS, BY REGION, 2008

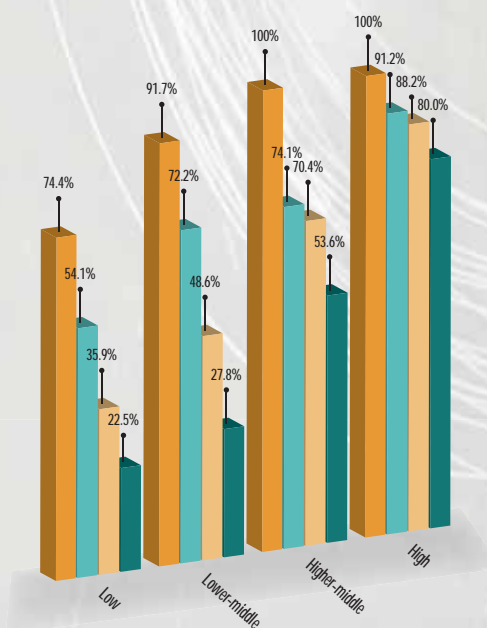


FIGURE 2.19
PROPORTION OF COUNTRIES WITH TREATMENT SERVICES FOR DRUG USE DISORDERS, BY INCOME GROUP, 2008

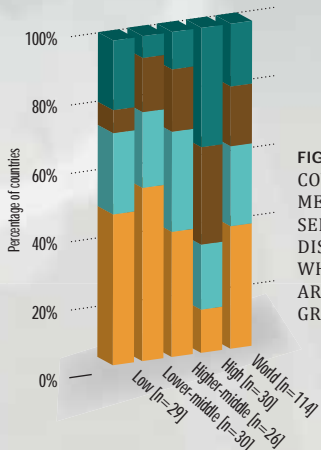
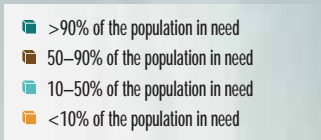


FIGURE 2.20
 COVERAGE OF INPATIENT
 MEDICAL DETOXIFICATION
 SERVICES FOR DRUG USE
 DISORDERS IN COUNTRIES
 WHERE THESE SERVICES
 ARE AVAILABLE, BY INCOME
 GROUP, 2008

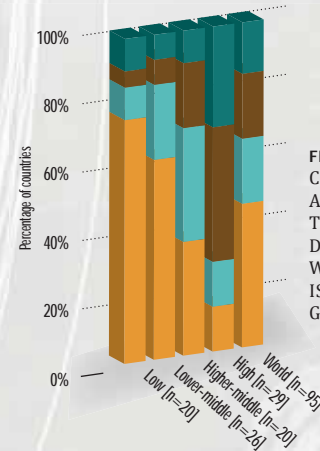


FIGURE 2.21
 COVERAGE OF OUTPATIENT
 ABSTINENCE ORIENTED
 TREATMENT FOR DRUG USE
 DISORDERS IN COUNTRIES
 WHERE THIS TREATMENT
 IS AVAILABLE, BY INCOME
 GROUP, 2008

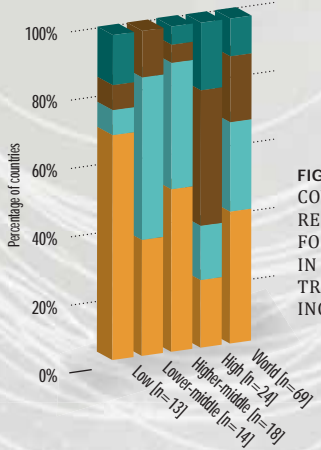


FIGURE 2.22
 COVERAGE OF LONG-TERM
 RESIDENTIAL REHABILITATION
 FOR DRUG USE DISORDERS
 IN COUNTRIES WHERE THIS
 TREATMENT IS AVAILABLE, BY
 INCOME GROUP, 2008

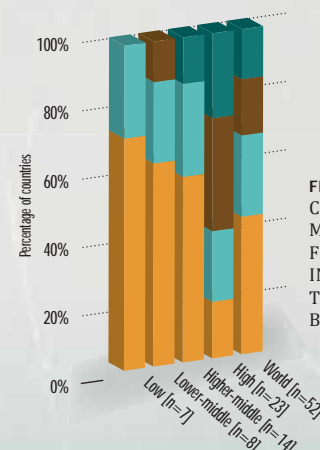


FIGURE 2.23
 COVERAGE OF AGONIST
 MAINTENANCE THERAPY
 FOR OPIOID DEPENDENCE
 IN COUNTRIES WHERE THIS
 TREATMENT IS AVAILABLE,
 BY INCOME GROUP, 2008

2.6 Number of beds and length of stay

(Figures 2.24–2.27)

Background

- Nominated focal points were requested to report on the capacity of their health care systems to treat substance use disorders using the following indicators:
 - the total number of inpatient beds available in their countries for the treatment of alcohol and drug use disorders;
 - the average length of stay for inpatient alcohol and drug detoxification.

Salient findings

Beds for alcohol and drug use disorders

- Among the responding countries, the median number of beds for alcohol and drug use disorders was 1.7 per 100 000 population (range 0–52 beds per 100 000 population).
- The lowest median numbers of beds for alcohol and drug use disorders were in the African Region (0.2 per 100 000 population) and the Eastern Mediterranean Region (0.6 per 100 000 population).
- The highest median number of beds for alcohol and drug use disorders was reported from countries in the European Region (10.3 beds per 100 000 population).
- There was a country income effect on the median number of beds for alcohol and drug use disorders across different income groups of countries. Between the low-income and lower middle-income groups of countries, there was no marked difference in the median number of beds for alcohol and drug use disorders. However, from lower middle-income (0.7 beds per 100 000 population) to higher middle-income countries (7.1 beds per 100 000 population), there was a 10-fold increase in the median number of beds for alcohol and drug use disorders.

Length of stay for alcohol and drug detoxification

- The median length of stay for alcohol and drug detoxification was 10.3 days and 14.0 days respectively.
- In the majority of regions, the median length of stay was longer for drug detoxification than for alcohol detoxification, and this difference was most marked in the Western Pacific Region, where the median length of stay was 14 days for drug detoxification and 7 days for alcohol detoxification.
- Low-income countries reported having a longer median length of stay than high-income countries. For example, the median length of stay for alcohol detoxification was 8 days in high-income countries, and 16.5 days in low-income countries.

Notes and comments

- Some focal points reported that beds for alcohol and drug use disorders are not counted separately from beds for mental health conditions, making it difficult for them to provide a response to this question.
- Patients with comorbid conditions may receive substance use disorder treatment in other hospital wards. These beds may not have been considered by countries.
- Information on the average length of stay for alcohol and drug detoxification was completed by 86 (alcohol detoxification) and 92 countries (drug detoxification). As presented in section 1.5, this response rate may reflect the fact that institutionalized treatment data collection systems for substance use disorders are present only in approximately 50% of countries.
- High-income countries seem to use shorter inpatient stays than low-income countries, despite the fact that shorter inpatient treatment duration is likely to result in significant cost savings.

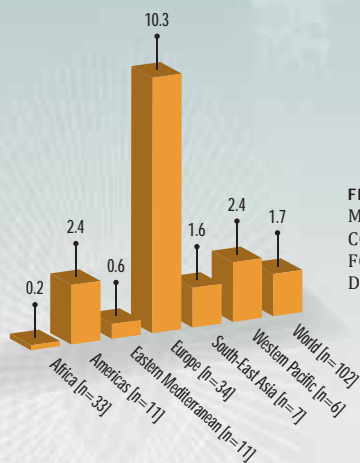


FIGURE 2.24
 MEDIAN NUMBER OF BEDS IN COUNTRIES (PER 100 000 POPULATION) FOR THE TREATMENT OF ALCOHOL AND DRUG USE DISORDERS, BY REGION, 2008

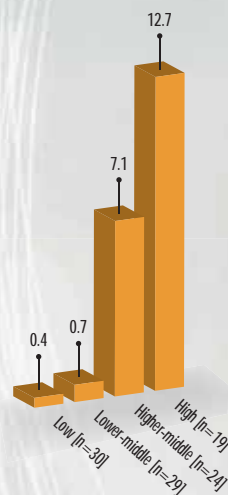


FIGURE 2.25
 MEDIAN NUMBER OF BEDS IN COUNTRIES (PER 100 000 POPULATION) FOR THE TREATMENT OF ALCOHOL AND DRUG USE DISORDERS, BY INCOME GROUP, 2008

Alcohol detoxification
 Drug detoxification

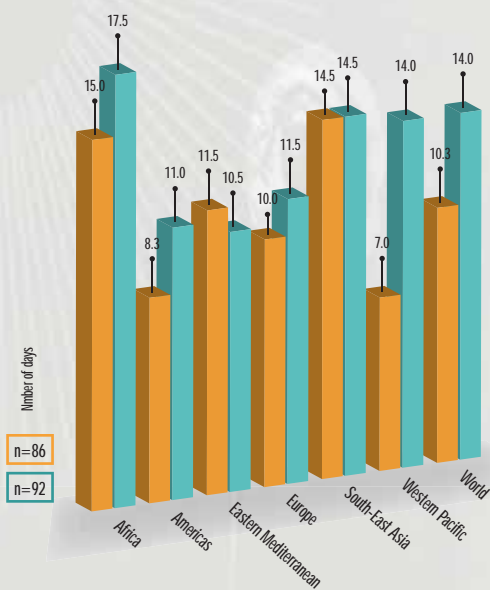


FIGURE 2.26
 MEDIAN LENGTH OF STAY IN COUNTRIES FOR INPATIENT ALCOHOL AND DRUG DETOXIFICATION, BY REGION, 2008

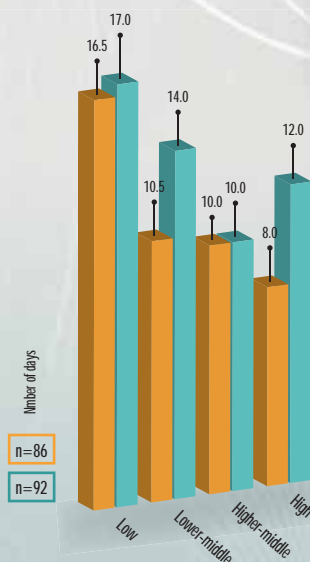


FIGURE 2.27
 MEDIAN LENGTH OF STAY IN COUNTRIES FOR INPATIENT ALCOHOL AND DRUG DETOXIFICATION, BY INCOME GROUP, 2008

2.7 Care for special populations

(Figures 2.28–2.33)

Background

- Nominated focal points were asked about the presence of treatment services for substance use disorders in special populations. In the context of this report, special populations are defined as pregnant women, young people, indigenous populations, and also prisoners, injecting drug users (IDUs) and commercial sex workers.
- Persons with drug use disorders who have infectious diseases may require specialized care and treatment. Focal points were asked about the presence of specialized treatment services for persons with drug use disorders who have HIV/AIDS or tuberculosis (e.g. where treatment of opioid dependence, tuberculosis and HIV are available from one specialized treatment service).

Salient findings

Treatment services for substance use disorders in special populations

- The proportion of countries offering treatment services for substance use disorders in different special populations varies considerably between regions and country income groups and according to the special population being treated.
- Substance use disorder treatment services for prisoners were reported from the majority of surveyed countries (55.9%), followed by substance use disorder treatment services for young people (47.6%) and injecting drug users (40.0%). Specialized substance use disorder treatment services for pregnant women and commercial sex workers are present in 31.0% and 25.5% of countries respectively. Approximately 11.0% of countries reported having substance use disorder treatment services for indigenous populations.
- Substance use disorder treatment services for young people and pregnant women were reported from the majority of countries in Europe (72.7% and 61.4% of countries in Europe respectively). Substance use disorder treatment services for indigenous people were reported to be most common among countries in the Western-Pacific (28.6%). Substance use disorder treatment services for commercial sex workers were reported to be most common among countries in South-East Asia (40%), and countries in Europe (34.1%).
- Besides substance use disorder treatment services for prisoners and injecting drug users, there is no effect of country income level on the presence of treatment services in special populations.

Specialized treatment services for persons with drug use disorders having HIV/AIDS or tuberculosis

- Specialized treatment services for persons with drug use disorders and HIV/AIDS were reported by 43.2% of countries. These services seem to be more often present in countries than treatment services for drug use disorders and tuberculosis (24.6%).
- Specialized treatment for persons with drug use disorders and HIV/AIDS appears to be most often present among countries in the European, South-East Asia and Eastern Mediterranean regions, and appears to be less common among countries in Africa where 14% of countries reported having this treatment service.
- Treatment services for persons with drug use disorders and tuberculosis were most often reported in South-East Asia (40%). In approximately 16% of countries in the African and Western Pacific regions, specialized treatment was reported for persons with drug use disorders and tuberculosis.
- There is no strong effect of country income level on the presence of specialized treatment services for persons with substance use disorders and HIV/AIDS or tuberculosis across different groups of countries.

Notes and comments

- One factor that may explain the variation in the proportion of countries providing services for different populations is the presence of the special population itself. Significant numbers of indigenous populations are not present in every country, for instance.
- The generally low proportion of countries with services for these types of special populations may represent a significant opportunity for development of services in this area.

FIGURE 2.28
PROPORTION OF COUNTRIES WITH TREATMENT SERVICES FOR SUBSTANCE USE DISORDERS IN SPECIAL POPULATIONS, BY REGION, 2008

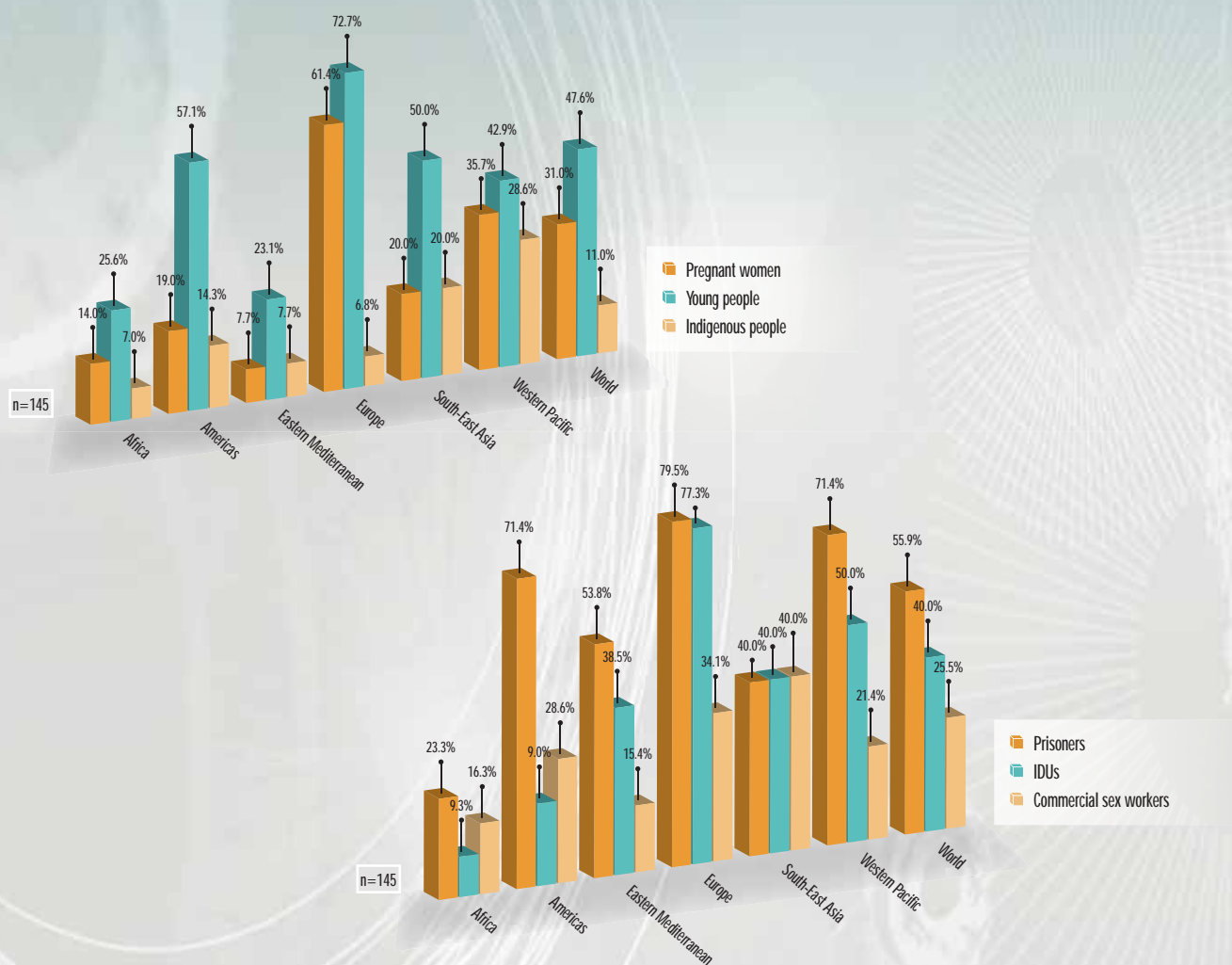
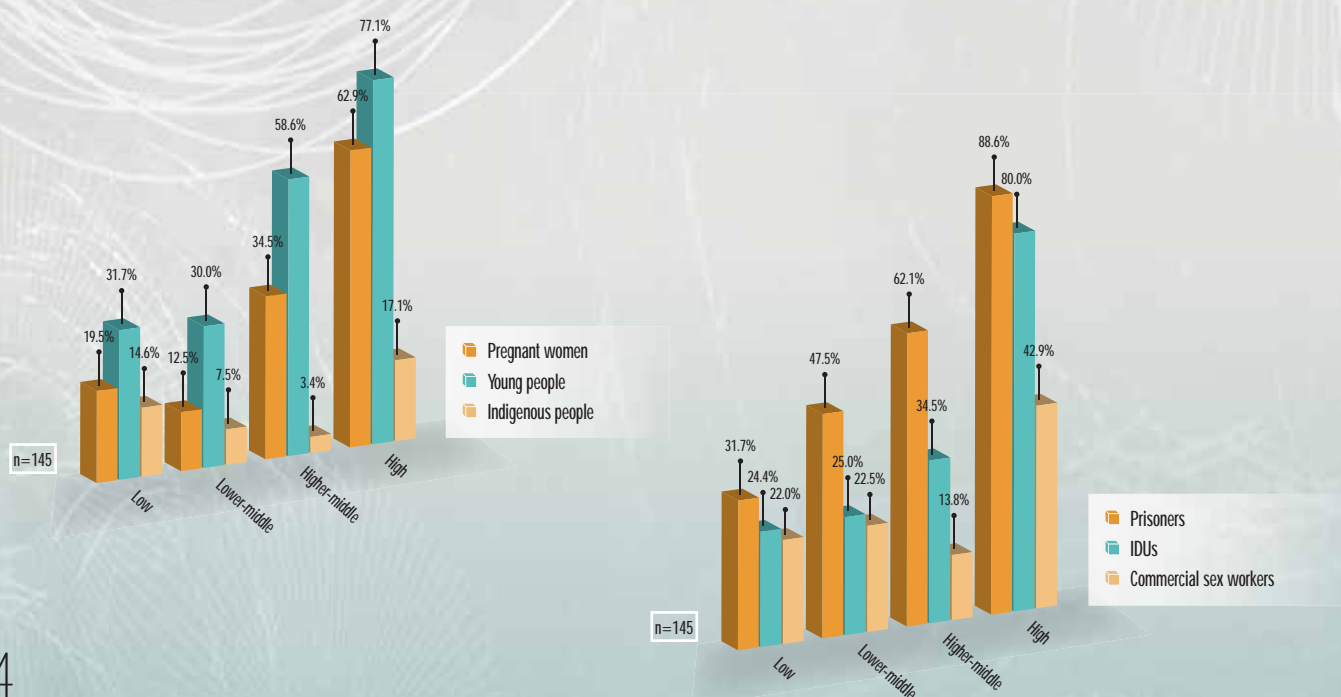


FIGURE 2.29
PROPORTION OF COUNTRIES WITH TREATMENT SERVICES FOR SUBSTANCE USE DISORDERS IN SPECIAL POPULATIONS, BY INCOME GROUP, 2008



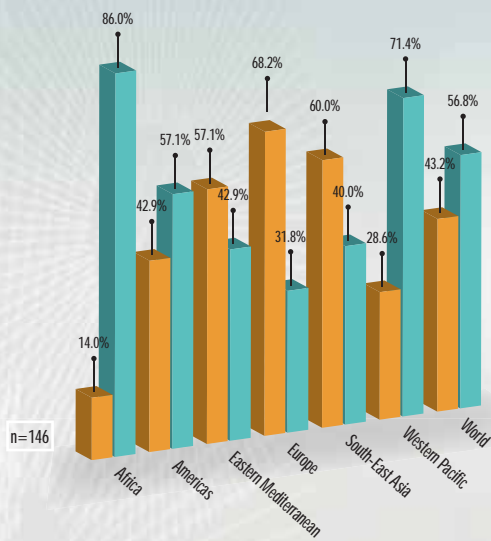
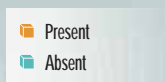


FIGURE 2.30
PROPORTION OF COUNTRIES WITH SPECIALIZED TREATMENT SERVICES FOR PERSONS WITH DRUG USE DISORDERS AND HIV/AIDS, BY REGION, 2008

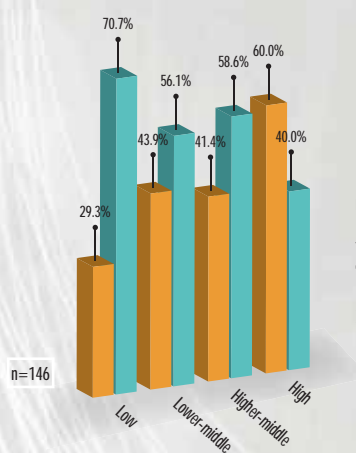


FIGURE 2.31
PROPORTION OF COUNTRIES WITH SPECIALIZED TREATMENT SERVICES FOR PERSONS WITH DRUG USE DISORDERS AND HIV/AIDS, BY INCOME GROUP, 2008

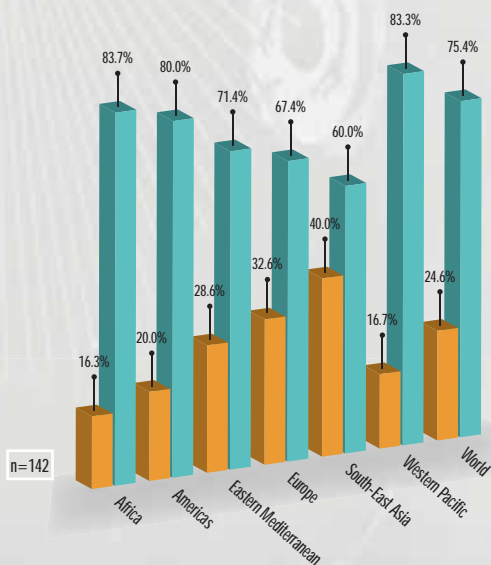


FIGURE 2.32
PROPORTION OF COUNTRIES WITH SPECIALIZED TREATMENT SERVICES FOR PERSONS WITH SUBSTANCE USE DISORDERS AND TUBERCULOSIS, BY REGION, 2008

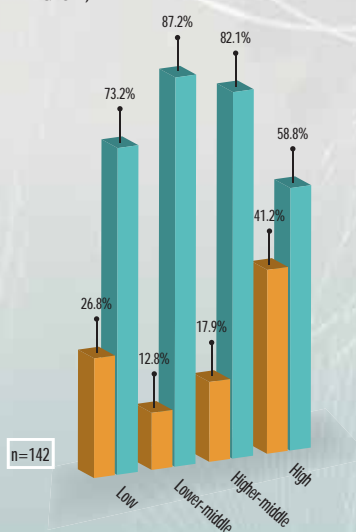


FIGURE 2.33
PROPORTION OF COUNTRIES WITH SPECIALIZED TREATMENT SERVICES FOR PERSONS WITH SUBSTANCE USE DISORDERS AND TUBERCULOSIS, BY INCOME GROUP, 2008

CHAPTER 3. PHARMACOLOGICAL TREATMENT

3.1 Pharmacological treatment of alcohol and drug use disorders

Robert Ali

The broad context of treatment

Treatment of substance use disorders works and is cost-effective (Cartwright, 2000; Simoens et al., 2002). For instance, Gerstein & Harwood (1994) examined the effects of treatment, the costs of providing treatment and the economic value of treatment in the United States. They found that the cost of providing the treatment was approximately US\$ 209 million, while the benefits society received during and after treatment were worth approximately US\$ 1.5 billion. A number of studies in other countries have confirmed that treatment works and that there is a net return on investment to the community (e.g. Simpson & Sells, 1982; Hubbard et al., 1997; Gossop, Marsden & Stewart, 1998).

O'Brien and McLellan (1996) compared drug dependence with adult onset diabetes, hypertension and asthma. For example, asthma is also a chronic relapsing condition with multiple etiologies, including a genetic component, personality and environment. Asthma, like substance use disorders, involves choice in the development of the condition (e.g. smoking) and requires significant behaviour changes. Continuing care across a person's lifespan is necessary. Relapse rates for asthma are in the order of 30–50%. These features are similar to drug dependence, yet no one argues about the benefit of providing treatment for asthma. The treatment of substance use disorders is as successful as the treatment of these medical conditions.

Governance can be described as the institutions, processes, policies and laws affecting the way people direct, control and administer treatment. Governance is an important component of the safety and quality of health care as poor treatment outcomes are often the result of failures of the health care system. Without proper governance systems, treatment services become vulnerable to abuse.

Simpson (2000) found that interactions between individual needs, motivation factors, social pressures and aspects of the treatment programme itself influence individuals to enter and remain in treatment. Drawing on research about how clients become engaged in treatment, Simpson (2000) conceptualized treatment as phases of outreach, induction, engagement, treatment and aftercare. The goals of treatment include reducing or stopping drug use, improving physical and emotional health, improving social functioning and relationships, and making meaningful contributions to the community, such as employment.

Maintenance of behaviour change requires substantial time and emotional commitment. Relapse prevention and managing cravings are central behaviour change requirements. In addition, individuals may need to learn to deal with emotions differently, acquire new or altered social skills, manage time effectively, and deal with interpersonal conflict in an

assertive manner. Financial management, employment skills and educational opportunities are also important components of establishing a drug-free and productive life.

Withdrawal treatment

The primary goal of withdrawal treatment (also called detoxification) is neuroadaptation reversal. Drug withdrawal treatment can be provided in a variety of settings – acute hospital, community residential unit, or as an outpatient service. The essential factors in effective withdrawal are a supportive environment and supportive counseling, provision of appropriate symptom management (usually pharmacotherapy), and development of a plan for further treatment after withdrawal (neuroadaptation) has been completed. It is important to note that withdrawal management is not a treatment in and of itself, and does not result in the substantial behavioural changes required for an individual to maintain a drug-free lifestyle. It is, however, the first step in attaining abstinence.

A meta-analysis of studies of pharmacological therapies for alcohol withdrawal (Mayo-Smith, 1997) suggested that benzodiazepines are effective in reducing withdrawal severity, incidence of delirium and seizures with a greater margin of safety and lower abuse potential compared to other therapies. A more recent systematic review (Holbrook et al., 1999) of randomized controlled trials reached a similar conclusion.

Most research into opioid agonists has focused on their use in maintenance treatment. However, the Cochrane review of opioid withdrawal compared 22 studies involving 1736 participants (Gowing, Ali & White, 2009). The major comparisons were between buprenorphine, methadone and clonidine or lofexidine. Severity of withdrawal was similar for withdrawal managed with either buprenorphine or methadone, but withdrawal symptoms may resolve more quickly with buprenorphine. Methadone is cheaper than buprenorphine and its administration in withdrawal management has no risk of precipitated withdrawal. Relative to clonidine or lofexidine, buprenorphine could be more effective in ameliorating withdrawal symptoms, and patients treated with buprenorphine or methadone are more likely to complete withdrawal treatment. At the same time there is no significant difference in the incidence of adverse effects, but drop-out due to adverse effects may be more likely with clonidine.

Opioid agonist pharmacotherapy (OAP)

There are three main medications for the treatment of heroin dependence, namely methadone, buprenorphine and naltrexone. Methadone and buprenorphine work by eliminating withdrawal symptoms, reducing or eliminating cravings and blocking euphoric effects from any additional heroin use. These three mechanisms are important and an adequate dose is required for these effects to occur. This dose may exceed the dose requirement just to eliminate withdrawal. The longer a person is in treatment, the greater the gains and benefits that accrue from opioid agonist pharmacotherapy. Methadone treatment has repeatedly been found to reduce substantially and, in many cases, completely eliminate heroin use. It also protects against HIV/AIDS and reduces HIV risk-taking behaviour. There are also benefits of reducing the risk of death from heroin overdose death as well as of criminal behaviour.

Opioid agonist pharmacotherapy treatment has been found in Cochrane reviews to be more effective than no treatment in terms of reducing heroin use, imprisonment and retention in treatment. It has also been found to be more effective than detoxification or outpatient drug treatment counselling in terms of reducing heroin use, criminal behaviour

and risky sexual behaviour. Finally, opioid agonist pharmacotherapy has been found to be more effective in terms of retention in treatment than therapeutic communities, outpatient drug-free treatment and naltrexone treatment.

WHO conducted a study in China, Indonesia, Iran, Lithuania, Poland, Thailand and Ukraine which found that treatment outcomes in terms of retention, drug use, HIV risk, health, criminal behaviour and employment were comparable to those found in studies conducted in Australia, the United Kingdom and the United States (Lawrinson et al., 2008).

Opioid agonist pharmacotherapy has consistently been found to reduce injecting drug use in terms of both the proportion of participants who continue injecting and the frequency of injecting for those who continue to inject. The interaction between these two components is important in terms of HIV risk-taking behaviour. Several studies have also shown lower rates of HIV seroconversion or of acquiring HIV when in treatment. HIV-infected drug users are more likely to take up treatment for their HIV and are also more likely to adhere to that HIV treatment when on opioid agonist pharmacotherapy. Health care costs and HIV-related medical complications are also significantly lower.

Training needs for opioid agonist pharmacotherapy

Until recently opioid agonist pharmacotherapy was largely restricted to specialist, clinic-based programmes that were heavily regulated and marginalized from mainstream health services. Changes in understanding the role of opioid agonist pharmacotherapy programmes, along with a shift towards a public health model of intervention, has seen the development in some countries of community-based programmes that are incorporated in other health and welfare services.

Further expansion of opioid agonist pharmacotherapy programmes to meet unmet demand brings with it the need to train the workforce in the use of this pharmacotherapy. This requires the development of clinical guidelines and procedures specifically tailored to community-based programmes. It also requires specialist services to provide clinical consultancy and treatment back-up for more complex clients.

Any training programme in opioid agonist pharmacotherapy will need to address attitudes and knowledge as well as skills. Training should combine didactic teaching, interactive learning, clinical case scenarios, assessment role plays and the opportunity for feedback and discussion. The use of learning objectives and competency-based training models is also required (Allsop et al., 1997). The assessment procedure can be used to determine whether the medical practitioner meets the learning objectives and can be authorized to prescribe. The assessment procedure will also assist practitioners in identifying their own training needs as well as providing the community and patients with confidence in the standards of treatment.

Duration and comprehensiveness of treatment

Duration of treatment is important. Longer length of treatment has been demonstrated to be associated with improved outcomes (e.g. Magura et al., 1999; Ball & Ross, 1991; Kang & De Leon, 1993). In addition, imposing arbitrary time limits on treatment does not enhance treatment outcomes (Ward, Mattick & Hall, 1998). A meta-analysis of treatment outcomes has confirmed the relationship between length of treatment and treatment outcomes (Brewer et al., 1998).

3.2 Policy framework and guidelines for the pharmacological treatment of substance use disorders

(Figures 3.1–3.4)

Background

- Policy documents and guidelines on the pharmacological treatment of substance use disorders may assist in regulating the context in which pharmacological treatment is provided, thus ensuring the optimal availability and use of different medicines in the treatment of substance use disorders.
- A policy framework is often needed to guide the regulation of medicines which have the potential for abuse, a number of which are useful for the treatment of substance use disorders – including opioids and benzodiazepines.
- Nominated focal points were asked about the presence of policy documents on the pharmacological treatment of substance use disorders, and were requested to indicate whether guidelines on the pharmacological treatment of these disorders exist in their countries.

Salient findings

Policy documents on pharmacological treatment

- Policy documents on the pharmacological treatment of substance use disorders were reported by 40.2% of countries.
- The region reporting the highest proportion of policy documents on the pharmacological treatment of substance use disorders was Europe (70.4%).
- There is some variation according to country income group. The lowest proportion of countries reporting policy document was in the lower middle-income countries (22.5%). In 73.5% of high-income countries, policy documents were reported.

Guidelines on pharmacological treatment

- Guidelines on the pharmacological treatment of substance use disorders were reported by approximately half of the surveyed countries (51.8%).
- The European and Western Pacific regions reported having the highest proportions of countries with pharmacological guidelines for substance use disorders (76.8% and 71.4% respectively). The lowest proportion of countries with pharmacological guidelines was reported from the African Region (21.0%).
- There is an effect of country income level on the presence of guidelines regulating pharmacological treatment of substance use disorders between low-income/lower middle-income countries (31.7% and 37.5% respectively) and higher middle-income/high-income countries (69.2% and 79.4% respectively).

Notes and comments

- Policy documents and guidelines on the pharmacological treatment of substance use disorders appear to be absent in a significant proportion of surveyed countries, especially in low-income and middle-income countries. This may reflect the difficulties that lower-income countries have in developing such policies, or the perceived lack of need for such policies. This in turn may affect the capacity to regulate the use of medicines with abuse potential, such as benzodiazepines and opioids.
- Guidelines for the pharmacological treatment of substance use disorders are common in high-income and upper middle-income countries, but much less so in low-income and lower middle-income countries. Again, this may reflect the difficulties that low-income and lower middle-income countries have in developing guidelines, or the lack of priority given to such guidelines. This may affect the capacity to ensure that the most cost-effective medicines are used.

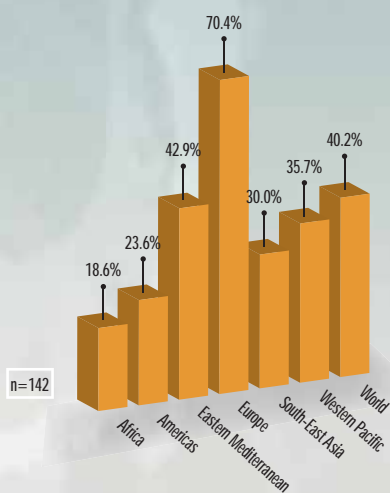


FIGURE 3.1
PROPORTION OF COUNTRIES
WITH POLICY DOCUMENTS
ON THE PHARMACOLOGICAL
TREATMENT OF SUBSTANCE USE
DISORDERS, BY REGION, 2008

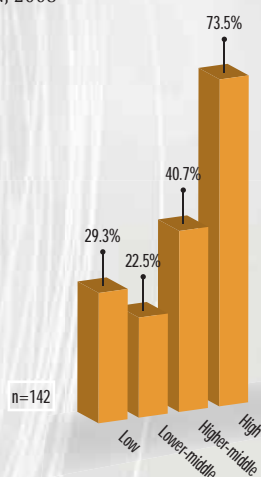


FIGURE 3.2
PROPORTION OF COUNTRIES
WITH POLICY DOCUMENTS
ON THE PHARMACOLOGICAL
TREATMENT OF SUBSTANCE
USE DISORDERS, BY INCOME
GROUP, 2008

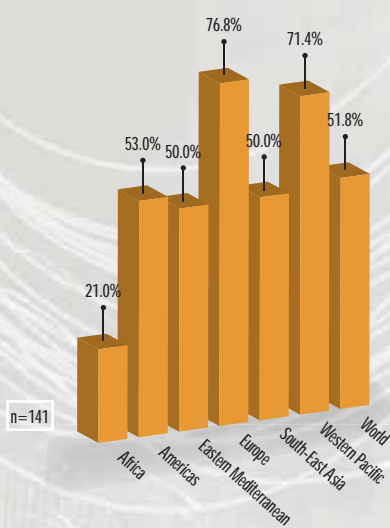


FIGURE 3.3
PROPORTION OF COUNTRIES
WITH GUIDELINES ON THE
PHARMACOLOGICAL TREATMENT
OF SUBSTANCE USE DISORDERS,
BY REGION, 2008

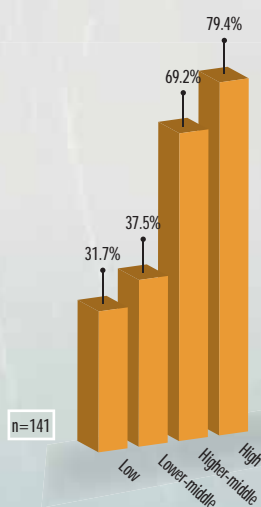


FIGURE 3.4
PROPORTION OF COUNTRIES
WITH GUIDELINES ON
THE PHARMACOLOGICAL
TREATMENT OF SUBSTANCE
USE DISORDERS, BY INCOME
GROUP, 2008

3.3 Availability of therapeutic drugs for alcohol and drug use disorders

(Figures 3.5–3.9)

Background

- Nominated focal points were asked about the use of different medications for the treatment of alcohol withdrawal in their countries.
- Focal points were requested to indicate the availability of opioid agonist pharmacotherapy for the treatment of opioid dependence – such as the availability of methadone, buprenorphine and buprenorphine/naloxone.
- On the treatment of opioid dependence, countries were asked which opioid agonists would be used for the treatment of opioid withdrawal and which for the maintenance of opioid dependence.
- WHO recommends the use of benzodiazepines for the management of alcohol withdrawal. The Organization recommends methadone for the treatment of opioid dependence as it is more cost-effective than buprenorphine, but also recommends that both methadone and buprenorphine should be available, if possible, and that the syrup/solution formulations of methadone should be used since it is easier to supervise their dispensing effectively. WHO does not have recommendations on the use of buprenorphine/naloxone as it was not considered in the most recent WHO guidelines on the treatment of opioid dependence.

Salient findings

Pharmacological treatment of alcohol withdrawal

- In 90.9% of countries, benzodiazepines were reported to be used for the management of alcohol withdrawal. Chlorpromazine and new antipsychotics were identified for the management of alcohol withdrawal in 55.9% and 49.2% of countries respectively.
- The use of chlorpromazine in countries appears to decrease with increasing country income.
- The use of acamprosate for the management of alcohol withdrawal was reported to be highest among countries in the high-income group (41.9%), compared to countries in the lower income groups (low-income = 5.3%).

Pharmacological treatment of opioid dependence

- For the treatment of opioid dependence, availability of methadone was reported by 41.6% of countries that responded to this question in the survey, buprenorphine by 27.7%, and buprenorphine/naloxone by 20.8% of countries in the survey.
- The highest proportion of countries reporting availability of methadone (88.6%), buprenorphine (59.1%) and buprenorphine/naloxone (50.0%) was in Europe. Africa was the region reporting the lowest proportion of countries having methadone and buprenorphine (9.3%). No country in the Eastern Mediterranean Region reported having buprenorphine/naloxone formulation.

- There is an effect of income level on the availability of opioid agonists for the treatment of opioid dependence across different income groups of countries. This income effect is strongest for methadone. The proportion of countries using methadone increases across different income groups of countries (i.e. 12.2% of low-income countries reported methadone, compared to 88.6% of high-income countries).

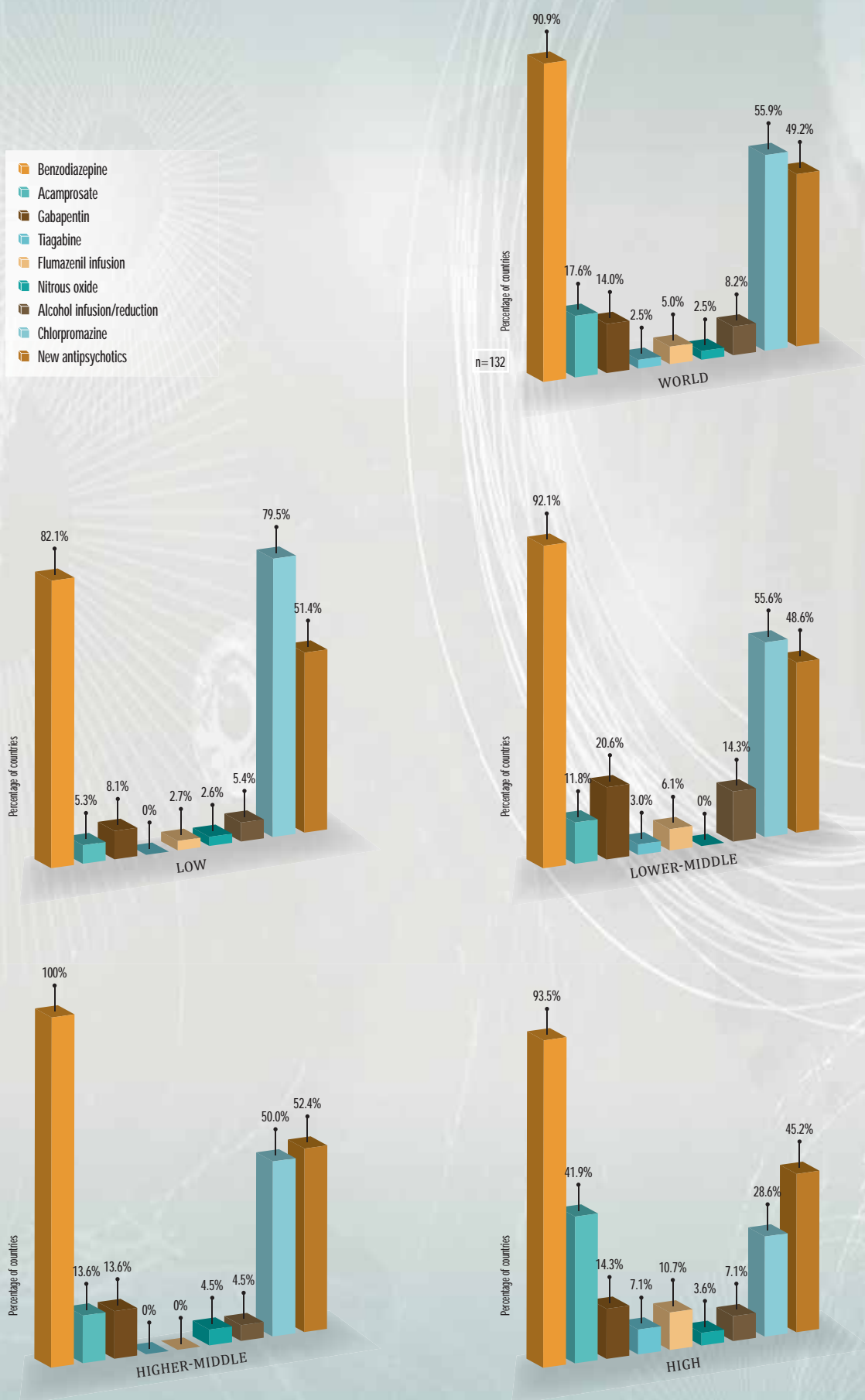
Pharmacological treatment of opioid withdrawal and maintenance of opioid dependence

- Approximately a third of countries reported using methadone for detoxification and maintenance of opioid dependence. For maintenance of opioid dependence, methadone solution/syrup seems to be used more often than methadone tablets. For opioid withdrawal and maintenance, buprenorphine was reported to be used by approximately 25% of countries.

Notes and comments

- The situation with availability of medications may change over a relatively short time. This, as well as the number of countries from which the relevant information was collected in the survey, should be taken into consideration when interpreting the data presented.
- The reported use of medications other than benzodiazepines for alcohol withdrawal suggests that there is considerable variation in practice in the management of alcohol withdrawal. The high rate of use of chlorpromazine is a concern since chlorpromazine is specifically not recommended by WHO as it may increase the risk of seizures during alcohol withdrawal.
- The fact that alcohol and drug medication is available in countries does not imply there is information on the coverage of the population in need of pharmacological treatment. As described in chapter 2, coverage of opioid-dependent persons with agonist maintenance appears to be low.
- Availability of opioid agonist pharmacotherapy for the treatment of opioid dependence appears to be low, especially in low-income and lower middle-income countries.
- The use of buprenorphine and buprenorphine/naloxone is effectively limited to high-income countries and approximately 10% of lower-income countries. This is consistent with its higher cost. Methadone is more available in lower middle-income and upper middle-income countries, presumably due to a greater sensitivity to cost in these countries.
- The reported use by two countries of buprenorphine patches for opioid agonist maintenance is noteworthy.
- While 42% of countries report the availability of methadone, only 31% report the availability of the methadone syrup formulation. The remaining 15 countries are presumably using methadone tablets for opioid agonist maintenance treatment. It is difficult to supervise the dispensing of methadone in tablet form. Take-home doses are also easily sold or injected, which can result in problems, including diversion to the street market.

FIGURE 3.5
MEDICATIONS USED IN COUNTRIES FOR THE MANAGEMENT OF ALCOHOL WITHDRAWAL, BY INCOME GROUP, 2008



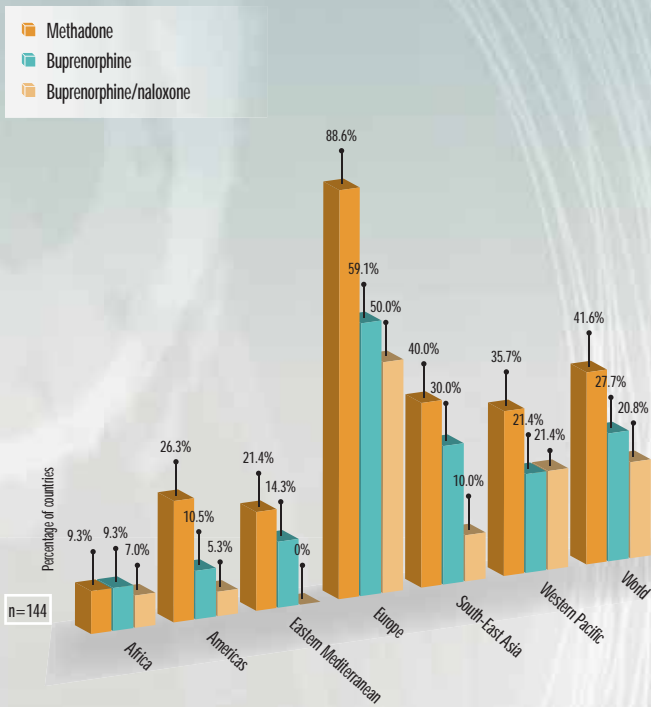


FIGURE 3.6
AVAILABILITY IN COUNTRIES OF OPIOID AGONIST PHARMACOTHERAPY FOR THE TREATMENT OF OPIOID DEPENDENCE, BY REGION, 2008

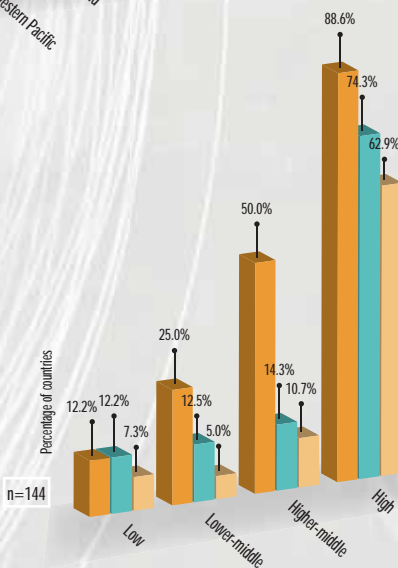


FIGURE 3.7
AVAILABILITY IN COUNTRIES OF OPIOID AGONIST PHARMACOTHERAPY FOR THE TREATMENT OF OPIOID DEPENDENCE, BY INCOME GROUP, 2008

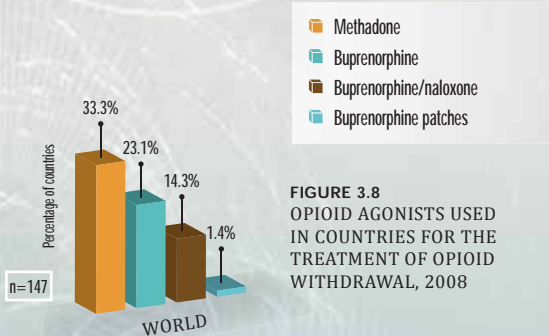


FIGURE 3.8
OPIOID AGONISTS USED IN COUNTRIES FOR THE TREATMENT OF OPIOID WITHDRAWAL, 2008

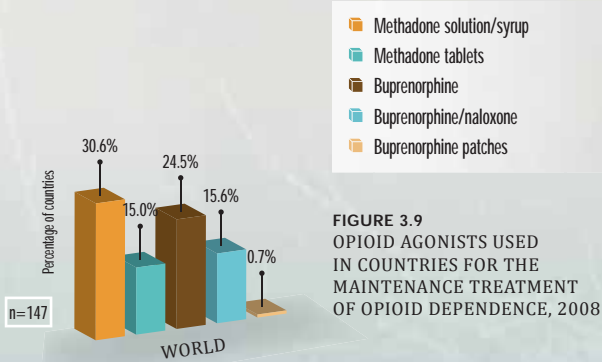


FIGURE 3.9
OPIOID AGONISTS USED IN COUNTRIES FOR THE MAINTENANCE TREATMENT OF OPIOID DEPENDENCE, 2008

3.4 Administration of opioid agonist pharmacotherapy

(Figures 3.10–3.14)

Background

- Nominated focal points were requested to indicate the duration of opioid agonist treatment, and were asked whether such treatment would be provided in a time-limited or an open-ended manner. WHO recommends open-ended treatment.
- Questions were asked on the formulation of methadone which is used for the treatment of opioid dependence. Focal points were requested to indicate whether methadone would generally be provided in tablet form or in syrup/solution. WHO recommends the use of the syrup/solution formulations as they are easier to supervise when being dispensed and, when diluted, they are not easily diverted to the black market for injection.
- Focal points were asked about the use of inpatient facilities for the commencement of methadone, buprenorphine and buprenorphine/naloxone, and were asked specifically whether treatment would normally be started as an outpatient or as an inpatient in their countries. WHO recommends that outpatient commencement should mainly be used.
- The following figures (Figs. 3.10–3.14) apply to countries in which opioid agonist treatment is available.

Salient findings

Duration of opioid agonist treatment

- Treatment with opioid agonist pharmacotherapy was reported to be open-ended in the majority of countries, with 74.1% of countries reporting no time-limit for opioid agonist pharmacotherapy. Across different income groups, the lower middle-income group of countries seems to have the highest proportion of countries with a time-limited opioid agonist treatment approach (45.5%).

Formulation of methadone

- Over 55% of countries in the survey (countries having opioid agonist pharmacotherapy available) reported using methadone syrup/solution for the treatment of opioid dependence. Approximately 25% of countries reported using methadone tablets only, while another 20% of countries reported using both oral solution and tablets.

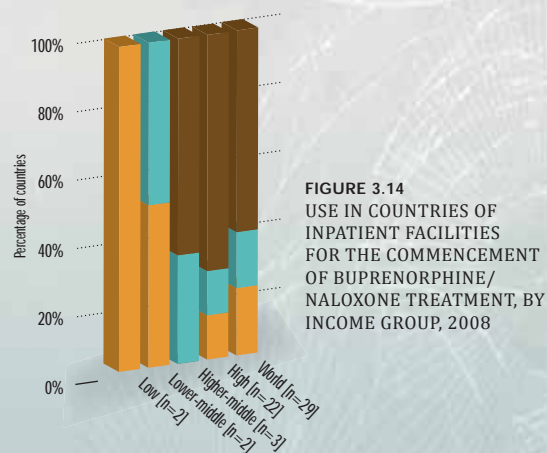
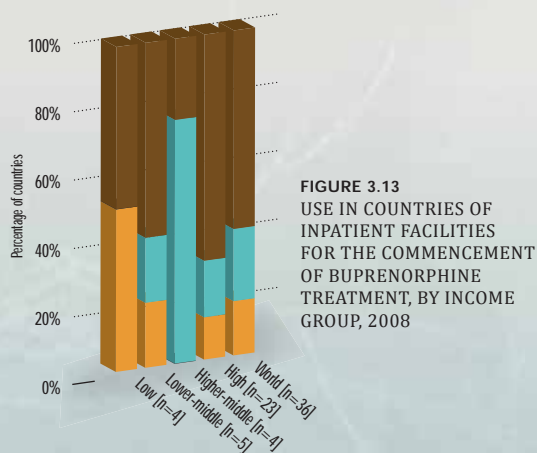
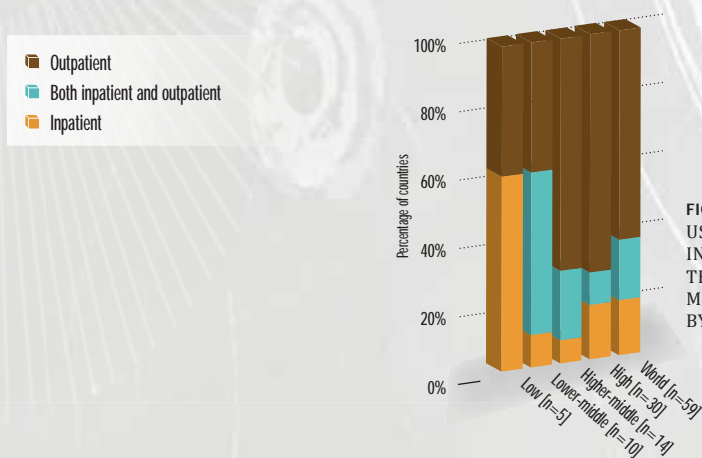
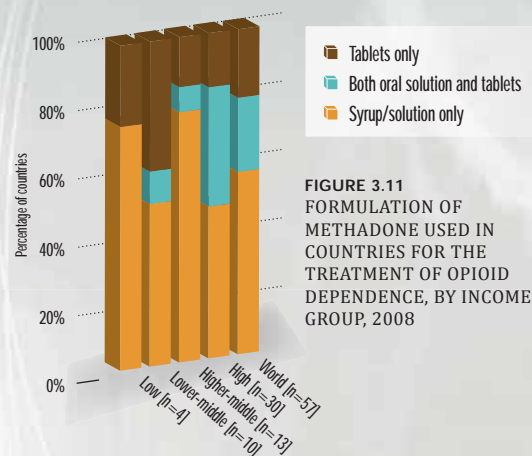
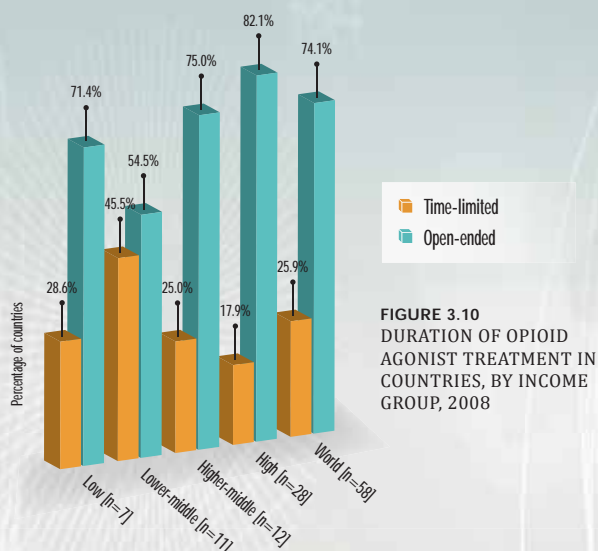
Inpatient facilities for the commencement of opioid agonists

- Opioid agonist pharmacotherapy such as treatment with methadone, buprenorphine, and buprenorphine/naloxone is commenced on an outpatient basis in approximately 60% of countries in the survey. Approximately 20% of countries reported commencing treatment with methadone, buprenorphine and buprenorphine/naloxone as an inpatient. An additional 20% of countries reported commencement of opioid agonist pharmacotherapy on both an inpatient and outpatient basis.

- Compared to high-income countries in which outpatient treatment with opioid agonists seems to be common, there is a tendency for fewer countries in the low-income and lower middle-income groups to commence treatment with methadone and with buprenorphine/naloxone on an outpatient basis.

Notes and comments

- Availability of opioid agonist pharmacotherapy such as treatment with methadone, buprenorphine or buprenorphine/naloxone appears to be limited, especially in lower-income groups of countries. Thus the overall number of countries in the respective groups are low.
- Outpatient treatment for opioid agonist pharmacotherapy appears to be a common treatment approach in high-income countries. Outpatient treatment for the pharmacological treatment of opioid dependence might be less expensive for countries, and may improve the capacity of inpatient services to deal with more complicated patients.
- As mentioned in section 3.3, the use of methadone tablets for opioid agonist maintenance treatment can result in difficulties in the capacity to effectively supervise the dispensing of methadone. The data in this section indicate that some countries have both tablet and solution formulations of methadone available and use both formulations in the treatment of opioid dependence.



3.5 Supervision and prescription requirements for opioid agonist pharmacotherapy

(Figures 3.15–3.23)

Background

- Nominated focal points were asked whether supervision of opioid agonist pharmacotherapy such as pharmacological treatment with methadone, buprenorphine, and buprenorphine/naloxone was required in their countries. WHO guidelines recommend that the administration of both methadone and buprenorphine should be directly supervised, at least early in treatment, to reduce misuse and diversion to the illicit market.
- Focal points were requested to indicate whether the level of supervision of methadone, buprenorphine and buprenorphine/naloxone would be individually determined by the treating doctor, or whether it was determined by a universally applied standard. WHO guidelines recommend that the level of supervision be individually determined.
- Focal points were asked about the minimum training requirements for health care staff responsible for the prescription of opioid agonists, and what kind of health care staff in their countries would have the authority to prescribe methadone, buprenorphine or buprenorphine/naloxone.

Salient Findings

Supervision of opioid agonist pharmacotherapy

- Supervision of methadone for the treatment of opioid dependence was required by 85.4% of countries in the survey. In 60.6% of countries buprenorphine supervision was required, and in 71.4% of countries buprenorphine/naloxone supervision was required.
- There seems to be no effect of country income level on the supervision requirements of opioid agonist pharmacotherapy.
- Approximately three quarters of countries in the survey (74.1% for methadone, 74.3% for buprenorphine, 69.0% for buprenorphine/naloxone) reported that the level of supervision with the respective opioid agonists would be individually determined by the treating doctor.
- Compared to high-income countries, a higher proportion of countries in the low-income and lower middle-income groups reported that the level of methadone and buprenorphine supervision would be individually determined by the treating doctor.

Training requirements for health care staff for the prescription of opioid agonists

- Almost every country in the survey reported that doctors require some additional training to prescribe methadone (98.2%), buprenorphine (97.4%) and buprenorphine/naloxone (96.4%). In approximately one third of countries surveyed, methadone, buprenorphine and buprenorphine/naloxone may be prescribed by any doctor, without additional training.
- In approximately 10% of countries surveyed, it was reported that non-doctors are given the authority to prescribe opioid agonists. The proportion of countries in which non-doctors may prescribe methadone, buprenorphine and buprenorphine/naloxone seems to be highest in the low-income group.

Notes and comments

- Most countries have been shown to use a supervised system of delivering methadone and buprenorphine, despite the increased cost that this entails. It is worth noting that the proportion of countries requiring supervision of buprenorphine/naloxone is not markedly different from the proportion of those requiring supervision of methadone or buprenorphine.
- In approximately 30% of countries in the survey, the level of methadone, buprenorphine or buprenorphine/naloxone supervision is not individually determined by the treating doctor.
- The question on additional training requirements demonstrates that in most countries the routine training of medical staff is not considered sufficient for the treatment of opioid dependence with methadone or buprenorphine. The fact that more than 20% of countries which use methadone allow prescription by any doctor without special training implies that it is possible to integrate methadone and buprenorphine into primary care services.
- Some focal points in the survey reported that non-doctors may prescribe opioid agonist pharmacotherapy. This has happened in both high-income and low-income countries.

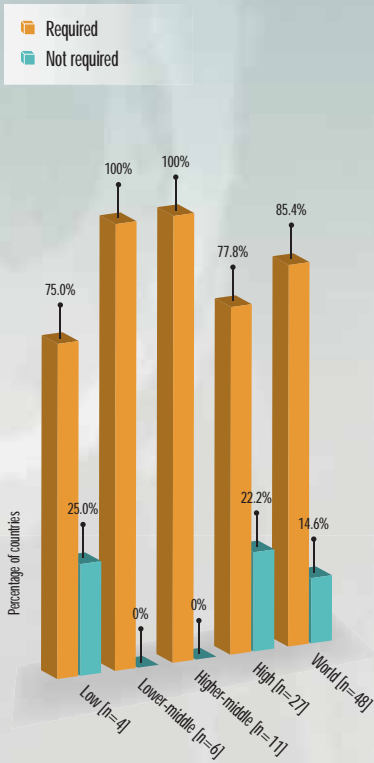


FIGURE 3.15
SUPERVISION OF
METHADONE TREATMENT
IN COUNTRIES, BY INCOME
GROUP, 2008

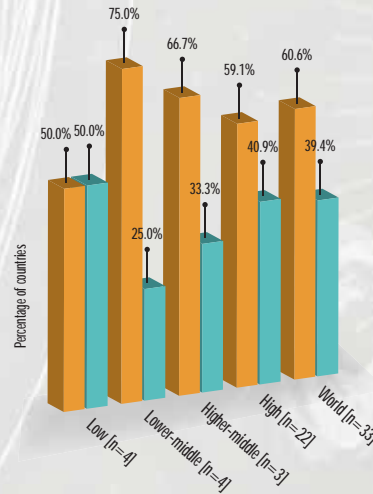


FIGURE 3.16
SUPERVISION OF
BUPRENORPHINE
TREATMENT IN COUNTRIES,
BY INCOME GROUP, 2008

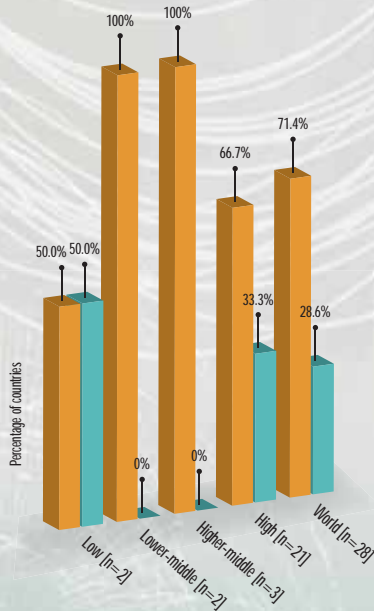


FIGURE 3.17
SUPERVISION OF
BUPRENORPHINE/NALOXONE
TREATMENT IN COUNTRIES
BY INCOME GROUP, 2008

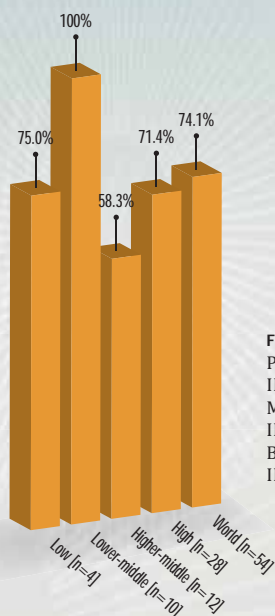


FIGURE 3.18
PROPORTION OF COUNTRIES
IN WHICH THE LEVEL OF
METHADONE SUPERVISION IS
INDIVIDUALLY DETERMINED
BY THE TREATING DOCTOR, BY
INCOME GROUP, 2008

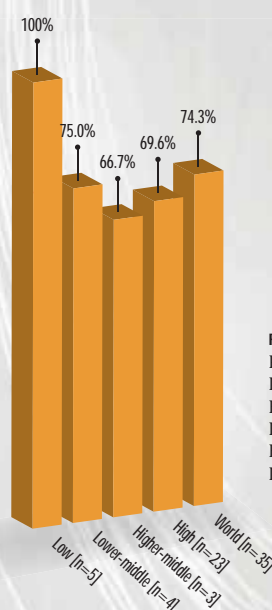


FIGURE 3.19
PROPORTION OF COUNTRIES
IN WHICH THE LEVEL OF
BUPRENORPHINE SUPERVISION
IS INDIVIDUALLY DETERMINED
BY THE TREATING DOCTOR, BY
INCOME GROUP, 2008

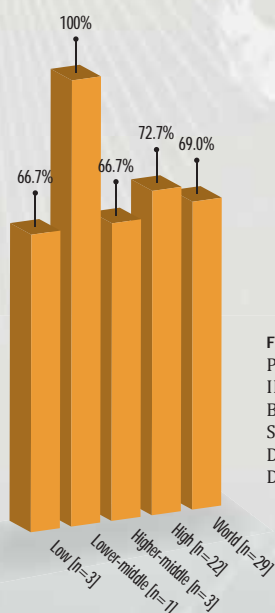


FIGURE 3.20
PROPORTION OF COUNTRIES
IN WHICH THE LEVEL OF
BUPRENORPHINE/NALOXONE
SUPERVISION IS INDIVIDUALLY
DETERMINED BY THE TREATING
DOCTOR, BY INCOME GROUP, 2008

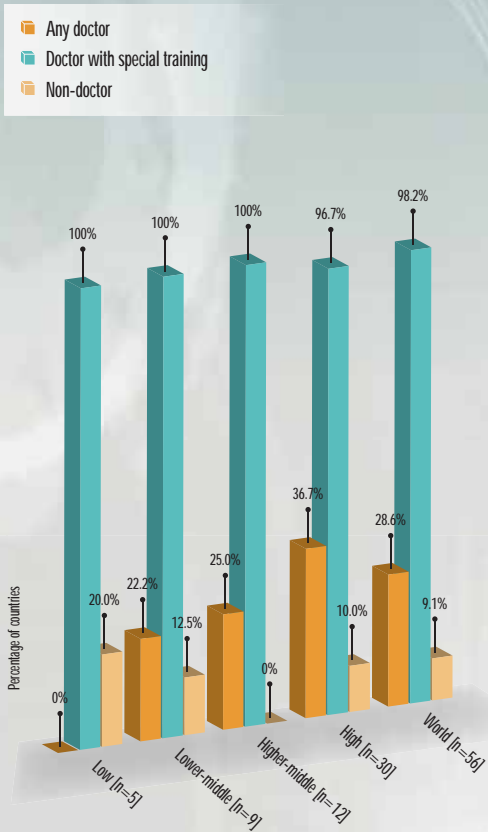


FIGURE 3.21
AUTHORITY OF HEALTH PROFESSIONALS IN COUNTRIES TO PRESCRIBE METHADONE, BY INCOME GROUP, 2008

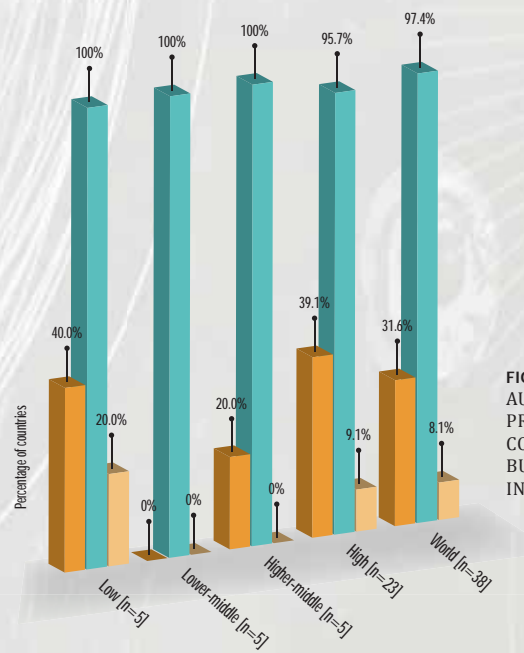


FIGURE 3.22
AUTHORITY OF HEALTH PROFESSIONALS IN COUNTRIES TO PRESCRIBE BUPRENORPHINE, BY INCOME GROUP, 2008

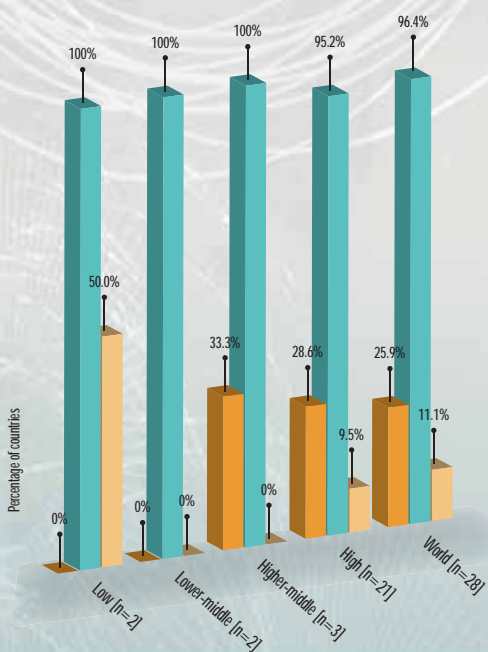


FIGURE 3.23
AUTHORITY OF HEALTH PROFESSIONALS IN COUNTRIES TO PRESCRIBE BUPRENORPHINE/NALOXONE, BY INCOME GROUP, 2008

CHAPTER 4. HUMAN RESOURCES

4.1 The health workforce

Maria Elena Medina-Mora

Introduction

Substance use disorders are complex phenomena. They have multiple causes and consequences that co-occur with other chronic diseases and touch on many areas of life. Prevention and treatment of substance use disorders are therefore not simple tasks and require the consideration of multiple components in the treatment process, the participation of several disciplines, and the inclusion of a variety of resources – including those offered by the health workforce and other institutionalized groups such as NGOs.

Despite the availability of cost-effective prevention and treatment approaches, the treatment gap for substance use disorders remains considerable (WHO, 2005; Wang et al., 2007). Not by coincidence, many of the people in need are in the poorest and most vulnerable sectors of society. Many other impeding factors influence the treatment gap – factors that need to be addressed by the health workforce and national authorities – such as the denial of substance use disorders, structural barriers (such as lack of services and trained personnel) and personal barriers among patients and their families (such as stigma and lack of trust in the treatment outcome).

All of these factors hinder people from seeking treatment.

The treatment gap for substance use disorders can be closed only with the integration of services into the mainstream of treatment of chronic disorders, and with the participation of multiple sectors of society.

Health workforce: availability and role of health professionals, NGOs, and self-help groups in treating people with substance use disorders

NGOs are essential partners in closing the intervention gap by preventing harmful use of alcohol and drugs, aggravation of dependency syndromes and subsequent health and social consequences for the patient. In general, the involvement of NGOs is more salient in prevention and rehabilitation, and less in treatment; it is also more salient in the area of drug use disorders as compared to alcohol use disorders. NGOs are present in all regions of the world and in countries at all levels of development, but they are more prominent in countries with higher income levels.

Civil society plays a key role in the self-help movement – especially Alcoholics Anonymous, Narcotics Anonymous and, more recently, Cocaine Anonymous which is most prominent in the Americas (UNODC, 2010).

Persons with substance use disorders may use drugs despite being faced with devastating consequences. Research evidence shows that effective treatment is available but also indicates that long-lasting recovery from substance use disorders may occur only after several episodes of treatment have been received over many years. It is well documented

that self-help groups have an important impact on the maintenance of abstinence after treatment (Kelly et al., 2006; Kelly, Magill & Stout, 2009). Self-help groups have a number of advantages: they provide free support, are easily accessible, and the individual can self-regulate his or her involvement according to their perceived needs. Although it has been shown that the combination of treatment by health professionals and involvement in self-help groups leads to the best treatment outcome, self-help groups and other alternative treatments on their own have also helped many persons to recover from addiction and dependence (Gutiérrez et al., 2009).

The treatment gap places a high social and financial burden on the family. Persons may live for many years with family members who, without treatment, frequently escalate to increasing levels of dependence. The family system is important because it constitutes a significant context in which the substance use problem first becomes evident. Families may serve as a risk factor per se that precedes the manifestation of the substance use problem as other family members may provide negative role modeling, facilitating the use of psychoactive substances. In some cases the social context of the family may serve to maintain the substance use problem, but on the other hand the family system may also facilitate help-seeking, treatment and recovery. Although problems often arise as a result of cohabiting with persons who have problems with psychoactive substance use, treatment for families and their involvement in self-help groups is not common. Actions should be taken to improve the options for families to help themselves while helping the family member who has a substance use problem.

The role of non-professionally trained staff in treating people with substance use disorders

Since 12-step programmes consider that helping others facilitates recovery, assisting others who suffer from the same substance use disorder is seen by many health professionals as an important component of the recovery process. Evidence shows that helping other patients increases the likelihood of 12-step involvement after treatment, and that the time patients with alcohol use disorders spend in helping other patients is associated with a higher rate of abstinence and less binge drinking. Therefore, former addicts or those who are in the process of recovery have an important role to play in providing formal care to other patients. Religious groups and religion-oriented NGOs constitute another important group in providing care for people with substance use disorders (Kelly, Magill & Stout, 2009). Where no other treatment is available, traditional healers – who are more frequently present in low-income countries – may also provide formal care for people with substance use disorders.

The role of primary health care professionals in treating people with substance use disorders

Integrating the treatment of substance use disorders and other mental disorders into the general health system will minimize the treatment gap. In a new conceptualization of the treatment system, primary care workers (including medical practitioners, nurses, social workers and other health personnel) would have a major role in detecting persons with substance use disorders in the early disease stages, while psychiatrists, addictologists or narcologists would be involved in the treatment of more severe cases. Combining enrolment in self-help groups and ensuring continued participation in such groups beyond treatment would be encouraged to expedite recovery and to prevent relapse. Networking between primary and specialized care is encouraged in order to reduce the costs of treatment by early detection of relapse and by ensuring prompt referral to a more specialized level of care when symptoms intensify.

Currently, specialists still play the most important role in all regions of the world in treating patients with both alcohol and drug use problems. This shows the need to re-conceptualize the health care system and to train other health professionals and also non-institutionalized groups of people – such as former addicts or those in recovery – to become more involved in providing care and assistance to persons with substance use disorders.

Needs of health professionals to provide effective treatment

In order to provide comprehensive care and treatment for people with substance use disorders, and also to influence the quality of life of the patient, it is indispensable to increase the variety of health professionals working in the area of substance use disorders, thus utilizing their different skills and knowledge to maximize the treatment outcome.

There is a need for more psychiatrists in the treatment system in order to treat severe cases, especially those patients who have a substance use disorder which co-occurs with other psychiatric disorders. An increase in specialists is particularly needed in developing countries that have historically had a shortage of psychiatrists – which is exacerbated by a “brain-drain” from developing to industrialized countries (Katschnig, 2010). Helpful steps to increase the enrolment of medical doctors in psychiatry and addiction medicine include efforts to reduce the social stigma against people with substance use disorders and their treatment providers, expanding insurance coverage, and disseminating evidence on the effectiveness of medical treatment. Efforts are also needed to increase the acceptance of addiction medicine as a medical specialty or subspecialty (Soyka & Gorelick, 2008).

Ensuring a high level of quality in treatment delivery has a positive influence on patient satisfaction. Only half the countries around the world have criteria for standards of care. Among high-income countries, the proportion achieves a modest 64%, whereas in low-income countries only one fourth of countries have quality-of-care criteria. Systems of clinical supervision for health care professionals are present in half of the medical professions with the lowest rates being found in developing countries.

Towards closing the gap

The challenge remains to close the prevention and treatment gap. Effective treatment is available but success is more likely with continuous care provided by various kinds of health professionals and other groups, when treatment is available and delivered even in times of relapse, and when help and assistance are guaranteed. Such assistance is also needed with regard to the social and occupational life which may be disrupted as a result of the substance use disorder. This can only be achieved through the integration of various health professionals and civil society in the treatment system, and with psychiatrists, general practitioners, psychologists, social workers, nurses, former addicts, self-help groups and other NGOs working together to achieve a common goal. Continuous education to further the advances of science and to reduce stigma will be essential.

4.2 Health professionals

(Figures 4.1–4.2)

Background

- Nominated focal points were asked about the professional background of health care staff treating persons with alcohol and drug use disorders in their countries.
- Countries applied a ranking to the involvement of different groups of health professionals in treating persons with alcohol and drug use disorders. The graphs in this section show the relative importance in countries of the three leading groups of health professionals treating persons with alcohol and drug use disorders.

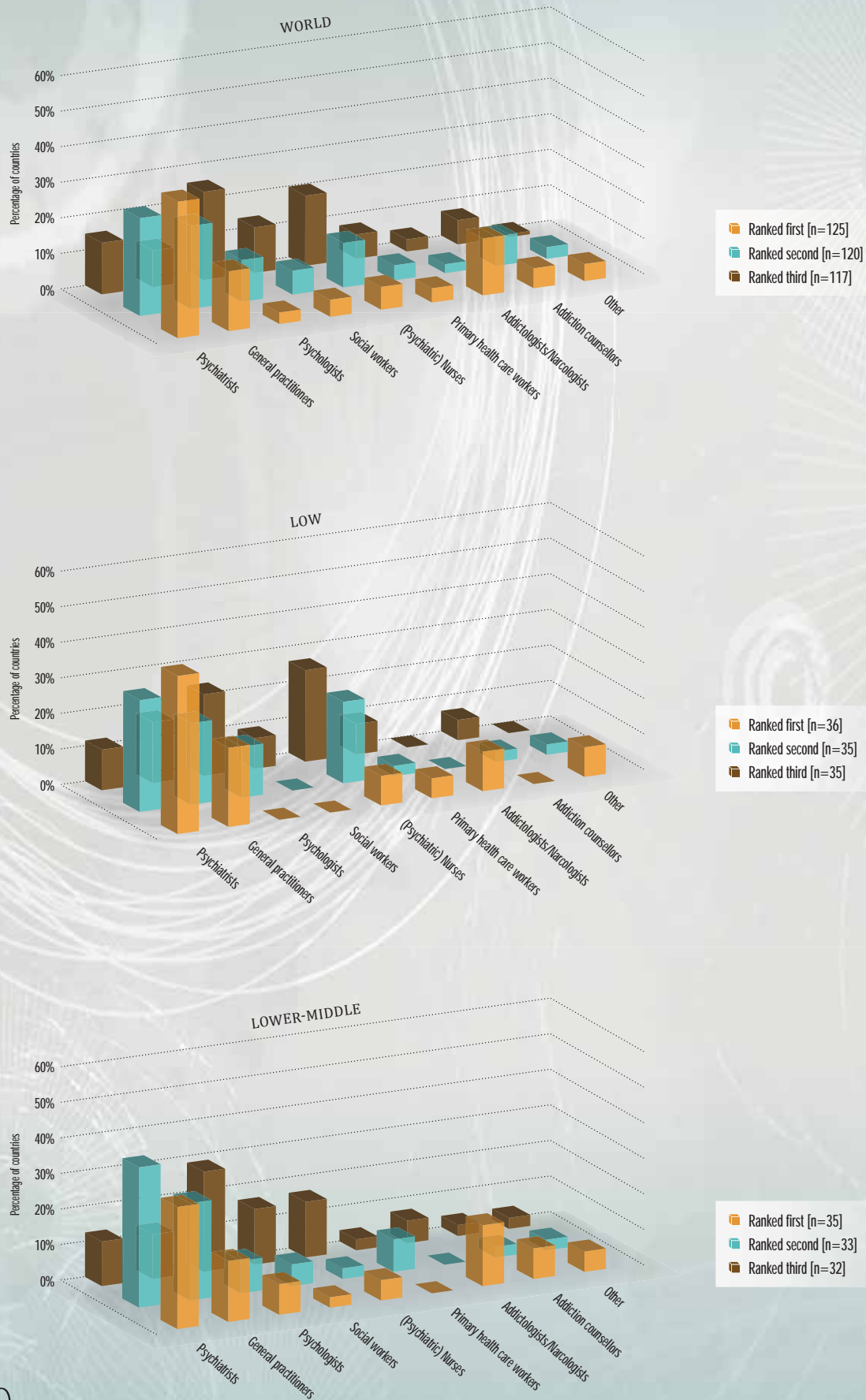
Salient findings

- Among the various groups of health professionals (i.e. health professionals who are most often involved in treating alcohol and drug use disorders), the majority of countries reported psychiatrists, general practitioners and addictologists/narcologists to be the most important health professionals for the treatment of alcohol and drug use disorders.
- Specifically, psychiatrists were reported to be the health professionals most involved in treating alcohol and drug use disorders in approximately 35% of countries in the survey. General practitioners and addictologists/narcologists were reported to be the health professionals most involved in treating alcohol and drug use disorders in approximately 10% of countries.
- The proportion of countries reporting psychiatrists as the health professionals most involved in the provision of treatment for alcohol and drug use disorders seems to be highest in low-income countries (approximately 45% for the treatment of alcohol use disorders, and approximately 55% for the treatment of drug use disorders), and lowest in high-income countries (approximately 25% for the treatment of alcohol use disorders, and approximately 10% for the treatment of drug use disorders).
- Among countries in the high-income group there seems to be no clearly predominant group of health professionals that is treating persons with alcohol and drug use disorders. This is in contrast to countries in the other income groups. For example, over 50% of surveyed countries in the low-income group reported that psychiatrists would be the health professionals most involved in the treatment of drug use disorders.
- Traditional healers were reported by a number of countries as the group of health professionals most involved in treating substance use disorders. Traditional healers are included under the category “other”.

Notes and comments

- A variety of health professionals seem to be responsible for the management of alcohol and drug use disorders in different countries.
- The data here imply a predominance of “top heavy” systems in treating substance use disorders, with many countries identifying specialist medical practitioners (psychiatrists or addiction specialists) as the health professionals most often involved in treating alcohol and drug use disorders. These data should be interpreted with some caution, as it is difficult to gather data on the number of different classes of professionals working in a treatment system, particularly in relation to primary care.
- General practitioners were often identified as an important group for the treating of substance use disorders. This suggests that more effective use of primary care can be considered as one method of reducing the treatment gap in countries that are not currently using primary care practitioners for that purpose.
- Availability of trained counsellors, psychologists, social workers and nurses, as well as their increasing engagement in the prevention and treatment of substance use disorders, could improve access to prevention and treatment services and facilitate a multidisciplinary approach to the management of substance use disorders.

FIGURE 4.1
PROFESSIONAL BACKGROUND OF HEALTH CARE STAFF MOST INVOLVED IN TREATING PERSONS WITH ALCOHOL USE DISORDERS,
BY INCOME GROUP, 2008



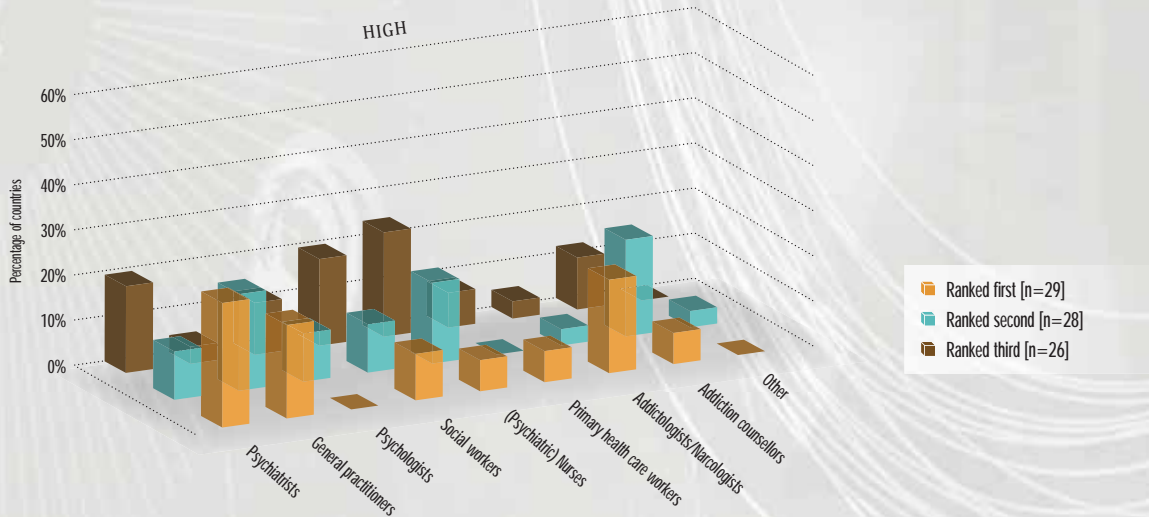
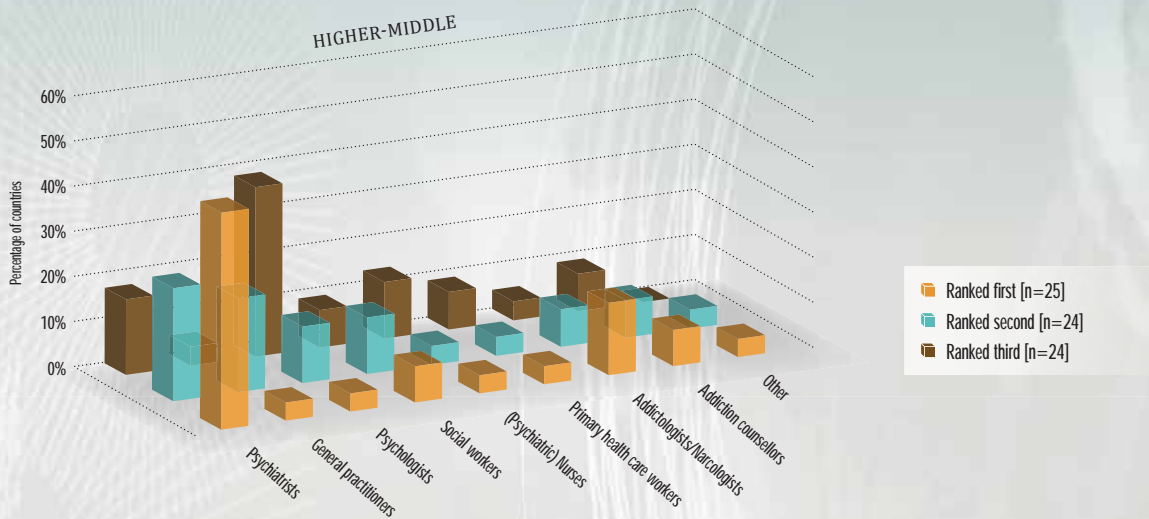
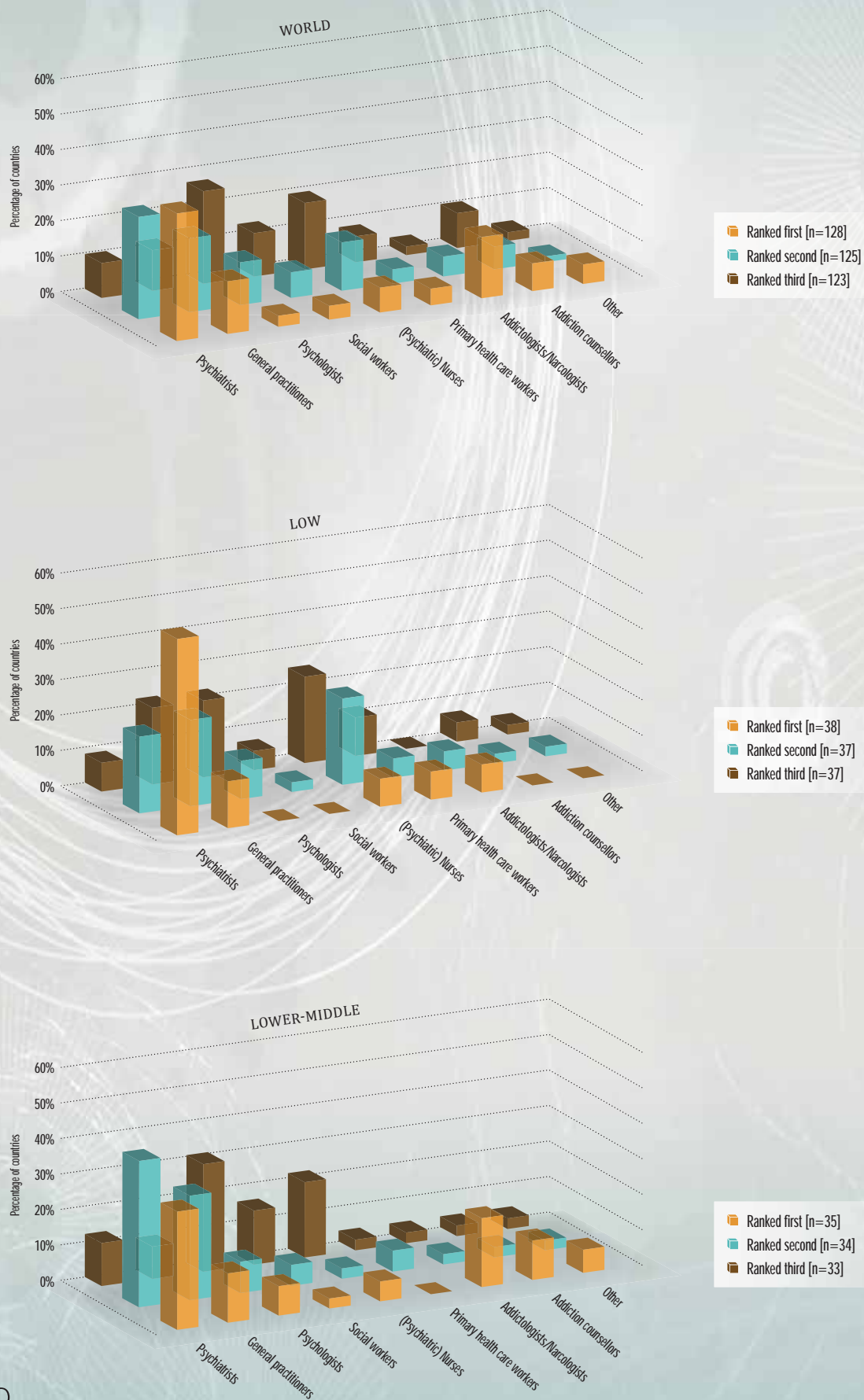
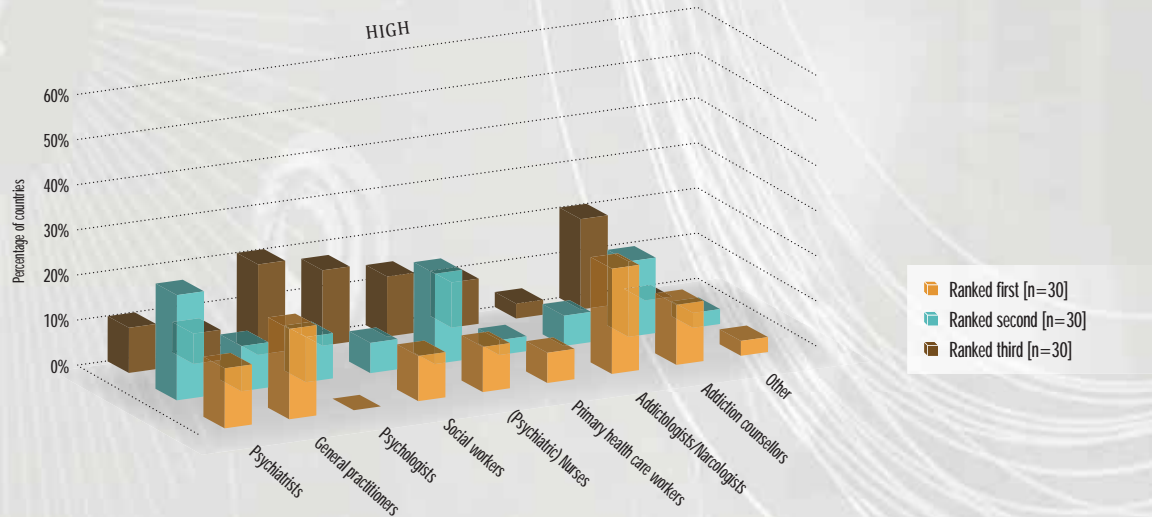
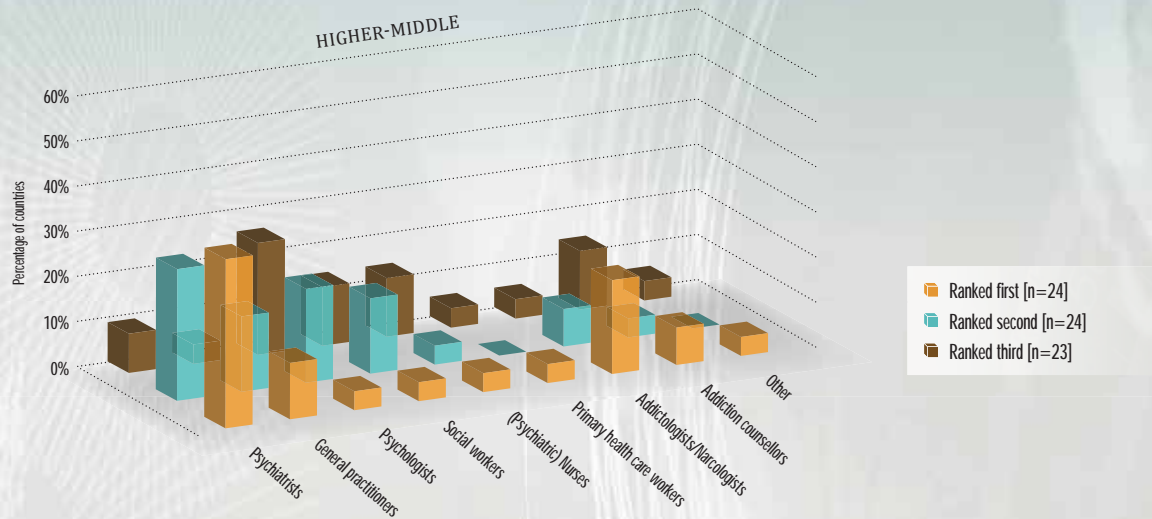


FIGURE 4.2
PROFESSIONAL BACKGROUND OF HEALTH CARE STAFF MOST INVOLVED IN TREATING PERSONS WITH DRUG USE DISORDERS, BY INCOME GROUP, 2008





4.3 Standards of care and supervision for health professionals

(Figures 4.3–4.6)

Background

- Nominated focal points were asked about the presence in their countries of national standards of care required for health professionals working with persons who have substance use disorders.
- Clinical supervision has positive effects on the performance of health care staff. Focal points were asked whether a system of clinical supervision of health care staff working with persons who have substance use disorders exists in their countries.

Salient findings

Standards of care for health professionals

- Approximately half of the countries in the survey (47.6%) reported having national standards of care for health professionals working with persons having substance use disorders.
- Europe (79.1%) and the Americas (65%) were among the regions reporting the highest proportions of countries with national standards of care for health professionals working with substance use disorders. The lowest proportions of countries with standards of care were reported in the South-East Asian (20.0%), African (20.9%) and Eastern Mediterranean (28.6%) regions.
- There is some variation according to country income as to the presence of standards of care for health professionals working with substance use disorders. However, there is no marked difference in the proportion of standards of care reported by countries in the higher middle-income (65.5%) and high-income (63.6%) groups.

Clinical supervision of health care staff

- Approximately half of the countries in the survey reported clinical supervision of health care staff treating substance use disorders. Clinical supervision for nurses was reported to be most common among countries in the survey (57.1%), followed by clinical supervision of doctors (52.5%), social workers (44.4%) and psychologists (43.5%).
- Across the regions, Eastern Mediterranean and Europe reported having the highest proportions of countries with clinical supervision of doctors, psychologists, nurses and social workers.
- There is no clear effect of the level of country income on the presence of clinical supervision of health care staff across different income groups of countries. Low-income countries reported, for example, a higher proportion of clinical supervision for doctors (57.1%) and nurses (66.7%) compared to countries in the lower middle-income (44.7% and 47.4% respectively) and higher middle-income (39.3% and 46.4% respectively) groups.

Notes and comments

- Standards of care for health professionals working with persons who have substance use disorders, and clinical supervision of health care staff appear to be absent in many countries. The impact of this on the quality of care provided is not clear.
- The significant proportion of countries with systems of clinical supervision, even of medical staff, indicate that clinical supervision is a model that can be implemented in diverse settings, although estimates of the impact of this were not possible through this survey.

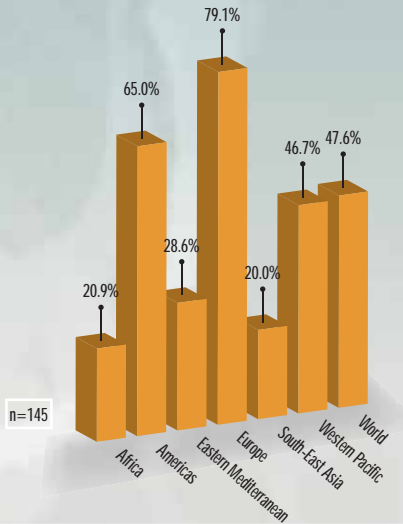


FIGURE 4.3
PROPORTION OF COUNTRIES WITH NATIONAL STANDARDS OF CARE FOR HEALTH PROFESSIONALS TREATING SUBSTANCE USE DISORDERS, BY REGION, 2008

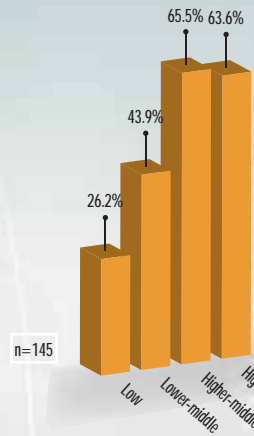


FIGURE 4.4
PROPORTION OF COUNTRIES WITH NATIONAL STANDARDS OF CARE FOR HEALTH PROFESSIONALS TREATING SUBSTANCE USE DISORDERS, BY INCOME GROUP, 2008

- Doctors [n=141]
- Psychologists [n=138]
- Nurses [n=140]
- Social workers [n=135]

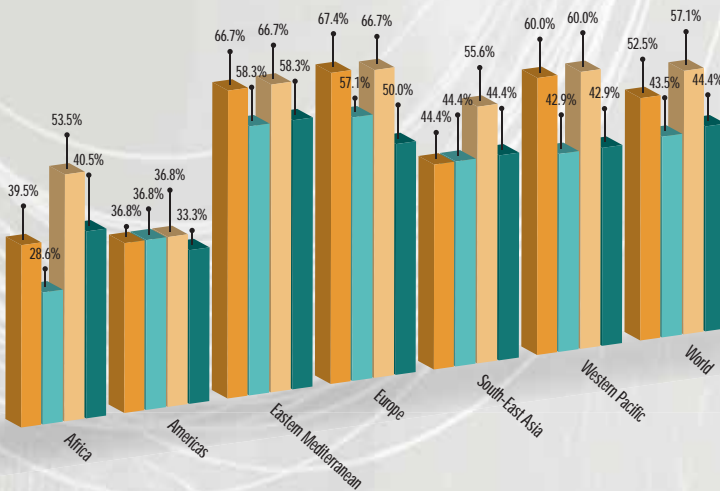


FIGURE 4.5
PROPORTION OF COUNTRIES WITH A SYSTEM OF CLINICAL SUPERVISION OF HEALTH STAFF TREATING SUBSTANCE USE DISORDERS, BY REGION, 2008

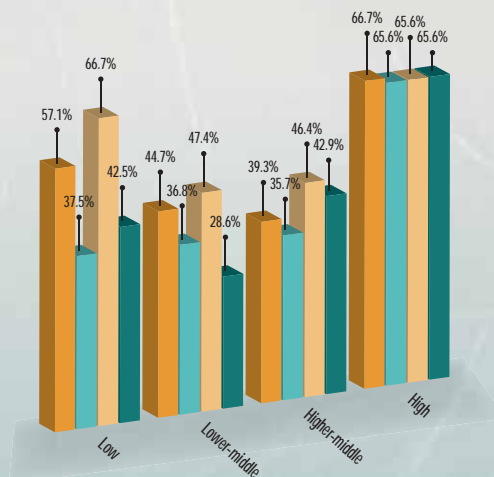


FIGURE 4.6
PROPORTION OF COUNTRIES WITH A SYSTEM OF CLINICAL SUPERVISION OF HEALTH STAFF TREATING SUBSTANCE USE DISORDERS, BY INCOME GROUP, 2008

4.4 Nongovernmental organizations and self-help groups for substance use disorders

(Figures 4.7–4.14)

Background

- Focal points were asked about the presence in their countries of nongovernmental organizations (NGOs) providing treatment, rehabilitation or prevention of alcohol and drug use disorders.
- Focal points were asked about the presence of various self-help groups (Alcoholics Anonymous, Al-Anon/Alateen, Narcotics Anonymous and Cocaine Anonymous) in their countries.
- Focal points were further asked to indicate the presence of people without formal training working in the treatment of substance use disorders, such as people with a history of substance dependence (sometimes referred to as “ex-addicts” or “recovering addicts”), traditional healers, and religious groups.
- WHO guidelines suggest that treatment staff should attempt to use what effective self-help groups are available by referring patients to self-help groups when appropriate.

Salient findings

Nongovernmental organizations for substance use disorders

- A high proportion of countries in the survey reported having NGOs focusing on alcohol and drug prevention (74.8% for alcohol and 81.6% for drug prevention). Approximately 70% of surveyed countries reported the presence of NGOs focusing on rehabilitation of persons with alcohol and drug use disorders. NGOs involved in treatment of alcohol or drug use disorders were reported from 54.5% and 59.9% of countries respectively.
- The Eastern Mediterranean and South-East Asia regions reported a higher proportion of countries with NGOs focusing on drug use disorders than on alcohol use disorders.
- There is some variation in the presence of NGOs according to country income level. NGOs for the treatment, rehabilitation and prevention of alcohol and drug use disorders seem to be more often present in high-income countries than in low-income countries.

Self-help groups for substance use disorders

- Alcoholics Anonymous was reported by the majority of countries (71.1%). The Americas, Europe and Western Pacific were the regions with the highest proportion of countries reporting the presence of Alcoholics Anonymous and Al-Anon/Alateen.
- Narcotics Anonymous was reported by approximately half of the countries in the survey (56.7%). The Americas, Europe and the Western Pacific were the regions reporting the highest proportion of countries with Narcotics Anonymous.

- The presence of Cocaine Anonymous was reported by 11.5% of countries in the survey. The Americas reported the highest proportion of countries with Cocaine Anonymous.
- Besides Cocaine Anonymous, which seems to be most often present in countries in the higher middle-income group, there is a strong effect of country income level on the presence of Alcoholics Anonymous, Al-Anon/Alateen and Narcotics Anonymous in different income groups of countries.

Other groups providing formal care for substance use disorders

- “Ex-addicts” or “recovering addicts” were reported to provide formal care for persons with substance use disorders in 59.9% of countries in the survey.
- Traditional healers providing care for persons with substance use disorders were reported by 31.3% of countries. The Americas and South-East Asia were the regions reporting the highest proportions of countries with traditional healers.
- Religious groups or NGOs based on religious groups were reported by 67.4% of countries, and were reported to be most common among countries in the Americas and South-East Asia.
- “Ex-addicts” or “recovering addicts” providing care for persons with substance use disorders seem to be most often present in high-income countries (75.0%). The highest proportion of traditional healers was reported from low-income countries (44.7%). Religious groups or NGOs based on religious groups are reported most commonly among countries in the higher middle-income group (79.3%).

Notes and Comments

- The widespread dissemination of NGOs and self-help groups throughout the world demonstrates that they have made significant contributions to prevention, treatment and rehabilitation systems. Countries wishing to expand the coverage of services may wish to consider the role that can be played by both NGOs and self-help groups. As both NGOs and self-help groups may be beyond the direct supervision of the Ministry of Health, they present particular challenges to policy-makers who seek to include them in the broader system of care.

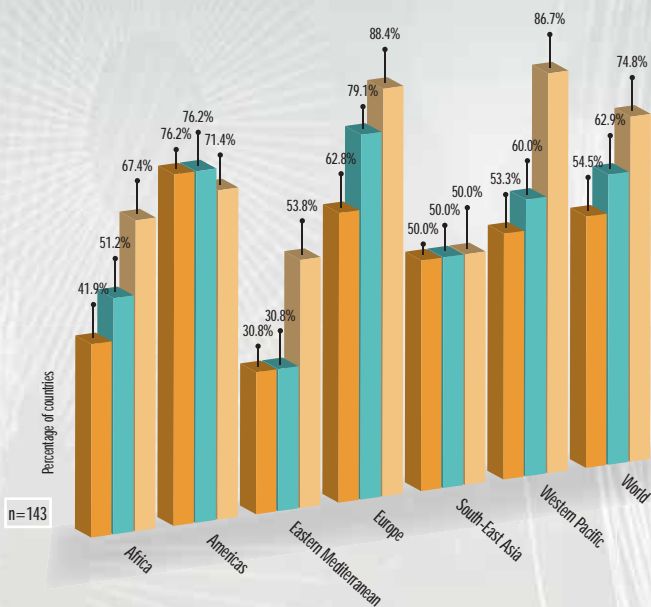
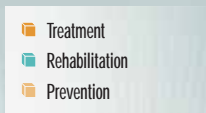


FIGURE 4.7
 PRESENCE OF NONGOVERNMENTAL ORGANIZATIONS IN COUNTRIES FOCUSING ON TREATMENT, REHABILITATION AND PREVENTION OF ALCOHOL USE DISORDERS, BY REGION, 2008

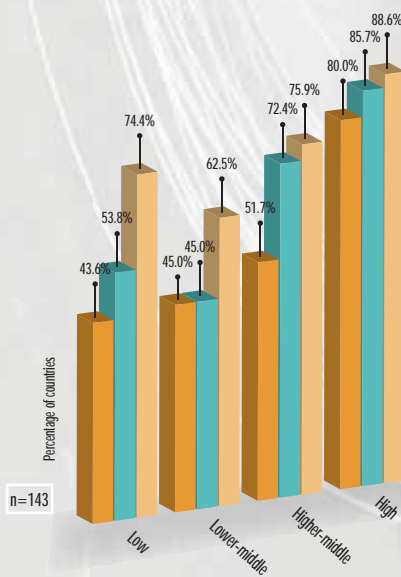


FIGURE 4.8
 PRESENCE OF NONGOVERNMENTAL ORGANIZATIONS IN COUNTRIES FOCUSING ON TREATMENT, REHABILITATION AND PREVENTION OF ALCOHOL USE DISORDERS, BY INCOME GROUP, 2008

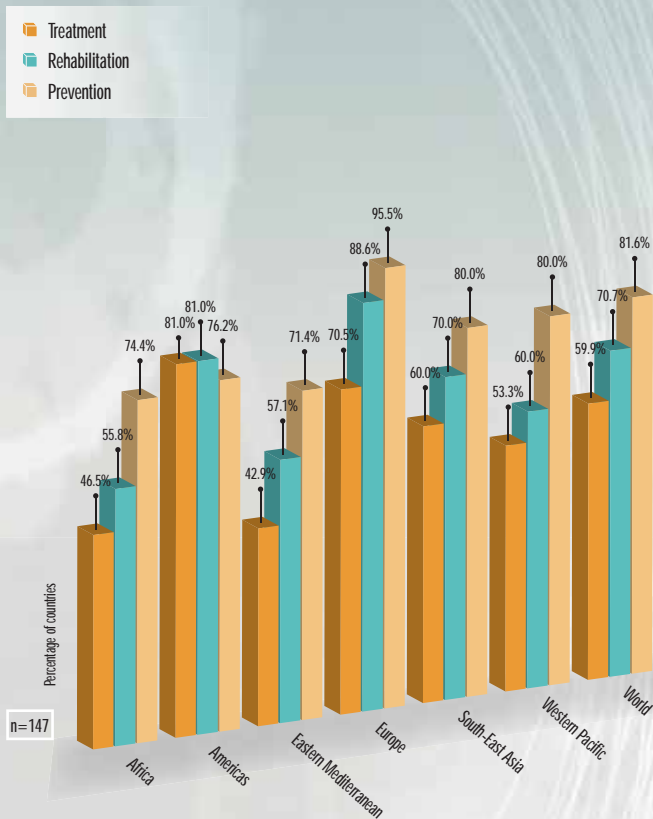


FIGURE 4.9
PRESENCE OF NONGOVERNMENTAL ORGANIZATIONS IN COUNTRIES FOCUSING ON TREATMENT, REHABILITATION AND PREVENTION OF DRUG USE DISORDERS, BY REGION, 2008

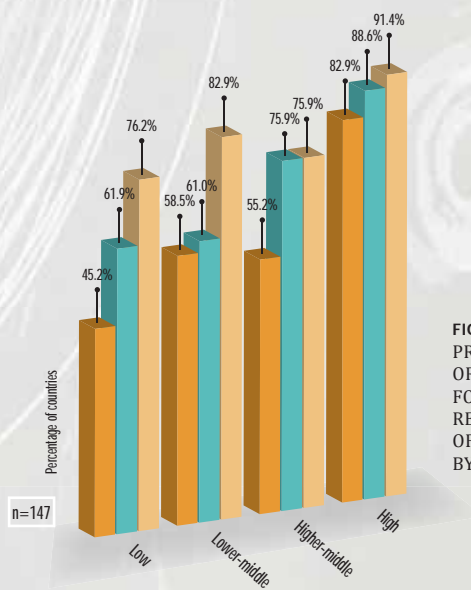


FIGURE 4.10
PRESENCE OF NONGOVERNMENTAL ORGANIZATIONS IN COUNTRIES FOCUSING ON TREATMENT, REHABILITATION AND PREVENTION OF DRUG USE DISORDERS, BY INCOME GROUP, 2008

- Alcoholics Anonymous [n=142]
- Al-Anon/Alateen [n=136]
- Narcotics Anonymous [n=141]
- Cocaine Anonymous [n=130]

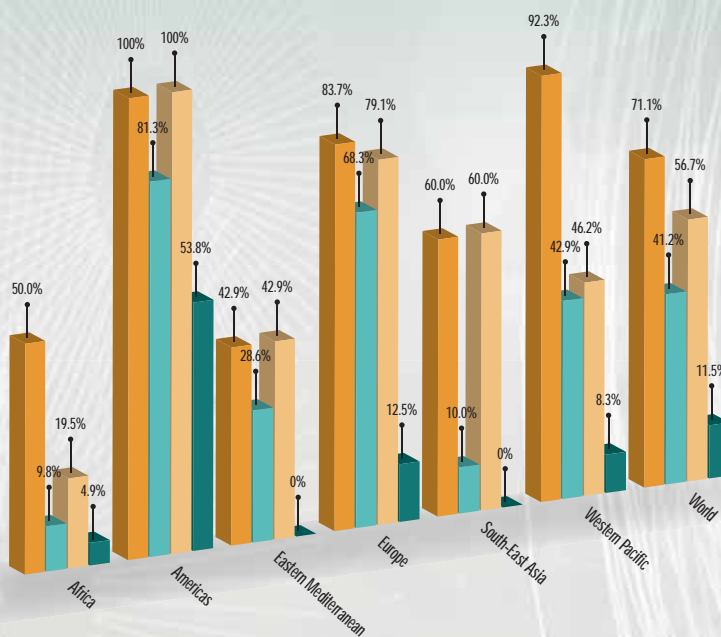


FIGURE 4.11
PROPORTION OF COUNTRIES WITH SELF-HELP GROUPS FOR SUBSTANCE USE DISORDERS, BY REGION, 2008

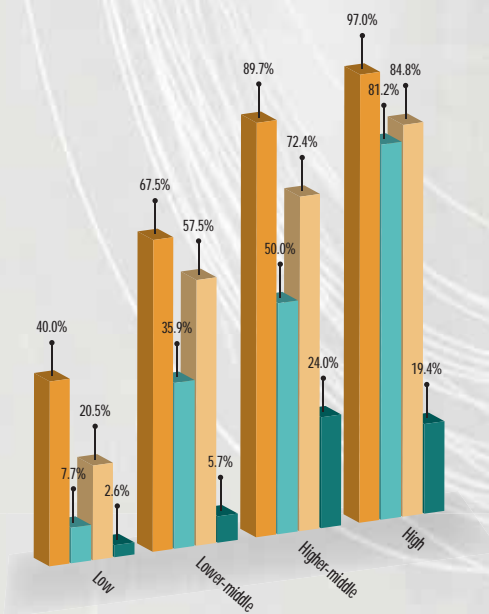


FIGURE 4.12
PROPORTION OF COUNTRIES WITH SELF-HELP GROUPS FOR SUBSTANCE USE DISORDERS, BY INCOME GROUP, 2008

- Ex-addicts or recovering addicts [n=137]
- Traditional healers [n=128]
- Religious groups/NGOs based on religious groups [n=138]

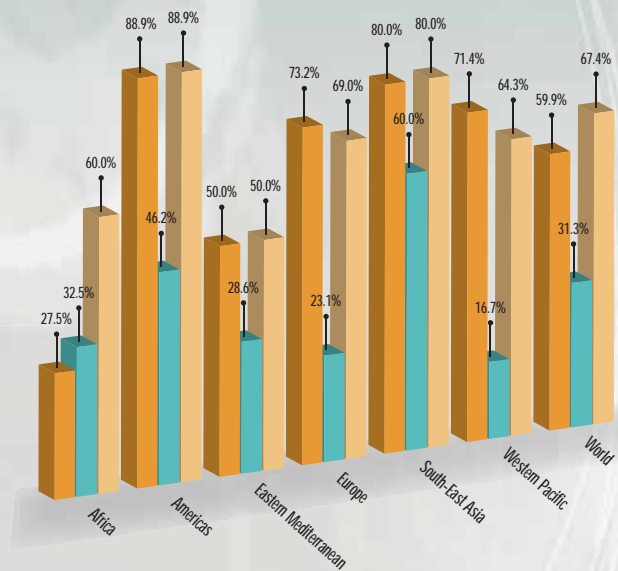


FIGURE 4.13
PROPORTION OF COUNTRIES WITH GROUPS PROVIDING FORMAL CARE FOR PERSONS WITH SUBSTANCE USE DISORDERS, BY REGION, 2008

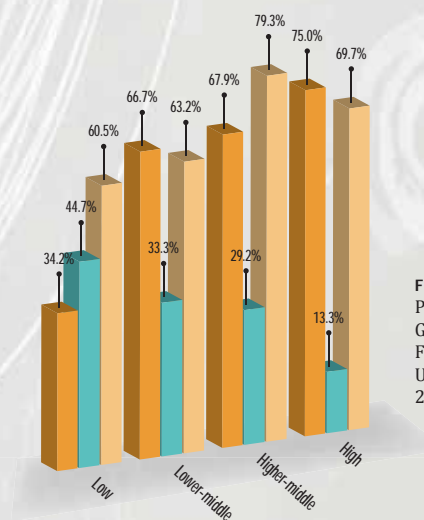


FIGURE 4.14
PROPORTION OF COUNTRIES WITH GROUPS PROVIDING FORMAL CARE FOR PERSONS WITH SUBSTANCE USE DISORDERS, BY INCOME GROUP, 2008

CHAPTER 5. POLICY AND LEGISLATION

5.1 Alcohol and drug treatment policy in public health perspective

Robin Room

For centuries, physicians, clergy and charity workers have provided treatment or care for habitual use of alcohol or drugs. But the treatment was provided as part of their general practice of caring. Specialized institutions and professionals for the treatment of alcohol disorders first emerged in the 1800s and spread through more industrialized and urbanized countries (Baumohl & Room, 1987). The initial institutions tended to take one of two forms: small "homes", often run under religious auspices, and larger "inebriates' asylums", run under medical auspices. Treatment was predominantly inpatient, and often lasted for a year or longer. Patients in inebriates' asylums were often there under a judicial civil commitment order. By 1900, many such institutions were also taking cases with opiate and other drug disorders. In the early 1900s, outpatient treatment of alcohol problems also spread through Europe in such forms as municipal advice clinics (*Fürsorgestellen*) and temperance boards.

These early traditions of treatment were disrupted by many factors: two world wars and a depression; the advent of alcohol prohibition in some societies, and then its failure; the advent of global drug prohibition under the international narcotics treaties; and the conceptual separation of alcohol from drugs after 1920 (Courtwright, 2005). In many industrialized countries, the main institutions in which alcoholics could be found in the 1940s were mental hospitals, public hospitals and local jails (e.g. Corwin & Cunningham, 1944; Room, 1988). When specialized alcoholism treatment began again in the 1950s, initially it was primarily inpatient treatment with relatively long episodes of care. A separate system of drug addiction treatment agencies was often set up in parallel as drug problems emerged in one country after another. Particularly for drugs, treatment was often compulsory, under judicial civil commitment orders. Gradually over the last half-century there has been a trend towards the combination of treatment services and systems for alcohol and drugs (e.g. Weisner, 1992). For alcohol in many places, there was a trend until recently towards less compulsion in treatment, whereas strong coercion to treatment has remained common for drugs, as discussed below.

Since the 1980s, there has been a growth of "harm reduction" services, particularly for injecting drug users. The winning policy argument for these services, often against considerable moral opposition, emphasized the well-being of the population at large. Methadone maintenance became politically acceptable in the United States in the 1980s because it reduced crime rates. After the mid-1980s, harm reduction services for injecting drug users were implemented in many countries as a way of reducing the spread of HIV and other bloodborne infections in the population, and sometimes also to reduce public nuisance on the streets. Harm reduction services thus tend to be justified as providing benefits at the population level as well as assistance and care for those with drug use disorders.

The history and development of alcohol and drug treatment services have been described for a number of countries (Klingemann, Takala & Hunt, 1992; Klingemann & Hunt, 1998).

The general trend has been towards development of a range of specialized types of treatment and care. There are wide variations in the mix of types available between countries and often between areas within countries. On the other hand, in a globalizing world, there has also been considerable international diffusion of types of services and models of care, through the media of intergovernmental organizations such as WHO, professional societies, international nongovernmental organizations and the professional and scientific literature.

Almost universally, heavy alcohol and drug users are stigmatized (Room et al., 2001). Those who enter specialized alcohol or drug treatment are also often heavily socially marginalized and much less likely than the general population to be employed, stably housed, or in an intact family (e.g. Storbjörk & Room, 2008). Since the international drug control treaties require that nonmedical use of drugs be criminalized, essentially all countries have specific criminal laws concerning trafficking or other involvement in drug markets, and most also have criminal laws concerning the use of drugs. Many who are in treatment for drug use disorders are thus stigmatized as having criminal records, even if they are not entering treatment specifically because of a criminal court referral.

These tendencies in alcohol and drug treatment populations give a special character to policy and legislation for substance use disorders – which differ from the policy and legislation for most other disorders. There is a great deal of special legislation for the treatment and rehabilitation of those with substance use disorders; over one-half of the countries in the ATLAS survey report it. However, much of the legislation is concerned with provisions for compulsory treatment or for treatment in lieu of jail or other punishment (Porter et al., 1999). Nearly half of the countries included in the survey report legislation concerning compulsory treatment. Drug courts, a relatively new innovation in which a programme of treatment is managed by a judge, with the patient cooperating under threat of jail as an alternative, have spread from the United States to many other countries; 21% of the participating countries report the presence of drug courts. The unusual distribution of drug courts by income group of the country may indicate that drug courts are most likely to be instituted where the alternative punishment is severe. If one considers all types of programmes that divert clients away from the criminal justice system and into treatment, some such diversion is in place in a majority of the countries reporting.

The high degree of marginalization of many persons with alcohol or drug disorders means that many have a considerable need for government benefits such as disability payments or care. In about 40% of the countries in the survey, such benefits are available (roughly equally to persons with drug use disorders and persons with alcohol disorders). Reflecting general patterns of the availability of welfare support, the benefits are more likely to be available in richer countries than in poorer ones.

Entering specialized alcohol or drug treatment is itself often stigmatizing (Room, 2005); how to provide specialized treatment and yet avoid contributing to further stigma is a continuing challenge for the field. The stigma associated with heavy alcohol or drug use, and the degree of coercion often involved in entry into treatment, mean that these treatment populations have special needs for the protection of their human rights (Barrett et al., 2008), including confidentiality concerning their treatment.

Alcohol and drug problems are relevant to most of the major social handling institutions of modern societies: not only the health system, but also criminal justice, welfare and disability systems. Alcohol and drug problems thus show up in the caseloads of a broad range of health and human services (Weisner & Schmidt, 1995; Tam, Schmidt & Weisner,

1996). Specialized alcohol and drug treatment services often emerged in a situation of neglect of the problems in these major systems, and were frequently set up by charismatic individuals or by self-help and other nonprofessional groups. Treatment services set up in such circumstances have made a very substantial contribution to the provision of care in many countries. However, there have also been instances in which such services have led to damaging results (e.g. Ofshe, 1980). Given the degree of coercion in much of the treatment, there is also a special need for both high and ethical standards of care in both professional and nonprofessional services.

Alcohol and drug problems are much more widely spread in the population than the smaller streams of cases entering specialized alcohol and drug treatment services would indicate. However, the problems tend to be more diffuse and less severe in the wider population than in those entering the specialized services (Storbjörk & Room, 2008). Substantial efforts have been made in many countries to improve screening, assessment and brief interventions for alcohol and drug problems in primary health care and other service systems, although progress has been slow in institutionalizing these improvements (Roche & Freeman, 2004). Destigmatizing specialist alcohol and drug treatment, and providing help and counselling for socially integrated heavy users who are less severely affected, are urgent tasks in many places in a public health approach to alcohol and drug treatment policy.

5.2 Policy frameworks and special legislative provisions

(Figures 5.1–5.8)

Background

- Nominated focal points were asked about the presence and nature of national substance abuse policies in their countries.
- Focal points were asked about the availability of special legislation in their countries pertaining to treatment and rehabilitation of substance use disorders.
- More specifically, focal points were required to indicate the presence and nature of special legislation for the compulsory treatment of substance use disorders in their countries.
- Focal points were asked in addition whether government benefits such as disability pensions, subsidies for food or housing, or any other benefits would be provided to persons with alcohol and drug use disorders in their countries.

Salient findings

Substance abuse policies

- The majority of countries in the survey (68.0%) reported having a national substance abuse policy, with 100% of high-income countries reporting having such a policy.
- The highest proportion of countries reporting substance abuse policies was in the European Region (93.2%). The African Region (32.6%) reported the lowest proportion of countries with substance abuse policies.
- In Europe, 45.5% of countries reported having separate policies for alcohol and for drugs. Separate policies on alcohol only were reported from some countries in Africa (2.3%) and Europe (18.2%). The largest proportion of countries reporting separate policies for drugs were in the Eastern Mediterranean (21.0%), South-East Asia (20.0%) and Western Pacific (40.0%) regions.
- Country income level appears to have an effect on the availability of substance abuse policies. A lower proportion of substance abuse policies was reported from the low-income countries (38.1%) compared with countries from the lower middle-income (63.4%), higher middle-income (79.3%) and high-income groups (100%).

Special legislation for treatment and rehabilitation of substance use disorders

- The presence of special legislation for the treatment and rehabilitation of substance use disorders was reported by 55.2% of countries in the survey.
- The highest proportions of countries in the survey reporting special legislation for the treatment and rehabilitation of substance use disorders were in the European (75.0%) and Eastern Mediterranean (71.4%) regions. Across the regions, the lowest proportion of countries reporting special legislation for the treatment and rehabilitation of substance use disorders was in Africa (25.6%).

- The country income level affects the presence of special legislation for the treatment and rehabilitation of substance use disorders. A greater proportion of countries in the high-income group (82.9%) reported having special legislation for the treatment and rehabilitation of substance use disorders than countries in the higher middle-income (60.7%), lower middle-income (58.5%) and low-income (24.4%) groups.

Legislation for compulsory treatment of substance use disorders

- Special legislation for the compulsory treatment of substance use disorders was reported from 42.5% of countries in the survey, with 30% of countries reporting special legislation for the compulsory treatment of both alcohol and drug use disorders together.
- The Western Pacific Region reported having the highest proportion of countries (80.0%) with special legislation for the compulsory treatment of substance use disorders. In this region, 33.3% of countries reported having special legislation for the compulsory treatment of drug use disorders only.
- The lowest proportions of countries with special legislation for the compulsory treatment of substance use disorders were reported from Africa (16.3%) and the Americas (25.0%).
- There is no strong effect of country income on the presence of special legislation for the compulsory treatment of substance use disorders. Special legislation for the compulsory treatment of substance use disorders was reported from 60.0% of high-income countries, 44.8% of higher middle-income countries, 47.5% of lower middle-income countries and 21.4% of low-income countries.

Government benefits for substance use disorders






- Government benefits for people with alcohol and drug use disorders were reported from 40.6% of countries in the survey.
- The Western Pacific (78.6% for alcohol, 73.3% for drugs) and European (69.0% for alcohol, 70.5% for drugs) regions reported the highest proportions of countries providing government benefits for persons with alcohol and drug use disorders.
- No country in South-East Asia reported having government benefits for persons with alcohol and drug use disorders.
- There is a strong effect of country income on the provision of government benefits for substance use disorders, with over 80% of high-income countries in the survey and approximately 12% of low-income countries reporting the provision of government benefits for persons with alcohol and drug use disorders.

Notes and comments

- The question on substance abuse policies provides an interesting insight into the distinctions between the areas of mental health, drugs and alcohol in countries. One

predominant model is not seen, though the most commonly reported model has alcohol and drugs being considered together, but separately from mental health. It is not clear why many countries do not have any policies, nor is it clear what the impact is of having or not having such policies.

- Special legislation for the treatment of substance use disorders is in place in many countries. A review of such legislation was conducted by WHO in 1999 (Porter, 1999).
- Such legislation typically may be required for a number of purposes, namely: to regulate controlled substances that are used in the treatment of substance use disorders such as methadone, to facilitate the referral of people from the criminal justice system to the treatment system, to enable the compulsory treatment of substance use disorders, or to provide for the structure of the treatment system.
- It is noteworthy that the most common model is to include both alcohol and drugs together in such legislation.
- The compulsory treatment of substance use disorders is controversial but is nonetheless envisioned in the legislation of many countries. A recent WHO report describes the nature of compulsory treatment in a number of countries in the Western Pacific Region (WHO, 2009b).
- The data collected in this survey do not distinguish between the presence of legislation only for compulsory treatment and the widespread implementation of such legislation.

-  Separate policy for alcohol and separate policy for drugs
-  Separate policy for drugs only
-  Separate policy for alcohol only
-  Policy for alcohol and drugs together
-  Policy for mental health, alcohol and drugs together

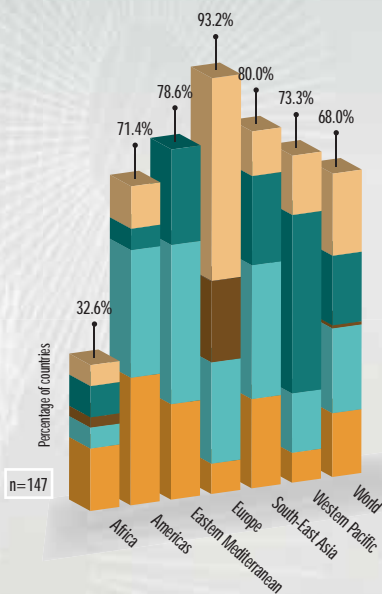


FIGURE 5.1
PRESENCE AND NATURE OF
SUBSTANCE ABUSE POLICIES,
BY REGION, 2008

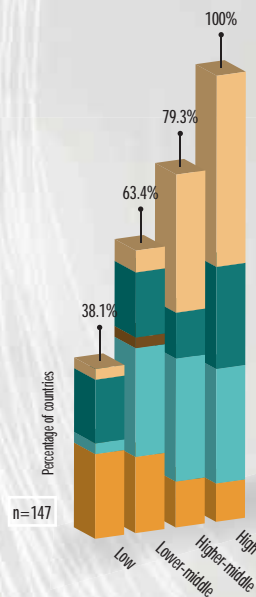


FIGURE 5.2
PRESENCE AND NATURE OF
SUBSTANCE ABUSE POLICIES,
BY INCOME GROUP, 2008

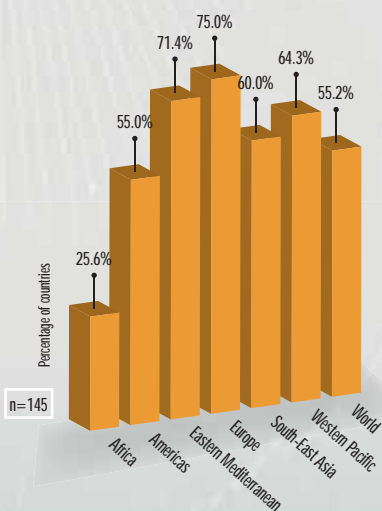


FIGURE 5.3
PRESENCE OF SPECIAL
LEGISLATION IN COUNTRIES
FOR THE TREATMENT AND
REHABILITATION OF SUBSTANCE
USE DISORDERS, BY REGION, 2008

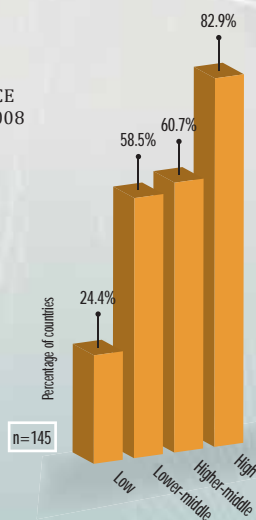


FIGURE 5.4
PRESENCE OF SPECIAL
LEGISLATION IN COUNTRIES
FOR THE TREATMENT
AND REHABILITATION OF
SUBSTANCE USE DISORDERS,
BY INCOME GROUP, 2008

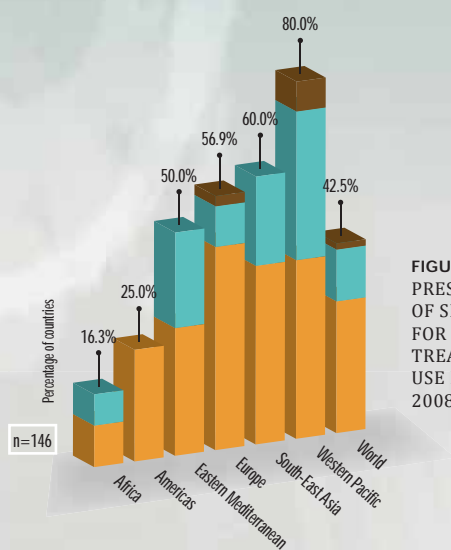
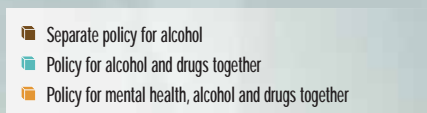


FIGURE 5.5
PRESENCE AND NATURE
OF SPECIAL LEGISLATION
FOR THE COMPULSORY
TREATMENT OF SUBSTANCE
USE DISORDERS, BY REGION,
2008

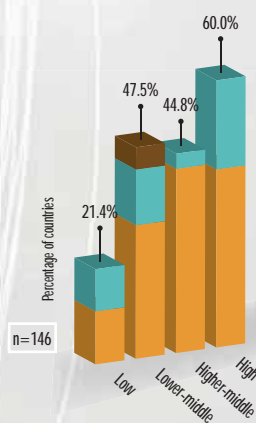


FIGURE 5.6
PRESENCE AND NATURE
OF SPECIAL LEGISLATION
FOR THE COMPULSORY
TREATMENT OF
SUBSTANCE USE DISORDERS,
BY INCOME GROUP, 2008

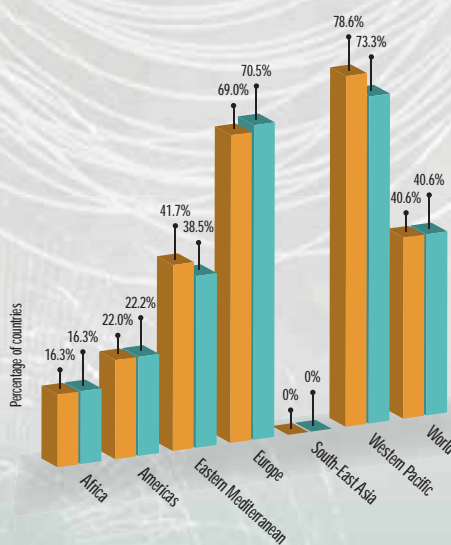
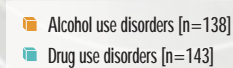


FIGURE 5.7
PROVISION OF
GOVERNMENT BENEFITS
FOR SUBSTANCE USE
DISORDERS, BY REGION,
2008

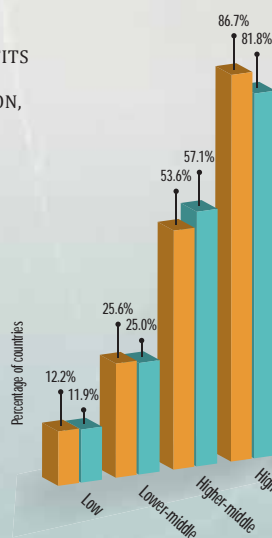


FIGURE 5.8
PROVISION OF
GOVERNMENT BENEFITS
FOR SUBSTANCE USE
DISORDERS, BY INCOME
GROUP, 2008

5.3 The criminal justice system and substance use disorders

(Figures 5.9–5.12)

Background

- Nominated focal points were asked to provide information about the presence of drug courts in their countries.
- Focal points in countries were requested to indicate whether there would be programmes in their countries referring or diverting clients from the criminal justice system towards treatment.

Salient findings

Drug courts

- The presence of drug courts was reported in 20.5% of countries.
- The highest proportion of countries with drug courts was in the Eastern Mediterranean Region (38.5%). The African (14.0%) and Americas (14.3%) regions had the lowest proportions of countries with drug courts.
- There was no effect of country income level on whether or not countries had drug courts.

Programmes diverting from the criminal justice system towards treatment

- Half of the countries in the survey (52.2%) reported having programmes referring or diverting clients from the criminal justice system towards treatment.
- The highest proportions of countries in the survey with programmes referring or diverting clients from the criminal justice system towards treatment were reported by Europe (66.6%), the Western Pacific (66.6%), the Eastern Mediterranean (61.6%) and South-East Asia (60.0%). Africa reported the lowest proportion of countries with these programmes (27.9%).
- For the majority of surveyed countries in the African, Americas and European regions, programmes referring or diverting clients from the criminal justice system towards treatment apply to both alcohol and drug use disorders. In the Eastern Mediterranean and South-East Asian regions, higher proportions of countries (38.5% and 40.0% respectively) reported having these programmes for drug use disorders only.
- There is an income effect on the presence of these programmes across different income groups of countries, with 84.9% of high-income countries in the survey and 38.1% of low-income countries reporting the presence of these programmes. The lower middle-income countries reported the highest proportion of programmes for drug use disorders only (24.4%).

Notes and comments

- Systems of referral from the criminal justice system to the treatment system are present in the majority of countries in the survey, and may warrant greater evaluation and discussion.
- The predominant model of inclusion of both alcohol and drugs in schemes that refer from the criminal justice system to the health care system suggests that in many cases the scheme is concerned not just with the crime of illicit drug use or possession but with crimes associated with both legal and illegal substance use.
- The reported data on presence of drug courts in countries should be interpreted with caution as the understanding of the term by nominated focal points could vary, and reported data could also reflect the presence of special procedures for offenders with drug use disorders.

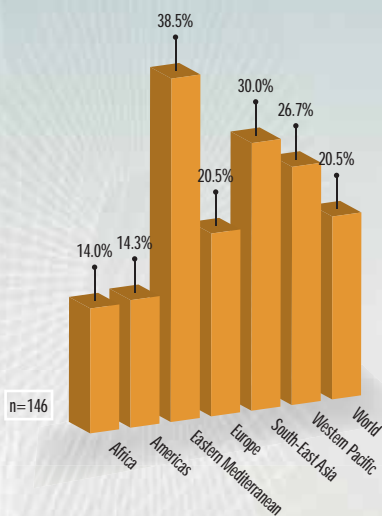


FIGURE 5.9
PROPORTION OF COUNTRIES
WITH DRUG COURTS, BY REGION,
2008

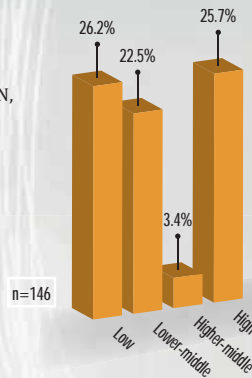


FIGURE 5.10
PROPORTION OF COUNTRIES
WITH DRUG COURTS, BY
INCOME GROUP, 2008

■ For both alcohol and drug use disorders
■ For drug use disorders only

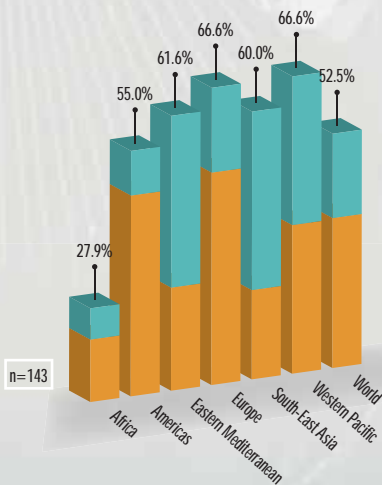


FIGURE 5.11
PROPORTION OF COUNTRIES
WITH PROGRAMMES
REFERRING OR DIVERTING
CLIENTS FROM THE
CRIMINAL JUSTICE SYSTEM
TOWARDS TREATMENT,
BY REGION, 2008

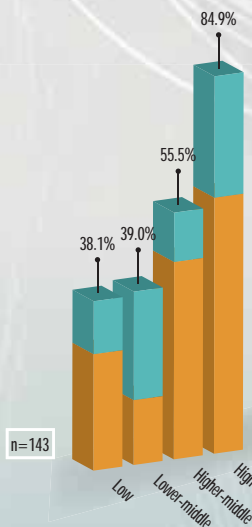


FIGURE 5.12
PROPORTION OF COUNTRIES
WITH PROGRAMMES
REFERRING OR DIVERTING
CLIENTS FROM THE
CRIMINAL JUSTICE SYSTEM
TOWARDS TREATMENT,
BY INCOME GROUP, 2008

CHAPTER 6. PREVENTION

6.1 Effective prevention of substance use disorders

Tim Stockwell

Introduction

The use of substances that modify how we feel, perform or behave is evident in all contemporary societies and has been throughout recorded history. In modern times, concerns about adverse effects have increased with the greater efficiency of production, distribution and marketing of an increasing variety of substances. Nineteenth-century tonic wines containing ingredients from the coca plant were supplanted by injectable cocaine in the 20th century and then more recently by crack cocaine. Alcohol can be manufactured from almost any seed, plant or crop. In non-industrial and pre-industrial societies its use was often restricted to harvest celebrations (Jernigan, 1997). Today most countries permit the distribution and intense marketing of thousands of different brands of alcohol of widely differing concentrations at prices to suit every budget and tastes to suit every palate.

The case for governments to be involved in preventing the use of harmful substances and minimizing harms from continued use is a strong one. Chapter 1 of this report makes this case in terms of the extent and severity of the harms involved. In Chapter 6 we see that many WHO Member States have designated, and often government-funded, prevention programmes. It is also clear that there is much variation in response, in terms of the types of drugs focused on, the types of activity (e.g. brief interventions, harm reduction, education), the main target groups and the settings for programme activity (e.g. school, workplace, community). Inevitably, the level of investment in prevention is greatest in higher-income countries.

Local and international agencies can seek to maximize the effectiveness of the overall prevention response by drawing on the growing body of evidence regarding the nature of the problem, what has worked in other places, and how a comprehensive response can be maintained (Babor et al., 2010a, 2010b). The overall effectiveness of a national prevention strategy can be increased by thoughtfully addressing the following questions.

What are the most prevalent and serious harms caused by substance use – and for which substances?

When budgets are tight, it is important to direct government investment to strategies that address the greatest harm. Alcohol, tobacco and illicitly-sourced drugs collectively contribute to almost 100 preventable causes of death, injury and illness (Buxton, Tu & Stockwell, 2009). The number of preventable deaths across the entire population leads to the conclusion that, in most countries, tobacco is the first priority, followed at a little distance by alcohol, and with the illicit substances some way behind. If one were to focus on younger people (i.e. those under 35 years of age) then clearly alcohol demands the most attention (Toumbourou et al., 2007). Using the metric of DALYs – which take account of death, disability, illness and longevity – then alcohol and tobacco become equal partners in causing between them about 90% of harm from substance use (Rehm & Room, 2005). If one includes harms caused to other people, and social and legal harms, then alcohol

and some illegal drugs come more into the picture – though some of those harms can be caused, perversely, by their legal status (Lenton, 2005).

The pattern of substance use and related harm will vary from country to country, as will cultural values around how the seriousness of these is evaluated. Some effective prevention programmes address only one type of harm (e.g. fetal alcohol spectrum disorder, road trauma, or the transmission of infectious diseases). A comprehensive national strategy needs to address and prioritize the full range of harmful outcomes when making high-level decisions about policy priorities and investment. Furthermore, the principle of the “prevention paradox” (Rose, 1985) suggests that strategies should address not only the substance use of such high-risk groups as pregnant women, sex trade workers and prisoners but also that of many individuals in the general population whose substance use is usually of lower risk (Stockwell et al., 2004). However, it is also important to respond to problems experienced by smaller populations of often marginalized and disadvantaged people experiencing severe health and safety problems, partly as a result of their substance use.

Should prevention focus mainly on broad spectrum and distal or more specific and proximal causes of harmful substance use?

The prevailing social and economic conditions faced by people in different contexts shape the nature and extent of substance use. For instance, patterns of alcohol use are related to income (Huckle, You & Casswell, 2010), and the extent of illicit drug use has been linked to levels of unemployment (Silverman & Robles, 1999). The physical and psychological well-being of children in their very early years predicts the likelihood of their experiencing a range of behavioural, mental health and substance use disorders in later life (Toumbourou, 2005). Such social, economic and childhood development issues can be considered as distal antecedents of substance use and related harms (Loxley et al., 2004; Toumbourou et al., 2007).

Conversely, preventative interventions may aim to modify the immediate or proximal antecedents of harm caused by substance use (e.g. the sharing of needles in the spread of bloodborne viruses, impaired driving caused by alcohol and/or other substances, violence triggered or exacerbated by drunkenness). In general, the effectiveness of efforts to modify the immediate antecedents of mostly acute problems caused by substance use are easier both to determine and implement than efforts to remedy fundamental social and economic conditions. While governments have a moral imperative to address these latter broad-spectrum issues, it is also vital that prevention strategies are supported which tackle the immediate environmental and situational antecedents of risky substance use and related harms.

Some areas of prevention activity – particularly those concerned with the regulatory environment – can have an impact on both distal and proximal risk factors for harmful substance use. There is good evidence that the overall degree of availability of alcohol or illicit drugs in a young person’s neighbourhood is a risk factor for later problems (e.g. Grube & Nygaard, 2005). Controls on the economic and physical availability of alcohol have also been shown to be among the most effective ways of achieving immediate and long-lasting reductions in alcohol-related harm (Toumbourou et al., 2007; Babor et al., 2010a). In other words, what is healthy for the adult environment will be beneficial for young people too. Attention to the regulatory environment and the immediate antecedents of harmful substance use should not be neglected while pursuing the lofty ideals of better living conditions and stronger families.

Which strategies have the strongest evidence for effectiveness?

Reviewing the published scientific evidence for the effectiveness of a range of preventive interventions is in itself becoming a science. The material available for review is so extensive that entire monographs (e.g. Loxley et al., 2004) and books have been dedicated to summarizing evidence in relation to alcohol policy (Babor et al., 2010a), illicit drug policy (Babor et al., 2010b) or both (Stockwell et al., 2005). As a general guide, the greatest weight can be given to evidence derived from multiple publications of well designed studies which include some kind of control or comparison population and which are identified through a series of systematic search strategies. Comparable results across multiple studies can be assessed by meta-analysis whereby a formal statistical approach can be used to estimate and compare effect sizes. Beyond that, cost-benefit analysis can be used to compare likely returns from investment in different strategies.

In the prevention of alcohol-related harms the most effective strategies include: managing the real price of alcoholic beverages (e.g. so that it reflects ethanol content, is adjusted with the cost of living and does not fall too low), maintaining and enforcing legal drinking ages, restricting the number of licensed premises (e.g. by way of government alcohol monopolies), random breath-testing and low legal blood-alcohol concentration limits for drivers, plus brief interventions for early-stage problem drinkers. Strategies involving only education and persuasion have the weakest evidence for effectiveness, though there is some dispute as to whether school-based interventions are completely ineffective in relation to alcohol and tobacco (Toumbourou et al., 2007; Babor et al., 2010a). Some prevention experts have also suggested that “community mobilization” that is partly achieved through awareness strategies can be useful in creating the conditions under which more effective environmental prevention strategies can be introduced (Holder, Saltz & Grube, 1997).

Needle exchange schemes and the provision of methadone both have relatively strong evidence of effectiveness – and, once more, there is scant evidence of the effectiveness of education and persuasion strategies in preventing illicit drug use (Babor et al., 2010b). There is some promising evidence in relation to the effectiveness of some early and later childhood interventions (e.g. home visits to support “high risk” mothers before and after birth, preparing preschool children to function in a classroom, strategies to create “good behaviour” in the classroom) (Toumbourou, 2005).

While some effective strategies can be delivered under the authority of government health departments (e.g. provision of clean needles, brief interventions), there are many others which fall under the responsibility of other government departments – such as finance (pricing and taxation), and police and public safety (liquor and drink-driving law enforcement). One of the challenges of a comprehensive strategy is to engage multiple government departments and authorities in the delivery of evidence-based prevention strategies.

Are effective prevention strategies necessarily unpopular?

Perhaps because alcohol is by far the most widely used psychoactive substance in most modern societies and most strategies supported by evidence would require alcohol to become both more expensive and less convenient to obtain, it appears that the most popular strategies (i.e. education and persuasion) are usually those that are the least effective (Babor et al., 2010a).

A more optimistic perspective is that (i) there is already public support in many countries for a range of effective strategies (e.g. reduced bar trading hours, policing of late-night licensed premises, enforcement of liquor laws, harm reduction services for illicit drug users), (ii) the level of apparent popular support will depend on how policies are described to make them potentially marketable, and (iii) after controversial public policies have been introduced there have been examples of public opinion improving. We are also beginning to know a great deal about the effectiveness of isolated interventions but less about how they operate as part of a comprehensive strategy. Education and persuasion have been part of effective campaigns targeting the prevention of smoking, drinking and driving, and bloodborne viruses (e.g. public awareness campaigns, warning labels, school-based education). In isolation they are ineffective in achieving population-wide behaviour change but they may be crucial ingredients in a national strategy. If governments wish to show leadership not only by listening to public opinion but also by leading it so as to implement effective prevention strategies, they will need to use social marketing techniques. Education and persuasion strategies are essential also for communicating the extent of harm associated with harmful substance use and the evidence for what constitutes effective prevention. An informed community will be more likely to expect comprehensive and effective responses to the problems of substance use from its elected leaders.

6.2 Administration and budget

(Figures 6.1–6.4)

Background

- Nominated focal points were asked whether there was a special government unit or government official in their countries with responsibility for the prevention of substance use disorders.
- Focal points were asked about the presence in the annual budget of the government of a specific budget line reserved for the prevention of substance use disorders.

Salient findings

Government unit for substance use disorder prevention services

- In 72.4% of countries in the survey, one or more government units responsible for the prevention of substance use disorders were reported.
- Across the regions, the highest proportions of countries with government units for the prevention of substance use disorders were reported from the Western Pacific (86.7%), Eastern Mediterranean (85.7%), Americas (80.0%) and South-East Asia (80.0%) regions. Over half of countries in the African Region (53.5%) reported having government units responsible for the prevention of substance use disorders.
- Besides those in the Western Pacific, the majority of countries in Africa, the Americas, Eastern Mediterranean, Europe and South-East Asia reported having government units responsible for both alcohol and drug prevention together. Over half of the countries in the Western Pacific (53.3%) reported having a government unit only for drug prevention. Government units responsible only for the prevention of alcohol use disorders seem to exist in a few African countries.
- There is an effect of increased country income on the presence of government units responsible for prevention of substance use disorders. However, there is no marked difference between the proportion of government units which are present in higher middle-income (82.8%) and high-income (78.8%) countries.

Budget for prevention services

- Half of the countries in the survey (50.0%) reported having in the annual budget a budget line for the prevention of substance use disorders.
- The highest proportion of countries reporting budget lines for the prevention of substance use disorders was in the Western Pacific Region (93.3%). The lowest proportion of countries reporting budget lines was in the African Region (30.2%).
- Budget lines reserved only for the prevention of drug use disorders appear to be common among countries in the Western Pacific Region, where 47.7% of countries reported having such a budget line. Budget lines for the prevention of drug use disorders only seem to be common in the Eastern Mediterranean (30.0%) and South-East Asia (21.4%) regions. Budget lines reserved only for the prevention of alcohol use disorders were reported from only a few countries in Europe (2.3%).

- There is an effect of country income level on the presence of budget lines for the prevention of substance use disorders. In 33.3% of low-income countries and 69.7% of high-income countries, budget lines for the prevention of substance use disorders were reported. The proportion of countries reporting integrated budget lines (i.e. a budget line which is reserved for mental health, alcohol and drug prevention together) decreases with increasing country income.

Notes and comments

- The presence of a budget line for the prevention of substance use disorders does not imply anything about the amount of money spent on prevention activities. A question on the amount of the budget line for prevention of substance use disorders was not pursued. The presence of a budget line does, however, provide an interesting insight into the structure of a country's system of prevention, and whether or not the country has the capacity to budget its resources rationally.

- For alcohol and drug use disorders separately
- For drug use disorders only
- For alcohol use disorders only
- For alcohol and drug use disorders together

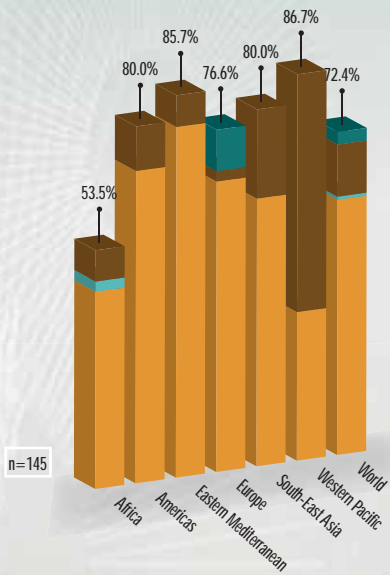


FIGURE 6.1
PROPORTION OF COUNTRIES WITH A GOVERNMENT UNIT RESPONSIBLE FOR PREVENTION OF SUBSTANCE USE DISORDERS, BY REGION, 2008

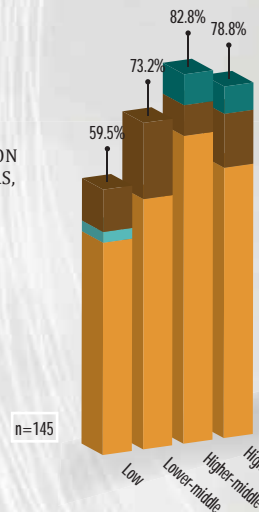


FIGURE 6.2
PROPORTION OF COUNTRIES WITH A GOVERNMENT UNIT RESPONSIBLE FOR PREVENTION OF SUBSTANCE USE DISORDERS, BY INCOME GROUP, 2008

- For alcohol and drug use disorders separately
- For drug use disorders only
- For alcohol use disorders only
- For alcohol and drug use disorders together
- For mental health, alcohol and drug use disorders together

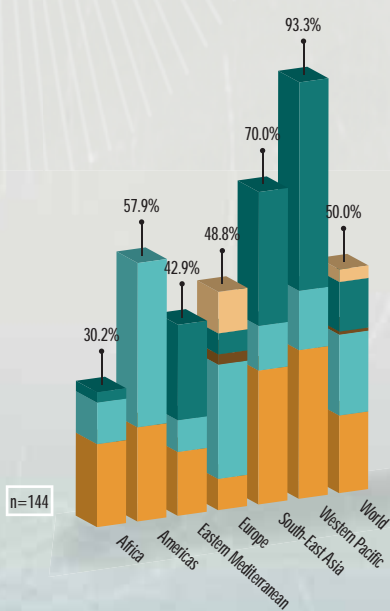


FIGURE 6.3
PROPORTION OF COUNTRIES WITH A BUDGET LINE IN THE ANNUAL BUDGET FOR PREVENTION OF SUBSTANCE USE DISORDERS, BY REGION, 2008

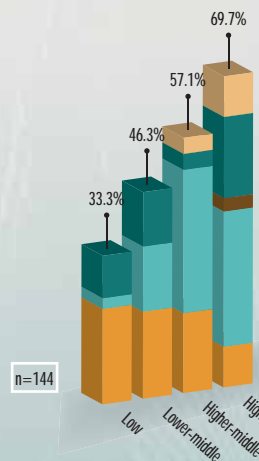


FIGURE 6.4
PROPORTION OF COUNTRIES WITH A BUDGET LINE IN THE ANNUAL BUDGET FOR PREVENTION OF SUBSTANCE USE DISORDERS, BY INCOME GROUP, 2008

6.3 Availability and coverage of prevention services

(Figures 6.5–6.10)

Background

- Nominated focal points were asked whether any prevention activities for substance use disorders were available in their countries, and they were required to indicate the main focus of these prevention activities.
- More specifically, focal points were asked whether programmes for the prevention of substance use disorders – such as school-based programmes, community-based programmes or workplace programmes – were available in their countries.
- For each of these programmes, focal points were requested to indicate the estimated level of coverage of the population.

Salient findings

Presence and focus of substance use disorder prevention activities

- Approximately 95% of countries in the survey reported having some kind of prevention activities for substance use disorders. Countries reporting not having any prevention activities for substance use disorders are in the low-income and lower middle-income groups.
- In approximately 50% of countries in the survey, prevention activities were reported to focus equally on alcohol and drug prevention. Around 13% of countries reported focusing to a larger extent on alcohol prevention, 28% reported focusing to a larger extent on drug prevention, and 4% reported having only drug prevention activities. No country in the survey reported having only alcohol prevention activities.
- The highest proportions of countries reporting prevention programmes focusing to a larger extent on drug prevention were in the Eastern Mediterranean (46.2%), South-East Asia (66.7%) and Western Pacific (35.7%) regions.
- There is no effect of country income level on the presence and focus of prevention activities across different income groups of countries.

Prevention programmes for substance use disorders and coverage

- School-based programmes, community-based programmes and workplace programmes for the prevention of substance use disorders were reported by 77.9%, 68.5% and 58.6% of countries respectively.
- School-based programmes, community-based programmes and workplace programmes for the prevention of substance use disorders were reported by all regions. The lowest proportion of countries reporting school-based programmes, community-based programmes and workplace programmes were in Africa.

- Coverage of the population in need with school-based programmes, community-based programmes and workplace programmes for the prevention of substance use disorders appear to be low. For example, over 50% of countries indicated that the coverage of school-based programmes for the prevention of substance use disorders would be provided for less than half of the population in need. Similarly, in only 10% of surveyed countries worldwide, community-based programmes cover as much as 75–100% of the population. Coverage of workplace programmes seems to be lowest, with over 60% of countries reporting less than 25% of the population covered.

Notes and comments

- An interesting finding is that the focus of the prevention efforts in the countries in the survey is either on drugs or equally focused on alcohol and drugs, despite the predominance of alcohol-related harm over drug-related harm in all but the Eastern Mediterranean Region. The reasons for this were not examined in this survey.
- It is noteworthy that this question elicited a much higher positive response from countries than the treatment questionnaires, with an almost universal uptake of prevention activities.
- This questionnaire did not distinguish between effective and ineffective prevention activities. Some widely implemented prevention programmes have been found to be ineffective with regard to some key outcome measures.

- Focused on drug prevention only
- Focused on alcohol prevention only
- Focused to a larger extent on drug prevention
- Focused to a larger extent on alcohol prevention
- Focused equally on alcohol and drug prevention

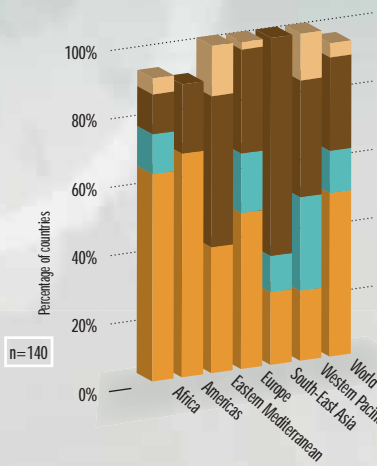


FIGURE 6.5
PRESENCE AND FOCUS
OF SUBSTANCE ABUSE
PREVENTION ACTIVITIES,
BY REGION, 2008

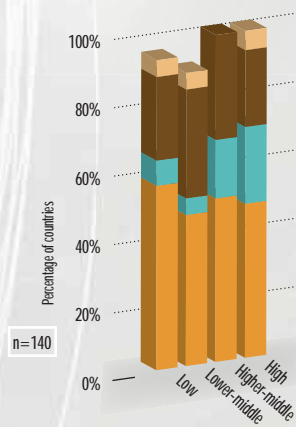


FIGURE 6.6
PRESENCE AND FOCUS
OF SUBSTANCE ABUSE
PREVENTION ACTIVITIES,
BY INCOME GROUP, 2008

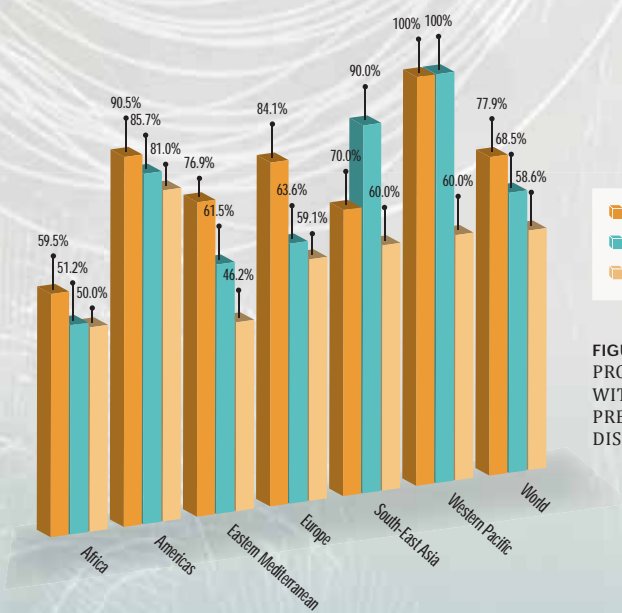


FIGURE 6.7
PROPORTION OF COUNTRIES
WITH PROGRAMMES FOR THE
PREVENTION OF SUBSTANCE USE
DISORDERS, BY REGION, 2008

- Coverage of 75–100% of the population
- Coverage of 50–74% of the population
- Coverage of 25–49% of the population
- Coverage of < 25% of the population

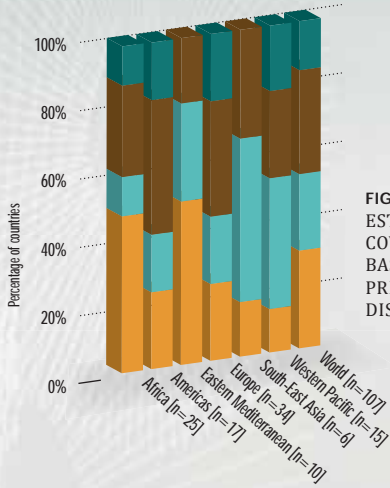


FIGURE 6.8
ESTIMATED POPULATION
COVERAGE OF SCHOOL-
BASED PROGRAMMES TO
PREVENT SUBSTANCE USE
DISORDERS, BY REGION, 2008

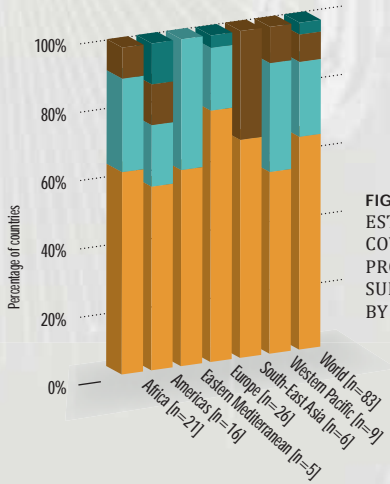


FIGURE 6.10
ESTIMATED POPULATION
COVERAGE OF WORK PLACE
PROGRAMMES TO PREVENT
SUBSTANCE USE DISORDERS,
BY REGION, 2008

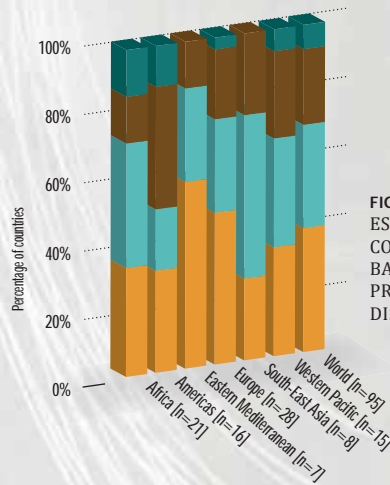


FIGURE 6.9
ESTIMATED POPULATION
COVERAGE OF COMMUNITY-
BASED PROGRAMMES TO
PREVENT SUBSTANCE USE
DISORDERS, BY REGION, 2008

6.4 Prevention services in special populations and harm reduction

Figures (6.11–6.16)

Background

- Nominated focal points were required to indicate the presence of prevention programmes for substance use disorders in special populations, namely young people at risk, prisoners, persons living with HIV, pregnant women, commercial sex workers and other minority groups.
- These populations are all particularly important from a public health perspective and are often not well reached by mainstream health services.
- Focal points were required to indicate the presence of harm reduction programmes in their countries. Harm reduction programmes describe policies or programmes that focus directly on reducing the harm resulting from the use of alcohol or drugs, without necessarily affecting the underlying drug use.

Salient findings

Programmes for the prevention of substance use disorders in special populations

- Programmes for the prevention of substance use disorders in special populations vary across countries. Prevention programmes for children and families at risk were most often reported by countries (45.2%), followed by prevention programmes for prisoners (43.2%), for people living with HIV/AIDS (41.1%), for pregnant women (32.2%), for commercial sex workers (29.5%) and for minority groups (17.8%).
- The highest proportion of countries reporting programmes for the prevention of substance use disorders in prisoners was in the Americas (66.7%). The European (65.1%), Americas (57.1%) and Western Pacific (53.3%) regions have the highest proportions of countries with programmes for children and families at risk. No country in the Eastern Mediterranean Region reported having programmes for the prevention of substance use disorders in pregnant women.
- There is no effect of country income level on the presence of prevention programmes in special populations across different income groups of countries. For example, programmes for the prevention of substance use disorders in pregnant women were more often reported among low-income countries (33.3%) than among lower middle-income countries (9.8%). Also, the proportion of countries reporting prevention programmes for substance use disorders in minority groups decreases from low-income countries (11.9%) to higher middle-income countries (3.4%) before increasing to 52.9% in high-income countries.

Harm reduction programmes

- The presence of needle/syringe exchange programmes differs within countries. In 41.1% of countries, community-based needle/syringe exchange programmes were reported. In all, 6.6% of countries reported having syringe exchange programmes in prisons.
- The highest proportions of countries reporting community-based needle exchange programmes were in Europe (88.6%), Eastern Mediterranean (41.7%) and Western Pacific (42.9%). No country in Africa, the Americas, South-East Asia or Western Pacific reported having syringe exchange programmes in prisons.
- There is no effect of country income level on the availability of harm reduction programmes across different income groups of countries.

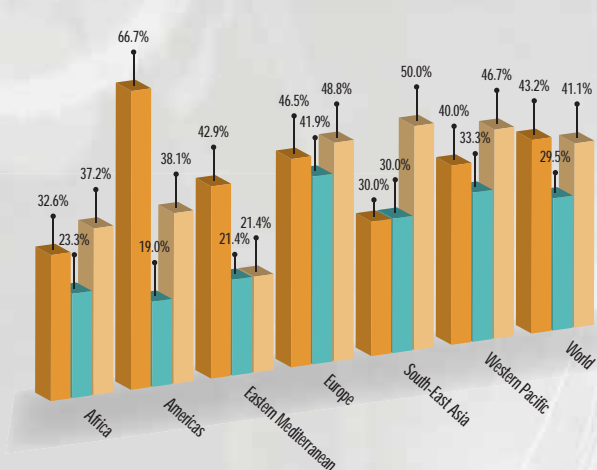
Notes and comments

- In the context of this report, children and families at risk comprise street children and children in families with alcohol, drugs and mental health problems.
- Many countries, although still the minority, have developed special programmes for these hard-to-reach and most at-risk populations. This model could potentially be expanded as an alternative approach to scaling up treatment for substance use disorders.
- The presence of prevention programmes in special populations does not indicate that there is information about access to the programmes or coverage of the population in need.
- Community needle and syringe programmes are recommended in WHO guidelines (WHO, 2010). On the basis of the data here, there would appear to be significant scope to increase efforts to make sterile injecting equipment available.

PROPORTION OF COUNTRIES WITH PROGRAMMES FOR THE PREVENTION OF SUBSTANCE USE DISORDERS IN SPECIAL POPULATIONS, BY REGION, 2008

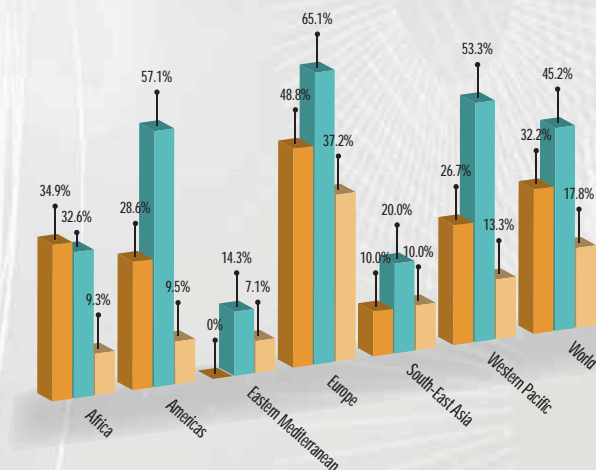
- Prisoners [n=146]
- Commercial sex workers [n=146]
- People living with HIV/AIDS [n=146]

FIGURE 6.11



- Pregnant women [n=146]
- Children and families at risk [n=146]
- Minority groups [n=146]

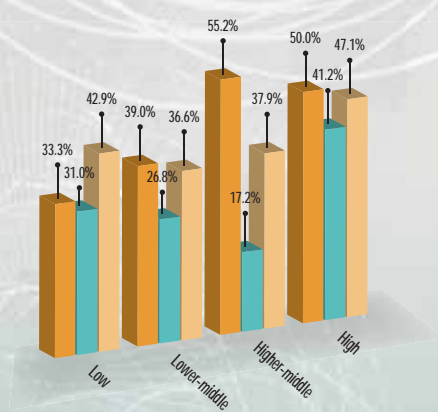
FIGURE 6.12



PROPORTION OF COUNTRIES WITH PROGRAMMES FOR THE PREVENTION OF SUBSTANCE USE DISORDERS IN SPECIAL POPULATIONS, BY INCOME GROUP, 2008

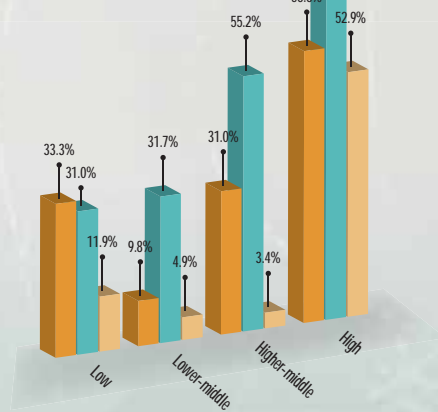
- Prisoners [n=146]
- Commercial sex workers [n=146]
- People living with HIV/AIDS [n=146]

FIGURE 6.13



- Pregnant women [n=146]
- Children and families at risk [n=146]
- Minority groups [n=146]

FIGURE 6.14



- Community-based needle/syringe exchange programme [n=141]
- In-prison needle/syringe exchange programme [n=136]

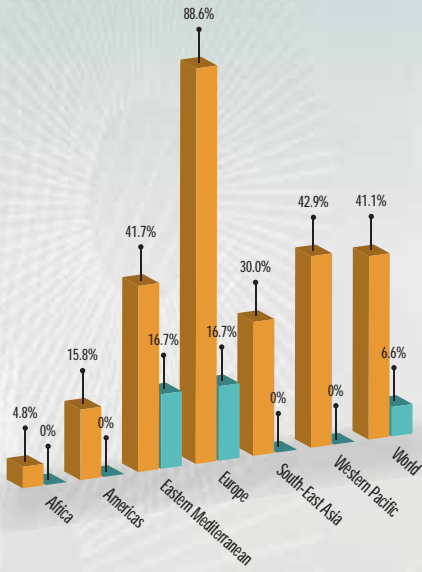


FIGURE 6.15
PROPORTION OF COUNTRIES
WITH NEEDLE/SYRINGE
EXCHANGE PROGRAMMES,
BY REGION, 2008

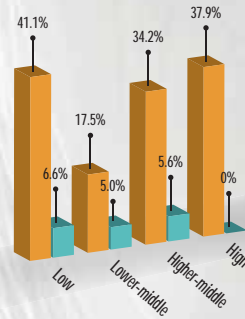


FIGURE 6.16
PROPORTION OF COUNTRIES
WITH NEEDLE/SYRINGE
EXCHANGE PROGRAMMES,
BY INCOME GROUP, 2008

6.5 Screening and brief intervention programmes

(Figures 6.17–6.20)

Background

- Focal points were asked about the availability of screening and brief intervention programmes implemented in primary health care for alcohol and drug use disorders.

Salient findings

- Screening and brief interventions for harmful alcohol and drug use implemented in primary health care were reported by 47.9% and 46.2% of countries respectively.
- The Americas and Western Pacific regions reported the highest proportions of countries with screening and brief interventions for harmful alcohol use (76.2% and 69.2% respectively) and drug use (65.0% and 71.4% respectively). The lowest proportions of countries with screening and brief interventions for harmful alcohol and drug use were reported in Africa (30.2%), Eastern Mediterranean (21.4%), and South-East Asia (30.0% for alcohol use and 40% for drug use).
- There is an effect of country income level on the availability of screening and brief interventions for harmful alcohol and drug use. A higher proportion of countries in the higher income groups reported having screening and brief interventions for harmful alcohol and drug use implemented in primary health care compared to countries in the low-income group.
- The majority of countries, however, reported using screening and brief interventions for alcohol and drug use only rarely. This also applied to high-income countries. For example, approximately 43% of high-income countries reported using screening and brief interventions for harmful and hazardous alcohol use disorders only rarely, with approximately 25% of high-income countries reporting using these approaches on a routine basis.

Notes and comments

- Brief interventions have been shown to be effective ways to reduce alcohol and drug use, substance use disorders and associated harms, and are recommended in WHO guidelines (WHO, 2010). The adoption of this strategy in a significant proportion of countries demonstrates its feasibility in multiple settings. The lack of use of brief interventions in the remaining countries, and the low rates of uptake within countries that do have some brief intervention programmes, demonstrates significant potential for this strategy to be scaled up.
- It is interesting that the use of brief interventions appears to apply more to drugs than to alcohol, despite the fact that the greater burden of disease is due to alcohol and the impact on alcohol use and related harm is stronger. The reasons for this cannot be determined by this survey.

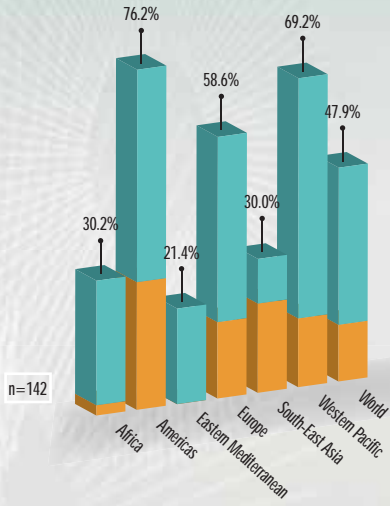
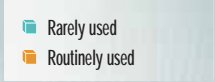


FIGURE 6.17
PROPORTION OF COUNTRIES IMPLEMENTING SCREENING AND BRIEF INTERVENTIONS FOR HARMFUL AND HAZARDOUS ALCOHOL USE IN PRIMARY HEALTH CARE, BY REGION, 2008

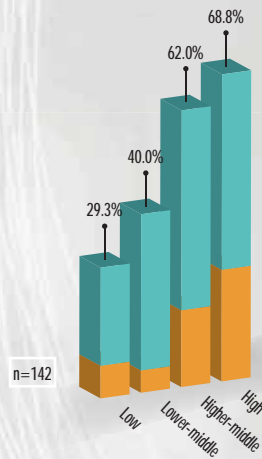


FIGURE 6.18
PROPORTION OF COUNTRIES IMPLEMENTING SCREENING AND BRIEF INTERVENTIONS FOR HARMFUL AND HAZARDOUS ALCOHOL USE IN PRIMARY HEALTH CARE, BY INCOME GROUP, 2008

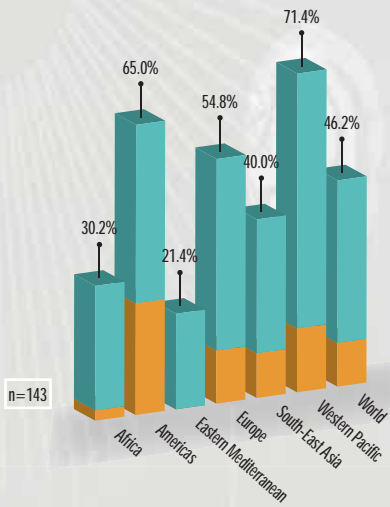


FIGURE 6.19
PROPORTION OF COUNTRIES IMPLEMENTING SCREENING AND BRIEF INTERVENTIONS FOR HARMFUL DRUG USE IN PRIMARY HEALTH CARE, BY REGION, 2008

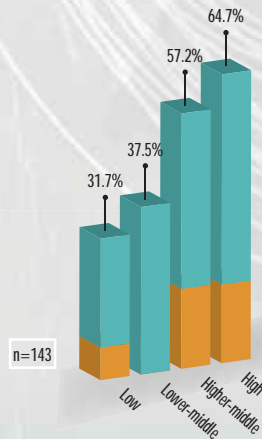


FIGURE 6.20
PROPORTION OF COUNTRIES IMPLEMENTING SCREENING AND BRIEF INTERVENTIONS FOR HARMFUL DRUG USE IN PRIMARY HEALTH CARE, BY INCOME GROUP, 2008

6.6 Groups and agencies involved in prevention of substance use disorders

(Figures 6.21–6.24)

Background

- Nominated focal points were asked to indicate groups and agencies which are involved in the prevention of psychoactive substance use and substance use disorders in their countries.

Salient findings

- Different groups and agencies appear to be involved in the prevention of substance use disorders in countries.
- In 78.1% of countries, schools are involved in the prevention of substance use disorders, followed by community groups (49.3%) and employers (29.5%).
- The involvement of law enforcement agencies in the prevention of substance use disorders was reported by 68.5% of countries. Involvement of international organizations in the prevention of substance use disorders was reported by 56.8% of countries, followed by the involvement of labour organizations (19.2%).
- A higher proportion of countries in the higher income groups reported the involvement of schools, community groups and employers in substance abuse prevention activities than countries in the lower income groups.
- Conversely, there was no observable effect of country income level on the involvement of labour organizations, law enforcement agencies and international organizations in substance abuse prevention activities.

Notes and comments

- Broadly speaking, these data show that most countries have some activities to prevent substance use and related harms, and that there is considerable variability as to which organizations carry out the prevention activities and in which settings these prevention activities take place.
- A particularly high proportion of countries report the engagement of schools in the prevention of substance use problems. Although perhaps counter-intuitive, not all school-based prevention programmes have proven effective, and some have the potential to raise the level of interest among their adolescent targets in the consumption of alcohol and drugs. The ATLAS questionnaire did not distinguish between those school-based programmes that were evaluated and proved their effectiveness and those that were not, so it is difficult to conclude from these data whether the most value is being obtained from such prevention efforts.

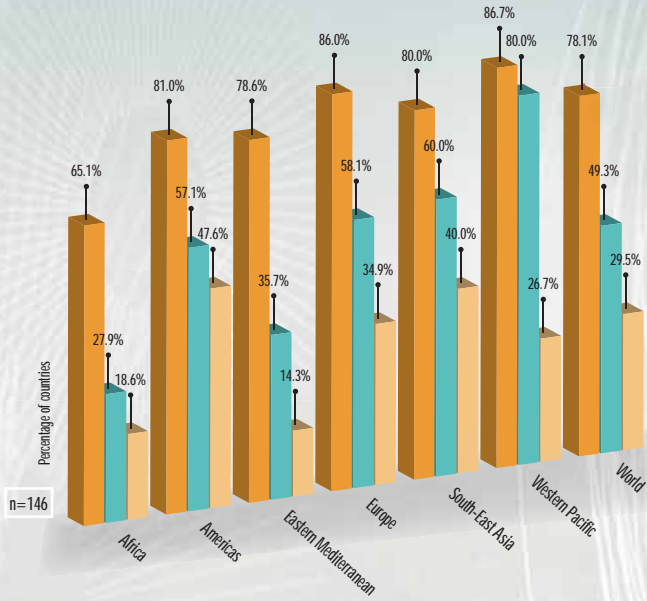
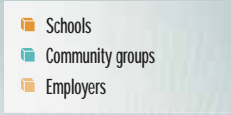


FIGURE 6.21
GROUPS INVOLVED IN THE
PREVENTION OF SUBSTANCE
USE DISORDERS, BY REGION,
2008

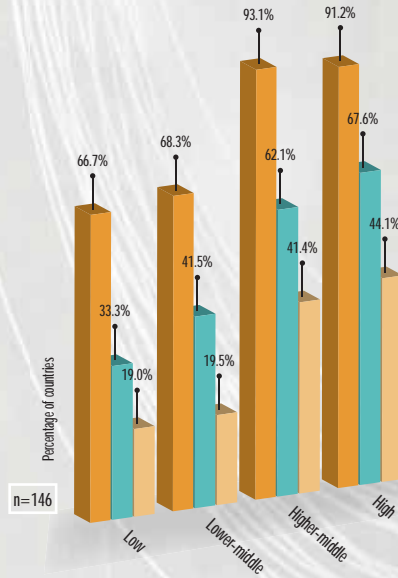





FIGURE 6.22
GROUPS INVOLVED IN THE
PREVENTION OF SUBSTANCE
USE DISORDERS, BY INCOME
GROUP, 2008

-  Labour organizations
-  Law enforcement agencies
-  International organizations

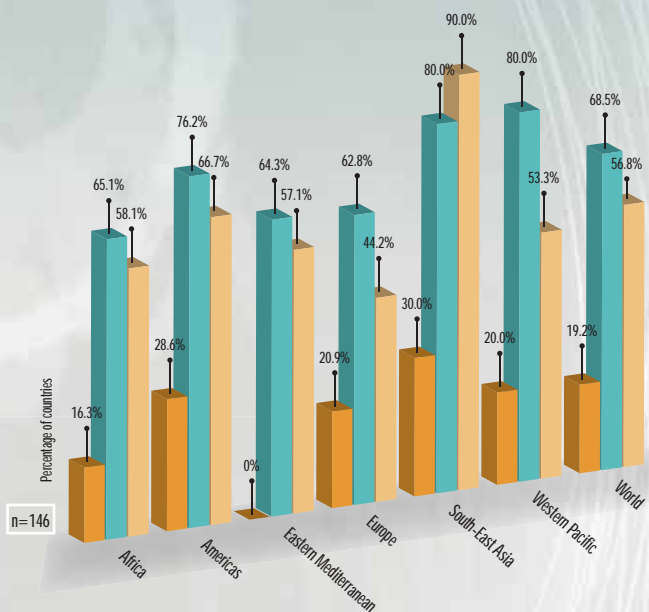


FIGURE 6.23
AGENCIES INVOLVED IN THE PREVENTION OF SUBSTANCE USE DISORDERS, BY REGION, 2008

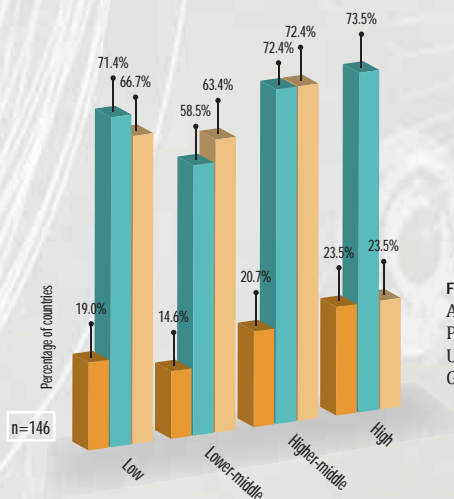


FIGURE 6.24
AGENCIES INVOLVED IN THE PREVENTION OF SUBSTANCE USE DISORDERS, BY INCOME GROUP, 2008

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Country	Names of nominated focal points
Afghanistan	Alia Ibrahimzai
Albania	Roland Shuperka
Algeria	Djamel Slimi
Angola	Luísa Porfirio Paim
Armenia	Karine Simonyan
Australia	Darius Everett, Michael Pitt, Virginia Hart
Austria	Raphael Bayer
Azerbaijan	Kenoulle Velieva
Bahamas	Marcia Munnings, Marvin Hepburn
Bahrain	Abdulnabi Derbas Salaman Derbas
Bangladesh	A.H. Mohammad Firoz
Belarus	Alexei Alexandrov, Vladimir Maksimchuk, Vladimir Lelevich
Belgium	Leen Meulenbergs
Belize	Karen Bodden
Benin	Célestin Eric H. Ganhounouto
Bhutan	Damber Kumar Nirola
Botswana	Sefentse P. Moahi
Brunei Darussalam	Ng Thin Chiong
Bulgaria	Tsveta Raycheva
Burkina Faso	Mahamadou Compaoré
Burundi	Nicodème Mbonimpa
Cameroon	Yvette Yon Tjega
Canada	Mark Edwards
Cape Verde	Maria Francisca Tavares Alvarenga Varela
Central African Republic	André Tabo
Chad	Donbe Nganguenon Gode
Chile	Christian Palma Bielefeld
China	Hao Wei, Xiang Xiaojun
Colombia	Gilberto Alvarez Uribe
Comoros	Mouandhui Houmadi
Congo	Rosalie Likibi-Boho
Costa Rica	Giselle Amador, Vera Barahona, Douglas Mata, Julio Bejarano
Côte d'Ivoire	Roger Charles Joseph Delafosse
Croatia	Marina Kuzman
Cyprus	Eva Symeonidou
Democratic Republic of the Congo	Idelphonse Muteba Mushidi
Denmark	Kari Grasaasen
Dominican Republic	Elias Tejada, Ivonne Soto
Ecuador	Enrique Aguilar Zambrano
Egypt	Wael Mansour Ahmed Emam
El Salvador	Moisés Orlando Guardado Rodriguez
Equatorial Guinea	Biko Nguema Ayetebe
Eritrea	Iyassu Bahta
Estonia	Liis Rooväli
Ethiopia	Haddis Solomon

Fiji	Ami Chandra
Finland	Ari Virtanen
France	Nicolas Prisse
Gabon	Frédéric Mbungu Mabilia
Gambia	Sana Malang Sambou
Georgia	Khatuna Todadze
Germany	Gaby Kirschbaum
Ghana	Eugene Kobla Dordoye
Greece	Christos Kokkoris
Guatemala	Héctor Leonel Hernández Archila
Guinea	Barry Mariama
Honduras	Enio Adán Alvarenga Chinchilla
Hungary	Tamás Koós, Orsolya Varga
Iceland	Pórfur Þórlindsson, Rafn M. Jónsson
India	Amit Mohan Prasad
Indonesia	Diah Setia Utami, Albert Augustinus Maramis
Iran (Islamic Republic of)	Mohammad Bagher Saberi Zafarghandi
Iraq	Sirwan K. Ali
Ireland	Anna May Harkin
Israel	Paula Rosca, Danny Budowski
Italy	Guido Vincenzo Ditta
Jamaica	Christopher Smellie, Ellen Campbell-Grizzle
Japan	Ryuichiro Narishige
Jordan	Jamal Anani
Kyrgyzstan	Gulmira Ibraeva
Lao People's Democratic Republic	Vannareth Thammavong, Sisouk Vongphrachanh
Latvia	Aija Pelne, Ilze Maksima, Mārcis Trapencieris
Lesotho	Mathaabe Ranthimo
Liberia	Tijli Tarty Tyee
Lithuania	Aurelija Cepulyte
Luxembourg	Simone Schram, Simone Steil
Madagascar	Jacques Andrianomenjanaharinirina
Malawi	Phiri E. McEvans
Malaysia	Rozanim Binti Kamarudin, Rushidi Ramly
Maldives	Mam Dhooha Sujaau, Mariyam Waseela, Aiminath Shahuza
Mali	Baba Koumare
Malta	Richard Muscat
Mauritania	Abdallatti Ould M. Bouhabib
Mauritius	Pravin Bucktowar
Mexico	Carlos José Rodríguez Ajenjo
Mongolia	V. Bayarmaa, Z. Tuya, L. Erdenebayar, B. Enkhchimeg, S. Munkhtuya
Montenegro	Jasna Sekulic
Morocco	Fatima Asouab
Mozambique	Eugenia Guelfrida Salesio Teodoro
Myanmar	Khin Maung Gye
Namibia	R.A. Adams
Nepal	Saroj Prasad Ojha, Suraj Sigdel
Netherlands	Wil M. de Zwart
New Zealand	Catherine Inder, Trees Beckett
Nicaragua	Juana Margarita Ortega Soza
Niger	Douma Maiga Djibo
Nigeria	Isodore Obot, Sheri Abari
Norway	Torbjørn K. Brekke

Oman	Mahmoud Al-Abr
Pakistan	Fareed Aslam Minhas
Palau	Maura Gordon, Annabel Lyman, Alex Ngiraingas, A. Reyes
Panama	Aldacira Meza de Bradshaw
Papua New Guinea	Umadevi Ambihaipahar
Paraguay	Manuel Fresco, Graciela Barreto, Marcelo Flores
Peru	Eduardo Haro Estabridis, Pedro Abad Barredo
Philippines	Ivanhoe Escartin, Edgardo Galvante, Joselito Pascual, Edgardo Juan Tolentino, Antonio Gauzon, Desiree Chingson, Jose Ramirez, Reniel Cristobal, Jade del Mundo, Benjamin Reyes
Poland	Wojciech Klosiński
Republic of Korea	Ryou Ji Hyoung
Republic of Moldova	Tudor Vasiliev
Russian Federation	Evgenia A. Koshkina
Rwanda	Yvonne Kayiteshonga
Saint Lucia	Clement Edward
San Marino	Andrea Gualtieri
Sao Tome and Principe	Marta Maria Posser
Saudi Arabia	Naseem Akhtar Qureshi, Abdulahmeed AlHabeeb
Senegal	Rokhaya Ndiaye Kande
Serbia	Ivica Mladenovic, Biljana Kilibarda
Seychelles	Shobha Hajarnis, Daniella Malulu
Sierra Leone	Alimamy Kamara
Singapore	Lim Wei-Yen
Slovakia	Lubomir Okruhlica, Adam Hochel
Slovenia	Matej Kosir
Somalia	Abdi Hassan Dualeh
South Africa	Charles Parry, Rehana Kader, Nadine Harker Burnhams
Spain	Rosario Sendino, Gregorio Barrio
Sri Lanka	Hiranthi de Silva
Sudan	Abdel Aziz Ahmed Omer
Suriname	Malti Algoe
Swaziland	Muntu P. Simelane
Sweden	Ulf Malmström, Daniel Svensson, Nina Rehn-Mendoza
Switzerland	Diane Steber Büchli
Syrian Arab Republic	Pierre Chiniara
Tajikistan	Sherali Rabiiev
Thailand	Samarn Futuakul
Timor-Leste	Tiofilo Julio Kehic Tilman
Togo	Amatsu Yibor, N'gani Simtokina
Tunisia	Nabli Mounira
Turkey	Sevgi Sucin, Ebru Aydin
Uganda	Sheila Ndyanabangi, David Basangwa
Ukraine	Anatoliy Mikolaevitch Vievsky
United Kingdom	Stewart Killala
Uruguay	María Cecilia Lazo, Héctor Suarez
Uzbekistan	Louisa Baimirova
Venezuela (Bolivarian Republic of)	Saribay Negrin
Viet Nam	Ha Thai Son
Zambia	Friday Nsalamo
Zimbabwe	Dorcas Shirley Sithole

LIST OF COUNTRIES ACCORDING TO WHO REGION

WHO African Region

Algeria
 Angola
 Benin
 Botswana
 Burkina Faso
 Burundi
 Cameroon
 Cape Verde
 Central African Republic
 Chad
 Comoros
 Congo
 Côte d'Ivoire
 Democratic Republic of the Congo
 Equatorial Guinea
 Eritrea
 Ethiopia
 Gabon
 Gambia
 Ghana
 Guinea
 Lesotho
 Liberia
 Madagascar
 Malawi
 Mali
 Mauritania
 Mauritius
 Mozambique
 Namibia
 Niger
 Nigeria
 Rwanda
 Sao Tome and Principe
 Senegal
 Seychelles
 Sierra Leone
 South Africa
 Swaziland
 Togo
 Uganda
 Zambia
 Zimbabwe

WHO Region of the Americas

Bahamas
 Belize
 Canada
 Chile
 Colombia
 Costa Rica
 Dominican Republic
 Ecuador
 El Salvador
 Guatemala
 Honduras
 Jamaica
 Mexico
 Nicaragua
 Panama
 Paraguay
 Peru
 Saint Lucia
 Suriname
 Uruguay
 Venezuela (Bolivarian Republic of)

WHO Eastern Mediterranean Region

Afghanistan
 Bahrain
 Egypt
 Iran (Islamic Republic of)
 Iraq
 Jordan
 Morocco
 Oman
 Pakistan
 Saudi Arabia
 Somalia
 Sudan
 Syrian Arab Republic
 Tunisia

WHO European Region

Albania
 Armenia
 Austria
 Azerbaijan
 Belarus
 Belgium
 Bulgaria
 Croatia
 Cyprus
 Denmark
 Estonia
 Finland
 France
 Georgia
 Germany
 Greece
 Hungary
 Iceland
 Ireland
 Israel
 Italy
 Kyrgyzstan
 Latvia
 Lithuania
 Luxembourg
 Malta
 Montenegro
 Netherlands
 Norway
 Poland
 Republic of Moldova
 Russian Federation
 San Marino
 Serbia
 Slovakia
 Slovenia
 Spain
 Sweden
 Switzerland
 Tajikistan
 Turkey
 Ukraine
 United Kingdom
 Uzbekistan

WHO South-East Asia Region

Bangladesh
 Bhutan
 India
 Indonesia
 Maldives
 Myanmar
 Nepal
 Sri Lanka
 Thailand
 Timor-Leste

WHO Western Pacific Region

Australia
 Brunei Darussalam
 China
 Fiji
 Japan
 Laos People's Democratic Republic
 Malaysia
 Mongolia
 New Zealand
 Palau
 Papua New Guinea
 Philippines
 Republic of Korea
 Singapore
 Viet Nam

LIST OF COUNTRIES ACCORDING TO THE WORLD BANK LIST OF ECONOMIES¹

¹ World Bank list of economies, year 2007

Low-income countries

Afghanistan
 Bangladesh
 Benin
 Burkina Faso
 Burundi
 Central African Republic
 Chad
 Comoros
 Côte d'Ivoire
 Democratic Republic of the Congo
 Eritrea
 Ethiopia
 Gambia
 Ghana
 Guinea
 Kyrgyzstan
 Laos People's Democratic Republic
 Liberia
 Madagascar
 Malawi
 Mali
 Mauritania
 Mozambique
 Myanmar
 Nepal
 Niger
 Nigeria
 Pakistan
 Papua New Guinea
 Rwanda
 Sao Tome and Principe
 Senegal
 Sierra Leone
 Somalia
 Tajikistan
 Togo
 Uganda
 Uzbekistan
 Viet Nam
 Zambia
 Zimbabwe

Lower middle-income countries

Albania
 Algeria
 Angola
 Armenia
 Azerbaijan
 Bhutan
 Cameroon
 Cape Verde
 China
 Colombia
 Congo
 Dominican Republic
 Ecuador
 Egypt
 El Salvador
 Georgia
 Guatemala
 Honduras
 India
 Indonesia
 Iran (Islamic Republic of)
 Iraq
 Jordan
 Lesotho
 Maldives
 Mongolia
 Morocco
 Namibia
 Nicaragua
 Paraguay
 Peru
 Philippines
 Republic of Moldova
 Sri Lanka
 Sudan
 Swaziland
 Syrian Arab Republic
 Thailand
 Timor-Leste
 Tunisia
 Ukraine

Higher middle-income countries

Belarus
 Belize
 Botswana
 Bulgaria
 Chile
 Costa Rica
 Croatia
 Fiji
 Gabon
 Jamaica
 Latvia
 Lithuania
 Malaysia
 Mauritius
 Mexico
 Montenegro
 Palau
 Panama
 Poland
 Russian Federation
 Saint Lucia
 Serbia
 Seychelles
 South Africa
 Suriname
 Turkey
 Uruguay
 Venezuela (Bolivarian Republic of)

High-income countries

Australia
 Austria
 Bahamas
 Bahrain
 Belgium
 Brunei Darussalam
 Canada
 Cyprus
 Denmark
 Estonia
 Equatorial Guinea
 Finland
 France
 Germany
 Greece
 Hungary
 Iceland
 Ireland
 Israel
 Italy
 Japan
 Luxembourg
 Malta
 Netherlands
 New Zealand
 Norway
 Oman
 Republic of Korea
 San Marino
 Saudi Arabia
 Singapore
 Slovakia
 Slovenia
 Spain
 Sweden
 Switzerland
 United Kingdom



The harmful use of alcohol and illicit drugs is the third leading risk factor for premature deaths and disabilities in the world. It is estimated that 2.5 million people worldwide died of alcohol-related causes in 2004, including 320 000 young people between 15 and 29 years of age.



EXIT THE MAZE OF
HARMFUL SUBSTANCE USE
FOR BETTER GLOBAL HEALTH

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