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Executive Summary

Public health practice in a community collects data on a community's health and shares it with policy makers from multiple sectors. This is the foundation for the effective delivery of sickness care, preventive care, and health promotion at a population level. A potential workforce of district health officials needs to be re-oriented and supported in the skills required to practice public health. Both pre-service and in-service approaches are needed.

Public health approaches combine top down campaigns and bottom up efforts in organizing the efforts of society to create the conditions for health. These collaborative efforts in social organization cross multiple sectors and make strengthening public health practice one of the best ways to pursue all 17 of the Sustainable Development Goals. Furthermore, the concept of Universal Health Coverage includes coverage with effective public health practice.

District public health staff who ought to be carrying out public health practice are present in most communities. The remaining agenda is to improve the quality and effectiveness of these district level health sector leaders in carrying out public health. Improving public health practice can be carried out for just pennies per person per year. Having countries decide on the essential public health functions for its local health officers is the first step to developing measurements that can be used to help coach the workforce in supportive supervision. National governments can staff a performance improvement unit to carry out regular efforts to collect measurements and share them with front line workers to develop and carry out plans for improvement. These quality improvement efforts are a public good that enhances the success of each specific program in the health sector. Financing for specific programs needs to be extended to pay for the core foundational capabilities of public health required for the success of each particular program.

“In some ways, our task has become more difficult because we are trying to restore the public health approach which we ourselves at an earlier stage in our independent history have given up for a more clinical, hospital based approach.” Keshav Desiraju  Former Secretary of Health of India

“It has been my firm belief that that the majority of today’s health challenges cannot be effectively tackled unless other sectors in government are engaged and a multisectoral public health approach is followed.”  Ala Alwan Former Regional Director Eastern Mediterranean Regional Office of WHO.
Introduction

“Public health is the art and science of preventing disease, prolonging life and promoting health through the organized efforts of society” (1) (italics added). District health management personnel are government employees charged with overseeing public health at a scale of roughly 100,000 people. Countries can use other terms for districts like counties, municipalities, parishes, barangays, but all have a sub-national local scale where airborne, waterborne, and behavioral diseases are transmitted and where political units can make and enforce local policies. It is the scale of human contact, personal involvement and social organization. Districts are the first detectors and last mile responders to all health threats. District health personnel thus have great potential to enlarge their role in creating healthier communities by facilitating “organized efforts of society”. There is indeed an art and science of this practice. Public health practice is defined by a set of functions that marshal local data on health and health threats and assure that multiple sectors are taking part in organized efforts to make a community a place with healthier living conditions. For over 150 years, district health managers have been able to transform the cities, counties, parishes, and districts of the world into healthier places. Their agency is necessary to help all of us transform the benefits of growing economic prosperity into communities where all humans thrive. There are over 60,000 health districts in the world today offering 60,000 micro-environments to improve human health.

There is a hidden capacity crisis in the district level public health workforce. The crisis is that district health managers often lack the skills, orientation, and motivation required to create a healthy physical and social environment. Too often, district health managers are diverted away from public health practice by the important work of managing public clinical facilities in order to deliver personal medical services. Managing clinical facilities is an immense task and often crowds out the managers' ability to attend to population level health prevention activities. Because district health management posts are staffed, the absence of public health practice does not manifest as an absence of staff. When doctors and nurses are absent and not attending to the sick, the human resource crisis is visible and has been well documented (2). When district health managers are present, but diverted from practicing public health, the crisis can remain invisible for many years.

Deficiencies in public health practice turn small outbreaks into epidemics. Proper public health practice routinely prevents epidemics of vector, water, and food borne illness. Since proper public health practice results in more rapid detection and control of public health emergencies, proper public health practice also enhances global health security by controlling emergencies at their source. Public health can set up local political environments that enable the policies that lower a community's exposure to alcohol, tobacco, STDs, and obesogenic foods. Public health practice addresses injury risks on roads, in homes, and in the workplace. Public health practice allies with clinical practice to improve patient safety by using data to detect and deter sources of antimicrobial resistance, nosocomial infections, fake drugs, and fake practitioners. Rabid dogs, rats, mosquitoes, and flu-infected poultry have been brought under control in health districts around the world that have applied public health practice methods developed over a century ago. There are public health strategies to address alcohol abuse and domestic violence. To leave district health managers untrained, overburdened, and without motivation to accomplish their work in public health practice needlessly exposes their community and their neighbors to preventable disease and higher costs for medical care.

Because district health managers are already on location, it is natural for most countries to build public health practice into the work of district teams. There are pressing needs for these staff to develop their skills and maintain the quality of performance. Quality improvement tools for public health practice are becoming available for use at the district level. These tools should be part of a country's strategy to reach the goal of bringing public health coverage to all
populations. Public health is part of universal health coverage and it is a pathway to sustainable development.

Communities with high capability to deliver broad-based responses to their shared health concerns epitomize the goals of sustained development. Hence the improvement of public health practice in communities is parallel and synergistic with achieving the sustainable development goals because its furtherance brings a community’s various resources together to improve human flourishing.

Ensuring that people are linked to high quality, barrier-free health care services has always been one of the many objectives of public health practice. Public health is an eternal ally of the medical sector. Public health is at the forefront of understanding and addressing the barriers to access of safe, accessible and effective medical care services for the sick. Fostering a public health orientation among district health managers is essential to sustaining universal health coverage.

In November 2016, a group of 19 experts in public health practice met in Bellagio, Italy to discuss strategies to help districts improve public health practice. Their conclusions are relevant to public health units serving global, national, and sub-national populations. The two main conclusions were: 1) Improving public health practice is an urgent priority that has become more timely than ever at the start of the sustainable development era. 2) There is a broad menu of proven strategies that can help health systems achieve stronger public health practice.
PART ONE

Why the World Needs Improved Public Health Practice

Alma Ata Declaration

The conception of “primary health care” described in the Alma Ata Declaration of 1978 aspired to involve community members in the work of integrating medical care service delivery with the work of addressing social determinants of health. The Declaration says:

“Primary health care... involves, in addition to the health sector, all related sectors and aspects of national and community development, in particular agriculture, animal husbandry, food, industry, education, housing, public works, communications, and other sectors; and demands the coordinated efforts of all those sectors” (Article VII) (1).

The Declaration offers little practical guidance on how to surmount the challenges of multi-sectoral integration. In the years after Alma Ata, more attention was placed on selectively delivering services and commodities to individuals. An array of low cost interventions loomed that could be quickly deployed whether or not multiple sectors were in harmony and whether or not the community was engaged (2). The delivery of selective interventions as well as medical care consumed the staff of district health systems. The flow of funds tied to these special programs as well as measurable delivery targets led to the domination of the health policy agenda by disease and intervention specific programs. Millions of lives have been saved because of programs to deliver micronutrients, vaccines, oral rehydration, family planning, as well as treatment for AIDS TB and malaria; however, the focus on vertical programs crowded out efforts to strengthen health systems and public health practice.

Ottawa Charter

The First International Conference on Health Promotion issued a charter in Ottawa in 1986 that built on the Alma Ata Declaration on primary health care. The Ottawa Charter increased the emphasis on intersectoral action and community engagement for health (3). It defined health promotion as a process of “enabling people to increase control over, and to improve their health.” For the Ottawa Charter, health promotion was not just the responsibility of the health sector.

Legacy

The principles of community participation and intersectoral collaboration were seen as neglected when the legacy of the Alma Ata declaration was re-visited for its 30th anniversary in 2008 (4). Retrospective review of the Ottawa Charter at its 25th anniversary also lamented that the work of bringing health promotion to fruition around the world remained for the future (5).

The lack of progress on the agenda set out in both Alma Ata and Ottawa became even more salient in the light of renewed appreciation of the Social Determinants of Health (6) which were highlighted in the World Health Report 2008 (7). In 2009, a World Health Assembly resolution urged member states to rededicate themselves to promote community
empowerment and active participation by all people in renewing the Alma Ata version of primary health care (8).

Foundations of public health practice

The frustrating need to repeatedly revisit principles of health promotion and health system design might lead some to conclude that these global declarations and charters should be regarded as merely aspirational. A defeatist stance might say that it is impractical to aspire to a multi-sectoral approach to public health practice in low income settings. Such a conclusion would be both ironic and unjust. Hundreds of millions of people today have the blessing of local public health operations that have achieved these aspirations. Reviews of strategies used by countries making the most rapid progress on MDGs showed that multi-sectoral approaches were employed (9). Furthermore, it would be inaccurate to conclude that success in public health is unattainable in low income settings. The populations of Europe and North America were able to succeed with public health practice in the early 1900s when cities and communities were quite poor by modern standards (10). Many of today’s top performers in public health practice are in low income settings (11, 12).

Inadequacy of Sickness Based System and Emergency-Based Global Response

The signatories of the Alma Ata Declaration and Ottawa Charter as well as the Commission on the Social Determinants of Health were expressing a broad consensus that healthier populations are not the result of a health system that focuses exclusively on delivering treatment to the sick.

A sickness treatment system is necessary, but not sufficient to identify and quickly stop outbreaks such as Ebola and Zika. To anticipate arising health problems, skilled human resources must be devoted to centralized monitoring and analysis of epidemiological data. Skilled human resources must also be present at the periphery—on the ground to detect, report, and respond to arising problems. Public health is far more than just surveillance and information. The public health enterprise must have a foundation of community trust so communities cooperate with authorities when disease control measures conflict with business as usual. As noted in the Alma Ata declaration, creating conditions for health will require collaboration with other sectors like food, industry, education, housing, and public works. These sectors are not quite as relevant in the treatment of the sick, but they are vital in maintaining the health of populations. Effective collaborations need to be built over time and at both the central and district levels. For example, Ebola control measures to change burial practices were resisted initially because of communication barriers and distrust between health officials and community members. Precious time was lost building trust. Hurriedly created community involvement committees were staffed with outsiders and their membership was criticized by village leaders (13). Being prepared takes time and resources.

A sickness based system is only a partial response to the growing burden of non-communicable diseases and injury. These conditions typically are due to environmental and behavioural exposures that require policy responses. Clinicians’ scope of work is not configured to develop the social movements and policy changes that can stem epidemics of tobacco, obesity, violence, crashes, and addiction.

The world already has a district health management workforce on the ground in its 60,000 health districts; however, this workforce is primarily devoted to assuring the provision of
individual medical services. Public health requires a distinct and different set of skills as well as a population-level orientation that can be strengthened by a focus on public health core competencies. In particular, improving competencies related to convening and mobilizing communities and other sectors can strengthen and extend the reach of public health departments. The remaining challenge is to reorient, re-staff, and re-motivate district health managers towards improving their practice of public health. The timeliness of this challenge is now.

Table 1 Why public health practice offers a universal template for achieving SDGs.

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<tr>
<th>Sustainable Development Goal</th>
<th>How Better Public Health Practice Could Advance this Goal</th>
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<td>1. End Poverty in All forms Everywhere</td>
<td>Proper public health practice must convene a community — breaking down class barriers that perpetuate poverty</td>
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<tr>
<td>2. End Hunger, Achieve Food Security and Improved Nutrition, Promote Sustainable Agriculture</td>
<td>Public health has a proven track record in identifying food insecure households and addressing root causes</td>
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<td>3. Ensure healthy lives and promote wellbeing for all ages</td>
<td>Life course perspective guides collection of data and policy formation on public health</td>
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<tr>
<td>4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all</td>
<td>Health influences learning outcomes and school attendance. Health promotion in communities and schools can help keep kids healthy to attend school and can help children develop healthier lifestyles.</td>
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<tr>
<td>5. Achieve gender equality and empower all women and girls</td>
<td>Whole population perspective of public health. Historically the natural appeal of maternal and child health issues evolves into inclusion and equality for women and girls in all social endeavours.</td>
</tr>
<tr>
<td>6. Ensure Availability and Sustainable Management of Water and Sanitation for All</td>
<td>Water and sanitation are essential services of public health</td>
</tr>
<tr>
<td>7. Ensure access to affordable, reliable, sustainable, and modern energy for all</td>
<td>Public health specialists have data and expertise to keep energy solutions environmentally sustainable</td>
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<tr>
<td>8. Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all</td>
<td>Public health expertise in occupational health and safety assures that decent work is decent.</td>
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<tr>
<td>9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</td>
<td>Public health experts can ensure that infrastructure and industry are developed through a Health in All Policies approach that ensures development promotes sustainability, health and well being, and does not marginalize vulnerable groups.</td>
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<td>10. Reduce inequality within and among countries</td>
<td>Public health interventions use data to target those who are more vulnerable</td>
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<tr>
<td>11. Make cities and human settlements inclusive, safe, resilient, and sustainable</td>
<td>Cities without public health functions are uninhabitable. From controlling vermin to violence and involving residents in solutions, public health is key.</td>
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<tr>
<td>12. Ensure sustainable consumption and production patterns</td>
<td>Public health engages communities in understanding and addressing how sedentary lifestyles and overconsumption threatens health.</td>
</tr>
<tr>
<td>13. Take urgent action to combat climate change and its impacts</td>
<td>Public health experts help communities form and execute preparedness planning for extreme weather events unleashed by climate change.</td>
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<tr>
<td>14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development</td>
<td>Public health can educate communities on their role in ocean conservation and sustainability, and can address local human and environmental conflicts that undermine ocean conservation through convening communities for problem solving and action.</td>
</tr>
<tr>
<td>15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</td>
<td>Public health convenes communities and creates platforms from which “One Health” initiatives that protect animals, humans and the environment can be mobilized.</td>
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<tr>
<td>16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels</td>
<td>Because proper public health practice must build circles of inclusive community engagement it uses a universally shared concern for health as a springboard for accountability in other sectors. Strong public-sector institutions that protect the public’s health increase trust while building local and national capacity detect and prevent disease.</td>
</tr>
<tr>
<td>17. Strengthen the means of implementation and revitalize the global partnership for sustainable development</td>
<td>Public health community is a global platform for sharing best practices in implementation all of the above ways to achieve the SDGs.</td>
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**Why is Public Health Practice so Relevant Now?**

Creating places that have the capability to keep populations healthy is what it means to have sustainable development and this is the central mission of the practice of public health. There are common principles of public health practice improvement that are universally applicable. The basic approach is to collect data on health problems and threats, convene the community and its problem-solvers to form a strategy and to act. This common approach is easy to share globally and is naturally adapted to local contexts. The details of how to collect data, and how to give citizens voice in developing solutions are going to vary, but the universal principles are measurement and convening the community around shared problems.

As Table 1 shows, every single SDG could be addressed by and institutionalized by a well-functioning community. Many health officials have not risen to their potential as community organizers and conveners because they are too busy with single disease initiatives or with managing clinical enterprises. Many health officials are constrained by a vision of public health that sees them as merely staff for campaigns to control various diseases. The past, present, and the future of public health practice includes the potential to become a local
convener of society around evidence and a catalyst to steward local resource and insight to make a community more fit for all to live and prosper in the long run.

Countries need to have strong and sustained national capacity in public health, whether at a national public health institute (NPHI) or ministry of health, with well-developed capacity at the provincial and local levels. The opportunity to advance the SDGs using the public health framework is made more attractive because the methods of public health practice are already worked out—they do not need to be invented. These methods just need to be applied. More importantly, there are already district health managers who ought to be the leaders of public health. They are already in place in all countries and nearly all of the world’s districts. These workers do not need to be put into place. However, many district health managers have not taken on the role of public health leaders. The health system has often not asked them to practice public health, even though there is nobody else in a better position in the district to do so.

District health managers will need assistance in improving the performance of public health departments. They need training, motivation, and resources devoted to public health that are walled off from the inexorable pull of clinical care demands. A global community that could help district public health practitioners already has the potential to reach them. Unfortunately, for decades, arising health crises like HIV and other pandemics, and the seduction of measurable commodities to promote and distribute has diverted attention from building up public health practice in the places where it is most needed. The SDGs are a transition into a new era where sustainable approaches matter. It is no longer enough to parachute in life-saving commodities or to rush from crisis to crisis. The SDGs signal a new era of public health practice. By 2030, communities that achieve the SDGs will sustain solutions based on data they gathered, understood, and reacted to. By 2030, their examples of progress will be shared to inspire emulation by all who strive for a better world.

**WHO Member States Are Asking for Leadership on Public Health**

The World Health Organization voted in 2016 to take steps to improve practice throughout the world. World Health Assembly Resolution 69.1 was a unanimous call for all states to show leadership and ownership in effective public health governance (8). The resolution specifically called for each nation to have infrastructure and workforce capacity to deliver “essential public health functions”. It asked for the WHO Director-General to develop and disseminate technical guidance on the application of essential public health functions. The Director-General was asked to facilitate international cooperation around essential public health functions and to prepare institutional, administrative, and scientific capacity for the WHO to provide technical support in essential public health functions.

The term “essential public health functions” (EPHF) refers to activities that every well-performing public health unit must carry out to advance public health. The development of checklists to classify what public health departments do dates back to the early 20th century (14). More modern efforts include the Centers for Disease Control’s (15) list of ten public health practices which later became the foundation of the US’s National Public Health Performance Standards Program (NPHPSP) (16). In the late 1990s, the WHO convened 145 public health experts using a Delphi process to determine priority elements of a list of essential public health functions (17). Subsequently WHO regional offices in Africa (18), the
Americas (19), Europe (20), Western Pacific (21), and Eastern Mediterranean (22, 23) developed initiatives to develop context-specific measurements of essential public health functions in their regions.

**Box 1. Essential Public Health Functions (EPHF)**

Lists of EPHF vary slightly by region, most include:

1. Monitoring Health Status to Identify Community Health Problems
2. Diagnose and Investigate Health Problems and Health Hazards in the Community
3. Inform, Educate, and Empower People about Health Issues
4. Develop Policies and Plans that Support Individual and Community Health Efforts
5. Mobilize Community Partnerships to Identify and Solve Health Problems
6. Enforce Laws and Regulations that Protect Health and Ensure Safety
7. Link People to Personal Health Services
8. Assure a Competent Health Workforce
9. Evaluate and Assure Effectiveness, Accessibility, and Quality of Preventive Health Services
10. Research for New Insights and Innovative Solutions to Health Problems
11. Disaster Preparedness

The WHO’s involvement in supporting improvement in public health practice has occurred in some of the regional offices like EMRO, EURO, PAHO, and WPRO and the intensity of any one region’s support for public health practice has varied over time. These efforts have struggled to build institutional support and to attract resources at regional offices. There has always been a desire to move beyond just measuring performance of EPHF towards using measurement for sustained performance improvement.

The World Health Assembly resolution on essential public health functions expressed member states’ desire for more consistency and institutionalization of efforts to help countries improve their public health practice. Countries need to develop their public health institutions such as national public health institutes and to invest in improving their public health workforce. Member states have asked for the WHO’s expert leadership in an area where it has great potential to lead based on the achievements of its regional offices.

**Public Health is Fundamental to Universal Health Coverage**

According to the WHO, “Universal health coverage means that all people and communities can use promotive, preventive, curative, rehabilitative, and palliative health services they need of sufficient quality…” (24). For a community as a whole to use promotive and preventive services, that community must have a public health department “covering” it. The definition of UHC has always been much broader than having all individuals being covered with individual medical care services. UHC cannot be realized unless whole communities live under the protection of high quality public health departments. Some health districts need to build these operations from scratch. Many others need to reorient current district health managers to offer meaningful coverage by population-level public health functions.
But public health is more than just one more entry on a list of things that people are covered with. Efforts to improve financial protection, accessibility, and quality of individually delivered health care services require public health functions. There is no better way to be financially protected than to live in a community where the chance of getting sick or injured is constantly being made as small as it can be. Public health activities, being public, create social and environmental changes that are accessible to all and free for all, automatically. Public health departments improve health care quality because efforts include tracking the epidemiology of patient safety, drug safety, and professional credentialing. Public health departments work hand in hand with clinics, hospitals, and pharmacies to collaboratively improve quality.

Current framing of policy agendas for UHC are heavily dominated by the financial challenges of individual health care services. This is seen in the development of current measures to track metrics of UHC progress that measure out of pocket payments for care and episodes of clinical care utilization.

It is too easy to mistakenly think that coverage is just coverage with clinical services (25). The synergies between community-wide and individual service provision are too important to be ignored. More input from the public health profession can help improve metrics of community public health coverage and adequate financing for public health operations at the community level (26). Current health care crises across the globe showcase the importance of public health strengthening to achieve UHC.

### Recurrent Pandemic Health Crises

In the wake of the Ebola and Zika pandemics, several commentators have noted the need to strengthen health systems (27, 28) including those at the national (public health institute), provincial and local levels. Systems for rapid detection of an outbreak at its source, with immediate communication to national authorities, can make a critical difference in whether or not an outbreak becomes an epidemic. For example, patient zero of the Nigerian Ebola outbreak was diagnosed within 24 hours of his entry at the Lagos airport. Working with Nigeria’s CDC, the local health department was able to re-purpose a small army of epidemiological contact tracers that was in Lagos for the polio program. Nigeria’s Ebola epidemic was stopped. Nigeria experienced a combination of good luck and good management. In Liberia the experience was more challenging; based on its experience with gaps in capacity at all levels, the government created the Liberia Public Health Institute in 2016.

Pandemic preparedness will require capability to mount a rapid response to an outbreak anywhere. That implies a surveillance network and trained staff that are present or deployable throughout the country. Controlling Ebola also illustrated the need for investing in community partnership and trust long before an epidemic strikes. Trust must be built years before any pandemic because it is difficult to create trust during a crisis. More importantly, engaging a community in understanding and responding to its health conditions is the sustainable way to address all public health issues, not just pandemics.

### Non Communicable Diseases and the New Epidemiologic Transition
WHO estimates that by 2020, NCDs will account for 80% of global mortality. NCDs will account for 7 out of every 10 deaths in developing countries, with over half of these premature deaths before the age of 70. (29, 30).

NCD control typically involves policies that impact businesses (tobacco, alcohol, processed food industries, motor vehicles, etc.) Political battles to support these policies will take time. Evidence and mobilization of communities widens understanding that the health benefits of regulating health hazards are worth the costs to specific businesses.

Control of NCDs requires social movements and cultural change to overcome the political obstacles to policy changes. EPHF done well can lead to community engagement and subsequent social pressure for behavior change (i.e. smoking, safety, dietary change) (31).

**Antimicrobial Resistance**

Antimicrobial resistance (AMR) has been highlighted by the United Nations as one of the great threats to advances in modern medicine. Efforts to strengthen public health practice are directly related to the global strategy on AMR, particularly in areas of surveillance of drug resistance and drug resistant infections for TB, MRSA and other diseases. Multisectoral partnerships between agriculture and public health are essential to balance food security against antibiotic use in animal husbandry. Public health officials are a latent army to achieve better antimicrobial stewardship in health services. Community engagement in understanding the risks of AMR and demanding antibiotic stewardship is a critical element of addressing AMR. For example, hot spot maps of resistant organisms and hot spot maps of agricultural antibiotic use can motivate political will. Public health practitioners can use their data and community ties to push for properly enforced legislation and real time reporting for cases of resistant organisms.

**Public Health and Public Accountability**

The Alma Ata Declaration, Ottawa Charter, and World Health Assembly Resolution 69.1 all sought greater realization of the power of community engaged public health practice because it is the most sustainable approach to making people stay healthy.

There is a transformative side effect of gathering a community to address the conditions that create health. This side effect is actually more important than health. It is the creation of accountability and inclusion at all levels. Achieving this accountability requires the Alma Ata style of inclusion that shares information, policy formation, and implementation broadly.

Health, like security, is a shared concern of all people. For millennia, the achievement of security was the impetus to form governments for the purposes of war and defense. In the past, “development” was the development of military strength. The modern political landscape arose from centuries of conflict as a form of natural selection. Societies that learned to cooperate, organize and finance their endeavors prevailed in history (32).

Now we aspire to have both effective institutions and peace. SDG 16 says “Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels”. In pre-modern times such an aspiration would be an enigma because war, not peace, created effective, accountable, institutions.
The shared concern for better health is the answer to the conundrum of SDG 16. It is not that health for all will magically make societies peaceful and inclusive. According to the Alma Ata Declaration and the Ottawa Charter, the best process for making a community healthy is a process of inclusion that builds effective, accountable, and inclusive institutions. As shown in Figure 1, there is an equilibrium of synergy between how well a community’s public health operation functions, how well all potential resources (financial, human, and organizational) are used, and how healthy people are. A community-engaged approach to public health practice offers households input and ownership of the data and decisions regarding their health. From peoples’ inclusion, comes institutional accountability.

This style of inclusive public health practice is not now widely prevalent. It is possible to achieve appreciable temporary gains in population health without an effective community-engaged practice. Top-down interventions to distribute health commodities or conduct campaigns or offer treatments without engaging people can be effective, although hard to sustain. The inclusion of people in their public health is the best foundation for both sustainability and continued success in top-down public health campaigns. SDG 16 says that the achievement of inclusion and accountability is an end in itself and public health practice is a means to that end as well as a means to health.

Recent high profile public health crises in communities in both the developed and developing world highlight how strengthening public health practice needs to be an imperative for politicians as well. Intermittent crises in air quality in large Asian cities as well as crises in transport safety, and water quality can be anticipated. More insidious problems can grow silently for decades like rising rates of obesity and diabetes. Sustained progress is elusive without a data-powered social movement to provide the political coverage that allows a society to confront the economic changes required. This problem is as old as the industrial revolution and so is its solution (See Box 2 on the role of public health in industrializing England).
Box 2. Public Health in 19th Century England

One of the first cases of public health synergizing political accountability was the genesis of the modern public health movement in 19th Century England. Public health leaders like Edwin Chadwick publicized data on the poor health conditions of industrial cities and promulgated the idea that unsanitary conditions bred disease and led to poverty (35). Civil leaders and clergy popularized this movement and in 1848 and 1875 England passed public health acts to start local municipal health departments (36). Although England had a strong history of municipal political autonomy, cities and towns until the 1870s cities were unable to marshal the political will to spend their tax revenue on public works. The hygiene movement played a catalytic role by collecting data on the ways that death and suffering were restraining civic progress (37). Newspapers ran regular features comparing mortality rates across English cities (38). Preachers sermonized about the plight of the urban poor (39). The broadened base of political support for livable conditions galvanized civic leaders’ to finance clean water, sewage, better housing, and led to the massive decline of mortality in the early 20th century (40).

Being able to address a commonly shared health problem strengthens civic institutions. Examples of the spill overs from public health to accountable government abound as discussed in Box 2 and Box 3.

Box 3. Community Engagement to Improve Health Facility Quality

A systematic review of community engagement through health facility committees found well done studies from Peru, Zimbabwe, Kenya, and Uganda (41). These community engaged programs all convened political and non-political members of the community to monitor the day to day running of health facilities and tune their operations to community needs. The Peruvian example studied committees for health administration called Comunidades Locales de Administración de Salud (CLAS). These programs started in 1993 and covered a quarter of Peruvian primary care facilities. Because the people in CLAS impacted communities saw their own citizens on the governing boards of their local clinic, utilization increased, physician recruiting improved and public mistrust of government was reversed (42). The dispensary health committees studied in Kenya reduced financial mismanagement and improved availability of medicines and utilization compared to baseline. It demonstrated that semi-literate committee members could collect and act on health and financial information (43). The Ugandan study also showed improvements in immunization and Vitamin A coverage as well as outpatient service utilization (44). Each of these health facility management committees had the narrow remit of improving the operations and financing of service delivery units, and were not tasked with discussing or addressing the fundamental determinants of health and wellness. Yet, in each case, because the strategy used community based approaches, accountability was enhanced and the SDG-16 aspiration of “effective, accountable, and inclusive institutions” was advanced.
Why is Public Health So Important Now?

Almost forty years ago the Alma Ata Declaration called on us to create the conditions for health in each community through a process that engaged people with local data about health and empowered people with evidenced based solutions. Much progress has occurred since then. The fruits of economic growth have allowed more and more people to afford better housing and food, and more people can now afford the wonders of modern medicine. Worldwide health care spending has grown faster than economic growth.

Two current priorities make public health important right now—Universal Health Coverage and Sustainable Development Goals. Bringing high quality practice of public health to all districts is part of the health coverage that needs to be made universal. Much of the scholarship and action plans and metrics for progress on UHC have omitted public health practice from the agenda. This omission is unwise and shortsighted (25). Public health practice is the least costly and most high impact component of a modern health system. Highly functional public health units at all levels are the means through which healthy people stay healthy. They prevent the spread of communicable diseases, encourage behavior change to avoid non communicable diseases, and engage people in understanding and creating the political foundations to sustain otherwise contentious policies and regulations to stem the growing burdens of injury and non-communicable diseases.

Box 4 Relevance of Public Health to India

—Keshav Desiraju Former Minister of Health

India is fighting public health challenges on all fronts; communicable diseases such as malaria and tuberculosis, and a range of what might be termed “the diseases of the very poor”, non-communicable diseases including mental illness which, as we now know, are unconnected to income, and the burden of maternal and infant mortality where, though there are regions where the MDGs have been achieved, the problem remains serious. If a country of 1.2 billion is to comprehensively address improvement of health status of all its people, it can only be through a strong and dynamic primary health structure with viable community institutions and qualified health workers, all together performing various essential public health functions. At a secondary level these structures will need the backing of larger, more specialist hospitals and medical and nursing colleges oriented towards family medicine. Working in health policy and health administration in India has meant addressing all these issue simultaneously, and finding the budgetary resources to fulfil these ends. In some ways, our task has become more difficult because we are trying to restore the public health approach which we ourselves at an earlier stage in our independent history have given up for a more clinical, hospital based approach.

Out of the 17 Sustainable Development Goals only Goal 3 is specifically about health, however the proper practice of public health naturally furthers progress towards all 17 of these goals. The reason is simple. Public health practice engages communities with data on health threats and marshals inclusive participation in creating social and environmental conditions to make communities fit for sustainable human thriving. Here is the good news. The SDGs have a potential public sector workforce already in position in the roles of district health
managers. However, district health managers have insufficient training in public health and are often overburdened by the urgent need to treat the sick.

The future agenda is to get more and better public health practice out of the world’s public health workforce. Recognizing that both UHC and SDGs make public health practice an idea whose time has finally come, the World Health Assembly voted in 2016 to have every member state rededicate itself to improving its execution of the essential public health functions. The Director General is tasked to bring forth technical guidance to assist member states in improving essential public health functions. In the next section we will review the world’s best practices in how to improve public health and lay out a blue print for further improvement.

Box 5-Relevance of Public Health in EMRO Region by Ala Alwan

In 2012, I started my term as WHO Regional Director for the Eastern Mediterranean and my priority was to reach consensus with Member States on the key health challenges that they face and to agree on strategic directions to address them. In this context, the first step was to conduct a comprehensive situation analysis, in close coordination with Member States, focusing on the challenges, the gaps and barriers to action, as well as interventions to address them and the opportunities that exist.

The situation analysis, conducted in early 2012, clearly revealed that although important improvements were made in some health indicators over the past few decades, there was a major gap in public health capacity in the majority of Member States in the Region. The serious health challenges that Member States face in the five areas of health system strengthening, non-communicable diseases prevention and control, maternal and child health promotion, health security and response to emergencies, and communicable disease prevention were not matched with existing public health skills and experience. It was also evident that progress in addressing these five key priorities would not be possible unless public health capacity is strengthened in the Region. It has been my firm belief that that the majority of today’s health challenges cannot be effectively tackled unless other sectors in government are engaged and a multisectoral public health approach is followed. With these conclusions, expanding public health capacity and skills was identified as a priority action in the Region.

The overall aim of the essential public health functions initiative in the Region is to conduct an objective review of the different components of the public health system in Member States, identify strengths as well as areas for further improvement and propose evidence-informed plans and recommendations for improving public health capacity and performance. (25)
PART 2
Strategies to Strengthen Public Health Practice

The variety of different contexts, interests, and talents of those who can contribute to a community’s health mandates a variety of approaches to strengthening public health. There is not going to be one universal approach. It is helpful to review the general destination so that multiple roads and bridges can help reach it. What is needed is a public health workforce that has the knowledge, tools, and resources to construct the right approach for their context.

Mainstreaming Public Health Practice Strengthening

Figure 2 offers a conceptual framework adapted from the Public Health Leadership Forum (33) to demonstrate that the work of public health practice is carried out both inside public health departments and also across multiple stakeholders and groups across society. The fundamental producers of health are the households served by these stakeholders. Inside a
public health department are a series of public health program areas supported by cross cutting foundational capabilities. It is common for financing to flow to specific program areas as external donors offer money according to external priorities.

The tied funding often leads to imbalance where some programs build strong operations and others do not. Many public health program areas see themselves as competing with each other for priority in funding streams from national and global sources. However, the foundational capabilities are not in competition with any public health program. They are complementary to all, supportive to all, and will assist all public health efforts to be better attuned to local priorities and make better use of community strengths.

At the very base of all foundational capabilities is the effort in performance improvement. It is impossible for the system to detect and correct imbalances and to achieve efficiency across its portfolio unless it takes the time to become aware of how the whole system is performing and help all staff undertake improvements.

Figure 2 helps depict the universal objectives of public health performance improvement. All levels of the public health system inside and outside the governmental public health units need to continuously assess and improve the operations in both foundational capabilities, program delivery, and multi-sector collaboration. Local priorities and strengths will dictate what criteria to use to assess, how to assess, and how to ensure that assessment is translated to improved performance. Performance improvement is foundational and must be part of business as usual. This must not be a one-time initiative.

The Role of National Public Health Institutes in Strengthening Public Health Practice

More than 90 countries around the world have established National Public Health Institutes (NPHIs) to coordinate and lead public health systems. NPHIs influence national and subnational efforts in the public health system by maintaining a workforce ready to apply scientific evidence to policy implementation while remaining accountable to governments and the public. NPHIs serve as a career home for a cadre of trained public health science experts. NPHIs’ key functions typically include disease surveillance, detection and monitoring; outbreak investigation and control; health information analysis for policy development; research; training; health promotion and health education; and, laboratory science.

These institutions can set standards and protocols for training and evaluation because they have a national scope of influence and focus on the major public health problems affecting the country. They are critical to improving the foundational capabilities shown in Figure 2. The International Association of National Public Health Institutes’ (IANPHI) has developed internationally-recognized standards for NPHIs (34) that build on best practices around the world.

In many countries NPHIs are the focal point for workforce capacity development activities in public health. A capacity development strategy begins by monitoring the workforce’s existing capacity and unmet needs. Based on needs assessment an NPHI can work with partners to develop training and continuing education opportunities. Some NPHIs conduct training on their own premises (for example, in laboratory techniques or epidemiology). Others form partnerships with universities and contribute to define core competencies and pathways to professional recognition with degrees, certification, or accreditation for public health professionals.
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For a fledgling NPHI, the priority will usually be on training that is practical and provides specific skills, rather than degree programs. However, in addition to providing skills-based training, some comprehensive NPHIs have degree programs that make important contributions to their country’s public health infrastructure (34). NPHIs can play a role in helping to provide fulfilling opportunities for public health practitioners and other incentives for remaining in the public health workforce.

Stronger linkages and information-sharing between national and local levels, and strategies to highlight the value of public health careers at the local level - and their contributions to national efforts to save lives. NPHI’s have led efforts to use supportive supervision to measure and improve the performance of the essential public health functions at district level (35). NPHIs will be natural leaders and contributors to any country’s efforts to strengthen public health practice.

**Strengthening District Level Public Health Performance**

Key challenges that must be overcome at districts are

- Lack of continuity of leadership
- Lack of visibility of public health work
- Lack of multi-sectoral involvement
- Lack of public health governance

A lack of continuity of leadership occurs in centrally controlled systems or when political considerations are dominant. Key personnel can be transferred by central decision makers, taking no account of the local situation and interrupting planning. As much as possible, local public health units should be managed and financed by an authority at the sub-national level. This may be out of a governor’s or mayor’s office or by other local citizen’s leadership like a board of health. The central government may provide guidance in terms of policies and strategic objectives, as well as supplementary funding for implementing priority programs, but the basic operations should be under local control. This includes the local recruitment of technical and support staff as well as local oversight on program performance. Local control of the PH programs at the sub-national assures continuity of leadership. Further, by being a part of the local governance structure, collaboration with local stakeholders is built into the system. It is important for governance structures to build in a combination of public health technical knowledge with an awareness of local politics. This could be done through building partnerships between political staff and technical staff. It is rare to find individuals who combine both sets of skills.
Personal and Professional Development of Workforce

Training and supervision

The national health strategy needs a national public health workforce strategy which should include developing and deploying a performance based monitoring plan for the skill level of the public health workforce. When public health professionals have benchmarks to rate their performance they can acquire an informed view of where they need to focus improvements. Leadership development at the local level requires continuous supportive training and supervision. Leadership skills development should be incorporated in pre-service training for long run impact. In the short run, in-service training in leadership development is vital.

Curricula for training mid-level public health officers should incorporate introduction to essential public health functions and how they are relevant to initiatives which are being rolled out by governments as measures to address health issues. Local health officers need to see the intersection of efforts in performance improvement with ongoing initiatives to avoid confusion and identify synergies and joint opportunities to streamline the practice of public health. The improvement strategies for local district health officers need to be routinized. Since procedures for supportive supervision already exist. Much of the agenda for local improvement can be grafted on to current procedures for supportive supervision.

Evaluations of supportive supervision unsurprisingly confirm that the effectiveness depends on the design and execution of supervision (36). It is common for supportive supervision of districts to be uncoordinated, irregular, and not always “supportive”. Having supervisors see themselves as coaches and facilitators can help these relationships elicit the best efforts that the health officers have to offer. Supervisors must avoid an approach that finds fault and assigns blame by transitioning to a stance of partnership. Moreover, it is important to coordinate and streamline the system of supervision to avoid haphazard and too frequent encounters.

Self Assessment

Provide the opportunity for local health district teams to periodically conduct self-assessment exercises to reveal how the foundational capabilities of public health (See Figure 2) are being implemented and operationalized. Self-assessment should aid public health workers at the district level to identify strengths and weaknesses and develop a prioritization plan that is feasible with local resources and assets. Measurements that go to headquarters are not as useful as measurements fed back to workers as part of ongoing improvement.

Cross Cutting Support

Empower public health personnel using cross-cutting supports. Figure 2 supports an organizational structure that looks like a matrix. There are cross-cutting horizontal operations in surveillance, communications, legal, and quality improvement that support vertical program areas. A transition from a completely hierarchical collection of vertical programs to a collaborative structure allows synergy and collaboration. More efficient resource use can occur.
Community of Practice

Link public health practitioners to a community of practice. There should be opportunities for exchanging the best practices and learning from each other across districts. The linkage of public health officers to community structures as well as community health workers program, both through formal meeting and informal continuous follow up meetings will strengthen the health system.

Intersectoral Collaboration

Form an inter-sectoral local public health committee. Sectors may include education, police, social welfare, water boards, transportation services, road construction services, agriculture services. The committee will make a forum to link each other, to discuss their issues related to planning and implementation.

Regular dialogue with many governmental sectors should be emphasized as public health practice at local level and must be part of the public health officer’s core competencies and job description. This helps with aligning strategic plans and coordinating governmental actions. This practice of looking for health in all policies is growing and should be seen as a way to help other sectors succeed as opposed to taking over their work and asking them to shift their focus to a health agenda. Since listening to communities is such an important part of public health practice, local committees can be an opportunity for the inclusion of voices that might not be otherwise heard. These committees also marshal local resources that can create healthier environments and which might be otherwise overlooked. For example, schoolteachers, police, and business leaders are critical for public health.

Strengthening National Level Public Health Performance

Public Health as part of a National Health Strategy

Developing and refining a national health strategy to support public health practice improvement is an effort that will require multiple stakeholders including:

1. Ministries of Health, Finance
2. National Public Health Institutes
3. Civil society
4. The private sector
5. National training, education, and research institutions
6. Development partners
7. Legislative bodies

An inter-sectoral coordination committee chaired by a top governing authority is ideal and could be led by a National Public Health Institute. Coordinating committees formed by peer agencies often fail to function because no sector wants to be coordinated by others. The health sector (and particularly public health) should solicit and put forward agenda items of potential public health concern, that involve the work of and depend on the input of the other sectors. There should be reporting lines that include both public and private sector healthcare providers, clinics and hospitals and the National Public Health Institute. Local governments should be receiving information from both public and private sector. The inter-sectoral coordination committee’s success requires the engagement of all levels of governing bodies,
from the national level to the local governance unit. There should be separate articulations of this intersectional coordination body at each relevant level of governance.

**Enlarging the Current Focus of Health Strategy under a Public Health Umbrella**

Health strategies in most countries concentrate on delivery of health services through the hospital system around disease control programs. Focusing on the foundational capabilities of public health will enable the existing health care system to also address the social and environmental causes of disease, and the health of the population as a whole. This new focus includes health care services and universal health service coverage—it does not call for stopping or slowing down the important work of caring for the sick. Seeing sickness care in the context of total population health is a win-win proposition for the entire health system.

A strategic plan would show linkages of public health efforts with ongoing efforts across multiple sectors and the clinical sector. It would delineate promising initiatives to pursue priority objectives in public health based on local problems and local strengths. Many countries decide to name a small list of diseases or issues that are high priorities for them. This can help improve buy-in and engagement.

**Performance Improvement Units**

An important best practice in implementation is to develop organizational cross-cutting units devoted to public health performance improvement. These units should be part of a national level ministry or national public health unit and part of larger subnational health departments. Public health performance improvement is one of the foundational capabilities shown in Figure 2 and delegating the task of performance improvement to a specific unit can ensure that these efforts are put into practice(37).

Public health performance improvement units are similar to patient safety and peer review offices that are a feature of most modern hospitals. The field of clinical quality assurance, peer review, and hospital systems improvement has advanced further than public health quality. It is time to catch up. There are more lives at stake in public health practice, but since failures jeopardize statistical lives, public health institutions are seldom held accountable for quality.

Performance improvement units can conduct assessments of essential public health functions, and share the results with workers to empower their efforts at continuous quality improvement. The dimensions that are assessed and the tools used for assessment need to be developed locally with input from the staff involved. There are many toolkits available for assessment at national and sub-national level (16, 38). These require local adaptation and they need to be made actionable so that the results can guide quality improvement plans.

**Financing a robust public health system**

A sufficient, recurrent budget allocation for public health should provide the core of public health funding. Whenever public health activities are funded out of the same budget that pays for medical services there is a danger that public health will be cut to pay for the inexorable growing demands to pay for medical care. Protected public health funding should be part of the country national health expenditures and/or development budget. Some countries refer to
“ring fenced” budgets for public health (39). Specific sources of financial support to public health expenditures can be identified. Many countries, for example, Switzerland and Thailand, dedicate part of their health insurance revenues to supporting public health. A proportion of sin taxes, imposed by many countries can be dedicated to supporting public health. If a credible plan for public health performance improvement is put forward, one might consider a “levy” on foreign direct assistance for health (i.e. vertical health programs) and it would be justifiable in the sense that support for special programs and services requires the overhead of a public health system. Having a credible plan for public health practice improvement would justify requests to finance the foundations of the system. Building financial support is a responsible way to sustainably develop the public health system at the foundation of successful vertical programs.

Public health operations are not costly. Most countries spend between 2 and 5% of their total government health budget on population level public health, though data on public health spending are scarce. A quality improvement unit for public health practice is a “best buy.” A state with a population of 10 million might have 100 public health districts of 100,000 each. The national quality improvement unit would need to invest in only 5 quality improvement personnel to provide quarterly quality improvement supervision to a circuit of 20 districts each. Providing a doctor’s salary to the 5 public health quality supervisors and logistical support might total between $200,000 to $500,000 in a low or middle income country. So the budget for a public health quality improvement unit would come to around five cents per person per year. The unit would automatically generate the data to keep itself accountable. By collecting performance measurement data regularly, it would face the discipline of shepherding performance improvement.

Regional Efforts in Public Health Performance

Much of prior progress in public health performance improvement has occurred at WHO regional offices where performance benchmarks have been developed to assess performance of public health departments.

WHO regional office initiatives

WHO Regional offices have built collaborating centers and local task forces that were able to link public health practice to regional priorities. They have the ability to convene international expertise and collaboration through regional international partnerships like the Economic Community of West African States (ECOWAS) or South Asian Association for Regional Cooperation (SAARC).

Regional initiatives in public health performance improvement make sense because many regions share common features of epidemiology and health system organization as well as language. When Pan American Health Organization led an international initiative in documenting the state of public health practice, it sponsored the deployment of English, Spanish, and Portuguese language measurement tools that permitted international comparisons (19). When Eastern Mediterranean Regional Office (EMRO) led initiatives in public health practice improvement it could deploy international experts as well as technical officers familiar with regional culture, health systems as well as language (23). This feature can give member states added comfort and confidence when they request technical assistance.
Already there are cross-region collaborations as efforts at public health practice improvement in Europe and the Americas have informed efforts to measure and improve practice in the Eastern Mediterranean (23). Cross-regional cooperation can be further improved through global organizations like WHO and the International Association for Public Health Institutions (IANPHI).

**Global Efforts in Public Health Performance**

Global actors are often called on for technical assistance in country’s strategies to achieve the Sustainable Development Goals. For example, *Every Woman Every Child* was a globally relevant blueprint for action around SDGs led by WHO’s Partnership for Maternal Newborn and Child Health(40). Other global entities that could play a similar role include

- UN agencies like UNICEF, UNCHR, UNAIDS, and SDG High Level Political Forum
- Multi/Bilateral agencies including World Bank, CGIAR,
- Global associations
- Healthcare professional associations
- World Medical Association
- World Federation of Public Health Associations
- International Association of Public Health Institutes
- Specific programs/initiatives including GAVI and Global Fund
- Civil society organizations
- Academia
- Foundations
- Advocacy groups
- Private Industry

Each has an interest in making sure that local district health departments are able to perform public health functions. The benefits from local public health are enjoyed in each district, but also generate a public externality by protecting everybody on earth. There are important financial returns in each local area that can be measured and used to motivate investments. The economic case for investing in public health rests on evidence of proven interventions in community health promotion that prevent disease and save money (41) (42). Civil society can use the evidence of economic gains to attract coalitions in support of public health.

**Putting public health on the global agenda**

It is time for global actors to correct the omission of public health practice from the global agenda. Typical contestants for greater global priority make their case by claiming that their specific concern is responsible for more deaths or more disability adjusted lives lost or financial losses. In the case of public health practice, there is a win-win proposition. Improving the world’s capacity in the practice of public health will mean better ability to assess health problems, convey them to multiple stakeholders, and carry out countermeasures. This capacity helps everyone. Tools to enhance this capacity are a leading example of a global
Public good. Encouraging more regions, nations, and districts to notice and attend to public health practice will add rather than detract from all the other work to be done in health.

So far, initiatives in health system strengthening and universal health coverage have not successfully boosted public health because of the urgent needs to improve health care service delivery. For example the Six Building Blocks framework at the base of so many efforts to talk about health systems is really a listing of the components of delivering drugs and services. Metrics for health system strengthening measure service delivery and do not measure or assist with quality improvement of public health practice. This can change by supporting metrics for how well essential public health functions are being practiced.

Clinton and Sridhar note that vertical funds were the global health answer of the late twentieth century but question their utility during the coming century of NCDs, UHC, and pandemics. They call for WHO to develop tools for coordinating health systems and a recommitment to a broader definition of health security (43). The World Health Assembly resolution of 2016 called for WHO to support member states efforts in improving essential public health functions and embodies that recommitment by WHO (8). The tools for coordination are ready. The global health community needs to support a transition from the top down public health of the past to an integrated public health of the future. Global actors have an important role to play in maintaining and improving the world’s stock of knowledge and tools to improve public health practice.

**Opportunities to create global public goods**

Although the World Health Assembly has asked WHO to develop technical guidance to improve public health functions, there are already many initiatives to build on and partners to work with.

The [IANPHI Peer-to-peer Evaluation Initiative for NPHIs](#) lists and helps assess the basic requirements for essential public health functions in a country. The [CDC/IANPHI developed Staged Development Tool](#) helps national public health institutes take a more in-depth look at the maturity of the public health functions they lead. The SDT helps NPHIs assess their current capacity and develop a roadmap for achieving a higher level of functioning. There are tools to measure specific capacities with each function and to provide a tool for dialogue on priority setting, investment, planning and action and closing the cycle with assessment, learning and improvement.

World Bank has developed essential public health assessment toolkits for India (44). UNICEF has several programs to help improve district level health care management as well as tools to help improve the impact and equity of health policy (e.g. EQUIST).

The WHO and the US-CDC have developed a very important conceptual tool in the Essential Public Health Functions, to help practitioners to understand the key activities of a successful public health system. This conceptual tool is essential for governments interested in re-orienting their work towards public health services, on which their awareness may have become rusty due to focusing primarily on improving medical services.

The EPHFs draw attention to the public health functions and their governance. In addition, the toolkits developed by the US-CDC enable detailed assessment of the performance of these functions at the national and sub-national levels. This makes it possible to identify areas that need strengthening, and to plan accordingly and monitor changes over time in a given setting. However, it needs to be borne in mind that the toolkits are not designed to permit
comparability across settings, as the responses are situation-specific. These toolkits have been adapted and used in many settings (16, 19, 21, 23).

What Needs to be Done

• A modest infusion of funds and human resources to serve foundational capabilities in public health through training,
• Protecting support for foundational capabilities in government public health budgets.
• Develop and share templates and operations manuals for quality improvement units in national and sub-national public health departments.
• Extending the reach of educational opportunities in public health practice to the current and future workforce.
• Sponsor academic research to learn best practices and what works in different contexts to improve performance in public health

What Needs to be Avoided

Threats and pitfalls include the perception that there is nothing new here—that public health practice is already being covered. There is a misconception that public health is exactly the same as outreach to give out commodities like vaccines and bed nets and micronutrients. This mistake makes people think that whenever public health vertical programs receive increased funding public health practice is also addressed. In fact, the opposite occurs. Expanding program operations often draws down limited human resources from the foundational base. Global initiatives need to avoid a one-size fits all approach. Countries need the flexibility to develop country specific adaptations of public health strengthening strategies.
Summary

This White Paper has shown that strengthening public health practice is one of the best ways to pursue all 17 of the Sustainable Development Goals. Public health practice is built upon data-driven community engagement in building accountable institutions and multi-sectoral collaboration. The concept of Universal Health Coverage includes coverage with effective public health practice. The public health functions in a community collect data and share it with policy makers from multiple sectors. This is the foundation for the effective delivery of sickness care, preventive care, and health promotion.

District public health staff who ought to be carrying out public health practice are present in most communities. The remaining agenda is to improve the quality and effectiveness of these district level health sector leaders in carrying out public health. Improving public health practice can be carried out for just pennies per person per year. Having countries decide on the essential public health functions for its local health officers is the first step to developing measurements that can be used to help coach the workforce in supportive supervision. National governments can staff a performance improvement unit to carry out regular efforts to collect measurements and share them with front line workers to develop plans for improvement. These quality improvement efforts are a public good that enhances the success of each specific program in the health sector. Financing for specific programs needs to be extended to pay for the core foundational capabilities of public health required for the success of each particular program.

Regional and global efforts can support this agenda by consolidating the science and practice of performance improvement in public health.
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