DRAFT Report

Community Systems Strengthening Toward a Research Agenda

The following draft report is the result of work of working group #2 of the Inter Organizational Task Team on Community System Strengthening (IOTT on CSS).

The report was developed under the guidance and coordination of the IOTT Secretariat, and it is presented for consideration to the Global Fund to Fight AIDS, TB and Malaria as a deliverable of the IOTT Secretariat's contractual obligations (hosted by ICASO).

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Community Systems Strengthening
Toward a Research Agenda

The Global Forum on MSM and HIV (MSMGF)

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ABSTRACT

Communities have a long history of acting to preserve and promote the health of their members. Public health researchers, programmers, and funders are increasingly recognizing that community involvement is essential to improving health, especially among populations that are disproportionately affected by HIV. The Global Fund to fight AIDS, Tuberculosis and Malaria, together with civil society organizations and other development partners, created the Community Systems Strengthening (CSS) Framework to help Global Fund applicants frame, define, and quantify efforts to strengthen community contributions engagement (Global Fund 2011). Although the use of a CSS approach in health programming implementation shows promise, it lacks a theoretical framework to guide collaborations with communities. Additionally, it suffers from a paucity of program designs and evaluation practices, an incomplete evidence-based rationale for investing in CSS, and imprecise definitions (e.g., what is meant by "community" and "CSS").

The purpose of this paper is to highlight promising areas for future research related to CSS. Toward this objective, we propose to lay a foundation for a CSS research agenda by using theories and approaches relevant to CSS, reinforced with evidence from projects that employ similar approaches.

INTRODUCTION

Communities have a long history of acting to preserve and promote the health of their members. Public health researchers, programmers, and funders are increasingly recognizing that community involvement is a critical strategy for improving and sustaining health. This is especially true among populations most at risk for HIV (Declaration of Alma-Ata 1978, World Health Orginization (WHO) 1991, WHO 2002, WHO 2008, WHO 2008, WHO 2011, Lippman, Maman et al. 2013).

Acknowledging the key role that community involvement plays in health promotion, the Global Fund to fight AIDS, Tuberculosis and Malaria, together with civil society organizations and other development partners, created the Community Systems Strengthening (CSS) Framework. The aim is to help Global Fund applicants frame, define, and quantify efforts to strengthen community contributions (Global Fund 2011). The Global Fund's CSS Framework places strong emphasis on capacity building, human resources, and financial resources to enable communities and community actors to play a full and effective role in the country level response to the three diseases, alongside health and social welfare systems.

The Global Fund indicated its commitment to CSS by incorporating the concept into its current funding model. Under this model, they explicitly encourage applicant countries to budget and plan for interventions specifically aimed at community mobilization, community-led service delivery, and strengthened accountability (Greenall 2013). In this context, the goal of CSS is to maximize meaningful community involvement. This is achieved by developing the roles of populations and communities most at risk for HIV, community organizations and networks, and public- or private- sector actors working in partnership with civil society at the community level, in the design, delivery, monitoring, and evaluation of services and activities focused on improving health (Global Fund 2011).

The aims of CSS, as outlined by the Global Fund, are ambitious and laudable. To date, investments in CSS are implemented with no theoretical framework to guide collaborations with communities, program designs, and evaluation practices. There is also an incomplete evidence-based rationale for investing in CSS (including identification and quantification of gaps), and use imprecise definitions of "community" and "CSS." The lack of tools to understand or assess the scale of community systems and their contributions makes planning CSS initiatives difficult.

The purpose of this paper is to highlight areas for future research related to CSS. Toward this objective, theories and approaches relevant to CSS and evidence from projects using similar approaches are presented, laying the foundation for a CSS research agenda.

A preponderance of studies that yield examples relevant to building a CSS research agenda come from literatures focused on a limited number of diseases (e.g., HIV, mental health). The examples included in this paper are meant to illustrate lessons learned and concerns that may apply to CSS (e.g., barriers, facilitators, designs, methods, processes, outcomes), rather than to specific disease. Importantly, the intent is that the present research agenda be universal and applicable to CSS principles across multiple health contexts.

THEORIES, APPROACHES and SUPPORT for a CSS FRAMEWORK

Although direct evidence of CSS success is limited, a number of approaches support the belief that strengthened community systems are critical contributors to improved public health, including Systems Thinking and theory, community participation and mobilization approaches, and health systems strengthening (HSS). This is especially true among populations most affected by HIV, also known as key affected populations. Attention to the challenges faced by programmers and investigators using these related approaches can guide the development of a research agenda that capitalizes on lessons learned.

Systems Thinking

Systems Thinking is concerned with understanding how systems behave, interact with their environments, and influence each other. It offers a useful conceptualization of what the term "system" means, as well as a strong justification for the importance of strengthening community systems. Systems Thinking emerged from a series of interdisciplinary dialogues among biologists, psychologists, and ecologists who came to understand that a living system, including a social system, is an integrated whole whose properties cannot be reduced to those of its constituent parts (Center for Ecoliteracy 2008). In his aptly titled book, *The Web of Life*, Fritjof Capra argues for a richer integration of the principles of how ecological communities (ecosystems) organize in creating sustainable human communities (1996). These principles include: interdependence, partnership, flexibility, diversity, and sustainability (resulting from the other principles).

These same principles have implications for CSS:

1. The principle of *interdependence* holds that the health and well-being of a community depend on the health and well-being of the systems that support it and of the individuals within it, and *vice versa*. It follows that the measure of any given individual's health is linked strongly to the health of the systems that support that individual's community.
2. The principle of *partnership* suggests that shared responsibility and multi-directional capacity building are critical for building partnerships that coevolve. In a CSS context, this suggests the importance of egalitarian partnerships, collaborations, and cultural exchanges among all involved.
3. The principle of *flexibility* implies a need for a dynamic balance between stability and change, order and freedom, and tradition and innovation. It also suggests a need to optimize multiple variables rather than maximizing any one single variable. This principle indicates the importance of identifying and capitalizing on, or strengthening, as many intertwining systems as possible.
4. The principle of *diversity* specifies that sexual, gender, ethnic, cultural, age, and experiential diversity are forms of complexity that can promote resilience - but only if a web of interrelationships sustains the community from fragmenting into isolated or marginalized groups. On this point, Capra emphasizes the importance of nourishing various relationships among members as well as across different systems and communities.

Thus, Systems Thinking suggests that, within a CSS framework, programming that

accounts for and addresses multiple interdependent systems will fare best.

Few programs or interventions have explicitly used Systems Thinking to guide their design, implementation, and assessment phases. One exception is a recent study that used a Systems Thinking framework to describe service delivery challenges in Zambia's Better Health Outcomes through Mentorship (BHOMA) Project (Mutale, Bond et al. 2013). Mutale and co-authors report that barriers to accessing health services by local communities include:

1. A shortage of qualified health workers.
2. Poor staff attitudes.
3. Poor relationships between community and health staff.
4. Long waiting times.
5. Challenges with confidentiality and health worker gender.

There were also challenges posed by long distances to health facilities, transportation expenses, and cultural practices. This list of barriers alludes to the complexities of system interdependencies, diversity of cultural values, and how systems interact under varying conditions.

An important and useful next step in this study is to use these findings to explore the relationships among the various systems in order to identify where to intervene, what to strengthen, and how and under what specific conditions particular designs will work. A CSS research agenda including the development of a theoretical framework based on Systems Thinking will be beneficial for guiding such an analysis. Given the nascent stage of CSS development, it is important to recognize any theoretical framework as heuristic rather than definitive. In this way, a given theoretical framework remains open to multiple lenses and will necessarily evolve as new information or evidence supports or contradicts the assumptions of the framework.

Community Participation and Community Mobilization

Community participation is a critical part of health programs, particularly since the acceptance of primary health care as the health policy of WHO member states. Community participation is gaining importance globally, especially in resource-poor settings. Incorporation of public views into priority setting is perceived as a means to restore trust, improve accountability, and secure cost-effective priorities within healthcare (Kamuzora, Maluka et al. 2013). These goals are infrequently met. This may be due to a conceptualization of community participation as a "magic bullet" expected to resolve long-standing health problems and issues related to political power (Rifkin 1996). While study findings indicate that health and development programs flounder without community participation, evidence showing that community participation directly improves health outcomes is scarce, in part due to challenges in measurement (Pritchett and Woolcock 2004). In her 1996 review, Rifkin argues for a paradigm shift that views community participation as an iterative learning process fostering realistic expectations. More recently, her review of the experiences and lessons learned by policy makers, planners, and managers attempting to integrate community participation into their health programs reported continued struggles with the same challenges (Rifkin 2009). Rifkin attributes these challenges to:

1. The dominance of the bio-medical paradigm as the main planning tool for programs, leading to a focus on community participation primarily for the community's ability to contribute to a discrete outcome rather than engaging them as a community of individuals with goals that are broader than any one intervention could address.
2. The lack of in-depth analysis of the perceptions of community members regarding the use of community health workers.
3. The propensity to use a framework that limits investigation into what works, why, and how, in community participation in health programs.

Despite these challenges, there is evidence to suggest that community participation contributes to health improvements at the local level, particularly among poor and marginalized communities (Oakley 1989, Rifkin, Hewitt et al. 2007, Rifkin 2009, Draper, Hewitt et al. 2010). For example, an evaluation of the impact of community responses to HIV in Burkina Faso, India, Kenya, Lesotho, Nigeria, Senegal, South Africa, and Zimbabwe found that investments in communities produce significant results. These include improved knowledge and behavior, increased use of health services, and decreased HIV incidence. More mixed was evidence on social transformation, or the process by which society, organization, and individual change happens, such as changes in behaviors or cultural norms and perceptions as a direct or indirect result of community action. For example, community participation was found effective only in some settings (Rodriguez-Garcia, Wilson et al. 2013). The latter finding hints at an inherent challenge in systems strengthening: *processes of change are more difficult to assess than concrete outcomes.*

In a randomized controlled study in Nepal, Manandhar and colleagues show that participation in women's groups improves antenatal outcomes (Manandhar, Osrin *et al*. 2004). While this epidemiological study illustrates a causal relationship between the intervention and the outcome, the study was unable to show *how* the women's groups functioned and whether each group received the same intervention. As a result, it was unable to link the intervention's impact to community participation per se. This study highlights how difficult it is to identify mechanisms of change that result in better health outcomes through community participation.

Regarding successful community participation and coordination, there is some agreement that important factors include national political will, government support to community health worker supplies and training, administrative decentralization of decision-making, and community participation in determining program success (Oakley 1989). In a qualitative study of a multi-community collaborative, investigators identified organizational features associated with how groups involve and prioritize lay involvement (Potter 2010). The study aimed to uncover mechanisms contributing to successful community partnerships, and results suggest that in order to foster lay/professional partnerships in policy initiatives, lay participants must possess additional, civic-based skills beyond those needed in the service delivery arena. Organizational and professional change may be required to address unequal power relations between programmers and researchers relative to community members. Some investigators conclude that effective collaborations with communities require a paradigm shift from traditional practices (Kone, Sullivan et al. 2000), suggesting that a new

approach should acknowledge community contributions, recruit and train community people to participate in development teams, improve communication, share power, and value respect and diversity.

A more recent study explores implementation of community participation in the context of resource-poor settings, weak organizations, and fragile democratic institutions. Key informant interviews with multiple stakeholders and minutes from planning and priority-setting meeting reports were analyzed (Kamuzora, Maluka et al. 2013). Findings indicate that community participation leads to:

1. Better identification of community needs and priorities.
2. Increased understanding of community representatives about priority setting, transparency, and accountability.
3. Enhanced trust among representatives of health systems and communities.
4. Perceived improvement in the quality and accessibility of health services.

The findings also highlight barriers to community participation, including:

1. A lack of funds to support the work of the selected community representatives.
2. Limited time for deliberations.
3. Short notice for meetings.
4. Lack of feedback on the approved priorities that constrain the performance of community representatives.

The authors note the importance of external facilitation and support for enabling health professionals and community representatives to arrive at effective working arrangements.

Community mobilization is designed to engage and galvanize community members to take action towards achieving a common goal (WHO 2003). Community mobilization is especially effective in HIV prevention where efforts vary in focus, including those that:

1. Address social and structural contexts surrounding HIV by reducing discrimination against groups most vulnerable to HIV.
2. Create social cohesion and extend social networks for disenfranchised communities.
3. Ensure community participation in prevention and care programming (Beeker, Guenther-Grey et al. 1998).

Successes resulting from the use of community mobilization include:

1. Increased condom use (Basu, Jana et al. 2004, Jana, Basu et al. 2004, Reza-Paul, Beattie et al. 2008, Ramesh, Beattie et al. 2010, Lippman, Chinaglia et al. 2012).
2. Improved service access and quality of services (Lippman, Chinaglia et al. 2012).
3. Increased social capital or social cohesion (Lippman, Chinaglia et al. 2012).
4. Promotion of HIV counseling and testing uptake (Sweat, Morin et al. 2011).

Although these successes in HIV prevention are attributed to community mobilization efforts, "community mobilization" is rarely defined prior to intervention design (which parallels challenges in defining CSS). Based on a recent literature review and qualitative study, one team of researchers identified six key domains of community

mobilization fundamental to behavior change or health outcomes. These include shared concerns, critical consciousness, organizational structures/networks, leadership (individual and/or institutional), collective activities/actions, and social cohesion (Lippman, Maman et al. 2013). The authors also note that some domains, extracted from largely Western theory, transfer easily or require little adaptation to fit some non-Western contexts (in this case, South Africa). They found that organizations and networks operate through diffuse family networks, rather than through formal organizations as hypothesized. Although there is a need for more specificity in defining CSS, this later finding suggests that a CSS framework will be more useful if it is flexible enough to address dynamic systems within particular and varied cultural and community contexts. It will be valuable for a CSS research agenda to take into account these complex interactions.

Health Systems Strengthening (HSS)

"Health systems strengthening" is defined as the process of identifying and implementing policy and practice changes in a country's health system, enabling a country to better respond to health and health system challenges. It includes any array of initiatives and strategies that improve one or more of the functions of the health system and that lead to better health through improved access, coverage, quality, or efficiency (Islam 2007).

Although the HSS Framework is older than that of CSS, HSS faces many of the same challenges, in particular vague definitions and goals. Nevertheless, there is widespread support for the HSS approach. Some of this support stems from the WHO health system building blocks that describe six sub-systems to overall health system architecture (WHO 2007). The building block approach has the potential to be helpful in identifying obstacles in a health system and guiding efforts in resource allocation and performance evaluation (Shakarishvili, Lansang et al. 2011).

One major advantage of the HSS Framework over the CSS Framework is that the parameters that define a health system are much clearer than those of a community system. For example, in a health system it is easy to identify health providers (e.g., doctors, nurses), health facilities (e.g., hospitals, clinics), populations reached (e.g., women, children, men), and the numbers of patients served. A critical question for CSS is whether it is reasonable to expect it to quantify similarly.

In a review of the international literature coupled with a qualitative study of HSS strategy development in Myanmar, investigators identified critical success factors (Tin, Lwin et al. 2010). These factors include evidence-based development of the strategy through a sector analysis and a long-term approach to strategy development with wide stakeholder participation. The authors note that these factors contribute to strategy breakthroughs in the areas of health planning, health financing, human resource management, and the creation of civil society partnerships.

Similarly, a more recent study on strengthening health systems to support mothers in infant and young child feeding (IYCF) identified key factors for building capacity and supporting programs to scale up IYCF counseling in various country contexts (Sanghvi, Martin et al. 2013). The authors conducted situational assessments, stakeholder consultations, formative research, household and frontline health worker surveys, and

program monitoring in these countries. Findings indicate that guidelines and standards of care, training, job aids, supportive supervision, incentives, and monitoring data can enhance performance and strengthen systems for delivering IYCF counseling services in communities or at health facilities. Leadership, financing, partnerships, and logistics support are essential to support large-scale implementation of the IYCF counseling package in diverse service delivery environments.

Another recent study found improvements in antenatal care attendance and health facility deliveries after implementation of HSS and community interventions (Ediau, Wanyenze et al. 2013). Interventions included training health workers, provision of medical supplies, community mobilization using village health teams, music dance and drama groups, and male partner access clubs. Findings were based on reviews of health facility data on selected outcomes in the year preceding the interventions and after 21 months of intervention implementation. In another evaluation study to assess tuberculosis care in Brazil, findings indicated that efficiency of health services requires taking actions that give special attention to families and communities, as well as developing skills to create new spaces for professionals to act and to strengthen the interface with other sectors of society (Nogueira Jde, Trigueiro et al. 2011).

The findings from the HSS studies cited above suggest that HSS improves programming and health outcomes. Several studies identify multiple factors necessary for successful HSS implementation. Even when actual health outcomes improve in studies using an HSS approach, there is a lack of evidence linking the outcomes to precise HSS strategies. Specifically, the studies fail to elucidate what systems are strengthened, how they are strengthened, or the mechanism by which strengthening any particular system leads to improved health outcomes.

Further research is needed to examine the mechanisms of HSS that lead to improvements in health systems and health outcomes, including those that are community-related. Analogously, CSS research will benefit greatly from being able to define what is meant by "CSS," what the aims are, and how to evaluate success.

COMMUNITY and COMMUNITY SYSTEMS: WHAT ARE WE STRENGTHENING?

Definitions of "community," "community systems," and "CSS" are critical for reducing ambiguities that exist in relation to CSS. Conceptualizing these terms will help determine the scope of programs, and it will facilitate evaluation of their effectiveness. This contributes to a more transparent and comprehensive CSS approach from both research and practice perspectives.

Community

Definitions of what constitutes a "community" are varied. Some definitions are based on a shared ethnic or cultural identity, where members belong to a group that shares common characteristics or interests. Others reflect a geographic place defined as a physical location (Rodriguez-Garcia, Bonnel et al. 2013). Different criteria often identify community without regard to the ways individuals relate to one another across multiple communities. A review article on community-based interventions provides a useful typology that expands conceptualization and definition of community, including:

1. Setting or location, not necessarily geographic.

2. Target group health-related behaviors.

3. Agent respect for and reinforcement of the natural adaptive, supportive, and developmental capacities of a given community.

4. Resources, including internal assets (McLeroy, Norton et al. 2003).

Other important considerations include identifying existing relationships within communities that share common interests and identifying the ways relationships are formed when establishing a community. This is especially important for gay men and men who have sex with men (MSM), sex workers, people who inject drugs, and transgender people (Kone, Sullivan et al. 2000).

Further problematizing the concept of community in a public health context is the practice of defining communities based on objective epidemiological categories (e.g., MSM, sex worker, people who inject drugs, people living with HIV), without regard for the formation of communities based on subjective characteristics (e.g., religious affiliation, personal identity, love of music or sports). Epidemiologically derived communities may be politically expedient. However, individuals may not identify with a given artificially derived community, challenging the notion of community and the community systems to be strengthened. This complicated concept of community has implications for communities defined as "people living with specific diseases" such as malaria or tuberculosis, where the idea of community may be even harder to operationalize.

The diversity of definitions across programs and studies reflects the complexities inherent in communities. New technologies that enable virtual spaces in which individuals can organize and form communities based on common interest rather than physical location enhance this complexity. Future CSS research will need to articulate the parameters (e.g., setting, target, agent, resource) of the community or communities intended to be the focus of CSS (McLeroy, Norton et al. 2003).

Community Systems

Various research paradigms and health programs imply a concept of "community systems," though they lack a definition (Altman 1995, Freudenberg, Eng et al. 1995). The notion of community systems follows from Systems Thinking. Systems Thinking suggests that community systems are structured ways of interaction based on codified symbols that are understood by those within the community, and that community systems represent the multiple and complex ways in which individuals (and communities) relate to each other (Capra 1996).

Consistent with a Systems Thinking framework, the Global Fund defines community systems as:

Community-led structures and mechanisms used by communities through which community members and community-based organizations and groups interact, coordinate, and deliver their responses to the challenges and needs affecting their communities. Many community systems are small-scale or informal. Others are more extensive – they may be networked between several organizations and involve various subsystems. For example, a large care and support system may have distinct subsystems for comprehensive home-based care, providing

nutritional support, counseling, advocacy, legal support, and referrals for access to services and follow-up (Global Fund 2011).

Community Systems Strengthening (CSS)

Given the lack of precision in defining "community" and "community systems," it follows that the greatest ambiguity lies in defining "CSS." The concept hinges on varied interpretations of what constitutes community or community systems, both of which have vague meanings.

The Global Fund defines CSS as:

An approach that promotes the development of informed, capable, and coordinated communities, and community-based organizations, groups, and structures. CSS involves a broad range of community actors, enabling them to contribute as equal partners alongside other actors to the long-term sustainability of health and other interventions at the community level, including an enabling and responsive environment in which these contributions can be effective (Global Fund 2011).

A CSS research agenda needs to address how this definition operates in practice, describing how to unpack each aspect of this definition to provide a clear framework to guide development, implementation, and evaluation processes. Some questions for investigation include:

1. What do informed, capable, and coordinated communities look like and what would constitute change toward these aims?
2. Why is it important to include community-based organizations that work with members of communities with whom the target community associates?
3. What does equal partnership mean?
4. Who decides when parity is reached?

Similarities between CSS and HSS contribute to further confusion about the meaning and significance of CSS. Research is needed to elucidate the overlaps and differences between CSS and HSS, as well as potential synergies from using both approaches. For example, is it helpful to conceptualize HSS as the supply side of health and service provision, and CSS as the demand side? The Global Fund and a range of partners recently began to explore the links between HSS and CSS (Global Fund 2013). Although this exploration is currently suspended, it did yield some distinctions between the two. Most helpfully, they identify that while community aspects of HSS align with the goals of CSS, many are beyond the scope of HSS. For example, support efforts to increase capacity among community health workers may be both an HSS and CSS activity, whereas advocacy for law reform or stigma training for police officers are CSS activities beyond the scope of HSS – even while such activities have demonstrable impact on health. Also evident from the exploration is the critical role of community in health and community systems, and the need for more work to uncover and address social determinants of health.

A CSS research agenda might benefit from further articulating the similar and unique aspects of CSS compared to HSS. This approach will capitalize on lessons learned from HSS and elucidate those aspects of CSS that require additional clarification and

research. In addition, a CSS research agenda that grapples with distinction between CSS and HSS may more clearly lay bare the complementary nature and unique contributions of both.

INITIATING A COMMUNITY STYSTEMS STRENGTHENING RESEARCH AGENDA

Although there is consensus among programmers, funders, and investigators that a CSS approach is a critical contribution to improved public health outcomes, particularly among key affected populations, it fails to move beyond rhetoric. Findings from numerous studies exploring programs using related approaches suggest that a CSS approach is warranted. Although these studies indicate that community participation is important to successful implementation of health programs, they do not reveal the specific mechanisms of change. This makes it difficult to evaluate outcomes or replicate aspects of effective programming, while discarding those not essential. Further research is needed to:

1. Develop a theoretical framework to serve as a foundation to guide future CSS-based program designs, implementation, and evaluation.
2. Promote clear definitions, or parameters, to clarify what "community," "community systems," and "CSS" mean.
3. Build an evidence base that identifies the critical mechanisms of change.
4. Develop appropriate processes and measures to evaluate the efficacy of programs that use a CSS approach.

Developing a CSS Theoretical Framework

Theory development may be beyond the scope of a CSS research agenda at this time. Even so, a theoretical framework will be useful for guiding program design and interventions, determining what to measure, and identifying suitable methods for analyzing purported expected outcomes. Some argue that a theoretical framework is essential for establishing the empirical basis for an approach, including impact, factors influencing impact, methods used, and issues raised (Molyneux, Atela et al. 2012). Just as importantly, a theoretical framework will be valuable for determining realistic estimates of how long it may take to see an effect. For example, in a CSS-based intervention it may be reasonable to expect improvements in community engagement within a short time frame. Leveling of power hierarchies among different community systems, however, including those between community members and program staff, may have a much longer time horizon. To the extent that the implicit assumptions about what is expected from a CSS approach are made explicit and well articulated, CSS research will advance.

A central question to explore when developing a CSS theoretical framework involves whether or not CSS primarily aims to improve health outcomes, or to strengthen community systems where improved health outcomes are an assumed byproduct of the systems strengthening. The implication in the former case is that program development will predominantly focus on strengthening systems believed to be most associated with the health outcomes of interest. In this scenario, the measure of success will be the extent to which desired behavior changes or health outcomes are attained.

A CSS theoretical framework that places improving community systems in the forefront

assumes that strengthening the community systems has intrinsic value that will result in secondary effects in the form of improved health outcomes. This framework has implications for how one will evaluate outcomes. Evidence of success is based primarily on an evaluation of the systems that are strengthened, with secondary analyses of improved health outcomes - with the assumption that the mechanism of change for the secondary outcomes are linked to the extent to which community systems are strengthened.

In addition to addressing the question of primary and secondary aims, a CSS research agenda should contend with whether the health concern and approach to programing originate with the communities, the programmers, and/or those who fund a given program - or originate from a collaborative process between the three. This raises questions regarding whether or not, and if so, how community systems action is initiated (e.g., by funders, governments). Related to this question is the conceptualization of communities exclusive of program staff and funders. This distinction may be artificial and result in unnecessarily polarizing community members from programmers and funders. Better understanding through research is needed of this differential so that we can mobilize communities already within institutions towards common goals. Nonetheless, if CSS is determined to be a participatory practice evolving from a collaboration among communities, programmers, and funders, CSS will be a learning experience for the collaborators and those responsible for the national climate in which change takes place. A CSS research agenda will need to address these questions, all of which have implications for evaluation. The measure of success will include evaluation of changes among all partners including programmers and funders.

While the purpose of this paper is not to determine any specific theoretical framework, it aims to illustrate the implications of and practical value in developing such a framework. It also aims to recommend that the development of a theoretical framework be an integral task of a CSS research agenda. Given the importance CSS places on systems and systems strengthening, Systems Thinking and theory might be useful lenses through which to explore and develop a CSS theoretical framework.

Recommendations:
1. Articulate what is expected from a CSS approach.
2. Identify primary and secondary goals, including whether or not CSS primarily aims to improve health outcomes, or to strengthen community systems where improved health outcomes are an assumed byproduct of the systems strengthening.
3. Decide whether the health concern and approach to programing should originate with the communities, the programmers, and funders, or in a collaborative process.

Identifying Parameters for Defining Community, Community Systems, and CSS

Ambiguous terminology, as previously discussed, remains a basic challenge to the heuristic value of a CSS approach. A CSS research agenda will need to address this ambiguity. There are multiple approaches to doing this. One approach is to define each term such that all programming and interventions use the same definitions in their work. The advantage here is increased uniformity across program designs, implementation,

and measurement. Although this approach imposes order on dynamic communities, it does not account for the complexity and dynamic nature of communities and their systems.

Another approach is to accept the diversity inherent in human communities and develop parameters for describing communities and community systems based on context and given health concerns. For example, the parameters for what constitutes a community within populations most at risk of HIV, such as MSM, might include:

1. Setting (e.g., Nairobi, Kenya).
2. Target (e.g., MSM accessing health services).
3. Agent (e.g., formal and informal relationships among MSM and non-MSM, community engagement activities among MSM, non-MSM specific supportive systems, advocacy organizations).
4. Resource (e.g., MSM-specific CBOs and services, health knowledge and health provision capacities) (McLeroy, Norton et al. 2003).

Although these may not be the specific parameters for defining communities, determining the parameters required for defining respective communities across all programs will allow for the diversity of communities within their respective contexts. It will simultaneously require programmers and investigators to use the same criteria to define what they mean by the community in question.

By extension, this approach could support the development of parameters for explication regarding respective community systems. This might include the parameters designated by the Global Fund, including community-led structures and mechanisms used by communities through which community members and community-based organizations and groups interact, coordinate, and deliver their responses to the challenges and needs affecting their communities. It will likely include other related systems that are indirectly associated with these. For example, in collective cultures it will be important to account for potential networks of family and friends that influence communication systems, support networks, and individual behaviors. A CSS research agenda will advance CSS by explicitly mapping some primary systems categories that will need to be addressed (even if it means checking to see that a given system is or is not relevant for a given community).

Recommendations:

1. Develop well-defined parameters for describing communities and community systems based on context and given health concerns.
2. Identify the parameters that will need to be explicated for respective community systems across all projects.

Building an Evidence Base

The research on community participation and mobilization, as well as HSS, suggests that strengthened community systems are critical contributors to improved public health. Additional research is needed to uncover the specific mechanisms that account for 1) improved community systems, and 2) improved health outcomes. Once decisions are made regarding the primary and secondary aims of CSS, a CSS research agenda will benefit from categorizing existing findings onto respective classifications of outcomes.

For example, if strengthening community systems is the primary goal, the existing literature and ongoing evaluations of CSS programs may help develop a comprehensive catalogue of community systems and of approaches that strengthen them. This exercise will contribute to a more thorough and evidence-based description of the parameters of what constitutes community and community systems.

In parallel, and essential to the development of an evidence base, it will be important to collect data from existing projects that help to build evidence regarding:

1. Most appropriate designs and methods for implementing and evaluating programs within contexts of particular communities.
2. Types of community systems and health outcomes of interest.
3. Both qualitative and quantitative data that can point to what works and what does not work.

Together, these findings will help to move a research agenda forward, as well as provide concrete evidence on gaps, needs, effectiveness, and efficacy[1].

Recommendations:

1. Identify mechanisms that account for 1) improved community systems, and 2) improved health outcomes.
2. Develop a comprehensive catalogue of community systems, and of approaches that have worked to strengthen them.
3. Collect data from exiting projects that help to build evidence regarding:
   a. The most appropriate designs and methods for implementing and evaluating programs within contexts of particular communities.
   b. Types of community systems and health outcomes of interest.
   c. Both qualitative and quantitative data that that can point to what works and what does not.

Developing Plan for Evaluation: Outcome and Process Measures

Outcomes from a CSS research agenda will logically have implications for evaluation of CSS-based programs. Evaluation strategies and measures of community participation and HSS are still in their infancy. Evaluation of CSS outcomes are even more underdeveloped due to ambiguity in definitions, a lack of information on interventions that bring about strengthened systems, and a lack of methods and measures for evaluation. Further complicating prospective evaluation is the implicit assumption of a direct relationship between participation and health outcomes (Rifkin 1996). In a CSS framework, a linear, causal paradigm ignores critical factors that influence the

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[1] In public health, effectiveness of an intervention is the extent to which desired outcomes are reached in usual or routine conditions (i.e., real-world situations). Whereas efficacy refers to the extent to which positive results are reached in a controlled research setting. A study that shows an intervention approach to be "efficacious" means that the study produced good outcomes, which were identified in advance, in a controlled study, often in highly constrained conditions. Translating efficacious practices to routine practice settings to produce effective results is one of the challenges of evidence-based practice.

relationships among and within community systems. These include interdependence, partnership, flexibility, diversity, and sustainability. These factors are difficult to quantify, and they are influenced by community history, cultural values and norms, social and political capital, power, and context. Although not directly CSS-focused, there are studies and frameworks on related community engagement strategies that might help guide the development of outcome and process measures for CSS evaluation (Oakley 1989, Manandhar, Osrin et al. 2004, Rifkin, Hewitt et al. 2007, Rifkin 2009, Draper, Hewitt et al. 2010, Molyneux, Atela et al. 2012).

Recognizing the complexity and dynamic nature of communities, Rifkin and colleagues called for a nuanced analysis of community participation impacts (Rifkin, Hewitt et al. 2007). In their critical review and analysis of the role of community participation in enhancing the uptake of nutrition interventions for child survival and anemia, and whether any such increases in uptake are sustainable and scalable, the authors demonstrate a positive impact in all categories. They suggest that the process by which these programs are implemented is crucial, and they highlight the need for more prospective, rigorous evaluations of community participation that examine the role of process and impact on outcomes.

In another study focused on evaluation of community participation, the authors use a literature review and retrospective analysis to define "indicators of participation" along a "continuum of community participation (Draper, Hewitt et al. 2010)." They then incorporate this into an evaluation framework that enables an analysis of the processes of participation and links with health and program outcomes. The indicators of participation include:

1. Leadership of the community and of the professionals introducing the intervention.
2. Planning and management.
3. Forging partnerships between community and professionals.
4. Women's involvement.
5. External support for program development in terms of finance and program design.
6. Monitoring and evaluation examining how intended beneficiaries are involved in program activities.

The continuum of community participation includes values for mobilization, collaboration, and empowerment.

The evaluation strategy proposed by Draper et al. uses process indicators to appraise the nature and extent of participation achieved in relation to the continuum between community mobilization and community empowerment. Then, process indicators are analyzed in relation to health and program outcomes. This approach to evaluating community participation process outcomes provides a possible model for conceptualizing CSS process evaluations, in which communities participate in the delivery of health-related interventions (Draper, Hewitt et al. 2010). The advantage lies in the ability to capture process outcomes. Additional measures are needed to evaluate CSS outcomes, especially if a CSS research agenda concludes that strengthening systems is more than involving communities in health care promotion and delivery.

A study of the relationship between social environments and health predicting mediators offers a framework with operational variables and guidelines that enable start-up, facilitation, and evaluation of social change and learning processes (Wagemakers, Vaandrager et al. 2010). The variables for evaluation include:

1. Context (e.g., community context and readiness, linkages to other groups, resource mobilization).
2. Participant/stakeholder (e.g., expectations, skills, experience, diversity of participants, resources).
3. Partnership/coalition (e.g., roles, tasks, structures, communication and information exchange, documentation, flexibility)
4. Process variables (e.g., involvement, commitment, motivation, mission vision aims, action plan, participation satisfaction).
5. Outcome (e.g., satisfaction, perceived effectiveness, benefits and costs, participation results, reached target population, media coverage, visible outcomes, type of activities, changes in environment, institutionalization, policies).

Based on this conceptual framework, the authors developed a checklist that enables facilitation and evaluation of community health promotion partnerships that differ in context and level (both local and national), program phase, and topics addressed. Importantly, findings indicate that crosschecking and discussing results with partners, and triangulation with interview data, increases the reliability of the overall evaluation approach.

Evaluation methods, tools, and measures are needed to advance a CSS research agenda. The examples presented here offer promising models of useful approaches that could be adapted for CSS evaluation. The particular evaluation approach will depend on the theoretical framework, conceptual definitions, and evolving evidence on what works and what does not. It will also be important to incorporate quantitative methodologies and analyses that provide evidence of efficacy of interventions. Finally, it will be essential to develop evaluation methods that account for the level of investment required for CSS moving beyond cost-effectiveness analyses or accountability frameworks.

Recommendations:

1. Adapt existing models of evaluation methods, tools, and measures to develop CSS evaluation plan.
2. Use a theoretical framework, conceptual definitions, and evolving evidence on what works and what does not to iteratively advance evaluation plans and a theoretical framework.
3. Incorporate quantitative methodologies and analyses that can begin to provide evidence of efficacy of interventions.
4. Develop evaluation methods that account for the level of investment required for CSS that move beyond cost-effectiveness analyses or accountability frameworks.

CONCLUSIONS

Notwithstanding all the ambiguities surrounding CSS, there is consensus that a CSS approach is essential. Importantly, a CSS approach contributes to community systems and public health, especially among populations most at risk of HIV and other marginalized people. There is strong commitment to a CSS approach by the Global Fund, and findings from studies in community participation and HSS support the enthusiasm surrounding CSS and suggest community level factors that predict intended health outcome or productive community engagement. Further study must establish the relevance of these factors to a CSS approach, and towards the development of a CSS theoretical framework.

A CSS research agenda should include operational research that helps practitioners make the case for community and community systems strengthening. Operational research will be advantageous for developing a more comprehensive CSS research agenda, and a preliminary theoretical framework would be useful articulating initial expected outcomes, and assessing and uncovering critical components of CSS. The findings would inform the theoretical framework, provide new evidence for aspects of CSS that work, and flush out a more rigorous evaluation plan. This type of iterative process is ideal for strengthening CSS program design and evaluation, while advancing the theoretical framework.

Within this structure, the proposed principal activities for a CSS research agenda are to:

1. Develop a theoretical framework that can serve as a foundation to guide future CSS-based program designs, implementation, and evaluation.
2. Devise clear parameters for defining community, community systems, and CSS.
3. Build an evidence base that identifies the critical mechanisms of strengthened community systems change and improvement in health outcomes
4. Develop outcome and process measures to evaluate the efficacy of CSS.

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