

# The Security Dividend: What the United States Can Obtain from Investing More in International Health Care Capacity

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*With their increased emphasis on soft power, both the Bush and Obama Administrations have opened up a new front in the war of ideas regarding who will have the most influence over developing countries as the world moves through the twenty-first century. Currently the political and philosophical differences between the parties of this conflict are not as starkly defined as they were in George Kennan's historic argument for containment (i.e., there is no "Evil Empire," and "terrorism" can be a process, act, or method, but not a state). Yet the consequences of losing this international war on poverty have been defined as no less than a tangible threat to U.S. national security interests and moral leadership. This paper narrowly focuses on one particular type of strategy in this new war—foreign aid for health—and how, by helping countries to supply and train more of their own soldiers in this type of fight (i.e., non-physician health workers and surgically trained workers) the United States can achieve the best results in terms of sustainability, cost, and regional impact.*

## INTRODUCTION

Shortly after September 11<sup>th</sup>, the Bush Administration concluded that it was in U.S. national security interests to use foreign aid to help prevent fragile state collapse, with the logic being that fragile states could become ungoverned territory from which terrorist organizations could operate against U.S. interests. The 2002 National Security Strategy (NSS) encapsulated this conclusion and elevated the use of foreign aid in U.S. foreign policy by stating that, "including all of the world's poor in an expanded circle of development...is a moral imperative and one of the top priorities of U.S. international policy."<sup>1</sup> Sustained economic growth, poverty reduction, and public health are listed as areas of strategic importance.<sup>2</sup> In 2007, candidate Barack Obama also decided that well-structured foreign aid to developing countries was in U.S. national security interests, writing in the journal, *Foreign Affairs*, that the United States needed to, "invest in building capable, democratic states that can establish healthy and educated communities, develop markets, and generate wealth."<sup>3</sup> In 2008 Congress took the lead, increasing funding for the original Bush Administration's President's Emergency Plan for AIDS Relief (PEPFAR) by \$48 billion.<sup>4</sup> In 2010, Secretary of State Clinton declared that in the new administration development aid would have a place on equal footing with defense and diplomacy in U.S. foreign relations.<sup>5</sup> However, in 2011 with the United States just beginning to recover from a massive economic downturn and a newly elected Congress ready to flex its budgetary muscles, a strong fiscal reflex emerged to cut funding for all things foreign and domestic, especially foreign aid programs deemed merely as expensive, self-delusional exercises of soft power. But continuing along this path would be a strategic and shortsighted mistake. In this paper I argue that President Bush and President Obama both had it right. Well-structured foreign aid can produce efficiencies in the health care sectors of developing countries that augment economic

growth in ways comparable to education and beyond what can be achieved through military aid or military means alone. Foreign aid specifically designed for developing countries' health care systems can increase the number and broaden the skill set of physician and non-physician health workers. If designed correctly, programs in specific areas of need, such as rural obstetrics, surgical care, and proper vaccination distribution, can decrease marginal health care costs, broaden access and result in long term spillover effects into labor markets and thus stimulate economic growth—one of the few things that many studies consistently suggest lowers the risk of country collapse.

### **FOREIGN AID FOR SECURITY**

September 2002 was a time of great turmoil and diplomatic decision making in the United States. The U.S. was engaged in one war in Afghanistan, and President Bush was making the case before the United Nations and the American people for an invasion of Iraq. The Bush Administration, determined to usher in a dramatic shift in U.S. foreign relations, released a National Security Strategy (NSS) that highlighted foreign aid and economic development as pillars of a new U.S. foreign policy. Stating, “A world where some live in comfort and plenty, while half of the human race lives on less than \$2 a day is neither just nor stable,” the 2002 NSS outlined a series of development goals headlined as imperative to national security.<sup>6</sup> Investing in health and education, improving the effectiveness of development banks, and “unleash[ing] the productive potential of individuals in all nations,” were only a few of the goals set forth in the document.<sup>7</sup> Shortly after the NSS was released, PEPFAR funding legislation was enacted and the Millennium Challenge Corporation (MCC) was created. PEPFAR committed \$15 billion dollars of aid over five years to help combat AIDS in developing countries and the MCC launched a new platform for awarding foreign aid to countries that met specific market and democratic criteria.<sup>8</sup> When the Obama Administration came into office, it issued funding requests to Congress to increase the budgets for PEPFAR and the MCC, highlighting the role that the aid branches of government, such as the United States Agency for International Development (USAID), would play in utilizing soft power to achieve national security objectives in developing countries.<sup>9</sup>

### **TO GIVE OR NOT TO GIVE**

Policy makers and commentators originally skeptical of the U.S. policy shift to increase foreign aid funding became even more doubtful of its wisdom or long term effectiveness after the global economic downturn, citing as evidence cases where American public funds have landed in the coffers of unscrupulous government actors.

Yet there is strong evidence that poor health indicators are actually good markers for low-economic development and potential country destabilizing conflict. A study by Pinstrup-Andersen and Shimokawa, using World Bank data, found significantly positive correlations between under-five child mortality, nutritional status, degree of level of poverty, and likelihood of armed conflict eruption.<sup>10</sup> Collier and colleagues also found strong correlates between risk of country collapse and decreased economic growth. Their model suggested a 1 percent drop in risk of civil war in poor countries for every percentage point increase in the rate of economic growth.<sup>11</sup>

USAID, as an organization, has indicated that it also believes in health sector underpinnings of economic development. In its publication, *Implementation of the Global Health Initiative: Consultation Document*, USAID lays out its vision of a type of global health diplomacy where health is used as a vehicle to stabilize communities, spur economic progress, and contribute to the global security of nations.<sup>12</sup> Also in the document are outlines for strategic investments in health and gender equality, and on its website are examples of where the agency has achieved success in its childhood vaccination program in Pakistan and its mid-wife training program in Afghanistan.<sup>13</sup>

Interestingly, the global health implementation document also describes a USAID plan to strengthen health systems in developing countries by training and retaining 140,000 new health care workers.<sup>14</sup> Yet few specifics are given in terms of the types of health care workers that will be trained and in what capacity they may serve. This lack of definitional precision can be used as a structural advantage if converted into an effort to support and strengthen programs already in existence in many developing countries which are currently helping to fill the gap in health care provider presence in the areas of greatest demand.

A 2007 survey paper by Mullan and Frehywot characterized twenty-five sub-Saharan African countries where non-physician clinicians (NPCs), health workers trained beyond secondary school with fewer skills than physicians but more than nurses, were active in a spectrum of duties ranging from primary care to obstetric and major surgery.<sup>15</sup> In many instances NPCs were more likely than their physician counterparts to work closer to the geographic areas where they trained. Furthermore, in war-torn countries with very low physician density per population, such as Uganda, Rwanda, and Malawi, the number of NPCs performing traditional physicians' duties far outnumbered the actual physicians in the country.<sup>16</sup>

However, because of a demand that far outstrips supply, a 2007 World Health Organization study estimated a global deficit of 2.4 million health care providers in 57 low and middle-income countries.<sup>17</sup> Yet, because of the speed with which some of these programs had to be developed, the skill levels of these NPCs (also called clinical officers (COs), medical officers, assistant medical officers, surgically trained assistants, and several other employment-descriptive terms) vary widely.

In Malawi, where a 2011 paper by Wilhelm and colleagues documented only fifteen trained surgeons for a population of thirteen million, the COs performed nearly half of the 2931 major surgical procedures recorded during the study period.<sup>18</sup> Strikingly, in many instances no statistical significance was noted between fully trained surgeons and their patients' outcomes with respect to mortality ( $P=0.99$ ), wound infection ( $P=0.65$ ), or re-operation ( $P=0.14$ ).<sup>19</sup> In similar studies, not only were the outcomes of NPCs comparable to those of surgeons, but also these outcomes cost significantly less to achieve.<sup>20</sup> In one program in Mozambique where assistant medical officers were trained to perform high-risk obstetric surgery in three years as opposed to the standard six years, the cost per major surgery was less than half (\$38.9 v. \$144.1). Outcome measures were statistically insignificant in all areas except superficial wound infections, and the surgically trained medical workers were more likely than the fully trained surgeons to remain posted in rural areas.<sup>21</sup>

However, not in all low-income countries have these programs been entirely successful in producing lower cost physician and surgeon substitutes that can perform similar duties. A 2009 study by Hounton and colleagues using data from 2305

caesarean sections performed at regional hospitals in Burkina Faso found marked outcome variability in newborn fatality rates among operating clinical officers.<sup>22</sup> These clinical officers, nurses who completed a two year surgical training course, cost substantially less than obstetricians to train. But their case fatality rate was nearly twice that of their obstetrician counterparts and over fifty percent higher than general practitioners who had completed six month surgical training programs.<sup>23</sup>

These programs, designed to fill relative scarcities in local low-income markets for physician labor, present USAID with a unique opportunity to be a game changer in the health sectors of these countries by elevating and standardizing the level of training for NPCs and improving patient outcomes in ways that these countries can likely not achieve on their own. Very few of these low-income countries' health ministries have the resources to duplicate within their borders what has actually worked regionally. Nor is the majority of the non-physician health care labor market fluid enough to allow for net positive migrations between neighboring states. Furthermore, while actual physicians trained in these countries can and often do migrate to higher income countries such as the United Kingdom, Canada, or the United States, NPCs who choose to migrate are more likely to revert back to the nursing and medical assistant positions they occupied before their home countries spent resources for their advanced training, thus doubling the resulting social losses to already depleted health care systems.

### **MATCHING SUPPLY WITH DEMAND**

In areas outside of health care in many low-income countries, USAID has job training and skills-transfer programs designed to plant fertile seeds for economic growth. Its computer skills training program in Afghanistan and its primary school education programs in Guinea are only two examples mentioned on its website.<sup>24</sup> Similar or even more substantial gains in developing country economies can be obtained by adding skill-set enhancing health worker training programs to USAID's vast repertoire of health care initiatives.

Across many of the low-income countries which already have such programs in place, USAID can first investigate which ones have been exceptional (e.g., such as clinical officer training programs in Kenya, where the COs run most of the health centers in the country) while also distinguishing these from the ones which have been less so, based upon program funding, length of training, acceptance criteria, training attrition rates, worker retention rates, and clinical outcomes. It can then use the clinical outcome data obtained in ways similar to the way comparative effectiveness research data is used to distinguish interventions and clinical algorithms in the U.S. and other Western countries. Through descriptive and other quantitative analyses it can next determine which programs provided the best population coverage with respect to cost-effectiveness, and the lowest or at least decreasing costs per averted negative patient outcome (e.g., mortality, re-operations, or eventual referral to higher levels of care). After the analyses are complete, iterative models can be designed and then provided to low-income countries which may not have the resources to obtain data on best practices through a prolonged period of trial and error. For example, Ghana has a three to five year medical and surgical training program for registered nurses designed to increase providers in rural areas; Lesotho also has a similar program to provide nurses with advanced training, but it requires a one year internship.<sup>25</sup> Malawi's program is of the

same length of time as Ghana's and Lesotho's, yet it's reserved for medical officers and of broader scope.<sup>26</sup> Comparing programs through participant evaluations, interviews, and data analysis could yield vital information in terms of what works best as well what specific resources one program may need to bring it to the level of another better functioning program.

Similar to current debates regarding how to optimize the U.S. health care system, with respect to developing countries trying to supply their health labor markets, there is also the need for an investigation of whether governmental, quasi-private, or private organizations may be better positioned to deliver services to particular patient populations. The African Medical Research and Education Fund (AMREF), winner of the 2005 Gates Award for public health, is a Kenya based non-governmental organization that, in addition to funding and designing studies, also trains medical workers in roles traditionally reserved for physicians and surgeons.<sup>27</sup> Organizations such as this one, through public and private relationships, can sometimes deliver health services far more efficiently than national governments, which are sometimes beholden to powerful constituents who sometimes marginalize subgroups in society.

Finally, in terms of how supply can be better matched with demand in the health sectors of these countries, USAID can also help train health market supporters in the efficient utilization of information and communication technology such that what is learned in a Kenyan NPC training center can be readily transmitted to a rural surgical clinic in Malawi. In this way, USAID would not only help hubs for regional health care training, but also, it would help establish and strengthen channels for regionally-based electronic communication and trade.

## GETTING IT RIGHT

By helping low-income countries to more efficiently supply their health care labor markets, USAID can help stimulate economic growth in many ways similar to how economic growth is stimulated through education and military aid. Education, especially primary, can help lay a foundation upon which future skills may be developed; and military aid can create a stable environment from which markets and societies may flourish. In a similar vein, helping countries produce their own highly skilled, low cost health workers, can lay foundations for skills to diffuse to other members of society and thus lay the foundation for further human capital development within the labor force. Furthermore, like military aid, creating multiple points of access to a competent health care system within a society—one not geographically or ethnically confined to particular regions—can help create stable environments from which people can participate in markets and communities may thrive.

While no studies directly modeling the relationship between health care systems augmented by non-physician health workers with specialized training and GDP growth rates in low-income countries were found by the author, based upon the literature, reasonable inferences can be drawn about their indirect economic effects. The Burkina Faso obstetric surgery study by Hounton and colleagues, when taking cost of training and remuneration into account, demonstrated a near ten thousand dollar difference between surgical teams lead by obstetric surgeons versus ones lead by general practitioners with surgical training.<sup>28</sup> In Mozambique, even though outcomes only differed statistically with respect to wound infections, there was a near two and a half

times difference in cost per surgical procedure when the procedure was performed by an obstetric surgeon as opposed to a trained medical assistant.<sup>29</sup> With respect to vaccinations—a public health measure historically proven in many cases to be very cost effective in disease prevention—the 2007 cross-country study by Anand and Bärnighausen demonstrated that even though the density of doctors in low-income countries did not seem to correlate with higher rates of measles, polio, and DTP3 vaccinations, the density of nurses, far cheaper to train, strongly correlated.<sup>30</sup>

USAID and other U.S. aid agencies, NGOs, and development organizations are currently fighting the good fight to bend the poverty, health, and security curves of many low-income countries in a direction of significant and sustainable improvement. Yet we live in a world where governmental expenditures of all kinds, not just foreign aid, should be justified. Some of the readily identifiable justifications for foreign aid expenditures designed to increase health care capacity are the benefits to productivity and country stability that can be gained by decreasing infant mortality rates in communities highly dependent upon manual labor. The spillover effects that skilled labor can have on education and training throughout low-income societies from which human capital often migrates; and the aggregate benefit to the global market obtained from improving the consumptive capacity of low-income countries currently unable to self-invest to a level sufficient enough to optimize their growth. Any of these effects could yield the types of national security interest benefits mentioned in the 2002 NSS by the Bush Administration and announced as a strategic imperative of the Obama administration.

The continued emigration of healthcare workers trained in developing countries to European and Western economies is a valid argument to consider when debating the potential effects of U.S. policies designed to invest public funds into the training of higher skilled health care labor in developing countries. Working with foreign governments and training organizations to produce incentives for their workers to serve in their home countries and achieve training specific to the needs of their rural populations could be a strategy that might mitigate the negative externalities in terms of migration that could result from foreign aid.

But finding the right balance and composition of foreign aid to grow markets abroad, is extremely important, especially given the issues at hand: health, stability, economic development, and U.S. national security interests. With so much at stake, the U.S. government should use every tool at its disposal to accomplish this monumental task, including the tool of enhancing non-physician clinician and other skilled health worker training programs in developing countries. In an era where it costs approximately seven-hundred thousand dollars per year, per U.S. service member serving in Iraq<sup>31</sup> or Afghanistan—about as much as it would cost to fully fund three years of surgical training for thirty-six assistant medical officers in Mozambique—as we crash up against our \$14.3 trillion debt ceiling—a thorough cost-benefit analysis of what may or may not serve our long term security and economic interests, and the old markets we should leave behind and the new markets we should enter should be thoroughly, vigorously, and publicly debated.

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<sup>1</sup> *National Security Strategy for the United States* (Washington, D.C.: The White House, 2002).

<sup>2</sup> White House, *National Security Strategy*, 22.

<sup>3</sup> Barack Obama, "Renewing American Leadership," *Foreign Affairs* 86, no. 4 (2008): 2-16.

<sup>4</sup> USAID South Africa webpage, "U.S. President's Emergency Plan for AIDS Relief (PEPFAR)." Available at: [http://sa.usaid.gov/south\\_africa/content/us-presidents-emergency-plan-aids-relief-pepfar](http://sa.usaid.gov/south_africa/content/us-presidents-emergency-plan-aids-relief-pepfar).

<sup>5</sup> Hillary Clinton and Rijiv Shah, "Leading through Civilian Power," (remarks, USAID Town Hall Meeting, Ronald Regan Building, Washington, D.C., December 17, 2010). Available at: <http://www.usaid.gov/press/speeches/2010/sp101217.html>.

<sup>6</sup> White House, *National Security Strategy*, 22.

<sup>7</sup> Ibid.

<sup>8</sup> PEPFAR 2009-2013 Appropriations Bill, referred to as the Tom Lantos and Henry J. Hyde United States Global Leadership Against HIV/AIDS, Tuberculosis, and Malaria Reauthorization Act, H.R. 5501, 110<sup>th</sup> Cong. (2008). Available at <http://www.pepfar.gov/documents/organization/108294.pdf>.

<sup>9</sup> Millennium Challenge Corporation (MCC) website. Available at: <http://www.mcc.gov/>

<sup>10</sup> Pinstrip-Andersen, Per and Satoru Shimokawa, "Do poverty and poor health and nutrition increase the risk of armed conflict onset?" *Food Policy* 33 (2008): 513-520.

<sup>11</sup> Paul Collier, *The Bottom Billion* (New York: Oxford University Press, 2007).

<sup>12</sup> USAID Implementation of the Global Health Initiative: Consultation Document. Available at: [http://www.usaid.gov/our\\_work/global\\_health/home/Publications/docs/ghi\\_consultation\\_document.pdf](http://www.usaid.gov/our_work/global_health/home/Publications/docs/ghi_consultation_document.pdf).

<sup>13</sup> USAID Pakistan news release webpage. Available at: <http://www.usaid.gov/pk/newsroom/news/health/110117.html>. See also USAID Global Health Family Planning webpage. Available at: [http://www.usaid.gov/our\\_work/global\\_health/pop/news/mdg\\_summit5.html](http://www.usaid.gov/our_work/global_health/pop/news/mdg_summit5.html).

<sup>14</sup> USAID Implementation of the Global Health Initiative: Consultation Document. Available at: [http://www.usaid.gov/our\\_work/global\\_health/home/Publications/docs/ghi\\_consultation\\_document.pdf](http://www.usaid.gov/our_work/global_health/home/Publications/docs/ghi_consultation_document.pdf).

<sup>15</sup> Fitzhugh Mullan and Seble Frehywot, "Non-physician clinicians in 47 sub-Saharan African countries," *The Lancet* 370 (2007): 2158-2163.

<sup>16</sup> Ibid, 2159.

<sup>17</sup> Stella C. E. Anyangwe and Chipayeni Mtonga, "Inequities in the Global Health Workforce: The Greatest Impediment to Health in Sub-Saharan Africa," *Int. J. Environ. Res. Public Health* 4, no. 2 (2007): 93-100.

<sup>18</sup> Torsten J Wilhelm, Innocent K Thawe, Biswick Mwatibu, Henning Mothes, and Stefan Post, "Efficacy of major general surgery performed by non-physician clinicians at a central hospital in Malawi," *Tropical Doctor* 41 (2011): 71-75.

<sup>19</sup> Ibid, 72.

<sup>20</sup> Margaret Kruk, C. Pereira, F. Vaz, S. Bergsrom, and S. Galea, "Economic evaluation of surgically trained assistant medical officers in performing major obstetric surgery in Mozambique," *BJOG* 114 (2007): 1253-1260.

<sup>21</sup> Ibid, 1257.

<sup>22</sup> Sennen H. Hounton, David Newlands, Nicolas Meda, and Vincent De Brouwere. "A cost-effectiveness study of caesarean-section deliveries by clinical officers, general practitioners and obstetricians in Burkina Faso." *Human Resources for Health* 7 (2009): 34-46.

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<sup>23</sup> Ibid, 35.

<sup>24</sup> United States Agency for International Development (USAID) Education & Universities webpage, accessed February 18, 2011, [http://www.usaid.gov/our\\_work/cross\\_cutting\\_programs/](http://www.usaid.gov/our_work/cross_cutting_programs/).

<sup>25</sup> Mullan, 2160.

<sup>26</sup> Ibid.

<sup>27</sup> African Medical Research and Education Fund. Available at: <http://www.amref.org/who-we-are/>.

<sup>28</sup> Hounton, *A cost-effectiveness study*, 34.

<sup>29</sup> Kruk, *Economic evaluation*, 1257-1259.

<sup>30</sup> Sudhir Anand and Till Bärnighausen, "Health workers and vaccination coverage in developing countries: an econometric analysis," *The Lancet* 369 (2007): 1277-1285.

<sup>31</sup> Amy Belasco, *The Cost of Iraq, Afghanistan and other Global War on Terror Operations since 9/11* (Washington, DC: Congressional Research Service, September 2, 2010): 18