Side effects of lithium are a major factor in non-compliance and contribute to its decreased usage in the United States. Most patients who are prescribed lithium experience some adverse effects, though mainly of a minor nature.[6] However, even within the therapeutic range the impact on thyroid function can be profound. Overt hypothyroidism occurs in 5-10% of patients and 5% develop a goitre. Such effects are related to the dose and duration of therapy. Whether or not lithium results in memory disturbances is unclear, with a few studies reporting an effect but most failing to find any. Surveys show that many patients rightly or wrongly associate lithium with deterioration in their memory.[2] Significant gain in weight on lithium is often a source of concern for women. Approximately one in four patients prescribed lithium put on weight of 5 kg or more. However, alternatives to lithium have significant side effects for many patients.

Despite declining use, especially in the United States, the evidence base supports the view that lithium should be the first choice prophylactic drug for most patients with bipolar disorder. To date the alternative mood stabilisers have not been as extensively investigated. Valproate or carbamazepine should be confined to second line use in those who do not respond to lithium, or who have significant and unacceptable side effects due to lithium, and in patients with a history of rapid cycling.

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Confronting the small arms pandemic

Unrestricted access should be viewed as a public health disaster

Physicians throughout the world bear witness to the terrible consequences of small arms. But do we truly understand the impact and the epidemiology of the small arms pandemic, and can we devise effective strategies for prevention as we have for other major public health issues? The capacity for collecting consistent, reliable, and relevant data is limited by various cultural, economic, infrastructural, and logistic factors even in developed countries not at war. Nevertheless, we have some solid data on the size of the problem and indicators suggestive of possible solutions.

The United States, for instance, has over 28 000 deaths a year from small arms—accidents, suicides, and homicides—the highest rate in the developed world.[1] In that country firearms are the leading cause of death among 15-24 year olds, slightly ahead of vehicle crashes, and the third leading cause of death in those aged under 15.[2] While the US murder rate without guns is roughly equivalent to that of Canada (1.3 times), its murder rate with handguns is 15 times the Canadian rate.[3] Countries with similar cultural, economic, and ethnic make up but with different gun possession rates also have widely differing firearm death rates, roughly correlating with the percentage of households with guns.[4] For example, Britain's firearm death rate is about 0.3 in 100 000 while the US rate is 10.6.[5] Households with firearms are three times more likely to have murders and five times more likely to have suicides (due to all causes) than similar households without firearms.[6 7] These data suggest that firearm deaths may be preventable by controlling the supply and possession of guns.

Data from the developing world are less clear, especially in conflict situations. In many post-conflict countries in Central America and Africa only a tiny percentage of guns are registered, estimates of the total in circulation vary widely, and reporting of casualties may be affected by fear of the authorities. Nevertheless, small arms were unarguably the primary cause of death in wars in the 1990s, accounting for about 300 000 deaths a year.[8] Together with the estimated 200 000 people who die each year from firearms in non-conflict situations these deaths represent about a quarter of the 1.8-2.3 million deaths due to violence in a typical year in the 1990s.[9 10] The victims are often the youngest and healthiest members of society. Male combatants are the major perpetrators and direct victims of small arms violence, but in many conflicts non-combatants—disproportionately women and children—account for a large proportion of direct casualties and may also suffer the psychological and social burdens of increased domestic violence.

Impacts have also been evaluated in economic terms. Small arms purchases account for perhaps US$10bn (£6.9bn; €11bn) each year, a relatively small proportion of the roughly $850bn spent on military forces annually worldwide.[11] Yet the economic consequences can be far greater. In Colombia violence primarily related to small arms has been calculated as costing up to 25% of the country's gross domestic product (OV Vieira, Workshop on International Small Arms/Firearms Injury Surveillance and Research, Toronto, 1998).

Unless weapons are removed when hostilities end, casualties may not be substantially reduced. In the

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mid-1990s in Afghanistan, for example, Meddings found a decline in the rate of weapons related injury, before and after a particular region came under uncontested control, of only 20-40% when weapons remained in circulation.[12]

Supply side strategies such as buyback and amnesty schemes have been tried in countries such as the United Kingdom and Australia. In response to massacres at Dunblane and Port Arthur, those countries tightened regulations, the former banning handguns and the latter semiautomatic rifles. British citizens voluntarily turned in 250 000 weapons, while the Australian buyout programme netted 750 000. Law enforcement officials in both countries affirm the effectiveness of these measures in reducing damage by these weapons.

Many argue that a supply side approach alone is inadequate, and various demand side measures have been proposed. Awareness building and educational programmes to promote cultures of peace; international norms that stigmatise the possession of guns; and programmes to reintegrate former combatants into society and to provide real economic opportunities have all been postulated to reduce harm from small arms, but are more difficult subjects of study. In Mozambique a unique project, Tools for Arms, combines supply and demand side approaches. The buyback of weapons, the metal of which is turned into art, provides compensation for gun owners, giving them new economic opportunities.

International humanitarian law may be applied to restrict weapons that cause damage disproportionate to war aims. Whole classes of weapons could be banned from civilian possession, just as landmines and other indiscriminately harmful weapons have been banned from military and civilian use. Although it seems clear that restrictions on the possession of weapons are necessary to prevent harm due to small arms, such restrictions are fiercely opposed by highly organised, wealthy, and influential groups such as America's National Rifle Association. The failure to reach meaningful agreement to control illegal manufacture and trafficking in small arms at the recent United Nations conference on the illicit trade in small arms and light weapons was partly the result of the lobbying of these groups.

Public health models could be used to evaluate the effectiveness of each preventive approach. International Physicians for the Prevention of Nuclear War (IPPNW) has used the public health paradigm to call for the abolition of nuclear weapons and to support the global ban on landmines. With the convening of an international medical conference on small arms last autumn in Helsinki, IPPNW announced its intent to campaign for policies that can reduce firearms related injuries. The conference drew more than 200 participants—physicians, researchers, social scientists, peace activists, representatives of governments and international agencies, and students—from six continents to address gaps in our knowledge, propose areas for research, and ponder educational and advocacy strategies.

The next steps will be to determine data on which to base recommendations for policy change and community action; standardise databases and collection methods across the world; heighten awareness about the public health and social consequences of small arms among local, national, and international policy makers; and inform professional colleagues, students, and the public about the multiple causes and the devastating consequences of small arms violence.

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Health care and the European Union

Profound but uncertain consequences for national health systems

Education and debate p 1027

Slowly, in health and social affairs ministries across Europe, the realisation is dawning that European Union law has profound consequences for the organisation of national healthcare systems. Even in the United Kingdom, which for many years was in a state of active denial about the influence of Europe, ministers are looking at how to exploit the opportunities offered by provisions on free movement of patients (to France) and professionals (bringing teams of German surgeons to operate at weekends in NHS hospitals).

Yet the scope for action is often uncertain. A failure to address health care explicitly at a European level means that the evolving legal situation is based largely on policies designed to address broad principles, in particular the free movement of goods, services, people, and capital. These are then applied to the health sector in rulings on specific cases brought before the European Court of Justice, but leaving uncertainty as to how they should be interpreted in similar but slightly different circumstances. The

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