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Preventing Unintentional Injuries: Ethical Considerations in Public Health

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Abstract and Keywords

Injury, which originates from the Latin word for injustice, is a global health problem that imposes a disproportionately high burden on people in fragile economies. This chapter examines the ethical implications of public health actions to prevent unintentional injuries. The concepts of social justice and autonomy are at the core of common debates about the roles of the state, communities, and individuals in controlling injury. Distinguishing unintentional injuries from violence can undermine an integrated preventive approach. Viewing unintended injuries as resulting from accidents fosters a reluctance to apply principles of justice to them and supports risk acceptance and nonintervention. This chapter first critiques arguments relating to concepts such as responsibility, risk compensation, equity in access to the social determinants of health and the so-called normal opportunity range, personal freedom, health-promoting choices, collective health interests, and the avoidance of third-party harm. This is followed by an exploration of how an ethics framework for public health could assist injury prevention.

Keywords: unintentional injuries, public health ethics, accident, responsibility, social justice, social determinants of health, risk compensation, health-promoting choices, risk acceptance, injury prevention

“It is necessary that the weakness of the powerless is transformed into a force capable of announcing justice. For this to happen, a total denouncement of fatalism is necessary. We are transformative beings and not beings for accommodation.”

Paulo Freire, *Pedagogy of the Heart* (Freire, 1997, 6)

Introduction

The Latin origin of the word *injury* refers to an injustice (Baker, 1997)—a principle at the core of deliberations in public health and ethics. Globally, in 2013 an estimated 973 million people sustained injuries requiring health care, and 4.8 million died as a consequence of these injuries (Haagsma et al., 2016). Almost 90 percent of these deaths occurred in low- and middle-income countries, imposing disastrous and burdensome developmental consequences on people in fragile economies (Alonge, Khan, and Hyder, 2016; Norton and Kobusingye, 2013; Seedat et al., 2009).

Unintentional injuries account for approximately 69 percent of deaths and 72 percent of disability-adjusted life years related to injury, common mechanisms being road crashes, falls, and drowning (Norton and Kobusingye, 2013). While the defining feature of unintentional injuries is that they are not premeditated or deliberately inflicted, operationalizing this distinction can be problematic and is not always helpful. Even jurisdictions with robust coronial reviews acknowledge inconsistencies in available information to classify the intent of an injury death (Dodds et al., 2014). A rigid distinction based on intent can also undermine the benefits of an integrated approach to injury prevention (Cohen et al., 2003; Langley, 2008). Furthermore, it has been argued that associating the notion of unintentional injury with the term *accident* may convey an impression of fatalism, weakening the public health tenet that most injuries are predictable, and therefore preventable (Blank and Xiang, 2014; Davis and Pless, 2001; Langley, 1988; Pless and Hagel, 2005). As Norman Daniels (2008) appropriately points out in more general terms, viewing health conditions as the products of bad luck fosters a reluctance to apply principles of justice to them and supports risk acceptance and nonintervention on the part of the state.

Beyond terminology, two interlinked concepts are at the core of debates about the role of the state in preventing unintentional injuries. The first relates to social justice, or the responsibility of states to prevent harm in a just society. The second relates to autonomy, and the extent to which it is deemed permissible to limit personal freedoms to prevent harm. In this chapter, we critique arguments relating to these concepts and explore how the framework developed by Nancy Kass (2001) to assess the justifiability of a public health intervention could assist injury prevention.

Responsibility and Unintentional Injury

Attributions of moral responsibility are common in injury prevention discourse. The claim that states should take measures to prevent injuries from occurring within their territory implies that injury prevention is a responsibility of the state as the body charged with protecting the welfare of its people. Thus, the occurrence of injuries can be considered relevantly attributable to the state, and the state can be held accountable for injury prevention (Shoemaker, 2011). This claim is open to contestation.

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First, it could be argued that unintentional injuries are, by definition, unintentional, and that “accidents” occur despite, rather than because of, human intention. We can control, so the argument goes, the actions that we intend, and we are responsible for our intentional acts (Glannon, 1995). But we cannot control, or be responsible for, actions we do not intend. This reasoning could lead us to accept that “bad things” happen and avoid preoccupation with what might go wrong.

There are several problems with this line of argument. The first relates to the claim that moral responsibility is limited to intentional acts. If this were true, individuals would not be responsible for their omissions, or for reckless or careless behavior. But it is sometimes proper to attribute responsibility for an act omitted, a risk taken, or a state of affairs brought about, even if it is not the intended result of an intentional act (Daniels, 2008). We hold people responsible for fulfilling obligations or satisfying norms the demands of which often go beyond having a given set of intentions. Role obligations involving care for others exemplify this. Parents, for example, can be held responsible for harm to children resulting from negligence, not intent. Drivers who drink alcohol and drive, or who fall asleep at the wheel, are responsible for any harm they cause to others. While intentions are relevant to responsibility, responsibility encompasses more than intentions. It can require certain actions to be taken, or certain states of affairs to be brought about.

Another flaw with this line of argument lies in the implicit connection drawn between responsibility and blame. There is a reluctance to blame people for outcomes that are substantially beyond their control. Such reluctance is strongest at the micro level: responsibility for specific events that result in unintentional injury. The argument outlined above is most relevant to this level. Beyond this, however, questions arise about the context in which the event occurred and factors that elevated or reduced risk. These structural, macro-level questions capture considerations that render an event beyond an individual’s control. Features such as the layout or quality of the road upon which the driver speeds, the conditions for obtaining a driver’s license, the availability of public transport, road lighting, and safety features in cars can all affect whether a crash occurs and whether an injury results (Hosking et al., 2011; McClure et al., 2016; McMichael, 1999; Runyan, 2015). These contextual contributors are typically outside an individual’s control. But that does not mean that they are uncontrollable by their very nature. They are precisely the kind of things that states, under certain conditions (such as access to sufficient resources) can address. Establishing that individual responsibility should be tempered by recognition of the limitations of individual control does not absolve the state of responsibility. Rather, it should encourage consideration of whether there is a role for the state, and therefore a shift of responsibility to systems within control of the state.

The most proximal causes of injuries are often individual actions. This offers the starting point for another argument against state action; one based upon deterrence. It posits that responsibility for an outcome lies largely with the person or persons who contributed the most to its occurring. One reason to maintain this stance, despite multiple contributory causes, is to incentivize good choices. If responsibility tracks the choices that contribute

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most directly to an outcome, individuals have reason to take choices seriously. So, the argument concludes, injury prevention should focus on individual decision-making.

This line of argument assumes that if the state takes responsibility for preventing injuries, individual responsibility will be correspondingly diminished. Given that there are often multiple causes of events, some outside the individual's control, why should we be concerned by diminishment of inflated attributions of responsibility to the individual? One reason might be that, even if the attribution of full responsibility to an individual is somewhat artificial, it is a useful artifice, in that it encourages people to take care to avoid causing injury—more care than they may otherwise take. So there may be good consequentialist reasons to emphasize individual responsibility in injury prevention.

Of course, the success of this argument rests on the facts of the matter. However, determining what influences risk-taking is not straightforward. Evidence can be variously interpreted, and interpretations are sometimes ideologically driven. As evident in the voluminous literature over decades, there is vociferous debate regarding whether regulations requiring bicycle helmet use do or do not reduce risk, because helmets (and compliance with safety regulations) reduce the sense of vulnerability, leading to riskier cycling behavior (Gamble and Walker, 2016; Pless, 2016; Wilde, Robertson, and Pless, 2002). The debate hinges on the concept of “risk homeostasis”—the idea that there is a fixed level of risk that people accept, and that if environmental risk is perceptibly reduced, behavioral risk correspondingly increases (Wilde, 1982). Proponents and detractors attribute diametrically opposing levels of importance to the arguably weak evidence for risk homeostasis in nonexperimental conditions (Wilde, Robertson, and Pless, 2002). The main purpose of such explorations of responsibility is to identify the best opportunities for interventions addressing injuries—from the individual to the state.

Injury Prevention as a Matter of Justice

So far, we have presented and critiqued two arguments against state involvement in injury prevention. There are other compelling arguments in favor of state involvement. Following John Rawls, Daniels's account of distributive justice requires state action to ensure that citizens have equal access to the opportunities typically available in that society, or the “normal opportunity range” (Daniels, 2008). Disease and disability impair access to many opportunities. Thus, justice requires that the state concern itself not only with ensuring fair access to health care and public health provisions, but also that it contribute to a fair distribution of the social determinants of health (Solar and Irwin, 2010). The state's role in injury prevention is thus connected with its obligation, owed to each citizen, to take reasonable measures to ensure equal access to the normal opportunity range.

Several aspects of this approach are noteworthy. Firstly, Daniels accepts that the normal opportunity range is society-dependent. What opportunities are available and valued differ among societies. Thus, the normal opportunity range is relativized to each society. While this approach recognizes both the realities of wealth distribution between nations,

along with the entitlement of each society to develop its own characteristic way of life, it can be accused of too readily accepting a problematic status quo. Secondly, while the Rawlsian approach provides a plausible basis for establishing the state's role in injury prevention and provides a starting point for reasoning about resource allocation, it does not offer a comprehensive account of how to allocate resources or what measures are permissible in meeting health-related needs.¹

Other prominent accounts of distributive justice in health, such as Amartya Sen and Martha Nussbaum's capabilities approach (Nussbaum, 1996, 2000; Sen, 1993), support a role for the state in ensuring access to those all-purpose means that enable quality of life. State involvement in injury prevention is required by such accounts, although details of how to allocate resources between this and other state responsibilities, and what mechanisms for injury prevention are preferable, are typically absent (Taylor et al., 2016). Finer-grained decision-making must supplement general theory. These decisions will be challenged not only by doubt about the legitimacy of state involvement in injury prevention, but also by concerns about interference in zones of personal freedom.

Personal Freedom and Injury Prevention

State efforts to reduce and prevent injury often provoke deep disagreement. Legislative measures prohibiting or requiring certain acts based on harm prevention are perhaps most controversial. What some see as sensible measures that prudent people would take voluntarily, others regard as abhorrent infractions upon personal freedom, illustrated by the fierce, now almost forgotten, objections attending the passage of laws requiring seatbelt use in many jurisdictions. Many object in principle to being told what to do by their government, detecting in such measures a lack of respect for the capacity and choices of citizens. Injury prevention strategies that limit individual choice are often seen as paternalistic. Those who place a higher value upon free choice than upon welfare find paternalistic policies objectionable, because, in legislating behaviors, the state tells individuals what to do, as though they are unable to make such decisions for themselves (Radoilska, 2009). Thus, not only is individual choice limited, but individuals are perceived to be treated disrespectfully by paternalist lawmakers.

Unquestionably, decision-making in public health is fraught, dynamic, contested on the grounds of reasonableness, and not always predicated on irrefutable scientific evidence (Gostin and Powers, 2006; McGinnis et al., 2009). Yet legislation of individual behavior is not universally rejected. Some supporters emphasize that such laws can reduce claims upon collective health resources, and thus regard them as justified by social cost minimization rather than harm prevention (Gostin and Gostin, 2009). Others, attending to values such as welfare, community, and solidarity, reject the primacy accorded to individual choice (Bayer and Fairchild, 2004; Beauchamp, 1985; Jochelson, 2006) and question the reality of the ideal of fully informed, autonomous choice valorized by libertarians and other critics of paternalism. Psychology and behavioral economics have revealed common heuristics and biases in human reasoning that give cause to doubt that

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human choice and behavior are consistently considered and autonomous (Tversky and Kahneman, 1974). It is also problematic to assume, as objectors to paternalistic injury prevention measures seem to, that an absence of legal requirement equates to a neutral choice environment. Especially in societies in which legal instruments control some risks, individual risk assessments can be informed—sometimes misleadingly—by an absence of legal control.

Richard Thaler and Cass Sunstein draw upon studies of human reasoning and decision-making to argue for an approach to many policy problems, which they call “libertarian paternalism” (Thaler, 2008). Their approach has been employed in injury prevention; for example, a campaign in Montana designed to increase seatbelt use drew upon the “norms principle”—the heuristic by which our own behavior is heavily influenced by our beliefs about what others do. In other words, we tend to want to conform. That campaign ran the slogan “Most of Us Wear Seatbelts” (Linkenbach and Perkins, 2003). Seatbelt use was reported to have increased substantially, although the effect waned with time (Blumenthal-Barby and Burroughs, 2012; Linkenbach and Perkins, 2003). This approach, referred to as “nudging,” is seen as a way of enabling people to make better choices: choices that they themselves regard as better, but which are difficult to make without environmental support because of weak will or the everyday challenges of reasoning. The underlying idea is that our choices or actions do not always closely correlate with our autonomous will, and that respecting autonomy permits, and perhaps even requires, the state to design situations that favor health-promoting choices without cutting off other options. Advocates of this approach emphasize its balanced advancement of autonomy and welfare: unlike old-fashioned paternalism, it preserves choice, but without abandoning individuals to their own folly.

Several governments have enthusiastically embraced the possibilities of nudging, but the approach is open to a number of criticisms. Some maintain that, despite Thaler and Sunstein’s depiction (Thaler, 2008), nudging is essentially a form of paternalism proper. Although some nudges do not target the agent’s welfare (for instance, those which encourage prosocial choices), they succeed by effectively cutting off options, even if choice is ostensibly preserved (Hausman and Welch, 2010). Critics such as Hausman and Welch warn that although nudging seems less problematic than openly coercive forms of paternalism, its invisibility renders it a greater threat to free choice.

The Harm Principle and Injury Prevention

In comparison to the controversy surrounding paternalistic state action to prevent injuries, there is considerable acceptance of the state’s role in preventing third-party harm. John Stuart Mill’s harm principle permits state constraint of personal freedom where necessary to prevent harm to others (Mill, 1975). For Millian liberals, individual freedom is valuable for its own sake, and is also a necessary condition to secure other valuable goods, such as welfare and societal progress. Because, in Isaiah Berlin’s words,

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“freedom for the wolves has often meant death for the sheep” (Berlin, 1969), the state has a role in reducing the exposure of individuals to harms inflicted by others.

The harm principle is prominent in discussions of public health, including injury prevention (Nuffield Council on Bioethics, 2007). Measures that may be too controversial to gain political traction when framed as prevention of harm to individuals are often acceptable when their prevention of third-party harm is emphasized. Consumer product safety regulations, playground safety standards, installing barriers to control access to water, building codes to reduce risks of earthquake-related collapse or fire-related injuries, laws mandating the placement of window guards to prevent falls from high-rise buildings, and blood alcohol restrictions for drivers are examples of this. Although there is widespread agreement that third-party harm prevention is a legitimate state concern, there is often controversy about whether a given measure is necessary to prevent harm, or whether the constraints on freedom it entails is proportionate to the third party harm it may prevent (Feinberg, 1987).

Beyond this, the established liberal framework, with its focus upon individual rights, is increasingly seen as inadequate to deal with the essentially collective interests at the heart of public health. Reorientation, supplementation, or even abandonment of the harm principle may be required to capture the collective nature of both harm-producing actions and the health-relevant goods harmed thereby (Hardin, 1968). While the notion that state regulation of personal choice to prevent third-party harm is typically accepted by communitarian commentators, the harm principle’s other main plank—that agents should be free from intervention in actions that do not harm others—is subject to critique. Collective action problems are not easily managed by the harm principle. Public goods such as accessible pavements and roads with unimpeded lines of visibility can be threatened by apparently harmless acts that can, under given conditions, pose a health risk. Even more fundamentally, the focus upon the micro-level individual actions and their effects is seen by some as obscuring collective interests and the values—such as solidarity, trust, reciprocity, and relational autonomy—associated with them (Baylis, Kenny, and Sherwin, 2008; Jennings, 2009).

Putting Ethics into Practice

Given the preceding account, supporters and objectors submit a range of moral arguments in relation to public health interventions, including injury prevention. Consequently, several frameworks have been developed to assist practitioners in evaluating the ethical risks that public health measures can typically produce (Childress et al., 2002; Kass, 2001; Marckmann et al., 2015; Nuffield Council on Bioethics, 2007; Tannahill, 2008). We employ the tool developed by Kass (2001) to illustrate how a systematic analysis of ethical implications can help to discuss, debate, develop, and evaluate robust public health approaches to preventing unintentional injuries.

What Are the Public Health Goals of the Proposed Program?

Kass emphasizes that the goal of a public health intervention should be specified in terms of reduced mortality, morbidity, and disability, rather than merely targeted changes in intermediary factors (e.g., improved knowledge, attitudes, and behaviors). She also recommends considering the health gains from social programs outside conventional realms of public health. This is of relevance to injury prevention, where poverty reduction, improved living conditions, safer working conditions, and access to stronger engagement of marginalized groups in developing public policy are highly salient, equity-focused interventions. This emphasis aligns closely with the recommendations of the World Health Organization (WHO) Commission on Social Determinants of Health (2008; see also Sadana and Blas, 2013) and Tom Frieden's Health Impact Pyramid (Mack et al., 2015), where interventions addressing socioeconomic factors and controlling the relative deprivation that increases exposure to environmental hazards are postulated to have the greatest population impact.

How Effective Is the Program in Achieving Its Stated Goals?

This question focuses on the assumptions underlying specified public health goals. Many educational programs that aim to change awareness and behaviors of child pedestrians or novice drivers do not necessarily result in reductions in injury, despite favorable effects on intermediary factors such as changes in attitudes (Duperrex, Roberts, and Bunn, 2002; Roberts, Kwan, and Cochrane Injuries Group Driver Education Review, 2001). Foreshadowing the next step in the tool, Kass argues that the strength of the evidence should be that much greater when the burdens posed by a program are more substantial. The paradoxical gaps in data from less-resourced settings where injuries are disproportionately greater are particularly challenging in this context. Consequently, initiatives like the Bloomberg Philanthropies Global Road Safety program (Hyder et al., 2012) focus on enhancing research capacity alongside evaluations of promising interventions in low- and middle-income countries.

What Are the Known or Potential Burdens of the Program?

The societal burdens posed directly or indirectly by public health initiatives can include costs; infringements of personal freedom; and risks to privacy and confidentiality, liberty, and self-determination. Even educational interventions, which are usually voluntary and impose fewer burdens (cf. more coercive approaches, such as legislation and mandatory building codes and product standards) can be deemed paternalistic, manipulative, or coercive. These could also require burdensome measures to achieve effective implementation, result in inequitable outcomes due to required levels of literacy or access to services, and stigmatize groups profiled or targeted in media campaigns or messages. A deficit analysis problematizing individuals shifts the blame from unsafe environments in which people live to the victims involved.

Can Burdens Be Minimized? Are There Alternative Approaches?

If the public health program is deemed to impose any burdens, this step challenges us to consider the least coercive and invasive approach, without “greatly reducing” the effectiveness of the program. Alternatively, we can consider how the program could be modified to minimize the burden or unwanted consequence. This requires sufficient data on perceived and actual burdens, as well as a commitment to modify the program, if required, based on the information gathered. Injury prevention programs developed by or in partnership with indigenous communities often have attributes of mainstream interventions that have been modified to reduce risks of stigmatization and increase acceptability, thereby enhancing the intended outcome (Cullen et al., 2016).

In many countries with high rates of drowning, adverse living conditions make the task of constant vigilant parental supervision of young children particularly burdensome. Village-based supervised child-care programs in Bangladesh and Cambodia are increasingly recognized as reducing drowning risks, providing other health co-benefits, and mitigating the demands on impoverished families (WHO, 2014).

Is the Program Implemented Fairly?

Drawing on the principle of distributive justice, Kass argues that public health programs have an imperative to reduce societal inequalities, especially where these relate to health outcomes, and ensure a fair distribution of benefits, burdens, and harms. This does not mean that programs or resources necessarily have to be allocated equally across populations; rather, unequal distributions require support using a clear, justifiable rationale and data. For example, programs that subsidize or provide smoke alarms at no cost for low-income families could be construed as stereotyping these families as particularly needy or dependent. However, the argument in support typically relates to the risks of fire-related injuries in the absence of a functional smoke alarm. This aligns with principles proposed by Rawls and Daniels, among other philosophers, who propose a positive dimension to unequal resource allocation to address prevalent inequities in the structural determinants of health.

How Can the Benefits and Burdens of a Program Be Fairly Balanced?

The notion of balance in this step requires attention to procedural justice (i.e., a fair and democratic process to consider differing perspectives and settle disagreements). We agree with Catriona Mackenzie and others who discuss the notion of relational autonomy that concerns about social justice must be central to a reasonable conception of individual autonomy (Baylis, Kenny, and Sherwin, 2008). However, consensus on this point is unlikely, and the overall aim would be to determine which public health functions are justifiable, while acknowledging that some infringements of privacy and other burdens would be inevitable. Negotiating on these points is challenging, given the time, opportunities, and processes required for meaningful consultation, and the remarkable imbalances in power and political clout that can shape the nature of the discourse.

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Divergent views on what constitutes threats to freedom and liberty are common, especially from industries resisting what is deemed undue regulation. This is evident in challenges from the car manufacturing industry in the 1970s in the wake of increasing pressure to improve vehicle safety standards (Nader, 1972), and in more recent pushbacks from the alcohol industry to harm reduction policies seen as a threat to sales and profits (Moodie et al., 2013).

Reflecting on the multiple competing standpoints involved, it is heartening to note the increasing acknowledgement that realizing noticeable reductions in the injury burden requires social change, and that this involves systemic interventions deeply rooted in empowered communities working through institutions that define the forms and functions of society (McClure et al., 2016; Mohan and Tiwari, 2000). Such comprehensive action considers individual and communal responsibilities in injury causation as a whole, taking into account the often thin boundary between violence and unintended harm. This imperative, in a field where a commitment to social justice is a core value, requires more robust political commitment and resources than are evident to date.

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Notes:

(1.) Daniels, in collaboration with James Sabin, has developed an account of procedural justice, known as Accountability for Reasonableness (A4R), in recognition of ethical and political theory's inability to generate substantive conclusions about resource allocation that are both unambiguous and uncontroversial. A4R is proposed to foster allocation decisions that command respect on the basis of the fair process by which they were reached, even when the conclusions are not universally endorsed (Daniels and Sabin, 1997, 1998).

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