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A Brief Guide to Integrating Public Health and Crime Prevention: Acting on shared Goals and Opportunities

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Introduction

This article aims to give practitioners in the field of criminal justice and crime prevention an overview of public health, what it offers, and short-term and long-term ways of bringing the two fields closer together. This chapter is based on a presentation by the first author given at the annual German Prevention Congress, Dresden, June 2018. The presentation was inspired by the comments made by officials at the World Health Organization's (WHO) meeting of the Violence Prevention Alliance, in Ottawa in 2017, where they called for closer collaboration between the fields of public health and crime prevention.

In addition to the above instance at the WHO meeting, calls for closer collaboration between the fields of criminal justice, the sub-field of crime prevention and public health have been evident (Australian Institute of Criminology, 2003; Potter et al., 2000; and Prothrow-Stith, 2004, Tonry & Farrington, 1995). This idea has most recently been brought up again in recent publications since the time of the presentation in Dresden (Lee et al., 2018). For the most part, these are detailed works that described the value of collaboration and cited examples of collaboration.

This paper amplifies concepts expressed by other authors, and offers practitioners of crime prevention and criminology a concise and practical road map of how to realize this collaboration message. This chapter offers an overview of what public health is, and explains how it is a pragmatic partner offering well-established tools and methods that have the potential to expand the scope of crime prevention programs, and in so doing, more efficaciously serve the public.

What is Public Health?

Public health is a health professional field and a way of approaching problems – on a population or group level, rather than on an individual level. It is also marked by an emphasis on the prevention and control of diseases and health problems and looking at "upstream" factors that contribute to negative outcomes such as disease and poor health. In other words, it looks not only at the immediate causes of illness, but also at the conditions which give rise to the illness. For instance, air pollution can trigger asthma and clinically one may focus on treating the asthma. Taking an "upstream" view of the asthma involves taking steps to stop air pollution at its source.

A simple way to think about public health is as follows: in clinical situations, a physician, nurse, dentist or other health care provider focuses on one patient at a time; in public health a population is "the patient." The population of interest is a group that can be defined in various ways including variables such as age, gender, race/ethnicity, nationality, geography, or other characteristics.

Public health encompasses three core functions:

a. Assessment
b. Policy development
c. Assuring the health of populations and the general public (Centers of Disease Control and Prevention [CDC], 2018a)

The public health process is data driven and is marked by the following steps (CDC, 2018a):

a. Identification and prioritization of problems
b. Identification of risk and protective factors
c. Development and testing of prevention strategies
d. Widespread promotion and adoption of preventive strategies with on-going evaluation.

Public health is also characterized by the involvement of diverse sectors. It is an expansive and inclusive field that involves stakeholders such as schools, community organizations, employers, religious organizations, non-governmental organizations, mass media, clinics and hospitals, law-enforcement and police organizations and public transportation.

The origins of public health lie in the control of infectious diseases such as cholera and polio. However, public health today has evolved to reflect the complex nature of problems that threaten people's health and wellbeing. In keeping with the idea that health is determined not only by biological factors, but also by psychological and social factors (Engle, 1977), public health has expanded to address behavioral and social issues that influence health and wellbeing.

The original domain of public health – epidemiology – also drew upon biostatistics. These fields focus on the measurement of the distribution of diseases and their determinants or causes. Public health today has grown and includes the domains of environmental health, health policy and management and behavioral sciences. When speaking of environmental health and environmental influences upon health, it is important to consider that along with issues such as air and water quality, which make up the physical environment, persons exist in social and cultural environments which also exert an influence upon their health, wellbeing and behaviors. Thus, when thinking about crime prevention, it is important to consider factors such as social and cultural norms as well as television and movie content which have all been shown to influence people's behaviors, expectations about their lives, their aspirations and goals. These also represent avenues where through the modification of social and cultural environments, and by promoting pro-social or positive content in television shows and movies, one has the possibility to reduce some of the risk factors for engaging in crime and other unhealthy behaviors.

In thinking about preventing health and social problems, it is important to bear in mind that persons always exist within a series of layered environments that are similar to the Russian Matrushka dolls where one core doll is nested in a series of successively bigger dolls (Bronfenbrenner, 1979). A person's health and behavior are influenced by all of these layers of influence, such as their immediate home environment, community level environments and social policies. Together these make up the "social ecology" within which persons exist. Each of these layers can be a source of risk but also can be a place to implement a preventive intervention – for example in the form of school-based programs, or policies that reduce poverty and promote social integration.

When thinking about preventing health or social problems, it is easy to focus on the person and often the environment is overlooked or pushed aside because it is considered more complex to address. For instance, smoking cessation programs that focus on the individual often may not address factors like other smokers who live with the person trying to stop smoking, thereby making it more difficult for him or her to stop smoking. Tobacco taxes are also an environmental approach that influence a person's behavior but often not included in a comprehensive plan to help people stop smoking. When thinking of prevention of disease or crime, it is important to keep in mind that persons do not exist in a vacuum; rather they are always embedded within an environment. Persons and their environments always exist in parallel, like two tracks of a train. Thus, for any preventive intervention to realize its maximum potential, both person and their environments should be targeted.

Prevention, whether it is of disease, or a social or behavioral issue, such as crime or violence, also calls for two steps in parallel: reduction of risk factors and an increase of protective factors. Risk factors are defined as any variable that increases the likelihood of disease or other unwanted outcomes and protective factors are defined as any variable that reduces the likelihood of disease or other unwanted outcomes. A comprehensive approach to prevention should seek to reduce individual and environmental risk factors, and promote individual and environmental protective factors.

Public health practitioners are typically found in health departments and in universities in public health departments and in settings such as medical and dental schools. They are also found within inter-disciplinary teams in clinical settings, schools, non-profit organizations and sometimes also in community settings. The classical training to be a public health practitioner is the master's degree in public health, i.e. MPH, which is the most commonly encountered terminal professional degree in this field. Frequently encountered variations of the MPH degree include master's degrees in epidemiology or environmental health. There are also persons who hold doctorates in public health, as well as persons in a wide range of professions such as medicine, dentistry, veterinary medicine, nursing, social work, and law who get the master's in public health in addition to their other core profession.

The scope of public health is expansive – from the biological to the social. For instance, public health deals with tuberculosis in terms of bacterial transmission and issues related to accessing treatment, treatment resistant forms of the disease etc. At the same time, public health also addresses living conditions such as crowding and poor nutrition, which arise from poverty, and which increase a person's risk of acquiring this disease.

As public health has evolved and expanded from infectious diseases and biological origins of diseases and problems related to lifestyle and behaviour such as diabetes, hypertension, traffic accidents and violence, there has been an expansion of public health terminology that reflects this expansion. In looking at health and wellbeing, one must also take into account social determinants of health, which the World Health Organization (n.d.) defines as "the circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics." From this perspective, poverty emerges as a major threat to health and wellbeing for many reasons and is one of the most important social determinants of health.

Differences, Commonalities and Areas of Overlap between Public Health and Crime Prevention

Traditionally criminal justice professionals speak of "deterrence" and public health professionals speak of "prevention." Analysis of these words highlight differences in nuances of meaning as well as differences in how situations might be approached and which can be understood through the following example. A lock on a door is a deterrent against theft because it functions as a barrier but has no impact on a person's desire to unlawfully enter and steal. Prevention on the other hand, focuses on the conditions and attitudes that give rise to criminal behavior and seeks to address the causes of this behavior.

The public often has the perception that threat of punishment and heavy penalties can serve as a deterrent against committing a crime. However, Nagin (2013) found that fear of getting caught is a stronger deterrent than punishment and long sentences per se. Wright et al. (1996) found in their extensive study of burglars, that the decision to break-in and steal was influenced by such factors as the need for

money to support drug and alcohol habits. Their actions were not influenced by the risks associated with these actions and punishment. A public health approach would focus upon "upstream" factors, seek to address the problems of drug and alcohol use, and also strive to understand and address the social determinants that give rise to drug and alcohol use.

BBC (2019) recently reported on the plight of some elderly persons in Japan, who engaged in criminal activity because a jail sentence offered them a place to stay and three meals a day, which they could otherwise not afford on their pensions. This is a clear and dramatic example of where punishing persons who commit crimes does not alleviate the issue, as some of the people repeated crimes as soon as their sentences were completed. These persons were often living alone, had no company, and had limited funds. While they felt that jail was not ideal, it was better than their living situation so they intentionally committed crimes, such as theft and threats, which landed them in jail. A public health approach to preventing such crimes would involve developing policies and programs on the community level to address their physical needs, i.e. housing and food, and social needs to help them overcome isolation.

Within criminology, the sub-field of crime prevention, given its particular emphasis upon prevention, offers a critical link and context within which one can frame the collaboration between criminal justice and public health. Notable examples of movement in the direction of closer collaboration between criminal justice and public health include the Global Law Enforcement & Public Health Association and the Violence Reduction Unit of the Scottish National Police and Scottish government. But as stated at the WHO meeting in Ottawa in 2017, there are still many needs that remain unmet, with respect to realizing a closer collaboration between the fields and realizing the full power of the primary prevention of crime – i.e. preventing it before it happens, rather than addressing it after the incident.

What Public Health offers the Field of Crime Prevention

Akers and Lanier (2009) highlight the topic of "Epidemiological Criminology" and Wiessbrud et al. (2016) write about systematic reviews with respect to crime prevention and rehabilitation. These are examples of the commonality and some of the most obvious forms of

overlap between the two areas. The mission of the Campbell Collaboration (n.d.), a source of well-researched quality information, strives to "promote positive social and economic change through the production and use of systematic reviews and other evidence synthesis for evidence-based policy and practice." These are all examples that draw upon the methods and language of public health, and demonstrate the value of public health methods for the fields of criminal justice and crime prevention.

In addition to general applications of public health principles specific forms of illegal activities directly touch upon mainstream public health issues. For example, intravenous drug use is implicated in the spread of HIV/AIDS and Hepatitis. The pioneering work of Professor Nick Crofts of Australia, who is an epidemiologist, (Harms Reduction Australia, 2018) illustrates the critical intersection between these two areas. A dual-approach that blends public health with crime prevention could facilitate the containment and resolution of not only one problem, but a cluster of problems associated with intravenous drug use. In addition to cutting down on illicit intravenous drug use and reducing the spread of associated infectious diseases, active prevention could have the potential to reduce burglaries that may be associated with illicit drug use (Wright & Decker, 1996).

Crime surveillance is another example of how criminal justice converges with epidemiology. Epidemiology offers the means to carry out surveillance and identify trends and changes in the occurrence of crime over time. Geographic mapping, through the use of geographic information systems (GIS) is an area of overlap between epidemiology and criminal justice. It helps with the identification and on-going monitoring of crimes and supports the mapping of "crime hot spots." This in turn provides important information on the relative severity of crime in different regions and offers important information in the planning of resource distribution and allocation. These are some examples that illustrate how closer collaboration between the two fields can advance crime prevention.

In sum, public health can serve as a partner that complements the field of crime prevention through these avenues:

- Facilitating the understanding of crime within the broader context of health and social issues;
- Identifying points of preventive intervention, guiding their development, and evaluating their impact;
- Supporting the creation of community-wide networks and coalitions that facilitate implementation of the programs and support their long-term sustainability.

Interprofessional Practice: a Framework for Collaboration

The idea of closer collaboration between public health and crime prevention can be framed within the broader context of interprofessional collaborative practice, or as it is also often referred to as interprofessional practice (IPP, WHO, 2010). This approach to addressing health encompasses working in a coordinated manner across professional silos in a collaborative manner to improve patient outcomes, especially since health care is multi-faceted and patient needs are complex.

Returning to the earlier mention of "patient as population" in this chapter, IPP between public health and crime prevention is much needed, given that both fields have vital elements to contribute, but suffer from a "lack of reciprocal awareness in each sector of the importance of the other in achieving its mission" (van Dijk & Croft, 2017).

Although collaboration is recommended by experts, getting started can pose a challenge for practitioners of crime prevention, especially if they do not know where or how to begin. The local health department is one place to inquire about initiating collaboration. Such an outreach can generate insights into shared problems of concern, such as drug abuse, or violence and can organically lead to collaboration around shared concerns.

One can also inquire in universities among public health faculties. Many public health faculties are already engaged in partnerships and collaborative work with health departments and in some instances, other sectors such as the local department of transportation. Public health faculties can serve as consultants or advisors to police departments. There are many ways they can collaborate with police departments including the design, implementation and evaluation of research-based

prevention programs. They can also collaborate with police departments in community outreach and crime prevention partnerships to promote sustainability of prevention programs.

In the United States, academic departments of public health (where the master's degree in public health is offered) are required to engage in community service as a requirement for program accreditation. Additionally, many of us are eager to use our skills broadly and assist others in creating healthy societies. At the risk of sounding like an advertisement for our field, we are used to collaborating across professions, and we deal with many pressing issues in our work, such as infant mortality, unmet health care needs, frequently occurring diseases such as diabetes and cancer, as well as compelling social problems such as poverty, inequality and marginalization. We are generally an open and approachable profession ready to help other professions with activities such as planning community, state or national programs, and evaluating their impact.

Public health faculties may also have graduate students who are interested in carrying out public health practicums in crime prevention, especially if the topics are readily allied with pressing public health issues such as HIV/AIDS, racism, health disparities, mental health or violence. Students are often required to write detailed papers as part of their academic requirements. They can be engaged to write meaningful papers that serve a practical need for police departments, rather than merely writing papers as an academic exercise. For instance, a police department may want to know more about viable anti-bullying and school-based violence prevention programs. A graduate student in public health, under supervision of an academic advisor, can write a meaningful review of the relevant literature. In this manner, the graduate student and faculty advisor can assist the police department with the translation of research into practice and thereby enable them to deploy research-based interventions more effectively.

Lastly, for those police departments who have budgets and capacity, the addition of a public health professional as a part-time or full-time member on their team is definitely an avenue to consider. It may pose some challenges due to job definitions and restrictions across traditional silos. Hiring a public health professional may be viewed in some instances as "siphoning" of badly needed resources from front line police work. Such a situation is similar to tensions encountered in many clinical situations where overwhelming patient needs demand immediate attention, and a focus on prevention and public health is viewed as a "luxury" one cannot afford, especially in an environment with tight budgets.

Dual-Degree Programs: from Collaboration to sustained Integration of the two Fields

Van Dijk and Croft (2017) stressed that law enforcement and public health need (urgently) and "…more consciously join forces." But this coming together can be difficult for reasons described above. Additionally, public health professionals and police, though employed by the same city or county government, may face structural barriers when trying to work together. It is well known that many government agencies are entrenched in bureaucracy and change happens slowly. Despite common goals and the possibility of realizing synergies with more efficient use of public resources, it can be difficult for persons in the two sectors to collaborate, especially when there is no precedence for doing so. Professional boundaries can become translated into barriers that impede collaboration. The second author has observed such instances, when employed in the role of a state epidemiologist in the United States. A problem-focused approach would call for the public health department and the police to collaborate – for instance, an outbreak of Hepatitis associated with illegal drug use. However, staff members of the health department were unable to access any police surveillance data on illegal activities, despite the fact that access to this information would have resulted in greater clarity about the situation for both parties.

For these reasons, we advocate for the development of dual-degree programs between criminal justice and public health, in the same way that we now see dual-degree programs in medicine, dentistry, veterinary medicine, nursing, pharmacy, law and social work (Altman et al., 2014; Boumil, 2014; Chauvin et al., 2000; Cooper et al., 2010; Gortney et al., 2013; Minicucci et al., 2008; Ruth et al., 2008; Shaw et al., 2017; Wenzel et al., 2008; Ziperstein et al., 2015). This is a trend that takes professional practice from collaboration with public health to sustained systems level integration. Traditionally, health care professionals have pursued the master's degree in public health after completion of their main field of study. This is still the most prevalent practice among persons who get the master´s degree in public health. However, the trend toward the dual-degree means that students are concurrently pursuing both degrees and will graduate with two degrees, one of them being the masters in public health, at the same time. This is a path that extends upon Potter and Krider's work (2000) with respect to recommendations for aligning public health and criminal justice education.

In some dual-degree programs, such as the dental school where the first author was program director, public health courses have been integrated into the dental school curriculum and a certificate in public health is required of all students who graduate, regardless of their future career plans. Within each cohort, approximately 20% to 30% of the students elect to pursue the dual-degree option in public health.

This curriculum was developed intentionally, with the aim of graduating dentists who would be equipped to work in underserved areas and with low-income and marginalized populations. Dentistry has traditionally advanced disease prevention through measures such as tooth brushing with fluoride toothpaste and fluoridating community water supplies. However, the curriculum at the Arizona School of Dentistry & Oral Health at A.T. Still University of Health Sciences was designed to contribute a large number of public health-trained dentists to the national workforce. The idea behind this is to foster informed leaders and health planners for the future and to create a critical mass of dentists who support shifts in professional practice and related norms.

Since its inception in 2003, the school has been recognized for its innovation in dental education. In 2013, a sister school within the university, with a similar curriculum and similar public health and social missions, was subsequently established in the state of Missouri. As a result of this curriculum, every dentist who graduates from these schools will have completed five courses in public health including "Introduction to Public Health" and "Introduction to Epidemiology" as part of the mandatory public health certificate. This is separate from whether they elect to get the masters in public health and regardless of whether their future career plans actively involve working with the underserved. The rationale behind this curriculum is to graduate dentists with the capability of understanding and engaging in pressing public health matters. Having a foundation in public health increases the likelihood of graduates going into public service, and it prepares clinicians, even those who may elect to go into private practice, to continue to be informed leaders and advocates for public health related issues within the communities they will serve upon graduation.

Additionally, because of their emphasis on public health, the two dental schools attract a particular kind of applicant, namely those interested in a career dedicated to serving the underserved. Upon graduation, many still go into traditional private practice. However, graduates of these schools work in public health settings such as publicly funded community health centers in low-income neighborhoods, the Nation-

al Public Health Service Corps and the Indian Health Service at two to three times the national average. The focus on public health also serves as a foundation for our school to actively recruit and retain members of under-represented groups such as Native Americans and other low-income miniorities. Thus, the public health focus not only contributes toward a diverse workforce, but also attracts and graduates dentists who are more reflective of the underserved people they go on to serve.

According to Professor Robert Sutton of Stanford University's Business School (as heard in a talk by him in 2004 in the context of the program for non-profit leaders), one of the ways that innovation occurs is through the lateral transfer of ideas from one field to another. Given the call for closer collaboration between public health and crime prevention, we advocate for offering of public health certificates to criminal justice professionals and to students enrolled in criminal justice programs. The certificate in public health is a minimal first step that opens the door for criminal justice degrees to expand and evolve into the dual-degree master's in public health program. This development will help overcome barriers to collaboration between the two fields, such as those described above. Moreover, workforce development that advances dual-trained professionals with training in public health has the potential to make a lasting contribution to the field of criminal justice and crime prevention.

In the United States, police departments are in crisis. The police are not seen as professionals who help the public. Rather they are perceived as persons who unfairly target certain people such as African-Americans. If the field of criminal justice were to actively embrace, adopt, and practice a prevention-oriented kind of policing, through the steps we have described, there is the real possibility of turning around negative attitudes toward police by creating a workforce that is actively engaged in the primary prevention of crime, rather than responding in the wake of emergency calls. The Scottish police is one of the best-known police forces to have taken active steps to integrate public health into their work. This direction was in part motivated by Scotland, having one of the highest rates of murder in Europe, and their desire to take preventive action. Police departments in the United States and other countries should be encouraged by the success of the Scottish police. The collaboration steps and educational pathways described in this paper point to ways in which the lessons from Scotland can be scaled globally and further expanded.

Dentists, like the police in the United States, are subject to negative stereotypes. However, there are a significant number who defies the traditional stereotype. In addition to dentists getting a master's degree in public health, there is also the option of adding on a residency in dental public health which then qualifies one as a specialist in this field. The blending of dentistry with public health has led to a notable number of dentists whose practice is more than just the traditional "drill, fill and bill" method of practice. There are large numbers of us around the world who practice dentistry with an emphasis on disease prevention and public health.

Similarly, there exists the possibility for criminal justice professionals to actively focus on crime prevention and never touch guns or handcuffs, never make arrests and never enter jails. Instead, they can spend their time in the community, forming partnerships and building up community resources such as schools, youth mentoring programs, vocational programs, poverty reduction programs and mental health promotion programs.

Prevention (be it of diseases or crime) on a large-scale is possible. Public health shows us the way.

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Content

II. Lectures and Documents from the International Conference on Prevention of Violence and Extremism – PV&E

III. Annex