Strategies to support non-communicable disease interventions

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Abstract: In spite of being the leading cause of death in the world, non-communicable diseases (NCDs) like cardiovascular diseases, diabetes, cancers and chronic respiratory diseases receive a small share of global health funding. Developing nations, with fledgling health systems reliant on external funding, are ill-equipped to face the rapid onslaught of NCDs alongside communicable diseases like HIV, Malaria and Tuberculosis. Innovative, practical and sustainable solutions that encompass policy, organisational, technological and business-oriented interventions are needed to address current inefficiencies and tackle the growing incidence of NCDs. This article examines the current support for NCD prevention and treatment programs in low and middle income countries, and profiles strategies to employ in the fight against NCDs. With supporting data from third-party health sector reports, international health metrics tracking, government and organisation reports, journal articles, news articles and first-hand experiences; this article examines the conventional models of support and benefits of private sector solutions.

Keywords: non-communicable disease; NCD; health system development; developing nations; sustainable solutions.

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1 Introduction

HIV prevention and treatment programs garnered $16.8 billion dollars in 2011 (UNAIDS, 2012). Logically, the health sector should spend the most money on the largest cause of mortality; however HIV is not the largest cause of mortality. There exists a greater threat to worldwide health receiving a smaller portion of financial support (WHO, 2013b). Such a high proportion of health expenditure focused on a single disease begs the question, how are needs assessed? Where are funds truly needed? What other forms of support can be used to fill the gaps? The disparity between disease prevalence and funding allocation shows that disconnect exists between needs of the people and goals of the fund distributors.

As an example of misguided health distribution, malaria medications were equitably distributed as a kit to each district in Kenya. The reasoning behind the equitable appropriation is that incomplete and inaccurate data makes targeted medication supply difficult; however, this strategy creates large inefficiencies. In Kenya, malaria drug disbursement has been reformed, but a similar strategy of distribution can be seen in health funding on a global scale.

According to the World Health Organization (WHO), non-communicable diseases (NCDs) are the leading causes of death in the world (WHO, 2013a). The growing prevalence of NCDs is disproportionately detrimental to the health and economy of low- and middle-income countries (LMICs), where 80% of NCD deaths occur (WHO, 2013a). NCDs, including cardiovascular diseases, diabetes, cancers and chronic respiratory diseases, are spurred by aging, urbanisation and globalisation (Bloom et al., 2011). NCDs have shared risk factors including: unhealthy diet, physical inactivity, excessive alcohol consumption and smoking (WHO, 2013a). Additionally, individual susceptibility to NCDs can be tracked using common health metrics such as body mass index, blood pressure, and blood sugar (WHO, 2013a).

80% of heart disease, stroke and type 2 diabetes can be prevented, leading to improved health and economic development (WHO, 2005). Due to the size and prevalence of NCDs, even a 10% reduction in heart disease and stroke would save an estimated $25 billion per year in LMICs (Smith et al., 2012). In order to prevent and treat NCDs in an effective manner, local public health initiatives will have to modify nutrition recommendations, encourage physical activity, and promote primary care services requiring significant temporal and financial commitments from all stakeholders (Hossain et al., 2007). Countries wishing to reduce NCDs need to promote preventive primary care services as well as environmental, policy, and behavioural adaptations (Narayan et al., 2010). Ultimately though, all recommendations are only implemented with ample resources, which is a stipulation not found in the fight against NCDs. Because of this lack of resources, entrepreneurs have the distinct opportunity to fill the gap left from insufficient government and volunteer health services. Through the utilisation implementation of the tenants of social entrepreneurship, businesses may provide health prevention and management services for a small cost to patients. Innovative strategies are required from business-minded entrepreneurs, who understand the social and economic value of treating NCDs.

Due to their increasing prevalence, detrimental economic impact, and an overall lack of funding, NCDs pose a growing threat to worldwide health. Moreover, developing nations, with underfunded health systems reliant on external funding, are more susceptible to NCDs, and require innovative service and funding strategies to create an impact. With supporting data for the article comes from third-party health sector reports, international health metrics tracking, government reports and journal articles, this article outlines the threat of NCDs and analyses the potential strategies to fill current funding gaps to provide NCD services.

2 Supporting NCD initiatives

Without large international funds or awareness efforts that exist for other health causes, NCD programming will need to come from a variety of sources (AVERT, 2013). This section identifies four methods to support or provide NCD services including: enhancing government support, creating donor funds, adjusting operational health initiatives and developing private sector business-oriented initiatives.

2.1 Government action through effective policy-making

Governments have significant influence over the health sector of the country by creating and implementing large free health programs, focusing health efforts through awareness campaigns, and passing legislation to emphasise certain services or control health practices. In most global health metrics, NCDs are an indicator of the functionality of a health system (Samb et al., 2010). Effective NCD programs require well-functioning health sector, with widespread screening, diagnostic, and management services.

In an effort to confront relevant health threats, the Kenyan government adjusted the focus of the health sector with the most recent reformation of the Ministry of Health (Luoma et al., 2010). One of the six objectives of Kenya's Health Policy 2012–2030 is to "halt and reverse the rising burden of NCDs", displaying the future commitment to support NCD programming (*Kenya Health Policy 2012–2030*, 2012). The flagship

project to emphasise promotive health with a community strategy includes further training of Community Health Workers (CHWs) and Community Health Extension Workers (CHEWs) (*Kenya Health Policy 2012–2030*, 2012). This declaration shows support for preventive medicine, although dedicated follow-through is required to create impact.

2.2 Creating a new NCD organisation

One of the more challenging, but still viable, solutions to combat NCDs involves creating awareness or fundraising organisations. Creating and implementing a large scale NCD organisation would entail designing a strategy, raising funds, finding workers, and implementing the activities while maintaining donations according to budget. Examples of NCD organisations include: The Oxford Health Alliance, International Diabetes Federation and The NCD Alliance.

The NCD Alliance was created in 2010 as an effort to raise awareness for NCD prevention and treatment (Baker and Lettieri, 2013). The organisation is a collaboration of over 2,000 civil society organisations in 170 countries, creating an international fight against NCDs through cooperation (Baker and Lettieri, 2013). By supporting expert working groups, informing governments, producing research and policy documents, and mobilising organisations, the NCD Alliance is moulding the response to chronic diseases worldwide (Baker and Lettieri, 2013). In order to fund activities, NCD organisations often follow a method similar to the NCD Alliance, which receives support from government, corporate, or private donors (The NCD Alliance, 2013).

2.3 Leveraging HIV funding

While HIV and NCD programs are commonly seen as opposing causes fighting for scarce public health resources, they share many common strategies that allow these conditions to be confronted in parallel rather than at odds. A lesser-known opportunity to confront NCDs involves utilising well-funded and recently expanded HIV initiatives. A recent push by UNAIDS, including several pilot studies in LMICs, has created the realisation that HIV programs can be leveraged for NCD services (UNAIDS, 2011). The simple screening and disease management requirements of both HIV and NCDs emphasise a simple combination of services to shared programs. The most well-documented integration arrangements are elucidated below including: integrated screening, integrated treatment and integrated awareness or education efforts.

2.3.1 Integrated screening

Since there is a greater risk for developing NCDs while a patient has HIV, integrating screening programs could be an important strategy for both HIV and NCD initiatives (Wand et al., 2007). In Uganda, an integrated community-based screening campaign discovered a high prevalence of undiagnosed HIV, diabetes and hypertension (UCSF, 2012). The pilot's success demonstrated the efficacy of combining NCD testing into HIV initiatives (UCSF, 2012).

One of the most well-known programmatic changes in an HIV initiative in Kenya is the alteration from APHIA to APHIAplus, instituted in 2011 (APHIAplus Kamili, 2012). Under the new format, reproductive health, family planning, maternal and child health are included with HIV services (APHIAplus Kamili, 2012). Through the integrated sites, APHIAplus achieved 98% testing coverage for pregnant mothers and 96% coverage for HIV-exposed infants (APHIAplus Kamili, 2012). This reorganisation has shown the effectiveness of utilising HIV programming to combat other widespread diseases.

2.3.2 Integrated treatment

HIV and NCDs both require long-term medical care, drug adherence, routine check-ups, and simple screening in order to reduce complications and hospitalisations (Stevens, 2011). The care for both HIV and NCDs is adequately provided in primary care facilities, which allows a single office to provide both HIV and NCD treatment for a low cost and a shared staff (Stevens, 2011). Strengthening the staff relations and culture of chronic care for HIV and NCDs provides better delivery of services, reduces stigma surrounding HIV clinics and creates a more comprehensive and cost-effective health system (Stevens, 2011).

An example in Kenya further shows the effectiveness of this strategy. In a pilot study developed through the Family Health Initiative and UNAIDS, comprehensive NCD services were integrated into five HIV care centres (Lamptey and Dirks, 2012). The results showed that health providers and patients appreciated the relationship between HIV and NCDs and supported the integration of care (Lamptey and Dirks, 2012). More comprehensive treatment was provided to patients receiving care for NCDs and HIV at the same place with some of the same workers (Lamptey and Dirks, 2012).

2.3.3 Integrated awareness/education

Another tactic is utilising common resources to administer joint education campaigns (Smart, 2011). Through integrated awareness efforts, at-risk populations learn about NCDs, where to receive treatment and education on lifestyle modifications (Smart, 2011). An example of large-scale integration came in September 2011, when $85 million dollars of PEPFAR funding was allocated over five years for the Pink Ribbon Red Ribbon initiative (PRRR) (Pink Ribbon Red Ribbon, 2013). PRRR utilised these deregulated funds to provide cancer screening and educational services in African and Latin American countries (Pink Ribbon Red Ribbon, 2013).

The most direct form of circumventing global health funds is diverting funds from one cause, such as the most abundant health cause-HIV, directly to other health causes. There is some potential for providing or expanding NCD services with HIV funds, without breaking requirements, through ‘health system strengthening’ (Druce and Dickinson, 2008). This stipulation allows local primary care clinics to be created and maintained through HIV funds, with the clinics providing prevention and management for both HIV and NCDs.

2.4 Private sector solutions

The solutions outlined above are mainly organised on a national or international scale, but solutions can also be created on a local level. These solutions typically develop from local leaders implementing a program within their community to meet a health-need. Privately developed approaches can include volunteer organisations that provide services to community members free of charge, or business enterprises that provide similar services for a fee.

2.4.1 Volunteer approaches

Volunteer organisations rely on the generosity of the participants to maintain activities and have a not-for-profit focus. They may or may not have paid management staff, funded through charity, but activities are conducted by unpaid volunteers. Volunteer-based approaches involve the cooperation of community members; this provides a community-wide investment in the activities of the organisation.

2.4.2 Business-oriented approaches

Potential solutions developed within the local community can utilise a business-oriented approach. Many of the screening and management requirements of NCDs can be task-shifted from a doctor to a nurse, or specially trained community member. An example within Kenya is Mashavu: Networked Health Solutions which trains CHWs to provide customers with basic health metrics (Mashavu Networked Health Solutions, 2013). The Mashavu Health Workers charge a small fee to the customer, and pay a monthly subscription charge to Mashavu to sustain operations (Holmes et al., 2014). Mashavu simultaneously provides relevant health metrics to community members and employment to CHWs (Holmes et al., 2014). With a successful business model, profit earned can be re-invested to enhance services or expand coverage to a wider population.

3 Discussion of approaches

Government action is required to direct the entire health system of a country, create a comprehensive primary care system and provide readily accessible NCD services. Nonetheless, government action can be slow, and has the potential to be bogged down or halted by dispute. Additionally, government funding is consistently strained and provides a complete set of health services without fixating on a single cause. Overall, policy-making can develop an important foundation of NCD services through primary care facilities, but may not provide dynamic support.

NCD organisations have the benefit of freedom from debate and focused support as soon as funding is available. The downside includes the obligation to consistently secure donations and reorganise funding to ensure long-term benefactors.

By leveraging existing global health funds, NCD services can be provided at a lower cost. Additionally, integrated care can more efficiently organise staff and provide services for people with a risk of co-morbidity. HIV resources may not be used to directly fund NCD services, but may be utilised to integrate NCD services into campaigns or facilities.

Some of the added benefits of private sector solutions are sustainability, economic growth, and health system advancement. With the use of private-business solutions, long-term programming requires sound management-strategy rather than committed donors. Furthermore, developing countries are emerging markets, but access is the largest hurdle for foreign companies (Investments, 2013). Well-designed solutions simultaneously provide businesses with access to previously unavailable markets and communities with health services or commodities which would be unaffordable or unreachable otherwise. Practical strategies can be a win-win for all stakeholders, and are concurrently looked at favourably by governments who may not have the resources to bolster health access in a similar manner.

Economic growth from private-business health solutions emerges from the creation of new employment opportunities. Through private-sector business approaches, providing basic health services can be task-shifted so community members gain regular access to services, and local economic output increases from new employment opportunities and improved productivity. An example of this model comes from India. The Aravind System provides most services to the poor, but utilises volume and efficiency to ensure viability (Pahls et al., 2010). Through a simplified, specialised and replicable process, patients of an Aravind Eye Hospital receive quality procedures at affordable prices (Pahls et al., 2010).

Due to the simple screening and treatment procedures, multiple economic opportunities exist for private companies in the realm of NCDs. Prevention efforts involve screening and lifestyle counselling. Treatment for many NCDs includes drug adherence and behaviour alterations. Entrepreneurs can provide these routine services to community members at an affordable price through effective evidence-based programming.

A significant hurdle to any business, whether locally or externally developed, is gaining community acceptance. Nonetheless, this difficulty is remedied through either the approval of local leaders or the implementation by a community member. These solutions emphasise the significance of local officials for any healthcare solution no matter the mode of funding. Through local entrepreneurial inception, a long-term solution can be created as a win-win for the community, government and economy.

4 Conclusions

For the last 20 years, HIV has dominated the global health scene. Because of the infrastructure which stemmed from the influx of health donations, new NCD treatment and management opportunities can be created today with less initial capital. Additionally, better data collection health funds can be used to address relevant health needs on a more efficient and local basis (Shovlin et al., 2013).

Because government funding for preventive and primary care services is unreliable, communities must find ways to utilise limited resources to provide efficient healthcare services. Strategies can be global; however effective solutions need to be tailored to communities through dedicated local support. In order to confront the detrimental impact of NCDs as globalisation further radiates the epidemic to low-income environments, strategic coordination between governments, NGOs and local initiatives is required with a unified emphasis on sustainability. Health funding does not have to involve setting one

disease effort against another; rather there is a necessity of strategically adapting existing resources within a system to confront relevant threats.

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