Editorial

Unnecessary injecting of medicines is still a major public health challenge globally

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In 2012, we sought responses from all 194 World Health Organization (WHO) Member States for the WHO/World Hepatitis Alliance Global Hepatitis Survey (World Health Organization 2013). While the full survey results will be released on 28 July 2013, World Hepatitis Day, we feel that it is imperative to draw attention to one finding with potentially far-reaching public health implications. Only 7 of 126 Member States that responded to the survey were able to provide data for the following question: ‘What are your government’s official estimates of the number and percentage of unnecessary injections administered annually in healthcare settings?’ Another 6 respondents skipped the question, and 113 – almost 90% – answered ‘do not know’.

It is dismaying to learn that such a large number of countries do not appear to have these data available in light of what has been documented regarding injection overuse in developing countries. Much of the evidence is from the 1980s and 1990s, but more recent studies in China and Egypt found unnecessary health facility injection rates of 57% and 95%, respectively (Yan et al. 2006; Bodenschatz et al. 2009). A 2006 Pakistani study estimated that 94% of therapeutic injections nationally are unnecessary (Altay et al. 2006). A 1999 review article summarising earlier evidence noted levels of unnecessary injections ranging from 70% to 99% in various patient populations in India, Indonesia, the Russian Federation and Tanzania (Simonsen et al. 1999).

The findings from the recent global hepatitis survey are a stark reminder of the persistence of this danger. In our survey, the three highest national estimates for the proportion of unnecessary injections were 68% (Mongolia), 50% (Cambodia) and 20% (Pakistan). These figures, coupled with the absence of data from many other countries, raise the question of whether progress is being made on reducing unnecessary injections, which WHO identifies as a key strategy for reducing injection-associated disease transmission (World Health Organization 2010).

Simonsen et al. (1999) define an unnecessary injection as ‘one where oral alternatives are available, where the injected substance is inappropriate or harmful or where the symptoms or diagnosis do not warrant treatment by injection’. The literature on this phenomenon indicates that a complex array of factors may influence the decision-making of both patients and healthcare providers. Providers may recommend injections and patients may welcome them because of widespread misconceptions about injected medications being stronger or more effective than other types of treatment (Safe Injection Global Network 2011). Even providers who know otherwise may feel pressured by patients to administer injections (Kotwal 2005; Safe Injection Global Network 2011) – and may be concerned that withholding injections will undermine their professional credibility (Kotwal 2005; Chowdhury et al. 2011). Furthermore, it has been suggested that some providers may be motivated to administer injections because of the profitability of this practice (Safe Injection Global Network 2011).

We contacted the five Member States with national estimates of unnecessary injection levels of 5% or higher to obtain more information about why unnecessary injections occur. Three of them – Cuba, Mongolia and Pakistan – responded to this request, while two – Cambodia and Guyana – did not. (The two other Member States that reported national estimates of unnecessary injection levels were Denmark and Tonga, both of which indicated that no unnecessary injections take place).
Respondents were given several possible reasons for the occurrence of unnecessary injections and were asked to choose ‘yes’, ‘no’ or ‘do not know’ for each one. All three countries indicated that healthcare workers believe injections to be more effective. Two indicated that patients prefer injections rather than oral medication. One indicated that oral equivalents are unavailable, although the other two indicated that this is not a reason for why unnecessary injections occur. Additionally, one country selected each of the following as a reason: healthcare workers believe that patients expect injections; healthcare workers are paid more for injections; and better adherence can be achieved through the use of injectable medicine as opposed to the oral equivalent. The survey also asked for examples of ‘a drug that is typically injected when a cheaper oral equivalent is also available’. Responses included antibiotics, diclofenac and vitamins.

It is our hope that the global hepatitis survey findings about unnecessary injection rates and follow-up survey findings will rekindle interest in a problem that may be causing widespread unnecessary suffering. In 2008, an estimated 14% of HIV infections were attributable to unsafe injections, as were 25% of hepatitis B infections, 8% of hepatitis C infections and 7% of infections with bacteraemia. These estimates collectively represented 28 million disability-adjusted life years (DALYs) (Safe Injection Global Network). Therefore, if even one tenth of unsafe injections globally in 2008 were cases in which the injection was not warranted, this would translate into a disease burden of 2.8 million DALYs attributable to unnecessary injections.

In actuality, it appears that estimating the global disease burden attributable to unnecessary injections would be a difficult task if at least 119 countries do not have national estimates for unnecessary injections. The lack of data gives rise to the first of four recommendations regarding how to reduce unnecessary injections. Tracking the incidence of unnecessary injections – understood as providing an injection when an oral equivalent is available – at the country level is essential for determining the magnitude of the problem and measuring progress on the response. Governments are urged to incorporate this metric into ongoing health system monitoring, including tracking it as a mode of transmission for all bloodborne viruses.

Our second recommendation calls for a more concerted global effort to reduce unnecessary injections. This issue is already on the agenda of the Safe Injection Global Network (SIGN), which since its inception in 1999 has provided leadership in the campaign to reduce unsafe injections. Given that SIGN and WHO now have a toolkit and other resources in place to help countries address the general problem of unsafe injections (Safe Injection Global Network), it is logical to focus more on increasing awareness of the contribution of unnecessary injections to disease transmission. Furthermore, the toolkit might be expanded with tools such as a global guidance document that informs decision-making around whether injections are warranted and identifies commonly injected medicines that should be replaced with oral equivalents. The latter might require WHO to carry out a review of the evidence regarding oral versus injectable drugs. Guidance is also needed on how to stage information, education and communication interventions to change perceptions among both health providers and the general public in regard to the role of injections in health care.

As for our two other recommendations, an informative body of evidence provides insight into the behavioural, economic and structural drivers of unnecessary injecting in healthcare settings, but the majority of these studies are more than a decade old. Health systems in many countries have undergone extensive changes in recent years, and research is needed to illuminate the dynamics behind current injecting practices. Finally, with the intensification of efforts to reduce unnecessary injections, research will also be needed to measure progress and to refine interventions, with particular attention given to how interventions should be adapted to address different drivers of the problem in different countries and cultures.

WHO research indicates that interventions to reduce unnecessary injections are cost-effective, as are interventions combining these activities with efforts to also reduce unsafe injections (World Health Organization 2003). WHO, SIGN and government authorities must work in collaboration with medical associations, nursing associations and civil society partners such as patient advocacy groups to take stock of this problem and develop country-specific strategies for its resolution. The WHO Director-General’s upcoming injection safety initiative has the potential to serve as the backbone of this effort by increasing the global focus on unnecessary injections. Strong leadership on this issue is a moral imperative: it is simply unacceptable for the provision of medical treatment to be a pathway for large-scale disease transmission, suffering and death.

References


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