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And Why So Great a “No?”

The Donor and Academic Communities’ Failure to Confront Global Chronic Disease



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ABSTRACT

Chronic diseases are the dominant issues for global public health in terms of mortality, morbidity, and cost, and they have been identified as such for >40 years. Despite their predominance, however, these diseases—cardiovascular disease (CVD), diabetes, cancer, pulmonary disease, mental health, and dementia—attract little attention in the public health curriculum and even less from the funding community. We explore the rationales that have perpetuated this inability or unwillingness to match need with effort. We examine 3 concepts that impede changing this relationship: 1) the traditional contextual view of public health that emerged, to be sure with great success, in the post—World War II era; 2) the failure of public health to transition to economic development as the goal of health assistance; and 3) the unwillingness of public health to confront social, political, and economic policies as the foci of upstream drivers of the public’s health. We conclude with a discussion of the need for public health to expand its horizon and tear down the walls of the silos that inhibit the emergence of relevant global public health.

Structured, organized, government-sponsored global assistance for health began following the end of World War II. In this nearly antibiotic-free era and uncluttered arena, during which much of the world was either devastated or impoverished, infectious diseases and maternal and child health problems, including high fertility rates, were the obvious and obligatory foci of attention. Modern global health assistance was founded on humanitarianism, and this received a boost as part of the post-World War II global order.

Between 1945 and 1980, 20 schools of public health were founded in the United States, and these problems dominated their curricula and their research agendas. The problems of the post-war era have not gone away. In fact, new infectious diseases, often zoonoses, emerge regularly, with severe acute respiratory syndrome, Middle East respiratory syndrome, Ebola, and Zika being the most recent examples. In the 1980s, human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) exploded globally and was seen as the scourge of the century, if not the millennium.

New emerging diseases, the need for vaccination programs stimulated by the example of the elimination of smallpox, and HIV/AIDS gave firm support to efforts that perpetuated the post-war priorities. Government global health assistance, international organization programs, and private philanthropic contributions flowed to the post-war problems, and grant-dependent schools of public health followed suit.

Recognition of the move from infectious diseases and maternal and child health dominance to degenerative or

chronic, noninfectious diseases (CDs) is often dated in the United States to 1971, when Omran published his groundbreaking paper [1] describing this epidemiological transition. Since Omran, the global ascent of CDs has been documented in several studies. These include the GBD (Global Burden of Disease) Study 1996 [2], the INTERHEART study in 2004 [3], *A Race Against Time* in 2004 [4] and 2014 [5], the GBD again in 2010 [6], and the leadership of the *Lancet’s* conference and special publications on CDs and their control over the past 15 years.

However, this recognition that the health patterns around the world had changed did not alter the behavior of either the donor or academic communities, especially in the United States. The effect of 40 years of knowledge of the epidemiological transition has yet to be felt in any significant way, either in the grant-making process of public or philanthropic funders or in the halls of academia. Meanwhile, the stakes continue to rise.

Global economic development has progressed. Lower-income countries now constitute only 12% of all nations, whereas as late as 1990 it had been 58% [7]. Purchasing power and consumer choice have exploded, and a global middle class is emerging through Asia and Latin America and across southern Africa. Coupled with urbanization, these forces have led to a fall in fertility, a transformative makeover of the workforce with women leading the way, and the urban diet and life-style globally taking on more and more of a Western pattern. Compounding these changes, technological transformations in trade, communication, connectivity, and information availability have altered virtually everything from expectations and aspirations to

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physical activity, food availability, and smoking patterns. Hence, what was news in 1971 is common knowledge in 2016—the dominance of global CD.

Even as economics and demography alter the future of disease patterns, searching for funds to power relevant public health programs or departments in which to house the research needed to underpin such initiatives is a daunting, often impossible, task.

Our aim in this paper is to examine why that is so and what might be done about it. By and large, CDs—CVD, diabetes mellitus (DM) (especially type 2), lung disease, kidney disease, cancer, arthritis, and more recently, dementia and mental health—have been ignored by both the donors and the academic enterprise. In the United States, ignored is the correct word. CD gets somewhere between 1% and 3% of donor support [8], and these diseases are all but absent from the curriculum in the leading schools of public health in the United States [9]. Progress in schools of public health has been made elsewhere, notably the United Kingdom, Australia, New Zealand, Canada, and parts of Europe, India, and China. In the United Kingdom, the Center for Global Non-communicable Diseases at the London School of Health and Tropical Medicine has begun to influence the academic curriculum. But, the United States lags. Some of the newer schools of public health, particularly those that began as global health programs, have begun to emphasize CDs, and 1 program does merit mention. The Fogarty-United Health Care Centers of Excellence have begun to reap the benefits of their efforts and are producing qualified and competent professionals in centers around the world [10]. Hopefully, this will become an infectious process!

PRESSURES IMPEDING CHANGE

The continuing perception of the traditional disease context goes far in explaining why CDs are poorly represented in the global public health portfolio, whether denominated in terms of money or academic attention. In addition, 2 other forces join this to lock U.S. public health resources and institutions into outdated patterns: the failure to acknowledge the importance of economic development as a proper goal of health assistance, and the complexity of societal influences involved in the emergence of CDs. The latter 2 represent sets of disruptive realities.

The traditional context

First, as stated, the problems of 50 years ago have not gone away. Despite dramatic reductions globally over the past 30 years, infant, child, and maternal mortality remain high, often inside countries that are no longer poor, which supports the opinion that traditional communicable diseases should remain the global priority. In this context, the aperture of the public health lens remains narrow.

Contemporary global public health is a victim of its own success; over the past 50 years the donor community has educated a workforce attuned to the traditional

context. Any country serious about engaging in health initiatives aimed at women and children either has its own or can find a workforce and financial support. But, the existence of focused capacity and the potential for adequate money for 1 set of traditional problems is insufficient to constitute contemporary, relevant global public health.

Second, the perception is that CDs are the domain of the elderly or the result of voluntary life-style choices. This is wrong in both respects. Much of the burden of CDs in developing economies accrues from premature mortality and morbidity in productive middle age. It is the aging (not the aged elderly but the aging workforce) population of the developing world that is driving the CD trend. Additionally, the evolution of environments heavy with risk factors—diet, alcohol, physical inactivity, and tobacco, to name 4—is not under the control of individual citizens.

Third, the traditional context welcomes biomedical solutions; its goal is eradication through treatment. Indeed, both private and public funders focus their investments on measurable immediate solutions and not on funding the amelioration of socially or politically constructed long-term barriers to health.

This approach sees health impairment as a biomedical problem that can be solved or treated swiftly. Although this may be true for some (by no means all) infectious disease, disparities in CD incidence and prevalence have social and political drivers that require long-term structural action in the nonhealth realms of environment and commerce [11].

For CDs, management interventions are complex, requiring sustained efforts over years with hard-to-measure short-term goals, almost none of which occur within the confines of a grant agreement or electoral cycle. Asymptomatic CDs (CVD, hypertension, DM, obesity, and early cancer), even in highly developed economies, are difficult to prevent or manage to a large extent because they are asymptomatic and embedded in complex social matrices; progress is slow, complex, and expensive.

Fourth, the traditional context is one of interdependent international vulnerability to threats, and hence creates a motivation to prevent the spread of contagious disease among people. Urgency derives from the speed of contagion. CDs are not contagious, and they progress slowly. They are not seen as a threat similar to HIV/AIDS, tuberculosis, malaria, and the new or old (influenza) viruses. Yes, hepatitis C, human papilloma virus, and other chronic, long-term ailments are infectious, but this reality has not done much to expand the perception of the importance of CDs.

Economic development as a public health outcome

Public health must maintain its humanitarian focus and needs to sustain its mandate as the steward for the public health commons. This remains a vibrant and essential component of assistance, and it should remain so. However, public health is much more than that. The dominant goal now needs to be

economic development tempered by environmental sustainability and leavened by social justice. As we argued in *A Race Against Time* [4], the emergence of CDs in increasingly wealthy emerging economies, with standard risk factors ascendant, will lead to stark economic outcomes.

Untreated hypertension, obesity-driven DM, increased tobacco and alcohol consumption, and less physical activity in more urbanized environments with more pollution conspire to create a modern epidemic of mortality and morbidity from diseases such as stroke, heart disease, lung disease, and cancer. The afflictions of expressed disease will not only threaten the fiscal integrity of health budgets, but will also shorten productive work careers and even compromise child rearing. The economic and social effects will be reminiscent of Finland in the 1960s or Russia in the 1990s, but likely will be more severe and afflict even younger patients [12].

This failure to break out of a constricted traditional view of public health is the second impediment to clarity of vision and action about CDs. The need for fresh public health engagement with contemporary public health problems requires a change in how public health is defined, practiced, and taught. A new diagnostic process is required, whereby the origins of CDs are recognized as being way upstream.

For effective education of those interested in promoting the public's health in the future, the definitional aperture of public health must open, although such a change is often painful in academic settings. This will enable economic, financial, and behavioral analysis and expertise found not in departments (or ministries) of public health, but in such disciplines as finance, economics, and social sciences to be brought to bear on public health problems.

Academic public health has not torn down the walls between public health as an academic school and all of the other skills and professions that are needed to address CD prevention. Public health needs to break the silos of academia and cross pollinate students with inputs from economics, business, trade, anthropology, communications, and other academic pursuits that impinge on public health. Understanding these relationships will become an essential attribute of a future successful public health student and practitioner.

Then, when the contribution of many sciences beyond the traditional academy of public health is recognized, public health will recover competence and potency.

Complexity of external influences

The new public health agenda is radically different from the old. For most CDs, the development of an effective public response necessitates that public health be seen as only 1 of the necessary seats at the tables of policy, finance, or leadership.

For public health to have an impact on relevant public policies, it must play a proactive role in their formulation.

It has spent too long being insular, reactive, and hence, ineffective. Reacting to established policy leads to irrelevance. In the case of CDs, there are health effects of nearly all public policies, and the most effective way for those to reflect what best serves the health of the public is for public health to engage in their design and formulation.

Attempting to convince the public that 20-ounce sugary drinks are not healthy is less effective than arguing against the subsidy for corn that makes the sweetener nearly cost-free. Putting post-marketing restrictions on processed foods with a long shelf life lacks the long-term potency of conducting the research and analysis of trade agreements. Insights derived from this research may indicate what might be done to influence cross-border trade and investment in both food production and provision so as to foster better health [13]. To be even more effective, those interested in CD control might well lobby for a Deputy U.S. Trade Representative to come from public health and to have a budget that ensures input at every step in the multiyear process. That would mean finding a public health candidate who knows the world of trade negotiation and both economic policy and private industrial investment. This is, of course, unlikely unless public health creates interdisciplinary capacity to produce such leaders. With that larger view, public health should or could exert influence at the level of policy formulation in a vast array of CD-relevant areas such as drug policy and generic categorization, tobacco and e-cigarette regulation, workforce capacity issues, and nutritional content of foods. And, of course, public health also needs to lobby for funding of CDs.

Just as policy complexity has impeded traditional public health's embrace of CDs, so has financing complexity.

On the one hand, as we have noted earlier, neither the global institutional organizations nor the private or nonprofit donor communities invest much in CD interventions, at any level. There is little support for health care delivery or prevention, workforce training, capacity building, or education in relation to chronic illness. Even following the United Nations High Level Meeting on Prevention and Control of Non-Communicable Diseases in 2011, there was little if any funding movement [8].

But, the financing complexity reaches beyond that of public or donor resources. The organizations with a stake in the problem—employers of all sorts, including governments, insurers, and the financial institutions that invest in them—are all far, far outside of the normal orbit of public health. Few public health professionals have a major employer on their speed dial.

Yet, the financial incentives for these funding sources to become involved are real; one has only to witness the number of employers in the United States who have initiated “wellness” programs for their employees, driven by the exploding expense of employer-based health insurance. Their investment in downstream efforts to prevent CDs is impressive, although apparently ineffective save for

select CD management programs [14]. Perhaps consultations from public health, behavioral psychology, and communications technology could have devised more effective strategies.

Employers, unions, universities, governments, and civil society organizations would do better to embrace a relationship with public health expertise, providing the public health professionals themselves possess the skills and attitudes for effective collaboration and understanding, and can communicate, the importance of action upstream [15]. Helping to build these coalitions, therefore, must be part of public health education.

Academic public health will need to develop sophisticated collaborative relationships with the private sector. Ongoing estrangement will impede progress; there is common ground to find, and finding it will become essential to advance the CD agenda. In recognizing and confronting the CD problem, the private sector has established a willingness for upstream policy engagement. For the private sector, productivity and political accommodation will be the long-term gains; for public health, private sector policies that establish access to large population groups, including young parents, offer the potential for downstream translation to individual health improvement, whether it be user-friendly stairwells, ergonomically sound work stations, or exercise programs. The global public health efforts of the United States and the European Union will need to build bridges to various ministries, industries, and academics to develop these strategies and coalitions.

Finally, the financial complexity of CDs is also bound up in the complexity of time. These are decadal, if not generational, problems that will require long-term, consistent, predictable, and actionable financing. In an age of instant gratification, that is, short-term grants, such support is hard to find, and at the very least will be dependent upon broad, comprehensive, detailed, and fiscally responsible arguments.

Leadership is equally complex, and that complexity also impedes action. Obviously, public health leadership is needed.

There are plenty of leaders—at least, thought leaders. The GBD 2010 group [6] is large and has cataloged the CD and risk factor problems superbly. The *Lancet* commissions and series such as those on GBD 2010 [6], vital statistics [16], obesity [17], and physical exercise [18] are likewise built on distinguished scholarship.

But, thought leadership is different from that which leads to action, different from “boots on the ground,” and different from a CD “moon landing.” The required leadership extends to defining and understanding the problems and then developing and advocating for practical, workable changes in policy. Indeed, success in many instances begins not with academic public health, but with civil society organizations that rally people to the cause of health gain by environmental change [19].

In addition to the employer and union leadership mentioned previously, educational associations and

leadership groups can become advocates for policy initiatives that can influence changes in youth behavior. Disease-specific advocacy groups are already powerful, but are often too far downstream to be broadly effective. Using a CD, population-focused lens, public health efforts can be refocused toward upstream policies that can lead to effective change around the entire spectrum of risk behaviors. The growing power of women’s advocacy groups can be harnessed for necessary societal change that can reduce the incidence of noncommunicable diseases. The list of civil society allies is long.

Again, public health must be in the role of aggregator and organizer of leadership, and the skills to do so would need to be as much a part of the public health curriculum as disease analysis. Failing to master this complexity impedes the ability to take on CDs.

WHAT PUBLIC HEALTH SHOULD DO: TEAR DOWN THESE WALLS

We have painted a picture of inertia. An expanding, recognized problem looms, and public health and its donors avert their eyes. Clearly, such complexity of intersecting pressures cannot be addressed in totality by public health. Neither are those pressures all amenable to changes in schools of public health. Yet, there are places to begin. We suggest 3 courses of action for public health to consider.

First, public health needs to shift to an economic development argument for its major interventions. The depth and breadth of the HIV/AIDS epidemic certainly brought this concept into view, and it now needs to be put forth as a core argument for all public health intervention. Going forward, once a health system attempts to be comprehensive in scope and work toward universal health coverage, it becomes very expensive, even when highly efficient [20]. Such costs should trigger an enhanced interest in CD prevention. To be relevant, public health needs to be there.

Focusing on development requires partnerships with business schools, communications schools, schools of anthropology, and all manner of management and social science academic disciplines. True partnership is difficult and painful in academic settings, where stature is conveyed by the depth of singular expertise. It is perhaps suicidal when funds are distributed on the basis of that singular expertise. Tearing down internal academic walls will take public health leadership. Leadership is always associated with risk and peril; risk is built into the definition of leadership, because true leaders look around corners. You cannot look around a corner safely or from the back of a crowd. Public health needs to look around the corner of global development and take the necessary leadership risks.

Second, in parallel with leadership within academia, public health must also tear down organizational walls. Public health becomes a coalition builder among institutions that hold the various keys to the many locks on CD’s door: business, finance, advocacy, and the like. Public health can

enhance the strength and clarity of its voice by carefully building coalitions. It is easy for public policy to ignore a single voice, especially when it is the voice of a technical expert who has not participated in the economic discussions. It is harder to ignore a critical mass of voices, especially when they represent both powerful institutions such as business and powerful social forces such as women.

Finally, public health must tear down the walls between nations. There are no donors with a solution and no recipients with a problem when it comes to CDs. All nations face the same environmental determinants, the same risk behaviors, the same costs, and the same consequences. When it comes to CDs, public health is a global profession of peers in search of effectiveness, not a class system of knowledgeable donors and needy recipients.

Tearing down these walls—consigning academic isolation, institutional solitude, and the donor-recipient relationship to the dustbins of global health history—will be the biggest contribution public health can contribute to the global future for whatever unknown problems lie ahead.

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