Increasing Security through Public Health: A Practical Model

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ABSTRACT

As political and social changes sweep the globe, there are opportunities to increase national security through innovative approaches. While traditional security methods such as defense forces and homeland security provide both pre-emptive and defensive protection, new methods could meet emerging challenges by responding to the political, financial, and social trends. One method is the integration of defense, medicine and public health. By assisting a nation by providing basic services, such as healthcare, collaborative efforts can increase stabilization in areas of unrest. Improved health outcomes leads to increased domestic security, which can create a ripple effect across a region. Assessment, uptake and sustainability by the host nation are critical for program success. The proposed methodology focuses on the use of primarily extant resources, such as programs used by Special Operations Forces and other health and defense programs. Additional components include evaluation, set objectives and mission collaborations. As the nexus between foreign affairs, security, and public health is increasingly validated through research and practice, standardized interventions should be developed to minimize overlapping expenditures, promote security and strengthen international relations.

INTRODUCTION

Over the past twenty years, the frequency and visibility of terrorist events, as well as political and social change have spread across the globe. Changes from these events impact many regions previously under authoritarian rule. From the dissolution of the Soviet Union in the early 1990s to changes in Middle Eastern and North African nations, billions of people are in unfamiliar situations including new governments, weakened or nonexistent national infrastructure, crippled financial and employment markets all while experiencing increased globalization.[1] National security is a top priority for the United States (U.S.), maintained by reliance upon its infrastructure and diversity of resources.[2] One reason the U.S. remains a global leader in security is its ability to merge resources from multiple disciplines to meet existing and new challenges, such linking public health and national security to combat HIV.[3]

Assisting people in unstable nations could improve intergovernmental relations and the lives of individuals and also augment political and social stability, which would possibly reduce the risk of domestic attacks on American soil. Appropriate interventional methods should be developed, deployed and tested to determine the impact on these outcomes. Current programs in operation in the defense sphere include Medical Seminars (MEDSEM); Medical Civic Action Programs (MEDCAPs) and Defense HIV/AIDS Program (DHAPP). The operationalization of an idea can vary significantly from its inception, leaving areas for opportunity to increase program efficacy.

The idea put forth in this manuscript is that combining resources from overlapping in areas in the defense, health and foreign affairs sectors would decrease duplicative expenditures, free up funding and provide a more efficient approach to increasing security while improving the global image of the U.S. This U.S.-led increased global outreach could change outside perceptions of the West, promoting our international reputation and standing for the better. While this approach is partially theoretical, there are established precedents within national defense systems that provide public health support to foreign nations. For example, the U.S. Department of Defense (DoD) HIV/AIDS Prevention Program (DHAPP) combines defense funding and support with public health and research interventions.[4] DHAPP is one such program that demonstrates the ability of joint ventures in partnership with the host nation to build capacity and improve good will. Such joint ventures demonstrate the potential for favorable outcomes for larger missions.

BACKGROUND

The United Nations (UN) defines human security as: "a state not only lacking violence, but a state in which persons have access to healthcare, economic opportunity and education among other basic needs."[5] Through Resolution 1308, the UN further clarified that a disease, such as HIV, can present a threat to national and international security through its impact on the social stability of a nation.[6] The World Health Organization, within its constitution, declares that '…the health of all peoples is fundamental to the attainment of peace and security'.[7] It becomes apparent that international security organizations, such as the UN and high impact health organizations (WHO) acknowledge the relationship between disease, stability, and security. However, in the field of public health research, including medicine, there is a paucity of published research in scientific journals linking the positive impact of good health on security. There is, however, no shortage of publications on the detrimental impact that national insecurity has on health.[3,6]

Combining these definitions, it is plausible to use indicators of population health as a measureable, proxy marker to determine an area's level of security. When combined with other quantifiable measures, such as education level, literacy, unemployment, and poverty, an assessment of these factors, using culturally appropriate scaled, may allow for the determination of an appropriate geographic area where an effective intervention could increase stability. A successful project should have both short-term and long lasting implications. During times of uncertainty, international efforts have focused on the individual needs of basic necessities such as food, healthcare, shel-

ter, and security.[8] Due to extensive political, economic, and foreign policy changes in global areas of interest to the United States, these occurrences create an evolving opportunity for innovative approaches to increase the security in the midst of international change.[9]

Given new realizations of finite resources due to the international financial crisis, one cost-effective approach to increasing security is to engage persons in affected areas by meeting basic needs. Launching from the platform of foreign affairs, the combination of health and defense programs could yield a significant return on investment (ROI). Pooling extant resources, U.S. organizations in partnership with one another and including host nation (HN) collaborators, can address both the public health needs of a population, which would decrease crime, improve collective security, and better health conditions.

Similar approaches in meeting the basic needs are successfully employed by extremist groups and are used as recruiting persons and homogenizing individuals' thought with group ideology.[10] Counterinsurgency (COIN) interventions led by the U.S. military have real potential to change the perception of the U.S. and its military, especially if the U.S. military partners with public health academic institutions. In addition to building on overlapping areas of strength, such systems would counteract deficits in existing systems, to include: time-limited rotation of staff; the belief that programs should be brief; lack of capacity-building for HNs; sustainability and applicability by and to HNs.[11, 12] Regional rotation of foreign affairs and military staff disrupts programs' outcomes and delays implementation. A triadic approach that combines public health, military, and foreign affairs could mitigate this, as the HN public health partners working with U.S. partners could have a longer time commitment to the HN. Reliance on the development of local subject matter experts (SME) is vital.

Inter/National security

Traditional approaches to national and international security are focused primarily on defense initiatives such as weaponry, military bases, and defense forces, as well as securing allies through diplomatic missions and foreign policy. The U.S. national defense budget for Fiscal Year (FY) 2010 was $685.1 billion, including operations and maintenance, personnel, housing, research, construction, and procurement.[13] In 2009, the U.S. spent $663,225,000 on defense, ranking it globally as the country with the largest defense budget. China and the United Kingdom ranked second and third, spending $98.8 billion and $69.3 billion, respectively.[14] As a capitalist and democratic nation, the U.S. follows various business and financial models in determining the course of spending, contracts, and grants in order to forge enterprises as well as public/private partnerships. This same driving methodology can be employed to explore the proposed integration of cost effective public health interventions to increase the payoff through increased security, decreased U.S. focused violence and expenditure reductions by combining services and objectives.

A large proportion of U.S. military and defense expenditures result from the global distribution of the military. Increased coordination of public health and foreign affairs would allow the U.S. to increase national security while reducing spending. There are multiple methods through which a nation can secure its people and interests without the high financial and human costs generally associated with traditional defense and military approaches. Part of a nation's security is based on its overall international reputation of international affairs. (International Cooperation in the National Interest: Meeting Global Challenges 2006) Support of foreign governments is one manner a nation can improve its international standing.

The U.S. provides ongoing financial assistance to many countries, providing more than $49 billion in 2008.[15] The presence of U.S. military forces in 77% of the world's countries provides an opportunity for military assistance in each country by improving the nation's infrastructure. As of September 30, 2010, the U.S. military had almost 1.4 million troops with 297,300 of these troops deployed in 149 countries.[16] The annual U.S. defense budget will double between 2002 and 2016 given its current trajectory and yearly increases.[13] During this same time period, the U.S., along with the rest of the world, has experienced multiple financial meltdowns including the failures of companies, banks, and governments. Although humanitarian assistance is not the primary mission of the U.S. military, there is an established history of providing humanitarian aid through special programs in areas of interest.

While many national financial situations have weakened, the importance of securing national interests has not decreased. Understanding that national security threats are often related to foreign security issues underscores the need to create an opportunity to improve international collaborations.[9] Following the recommendations from the United Nations Special Committee on Peacekeeping Operations, it is an opportune time to explore creative and financially conservative methods to increase security through health improvement.[5, 6]

Concept Sharing & Potential Outcomes

National security is a well established, ever-evolving field that now uses consistent policies and procedures to ensure the protection of national interests. Similarly, the field of public health has existed for hundreds of years and was introduced more formally in the U.S. in the early 20th century. Public health combines research with practical application and implementation using empirically validated and systematic methodologies to develop, design, and execute interventions. When considering the impact of public health on the reduction of disease and the improvement of the quality of life, there is a naturally occurring component which also increases national security interests: healthy people are more secure and restful. (Ministers of Foreign Affairs of Brazil 2007) The missions of each field as well as the potential strengths and benefits are outlined in Table 1.

Due to multiple, active engagement in regions of the world also experiencing social change, favorable views of the U.S., especially in the Middle East, have been on the decline since 2008.[17] Additionally, majorities of persons in national surveys in Jordan, Lebanon and Pakistan state that their governments are working too much with the U.S. government. In contrast, public health workers are often regarded as persons interested in improving the health and well being of a population and are rarely associated as government employees. United States public health workers are deployed internationally representing multiple organizations and work toward healthcare infrastructure development and agricultural capacity, to increasing vaccination programs and examining the impact and path

Resource Sharing between Defense and Public Health to Improve National Security	
Goals and/or Missions	
Defense	**Public Health**
The mission of the Department of Defense is to provide the military forces needed to deter war and to protect the security of our country[1].	The role of public health workers is to: provide leadership on health matters, drive research, ensure the translation of valuable knowledge into services, and monitor various health situations and assess trends[2].
Strengths and Benefits to Integrated Programs	
U.S. defense forces have human assets in 149 nations	Human assets in every nation, including foreign and domestic assets
Trained in security and defense able to mobilize in unstable areas	Experienced in serving hard to reach populations and persons in poor health
Logistical and construction equipment and personnel	Trained in health and medical care infrastructure development
Expending funding in humanitarian assistance and health programs internationally	Expending funding in humanitarian assistance and health programs internationally
Hierarchical structure with well established protocols, policies, and procedures	Various organizations with different objectives, funding sources, and missions
High reputational credibility among military defense forces and international defense organizations.	Accepted as a source of health and quality of life improvement

Table 1. Strengths of Defense and Public Health Systems Strengths

[1] U.S. Department of Defense website www.defense.gov/about/#mission
[2] World Health Organization website www.who.int/about/role/en/index.html

of disease throughout a population. The U.S. military also has numerous positive attributes. In addition to being the primary source of national security, the military's capacity for logistics, internal support, command structure, and resources are exceptional.

Despite the number of humanitarian and service projects, many persons view militaries in a negative manner, often as aggressive or occupational forces.[18] Regardless of the mission of a defense force, the presence of military personnel often evoke feelings of fear and insecurity regardless of whether they are involved in active military engagement or not. (Baker and Shalhoub-Kevorkian 1999) Additional negative views exist toward a foreign defense force operating within a country. These views can result in the increase of nationalistic feelings and increase the resentment of a foreign military's presence. People may be afraid of a military with or without just cause. Underlying fear causes people to place their fate in the hands of governments or other powers for protection (Nissenbaum 2005).

Program Concept

Health defense is a concept, which may be defined as the intersection of public health and defense programs with the shared outcomes to promote health, stability and security. A medium term, strategically implemented pilot project using a developed health defense intervention would allow the establishment of a standardized and tested methodology that could be used to replicate successes as part of "portable projects".

Projects lacking goodness of fit include projects not relevant to the needs of the people; have a high probability of failure and producing detrimental outcomes. To combat this, testing a structural framework and then creating "portable projects" to be incorporated onto this framework allows each program to be targeted and tailored to a diverse population allowing individual, population level segments to be adapted to new countries and cultures. Contrary to a "one size fits all" approach, program frameworks would be tested and validated for a region, allowing the frame to be utilized in similar cultures, while the portable components would be adapted to specific cultures. The outcome would result in better developed and tested cultural specific projects that would decrease required time for implementation and execution.

To build a framework, a pilot program could be executed in a controlled environment using a continuous evaluation process throughout the development, design and implementation. Identifying, including and recording data on quality management markers creates an outcomes system to measure the efficacy of the project and increase its potential replication. A pilot project should be conducted where interventions are relevant to areas of security, public health, and foreign policy. Systematic setup and overview combined with experienced partner agencies, strong coordination and communication with clearly defined roles ensures the appropriate level of oversight. Interventions should focus on regions or countries where there is the following: a strong U.S. military presence, a strong U.S. public health presence, an interest or desire to promote military humanitarian assistance, and less than optimal coordination between these areas. Selecting multiple sites would provide the additional strength needed to compare base line and outcomes measures. Such outcomes measures could determine if successes and failures were specific to the site, the organizations involved, employed methods, or specific persons. In order to ensure cost effectiveness, monitoring of expenses and careful documentation should be made.

Implementation Example

The general steps for project development and implementation are presented in Table 2. This example provides a step-by-step approach to engaging a HN. Hypothetically, we will assume that the U.S. DoD has a humanitarian assistance program to be implemented in a small, strategically important country (identify region of operation). Identifying a U.S. based organization, such as an academic medical center (AMC), with experience in the country and in the region, which provides similar services could augment the expert domains provided by the DoD (partner identification). Initial, brief meetings assessing the interest of the AMC and the DoD to partner allows each become familiar with one another and determine the potential for partnership (willingness to engage). It appears that the HN culture was formed through a history of war by several occupying foreign nations, and its people have experienced persecution and oppression by the occupational forces. Therefore, foreign persons – especially those representing the government or defense forces may be viewed as suspect. Suspicion can be exacerbated if an offer of assistance for seemingly no reason is made. Prior to meeting with HN organizations about this project, discussions on how to effectively engage persons from the HN should be conducted. If either party has well-developed relationships with HN staff, an invitation for cultural training could be extended with the idea of increasing the efficiency of the U.S./HN meeting. Since the relationships developed by the AMC are more than likely different than those with DoD personnel, it is possible that each party would be able to provide the other with

Table 2. Health Defense Intervention Map (HDIM).

Identify Region of Operation	Geographic area. This includes the region/s, nations or areas (sections within a nation or across borders) for intervention. Total area is the region of operation (ROP).
Partner Identification	Domestic (U.S.) agencies with overlapping goals and/or objectives within or near the (ROP). Focus on agencies with experience and/or capacity in the provision of services within the ROP or similar culture and with scope of work relevant to a potential project.
Willingness to Engage	Assessment of the domestic organizations interest in collaboration and pooling resources to work on common areas of interest and objectives. Potentially increases outcomes and reduces overall costs.
Cultural Assessment	U.S. agencies must ensure that the approach used to HN organizations is one that is culturally competent from the perspective of the HN. Many projects are unsuccessful due to nuances, language or actions perceived as intrusive, questionable, or rude by HN personnel. Partnering with agencies and persons who understand both the U.S. and the HN cultures is vital for program development and success.
Willingness to be Engaged	Host nation's (HN) interest in receiving foreign assistance in an area. This could be healthcare, agricultural, critical infrastructure development, or any area identified as a need by the HN and potentially supported by all involved.
Need Assessment	Need determination of people in the ROP. Includes the overlapping objective or mission areas for the domestic agencies and the HN. Program should maximize the benefit to the people in the ROP while maximizing return on investment (ROI) for all parties. ROI includes increases in security, stabilization and foreign relations improvement.
Resource Assessment	Relevant resources, including personnel, time, equipment, supplies, financial capital, technical expertise, subject matter experience available from member organizations. Quality assessment of resources should be included to better understand the commitment.
Operationalization of Roles, Scope, & Duties	The role of each partner and the scope of work should be clearly defined. Duties that support the successful accomplishment of the project should be developed. This includes time and resource commitment. HN and partners should determine the potential for sustainability for a long-term project or success criteria for a time limited project. Outcomes measures should be development with measurement criteria.
Commitments & Contributions	Formal commitment to the project by all parties to move forward and work together. Formalize arrangements through memoranda of agreement or understanding. These establish procedures for communication, generally identify roles and responsibilities.
Outcomes / Evaluation Markers	Success criteria should be formalized as an evaluation plan (EP) prior to project implementation. The EP should have some fluidity so that it can be amended during implementation. Accurate, complete and consistent data collection is vital.
Sustainability	Dependent upon the scope of the project and the ability of the collaborative to support it, sustainability measures should be developed. At a minimum, the HN should be able to derive some tangible knowledge on how to be more self reliant.

effective rules of engagement. U.S. personnel must understand the onus of engaging HN personnel from an HN culturally competent perspective is incumbent upon the U.S. personnel, since the project would further U.S. interests (cultural assessment).

Initial meetings with HN personnel determine the level of interest and acceptance of a U.S. based intervention. This includes compromising so that each party may complete its mission (willingness to be engaged). The point of a public health based intervention is to improve the health and security of persons, producing a byproduct of improved U.S. relations and security. Projects should be designed and framed with the needs of the HN as paramount. Understanding the most critical needs of the HN citizens that fit within the U.S. program will yield the best results and acceptance of U.S. assistance (need assessment). Once the need has been identified, the agencies, both U.S. and HN, should determine what resources they have that they can commit to the project (resource assessment). This includes financial support, human resources, equipment, supplies and time. The role each organization, as well as the scope of work and duties should be negotiated and clearly defined (operationalization of roles, scope, and duties). Formalizing all discussions through the signing of memoranda of agreement (or understanding) will help in reducing future miscommunication. An MOA/U could extend beyond the scope of a financial obligation and enhance the ability for the HN to obtain external funding for project sustainability. MOAs allow the continued exchange of in kind resources (such as trainings and education) as well as knowledge transfer (access to U.S. SMEs).

Determining the effectiveness of an intervention depends on methodically collected data through the use of consistent methods. Understanding that an evaluation plan should be able to have some flexibility given the scope of the intervention, consistency is key to proper evaluation and outcomes. This would also allow for financial assessment and impact determination as well as improve the probability of successful replication of a project (outcomes evaluation). Whether the project is short term, such as a hospital or clinic renovation or medium term, such as a training program for military conscripts there should be a positive benefit to the HN that exceeds that of the project itself. Project sustainability regardless of the project duration should yield a positive, measurable outcome for the HN. An example of HM outcomes includes advanced knowledge or the development of technical expertise in an area. Interventions should focus on improving the capacity of the HN.

Conclusion

There are numerous examples of time and cost intensive interventions that have not generated the impact congruent with their potential. There are multiple reasons for project failure: lack of basic infrastructure to sustain the project; a U.S. culturally based project, such as the provision of highly active anti-retroviral therapy (HAART) for treatment of HIV/AIDS in communities with where the people have no food or water; mission creep, indicating that projects evolve over time to continue viability and sustainability. While most U.S. based foreign aid programs have strict funding requirements, it is important to understand how to meet the basic needs of people, before attempting to offer advanced services. Using the correct lenses to see the correct cultural perspective is key.

An effective, standardized methodology merging the strengths of the military with the knowledge of public health practitioners allows both groups to further their respective objectives while reducing overall costs, resource allocations and increasing project sustainability. By merging sections of these programs, health, foreign affairs and diplomatic processes would be enhanced resulting in increased security. Health diplomacy creates partnerships between military and non-military personnel in many areas with civilian public and private organizations and includes integrated public health initiatives.[19] Many of these partnerships are contractual arrangements that place the military in the position of financial and logistic control. If an egalitarian implementation method is adopted, and the public health agency serves as the public face of the intervention, the positive impact could be greatly improved. Simply put, let each player do what they have the capacity to do best.

Due to the current economic environment, many organizations, both governmental and non-governmental are hesitant to invest in new initiatives. As financial uncertainty breed's insecurity, it is an excellent time to implement new initiatives to maximize impact, increase security, and improve health simultaneously by merging existing methodologies and sharing resources that result in a gain at a minimal cost. Given that different fields and organizations employ various methodologies, approaches, and hierarchical structures, an initial demonstration or 'pilot' project could ensure the appropriate level of integration between public health and defense.

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