Plenary Contribution to IPPNW Conference “Aiming for Prevention: International Medical Conference on Small Arms, Gun Violence, and Injury.”
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Good morning everybody. Compared to the events that happened in New York on the 11th of September it sounds almost trivial, but yesterday in Zug, a small place in Switzerland, 14 people got killed in a single event involving small arms. Several more are still struggling to stay alive. Just to remind us about the endemic presence of those weapons.

I’d like to start off actually by thanking Brian and IPPNW as well as its Finnish affiliate for organizing this event and inviting me. I see this event as a milestone, I see it as the first time that the international public health community gets the opportunity to get together and talk about the way ahead. So, thank you very much, I think that this is a fantastic opportunity.

What I’d like to do today is three things. First of all is raise awareness, if it’s still needed, about the links between small arms and health. Second, present the report that you’ll find outside, Small Arms and Global Health, and, third, discuss the contributions that can be made by the public health sector in this whole endeavor.

My key messages: Small arms have an important impact on health. This impact is present in developing and developed countries. We’ve heard it already this morning, but it’s very often forgotten. This aspect was very much marginalized in the UN conference for instance a few weeks ago. This impact goes beyond mortality in conflict and post-conflict areas. It is very difficult from a public health point of view to differentiate the impact from licit and illicit weapons. The public health sector has an important contribution to make that includes the care for victims, data collection, prevention, evaluation of these prevention efforts, and advocacy. And a research agenda that includes studies to describe the exact health impact, and evaluate prevention efforts is needed.

Having said that let me start by presenting what we know about the global public health impact of these weapons. We commonly say that there’s about half a million deaths due to these weapons every year. But do we really have enough evidence to say that? I’m not sure. I don’t think we know how many deaths there really are. There are several hundreds of thousands, that’s for sure. If it’s 300 or 700 thousands, I don’t think we have the evidence to say anything more. When you try to dig into the available evidence about where this number of half a million really comes from, there is really not much solid evidence to sustain that.
What do we know? WHO tried to compile in the last months the data reported by Member States. Only 48 countries out of the almost 190 are reporting data on firearms to the World Health Organization. Most of the others don’t have such data. Those 48 countries represent a population of about 1.2 billion people. It’s about 1/5th of the world population. And in those 48 countries more than 100,000 deaths occurred during a one-year period. We have much more evidence from other more localized areas. In Cali Colombia for instance we know that 4 out of 5 homicides are committed with small arms. In Durban South Africa, 2 out of 3 homicides are committed with small arms.

What’s interesting to look at is what these small arms are being used for. This chart represents countries grouped into income groups. The first one on your left is the high income groups minus the USA, because the USA is an outlyer. Then you have the US. Then you have upper middle income countries minus Brazil because Brazil is also an outlyer. Then you have Brazil, and then lower middle income countries and low income countries.

And what we see is that in the higher income countries, most of the firearm deaths, about 70%, are suicides and less than 20% are homicides. And the more you go down in the income level, the higher the proportion of homicides becomes and the lower the proportion of suicides. So again this reinforces the point I made in the very beginning. We can’t talk only about small arms and war-related deaths. In many countries actually suicides are a much bigger issue than homicides with firearms.

Who is most directly affected? Well, mainly men, and mainly young men. Most firearm deaths (in absolute numbers) occur in the 15 to about 40 years old group. Obviously that doesn’t mean that indirectly women and children are not effected – they are very much so, but the biggest proportion of deaths is among young men in their most economically productive years. However if you transform this data into rates, you can see that the rates are going up towards the higher age groups, starting at 65 until 85+ we have much higher rates because of suicides.

There is a huge variation in rates among the 48 countries who have reported to WHO. For instance, the highest rates were for Albania 21.6 per 100,000, followed by Brazil and the US. And the lower ones are 0.1 Hong Kong, 0.1 Japan, 0.1 Republic of Korea. So we have a huge variation of from 1 to 200 just in those 48 countries, and we know that countries like Colombia, South Africa and a few others, who are not included in these data, have even higher rates than the ones we are presenting here.

Another example is from South Africa, and I suppose Stephanie will present more of that later today. A surveillance system was set up in South Africa, and on this table you can see a ranking of injury-related causes of death by age group. The red boxes are firearm-related deaths. And you can see that from age 15 to 64, firearm related deaths is the number one injury related cause of death. So it’s higher than traffic accidents, for instance.
I talked about fatal outcomes, which are mainly homicides, suicides, and unintentional. There are obviously many more health related outcomes. The non-fatal ones, include injuries, which often result in disability, or in mental health consequences. There is also a huge cost to the health system, and I’ll talk about those two aspects a little bit now.

About non-fatal outcomes, we really don’t have strong international research on that. We know from studies from the United States that there’s about 3 non-fatal firearm injuries, surviving persons, for each death. That there’s a huge amount of long-term disability. How much, we don’t really know either, but for instance spinal cord injuries which cause very long disability, we know for instance from a study of seven cities in Brazil that one out of four spinal cord injuries there are caused with small arms. There’s also a long hospitalization which results in costs. Studies in Finland have shown that on average, a survivor of small arms injury is hospitalized for about 13 days. I suppose we’ll hear more about that from the following speaker.

Mental health consequences, we talk a lot about it, but, again, we don’t know too much about these sequellae resulting from small arms. We know about the mental health consequences resulting from violence in general. Those that are specifically related to being victimized by small arms or witnessing small arms violence are not singled out in the research. But we can suspect that mental health consequences are important for small arms violence because of the magnitude of these consequences for violence in general.

Indirect consequences: We know about population displacement, about famine, etc, but again there’s not much research that helps us quantify the direct link between the availability of small arms and the resulting population displacement. We have descriptive evidence, yes, but to quantify the direct links we need much more research.

I talked about the costs. We know that in The US the costs to treat firearm victims amounts on average to about 17,000 US dollars per injury. And that medical costs actually represent only 13% of total costs to society. So total costs are much higher. From Colombia we know that productivity losses due to firearms amount to about 1.4 billion US dollars per year. Or in Cape Town that the cost of direct and indirect consequences of small arms amounts to more than 20 million Rand.

What are the risk factors, what’s contributing to all of this? I think we can divide them into three main areas. One is the factors that influence the use of small arms, such as the availability of small arms, and social acceptability of using these arms that are available. But we should not limit it to that. There’s also the factors that influence the level of interpersonal violence: the social acceptability of violence, consumption of alcohol, the gap between rich and poor, etc. As well as the factors that influence the suicide rate: psychiatric disorders, alcohol consumption, etc.
This is I think a very important slide. We often use the ecological model to present the risk factors for violence. It divides the risk factors into individual risk factors, factors that relate to the family, factors that relate to the community, and to the environment. I think this is important because I would not like us to walk away from here thinking that if we fix the issue of small arms we’ve fixed the issue of violence. It’s much more complex than that. Factors that influence violence at the individual level, for instance, include having been victimized from violence, having witnessed violence, social problem solving skills, or the availability of a firearm in the home. At the family level we know that poor family cohesion, poor monitoring of children by parents, lack of parental skills, or male dominance are also risk factors for violence. At the community level, low cohesion, negative peer influences, or isolation of the woman and the family in the community are also risk factor for violence. And finally at the environmental level, the gap between rich and poor, ethno-cultural heterogeneity, the availability of firearms, social acceptability of violence, and impunity are also known risk factors. So I think it’s very important that we realize that we need to take this problem as a whole, as violence in general and all of its risk factors, rather than focusing too much on one single risk factor which is the availability and social acceptability of using small arms.

So what’s the role of the public health sector? One of the obvious one is providing the care for victims: pre-hospital care, appropriate hospital care, the rehabilitation, mental health support, etc. But beyond that there’s a whole area of data collection where we have expertise to offer, about mortality, morbidity, the disability that results from it, the mental health consequences, and the costs to the health system and the community. We also need to work on implementing and evaluating prevention programs and policies, as well as on advocacy. And I’m glad to see that that is an important part of the program of this conference.

To leave enough time for discussion, I’d like to conclude here, by saying that clearly there’s a big health impact, but we need to be very careful when using those numbers. You probably all remember the landmine process where we started off claiming numbers and later on had to retract them. Public health clearly has a role to play, and we have received a formidable mandate through the program of action that was adopted in New York a few weeks ago. Thanks to the support of the countries from the European Union, and Norway mainly, this program of action now recognizes that there are clear public health consequences resulting from the availability and use of small arms, and that health and medical agencies, and I try to quote it, have a role to play in better documenting the impact and the causes of small arms violence. So clearly that program of action has given us a mandate to start conducting activities in this area. I think it’s a formidable mandate, and implementation starts today in this conference.

Thank you very much.