



OPEN LETTER

REVISED Supporting communities of practice – A Journey to effective problem-solving [version 2; peer review: 2 approved with reservations, 1 not approved]

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Abstract

In contexts of scarce resources, varied assets, and diverse communities, engaging local stakeholders in the problem-solving process is critical to develop interventions for HIV prevention and treatment. Communities of practice (CoPs) – groups of people organized around a key purpose and a delivery point – can develop expertise in identifying their local community’s key challenges and selecting viable solutions. We propose a framework, adapted from the CoP model developed by Etienne Wenger, for systematically understanding the stages a CoP may go through as it develops its capacity to identify and solve problems and implement good practices. Our framework is based on the experience of practitioners of the LISTEN model (Local Initiatives Scaled Through Enterprise Networks) in eight local-level CoPs in Kenya and Eswatini. LISTEN seeks to help CoPs integrate continuous improvement processes, data, and human-centered design into their development and solutioning activities. The four stages in our framework for a CoP’s problem-solving journey are: 1) **Community Identity**: Identify and understand the CoP’s purpose and goals, and build rapport with its members and leaders; 2) **Quick Win**: Use a process of human-centered design to obtain a rapid and clear success in addressing a problem that the CoP has identified for itself and which it can tackle with its own resources; 3) **Stewardship**: Support the CoP in addressing more complex or long-term issues, including links to other

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CoPs at the local-community or higher levels to disseminate knowledge and obtain resources and support, where needed; and 4)

Evolution: Support the CoP as it transitions into potentially new structures or functions. For each stage of the framework, we describe the kinds of support that may be provided to the CoP in the LISTEN model, and the types of tools that could be developed to assist them in problem-solving and in disseminating sustainable solutions.

Keywords

HIV prevention, communities of practice, Eswatini, Kenya, Human Centered Design, LISTEN

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REVISED Amendments from Version 1

This version of the article has been revised in response to comments from our reviewers. It includes more background on Wenger's concept of a community of practice; an explanation of why we adapted some of Wenger's terminology and framework to reflect the particular context of the LISTEN program; a definition of human-centered design; a description of the role of the facilitator in the LISTEN model; a clarification of how the LISTEN model was introduced in Kenya and Eswatini; a description of how the "quick wins" were conceptualized and designed in Eswatini using the LISTEN process; and a clarification that the tools we propose to support the LISTEN process are concepts that have not yet been designed.

Any further responses from the reviewers can be found at the end of the article

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Introduction

Despite significant gains and the potential for new technologies to accelerate progress in the fight against HIV, many countries face substantial challenges in preventing new infections and providing treatment and care to those living with HIV¹. Alongside questions of resourcing and sustainability^{2,3}, the path to long-term epidemic control requires enabling country ownership and an effective transition to programs that are well integrated with community needs, desires, and innovations⁴. This means ensuring that local communities are engaged to their full potential, and innovations are systematically identified, catalyzed, and scaled up. It is therefore essential to leverage local knowledge and innovation so that communities are empowered to develop and own programmatic solutions⁵.

Nevertheless, promising new approaches and ideas do emerge at the local level, often incubated by communities of practice (CoPs) – groups of people with a common area of interest who share with each other the resources and knowledge that they develop. The LISTEN model (Local Initiatives Scaled Through Enterprise Networks)¹ offers a structured process to encourage and support local ownership of problem-solving initiatives through CoPs^{6,7}. It operates from the understanding that well-developed and effective CoPs at the community level are the foundation for sustainable approaches that can reach the most socially remote and vulnerable members of a country's population. LISTEN has been pioneered by local country teams to address HIV prevention in Kenya⁶, Eswatini, and Malawi, supported by a consortium of institutions and organizations, including the Amsterdam Institute for Global Health and Development, the Center for Global Health

Practice and Impact at Georgetown University Medical Center, DesireLine, Final Mile Consulting, CooperSmith and PATH.

In this Open Letter we describe our observations of the work of CoPs implementing the LISTEN model at the local-community level in Kenya and Eswatini, countries with a high prevalence of HIV and significant numbers of new infections annually⁸. (Malawi is not included here because the LISTEN model had not yet been introduced at the time of our visits to the two other countries.) Building on Étienne Wenger's theory of CoPs as an expression of social learning, we propose a framework for systematically understanding the stages that a CoP may go through as it develops its capacity to identify and solve problems and develop and implement good practices, and the support that the CoP may need at each stage.

Communities of practice and the LISTEN model

The concept of a CoP, developed by Etienne Wenger and Jean Lave, sees learning not as an individual process but as a social one, situated in a cultural and historical context⁹. Learning can thus take place in any area of endeavor and is not limited to formal education¹⁰. The concept of the CoP has been particularly influential in the areas of education and organizational studies¹¹. Wenger defines a CoP as a group of people who interact regularly (community) around a shared interest (domain) and develop a shared repertoire of knowledge and resources (practice)^{5,10}. This practice may be to help each other solve everyday problems and share ideas; to develop, validate, and disseminate specific practices or knowledge; or to foster unexpected ideas and innovations.

A CoP may be formed within an already existing group or organization, or it may be created from scratch to address a specific issue. In either case, Wenger identifies several stages in its development⁵:

1. **Potential:** An issue is defined in a way that inspires people already concerned with the issue to come together, realizing that they may accomplish more through improved networking and knowledge-sharing.
2. **Coalescing:** The precise type of knowledge to be shared and the value of doing so is established, and relationships and trust are developed.
3. **Maturing:** The CoP defines its boundaries and its relationship to the wider organization or community, and organizes its knowledge.
4. **Stewardship:** The CoP works to promote the relevance of its domain of knowledge, keep its members engaged in lively debate and learning, and stay relevant or innovative.
5. **Transformation:** The CoP may change its form, for example becoming institutionalized as a "center of excellence", turning into a social club, splitting or merging, or eventually fading away.

¹ "Enterprise network" here refers to a network that connects groups of people to knowledge and resources beyond their own group.

The LISTEN model slightly modifies the three components in Wenger's definition: LISTEN conceptualizes a CoP as

a **group of people** organized around a **key purpose** (e.g., health, economic empowerment, public safety, etc.) and a **delivery point** (any interface between the supply and demand of those services). “Group of people” clarifies that in the LISTEN model, those coming together need not previously have been a formalized community or organization; “key purpose” highlights the problem-solving aspect of the work (rather than simply developing knowledge or pursuing an interest for its own sake); and “delivery point” adds emphasis to the model’s focus on interactions among people within a system, rather than the role that an individual performs.

The LISTEN model has three aims: to 1) to facilitate the development and support of CoPs at the local-community, regional, and national levels to integrate systematic processes for continuous improvement; 2) to improve the collection and use of data by each CoP to ensure that CoPs’ approaches to problems and innovations are evidence-based; and 3) to enable CoP’s uptake and use of human-centered design to accelerate and scale up both current and new solutions. Human-centered design is a systematic approach to problem-solving which prioritizes the experience, knowledge, perspectives, and values of the people directly affected by the issue in co-designing solutions, rather than imposing solutions from outside. In this respect it is aligned with concepts of community engagement endorsed by WHO¹². Specifically, human-centered design involves developing a thorough understanding of the problem area, identifying stakeholders’ specific needs, co-creating solutions with the stakeholders to address those needs, and iteratively testing and refining the potential interventions.

In the LISTEN model, trained facilitators identify and engage with existing groups or organizations relevant to the primary goal (entry point) of the LISTEN implementation effort, e.g., healthcare facility teams or youth groups when HIV prevention is the focus. Working with existing groups or organizations to facilitate their development toward operating as a CoP is preferred, as they are already motivated and organized around their primary purpose. However, in some cases where a group or organization would be helpful but is lacking, it may be opportune to engage individuals (e.g., members of a village community) in developing themselves into a CoP around a common issue.

The model links CoPs, both horizontally (i.e., CoPs working at the same level, such as village CoPs), so that they can learn from one another, and vertically, so that CoPs closer to local communities can call upon the support they need from higher levels of the system (e.g., village CoPs supported by regional or national government ministries). LISTEN facilitators also work with the CoPs to identify data and information relevant for measuring themselves against their goals, e.g., the rate of HIV infection in their community, to help them prioritize and stimulate their problem-solving efforts. The process by which a facilitator engages with the CoP is a responsive one, developed through respect and understanding between them. The facilitator supports the group in identifying and prioritizing their challenges, analyzing the root causes, designing responses

to address these, linking CoPs to one another (horizontally) for mutual learning, and linking them with external resources and support (vertically) where needed. This emphasis on strengthening systems both horizontally and vertically through intentional interactions is the reason the LISTEN model conceptualizes a CoP as having delivery points, rather than Wenger’s more general term “practice”. At the same time, the facilitator learns through their interaction with the CoP and adapts their guidance according to the CoP’s own practice and that of other CoPs with common goals or similar practices.

In contexts of scarce resources, varied assets, and diverse communities, we see the engagement and support of local stakeholders in leading and owning the problem-solving process as critical to the development of effective interventions for HIV prevention and treatment. CoPs can develop expertise in identifying their local community’s key challenges and selecting solutions that can be implemented within their community. In doing so, they can take on accountability for the results, and also begin to hold the elements of the system meant to serve them accountable to do so in a responsive, rather than directive, way. By equipping communities with the LISTEN model and helping them develop problem-solving skills to address their own challenges, we hope to create a more sustainable process for finding solutions.

The problem-solving journey of a CoP

We engaged with four CoPs in Kenya, and four newly formed CoPs in Eswatini, as they adopted the LISTEN model. In each country, with government agreement, LISTEN supported the Ministry of Health to hire or assign facilitators for the LISTEN process. The facilitators received online training in human-centered design, and in-person training in the LISTEN process.

The Kenyan groups were selected with the guidance of the National AIDS Control Council and county health departments, with a view to engaging with communities that were particularly vulnerable to HIV and helping them develop into CoPs. We drew upon the experiences of a group working to retain adolescents living with HIV in treatment, at Nazareth Hospital in Kiambu; and a faith-based organization comprised of youth representatives of various churches engaged in HIV prevention work, also in Kiambu. We also studied two organizations of fisherfolk and an organization of boda boda drivers (motorbike delivery and ride providers) in Homa Bay. This is an area where residents are at high risk of HIV, including through the exchange of sex for needed products and services (e.g., fish and transportation). In Eswatini, CoPs were formed in three separate locations, as well as a cross-community CoP established among a group of “Community Champions” (members of the three CoPs), who were brought together to conceptualize and design some quick and effective solutions to problems they faced, including HIV prevention. In each case in both countries, the LISTEN model was first presented to leaders of the groups or communities, and they agreed to try working with the process to identify and address challenges facing them.

Through observation of the LISTEN process and in-depth discussions with the CoP members, we adapted Wenger's framework to understand the key stages that local-level CoPs such as these go through as they develop, and how the LISTEN model can support their problem-solving journey. Our framework incorporates Wenger's stages of a CoP's development, as well as concepts from theories of social mobilization¹³, collective efficacy¹⁴, and intrinsic motivation¹⁵. Since CoPs evolve through different stages of development and within different contexts, with varying needs for support, this framework provides a structure that can in future be used to develop tools appropriate for each CoP's context. The framework is thus an integral part of the human-centered design approach underlying the LISTEN model. It is also based on our observations and in-depth discussions with members of the eight CoPs. It describes four stages in the problem-solving journey of a CoP.

1) Community identity

This stage corresponds approximately to Wenger's stages of Potential and Coalescing. CoPs will be at differing levels of development in different local communities, necessitating a nuanced approach on the part of the LISTEN facilitator to introduce the LISTEN model, establish a supportive relationship with local community leaders or the CoP leader, and provide resources to foster the CoP.

- Some CoPs already exist and thrive independently, and have established their key purpose, group, and delivery point.
- Some groups may have a key purpose but have not yet developed their delivery point.
- Some CoPs are "architected", i.e., they have been brought together with a certain key purpose in mind and need to develop their group and delivery point.

In formalizing a CoP where it does not already exist as such in a local community, the first step is to understand the current state of the community through conversations with local leaders and other stakeholders. What problems do they face? How are they addressing them? What local organizational structures exist? Are there already any functioning CoPs (whether or not they are understood as such)? What would support look like from their point of view? This information may be formalized in a LISTEN CoP Charter that outlines the community's goals and areas of focus.

In identifying CoPs, and inviting them to adopt the LISTEN model, the goal is not just to build trust with the local community and its leaders, but to support the community to develop its sense of ownership and empowerment – the belief that the CoP has an intrinsic capacity to address the local community's issues, and that it is in the interest of the CoP to accept the support offered by the LISTEN model.

In this stage it is important to:

- Identify and understand the existing purpose and goals of the community

- Build trust with the community and leaders
- Build a sense of efficacy among individual members, and collectively as a group
- Identify sources of intrinsic motivation, and drive a focus on the intrinsic motivation of individual members, which may include:
 - **Mastery:** Desire among individuals to improve skills/learning
 - **Autonomy:** Need to direct one's own life and work
 - **Meaning:** Connect effort to larger purpose¹⁵
- Determine the most appropriate group motivators.

Mature CoPs are often characterized by a sense of in-group identity, clear organizational and communications structures, and processes for problem-solving and communications. In Homa Bay, for example, we observed that the boda boda drivers wore uniforms, had a hierarchical organizational structure established through elections, communicated via meetings and WhatsApp groups, and documented their meetings through videos, photos, and log books. In Eswatini, we observed that the Community Champions also had elected leadership positions, and they communicated via a WhatsApp group and took part in capacity-building workshops.

2) Quick Win

This stage corresponds approximately to Wenger's stages of Coalescing and Maturing. It seeks to integrate within the CoP structure the LISTEN model of using data and human-centered design, in order to obtain a "quick win" – a rapid and clear success in addressing a problem that the local community has identified for itself, and which it can address in the short term using its own resources. The quick win establishes and demonstrates the value of the CoP for the local community when capacitated with the LISTEN model. It thus helps to build trust among the CoP members and increase their commitment to work together toward their individual and collective goals.

At this stage it is important to:

- Promote LISTEN as an aspirational opportunity that could help CoP members achieve their individual and collective goals
- Share processes and tools for identifying, prioritizing and assessing problems to tackle that will provide short-term, achievable "wins" for the CoP
- Support development of indicators and metrics to measure progress on problem solving
- Promote reciprocity and build small commitments, so that members feel that their contribution toward achieving the group's goal also benefits them at an individual level

- Provide transferable skill-building opportunities and actionable feedback so members feel a sense of progress at an individual and collective level
- Confirm and solidify the sense of efficacy, so members develop a positive belief system
- Leverage coordinated behaviors between participants to enhance social bonds and collective identities.

In Eswatini, one-day workshops with the three location-based CoPs used a human-centered design process to understand and prioritize the numerous issues affecting the communities. Subsequently, a two-day workshop with Community Champions, led by LISTEN facilitators, resulted in participants focusing on HIV prevention, alongside water access and unemployment, as problems that could be addressed. The human-centered design process helped the participants map current community resources and structures, identify root causes and actionable problems, and conceptualize and prioritize solutions based on the community's specific needs and resources. For each set of solutions, the participants identified what they could realize through their own community efforts and resources – their quick win – and what external support they would need to achieve the solution. The design workshop helped them learn a new approach to problem-solving, define the group's leadership role for improvement within their communities, and build collective efficacy which may motivate them to pursue more challenging problems in the future.

In Homa Bay, a quick win was a scheme for boda boda operators and fisherfolk to distribute condoms for HIV prevention, after receiving support to address challenges with licensing and police harassment. These CoPs have since developed the ability to identify and address quick wins on their own, such as investment projects and projects to provide alternative sources of revenue, and tree-planting to address deforestation.

3) Stewardship

This stage corresponds approximately to Wenger's Stewardship stage. The LISTEN facilitator focuses on supporting the CoP as it addresses more complex (second-order) challenges. Achieving or making progress on their quick win gives the CoP members an experience of reciprocity, and a sense of competence to address more complex or long-term issues.

It is at this stage that the CoP may require external technical support, for example for measurement and evaluation, including data creation, collection, and reporting. This may involve structured efforts to seek support from external or higher-level stakeholders. However, the LISTEN model helps the CoP members to see that asking for such support is compatible with self-determination when based on its own assessment of its needs, rather than the CoP being required to accept assistance imposed from outside.

Likewise, the CoP may benefit from being linked to CoPs at the horizontal level for mutual sharing of problem-solving processes. This makes full use of situated learning – i.e., learning based in a social context⁹ – as CoPs not only apply their experience and the data they have captured to their next problem-solving efforts, but share their learning with other, similar CoPs. The CoP may also benefit from being linked to CoPs at a higher level in the system for additional resources and to disseminate solutions by informing policy-makers. Through the linkages, the CoPs are capacitated to access solutions for themselves, both from other CoPs through experiential learning, and from CoPs at a higher vertical level (e.g., district, state, or national). In strengthening these horizontal and vertical linkages, the existing systems (governance, coordination, service delivery, and information management) are mapped. The LISTEN model uses the existing governance and coordination structures to make them more effective and efficient.

At this stage it is important to:

- Manage expectations, given that less visible progress may be made during longer problem-solving timespans
- Promote reflection/self-assessment by documenting and acknowledging members' efforts
- Assist with horizontal and vertical connections for sharing and adapting solutions
- Identify needs for multi-sector support (e.g., employment, youth funds, education, health) and facilitate explicit commitments from new horizontal and vertical partners
- Update the problem-solving process to include new learnings, and tools such as knowledge management systems.

In Kenya, we observed that the LISTEN model has been used to link the citizen-level CoPs to decision-makers in various sectors across the different levels, while ensuring that the citizen-level CoPs' interests and goals, as outlined in their charters, are recognized and addressed at each level of governance. This provides a win-win situation for leadership and communities and aids sustainability. In Eswatini, the Community Champions CoP planned to meet with the chieftom of Luyengo's Inner Council to address some of their issues and concerns that arose from using the LISTEN process in their problem-solving process.

4) Evolution

This stage corresponds approximately to Wenger's Transformation stage. The role of the LISTEN facilitator here is to support the CoP as it changes and evolves. In this final stage of the journey, the CoP may reach a natural milestone where its members find themselves ready to change their domain or group structure. As Wenger's model implies, this evolution may involve adopting a new key purpose to address; members transitioning to different levels of participation or leadership, or leaving the CoP, and new members joining the group; the CoP splitting to form new CoPs; or the CoP redefining and reorganizing itself as a "center of excellence" for its original key purpose.

At this stage it is important to:

- Support the development of a new sense of identity rooted in shared understanding of the CoP's key purpose and delivery point
- Support the CoP as members join or leave, potentially with mentoring and training programs
- Update feedback systems to ensure a sense of progress through changes
- Provide tools/resources that support the potential development of the CoP into a Center of Excellence

For example, in Kenya, it has been reported that the boda boda riders have devised a sustainability strategy to provide young people with the opportunity to join the CoP. The strategy includes employing younger riders, developing farming, establishing a petrol station and hiring out meeting facilities to generate income.

Tools for the problem-solving journey

Our observations of the CoPs in Kenya and Eswatini, and the mapping of their problem-solving journeys, suggest types of tools that might support CoPs at each stage of the journey. While the tools proposed below are not HIV-specific, they will support the integration of human-centered design into the problem-solving process. These process-based tools can therefore be leveraged to address a range of social issues including HIV and water access. The examples given below are concepts that would be agreed upon, developed, tested, and refined by and with CoPs themselves, following the human-centered design approach that underpins the LISTEN model.

Community Identity: Community asset mapping tool

This tool would identify and understand the existing purpose and goals of the community, and map HIV services and related resources – natural, cultural, human, social, political, financial, built.

- Records community resources and identifies gaps in resources
- Identifies resources needed for capacity-building
- Assists in building empathy of LISTEN leadership/Innovation CoPs for citizen-level CoPs
- Builds trust with the community and leaders
- Builds sense of efficacy among individual members and as a group

Quick Win: Quick win problem-solving process

This tool would identify challenges within the community and define a quick win.

- Identifies root causes of chosen community challenge
- Identifies actionable problems and ideates potential solutions
- Prioritizes quick win based on community resources and time required for implementation

Stewardship: Guided reflection and analysis tool

After a CoP completes an intervention, this tool would provide a systematic walk-through of the process and the effects of their implemented intervention

- Identifies successes and opportunities for growth
- Prioritizes case studies to share with horizontally and vertically linked CoPs

Conclusion

We propose this problem-solving journey framework as a way to apply the theories of learning of Wenger and others within a practical public-health problem-solving space. Our framework is based on the theory and observation that people at the grassroots know what problems they face and are best positioned to identify the best solutions for their context, try them out, and adopt or create metrics to learn from successes and failures. CoPs offer them the chance to solve problems together, with a process grounded in human-centered design, consciously evaluating what they are doing and how they are doing it via data and a continuous improvement process, and linking horizontally to learn from each other and vertically to get the support they require. In this way, programs become less top-down, with the higher levels of health services and government services acting as supporters – rather than initiators – of effective solutions. As LISTEN moves into its second phase, indicators will be developed to evaluate the effectiveness of this approach.

Given the urgency of problems such as the COVID-19 pandemic, and HIV prevention and treatment in many countries, and the hitherto limited success of CoPs in innovating and disseminating promising practices, it is critical to equip communities not only to become CoPs, but also to effectively carry out the problem-solving process. The types of tools we have suggested can support CoPs at the appropriate stages in their journey, and a goal of the next phase of LISTEN is to develop and apply such tools. When communities are equipped with problem-solving skills to address their own challenges, they can create a more sustainable process for finding solutions.

Data availability

Underlying data

No data are associated with this article.

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Tracy Johnson

Bill & Melinda Gates Foundation, Seattle, WA, USA

- Wenger's stages of development for COPs have not, to my knowledge, ever been published in peer reviewed literature. It might be a good idea to be clear about where and how formed and vetted the various ideas you ascribe to him are.
- I am not sure I understand the value of LISTEN's reconceptualization of COPs. It seems you have adapted *community, domain, and practice* to be *community, purpose, and then delivery point*. However, in the COP body of work – starting with Lave and Wenger and going up through Wenger, McDermott, and Snyder – the idea of delivery point would have been embedded in the idea of practice. Indeed, one of the issues that emerged from the later work was the question of what the relationship was between an occupational community (which would have been concerned with issues such as delivery points) and a COP. I wonder if by the delivery point you mean the outward expression of all the COPs knowledge or the “to what end”?
- A critical piece of the discussion missing from this is the foundation from which the idea of COPs emerged (that being *situated learning*). It is critical to understanding what a COP is and I think that the discussion of situated learning would strengthen your point, particularly as you demonstrate the vertical links across the COPs you reference. For example, how powerful would it be if you demonstrated that when new data is introduced to stimulate thinking, what happens in terms of how the COP comes to understand and integrate that data into their own thinking?
- I wonder if the language “developed a framework” is a bit strong? The formation of identity is a critical piece of Wenger's work, particularly the earliest work that he did with Lave. I would say that the team *condensed, documented, adapted, revised*, so as not to run the risk of disregarding the wealth of peer reviewed literature on communities of practice. And as you note at the beginning of each of your stages, they directly correspond to 1-2 of Wenger's stages.

- Stage 1 – what you appear to be saying is that you are formalizing COPs. If it is a true COP, there are probably elements of it that already exist but they have not formally coalesced. And indeed further on in describing how to support this stage its prior existence is alluded to. This does not lessen your guidance any, but it does stay more clearly within the foundational framework Wenger provides.
- My last point would be that there is a piece missing from our discussion of the COP facilitator. If this is indeed a COP emerging from the idea of situated learning then the facilitator will also be changed by this process, learning from the COP and adapting their guidance to the knowledge practices embedded in each COP. And that is an added benefit in terms of the system itself learning how to be more responsive to those at the grassroots.

Is the rationale for the Open Letter provided in sufficient detail?

Yes

Does the article adequately reference differing views and opinions?

Partly

Are all factual statements correct, and are statements and arguments made adequately supported by citations?

Partly

Is the Open Letter written in accessible language?

Yes

Where applicable, are recommendations and next steps explained clearly for others to follow?

Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Anthropology, Education (including situated learning), Human-centered Design

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 27 Jan 2021

Stephen J Kretschmer, DesireLine, Istanbul, Turkey

Wenger's stages of development for COPs have not, to my knowledge, ever been published in peer reviewed literature. It might be a good idea to be clear about where and how formed and vetted the various ideas you ascribe to him are.

- *Thanks for this comment. We have added lines at the beginning of the section on Communities of Practice and the LISTEN Model to give more reference to Wenger's work. It*

seems true that the academic literature has not offered much discussion of his theories, but as an article that we cite notes, their influence seems considerable and long-lasting.

I am not sure I understand the value of LISTEN's reconceptualization of COPs. It seems you have adapted *community, domain, and practice* to be *community, purpose, and then delivery point*. However, in the COP body of work – starting with Lave and Wenger and going up through Wenger, McDermott, and Snyder – the idea of delivery point would have been embedded in the idea of practice. Indeed, one of the issues that emerged from the later work was the question of what the relationship was between an occupational community (which would have been concerned with issues such as delivery points) and a COP. I wonder if by the delivery point you mean the outward expression of all the COPs knowledge or the “to what end”?

- *Thanks for pointing out the need for further explanation. We have added text in the 3rd and 6th paragraphs of the Communities of Practice and the LISTEN model to explain our adaptation of Wenger's three terms. In the case of “delivery point”, this emphasizes that the LISTEN model focuses on interactions among people within a system – the interface between the supply and demand of a service, and the interactions between CoPs at different levels, horizontally and vertically – rather than the role performed by an individual within a system. The intent behind using “delivery point” was not to critique Wenger's model, but simply to use terminology that made the most sense in the context of LISTEN.*

A critical piece of the discussion missing from this is the foundation from which the idea of COPs emerged (that being *situated learning*). It is critical to understanding what a COP is and I think that the discussion of situated learning would strengthen your point, particularly as you demonstrate the vertical links across the COPs you reference. For example, how powerful would it be if you demonstrated that when new data is introduced to stimulate thinking, what happens in terms of how the COP comes to understand and integrate that data into their own thinking?

- *Thanks for pointing out this omission. We have now introduced the concept of situated learning in the first paragraph of the section on Communities of Practice and the LISTEN model, and we go on to reference its importance in the section on the Stewardship stage (third paragraph), and how learning can be shared between CoPs.*

I wonder if the language “developed a framework” is a bit strong? The formation of identity is a critical piece of Wenger's work, particularly the earliest work that he did with Lave. I would say that the team *condensed, documented, adapted, revised*, so as not to run the risk of disregarding the wealth of peer reviewed literature on communities of practice. And as you note at the beginning of each of your stages, they directly correspond to 1-2 of Wenger's stages.

- *This is a fair comment and we have made our language more precise by saying that we adapted Wenger's framework (third paragraph of the Problem-Solving Journey of a CoP section).*

Stage 1 – what you appear to be saying is that you are formalizing COPs. If it is a true COP, there are probably elements of it that already exist but they have not formally coalesced. And indeed further on in describing how to support this stage its prior existence is alluded to. This does not lessen your guidance any, but it does stay more clearly within the foundational framework Wenger provides.

- *Thanks for helping us to clarify this. We agree that in most cases, elements of a CoP already exist, either because there is an informal or formal organization that can be*

guided to become a CoP, or because concerned members of a community have identified issues that they would like to address, and a CoP may coalesce from their shared interest. We have revised the text in the first paragraph of the section on the Problem-solving Journey of a CoP to clarify that in Kenya the first of these cases applied, and in Eswatini the second.

My last point would be that there is a piece missing from our discussion of the COP facilitator. If this is indeed a COP emerging from the idea of situated learning then the facilitator will also be changed by this process, learning from the COP and adapting their guidance to the knowledge practices embedded in each COP. And that is an added benefit in terms of the system itself learning how to be more responsive to those at the grassroots.

- *We agree that this is an important point and are grateful to you for pointing it out. The facilitator is indeed engaged in a process of responding to and learning from the CoP, as well as providing guidance to it, and we have added text in the penultimate paragraph of the Communities of Practice and the LISTEN Model section to explain this.*

Competing Interests: No competing interests were disclosed.

Reviewer Report 28 August 2020

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Julia Samuelson 

Global HIV, Hepatitis and STIs Programmes, World Health Organization, Geneva, Switzerland

The purpose of this open letter to focus on community engagement is highly relevant to advancing HIV prevention and useful at this time. It is clearly written and based on the foundational work of Wenger. It would be useful to know the reason to revise the CP (CoP) stages put forward by Wenger, rather than using his stages of development.

Problem solving section. A brief explanation of how the communities were engaged. Also as written it seems they were already using the LISTEN model; if so, how had they been introduced to it.

A few terms could be explained briefly as they are not evident to all readers:

- Enterprise networks.
- Human-centred design and how this concept differs from more widely agreed upon person- and people-centred services recommended by WHO (<https://www.who.int/servicedeliverysafety/areas/people-centred-care/en/>).

Regarding the last sentence (By equipping communities with problem-solving skills to address their own challenges, we can create a more sustainable solutioning process), the term solutioning process seems like jargon; consider simpler language such as sustainable solutions and do you mean 'they' create, rather than we?

A minor point is the use of CP - although this is not my expertise, CoP seems to be the main acronym I have noted in the literature.

Some statements are made but lack references, even if they seem evident. Para 1 Sent 3, Para 3 Sent 1.

Are the references/links to tools available?

Minor edits to consider:

- Two-way process, rather than street
- Another reference for you information:
<https://www.who.int/servicedeliverysafety/areas/qhc/community-engagement/en/>

Is the rationale for the Open Letter provided in sufficient detail?

Yes

Does the article adequately reference differing views and opinions?

Partly

Are all factual statements correct, and are statements and arguments made adequately supported by citations?

Partly

Is the Open Letter written in accessible language?

Partly

Where applicable, are recommendations and next steps explained clearly for others to follow?

Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: HIV, VMMC, HIV prevention, nursing,

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 27 Jan 2021

Stephen J Kretschmer, DesireLine, Istanbul, Turkey

The purpose of this open letter to focus on community engagement is highly relevant to advancing HIV prevention and useful at this time. It is clearly written and based on the foundational work of Wenger.

- *Thank you.*

It would be useful to know the reason to revise the CoP stages put forward by Wenger, rather than using his stages of development.

- *Thanks for this comment. The goal of our observations was not so much to show how Wenger's framework describes the formation and development of CoPs in the LISTEN model, but rather to use the framework as a starting point for describing the process we observed. We adapted the framework in order to create a shared understanding of the LISTEN process for the CoPs as they developed, so that they could support each other's development more easily. We hope the explanation in the revised 3rd paragraph of The Problem-solving Journey of a CoP section makes this clearer.*

Problem solving section. A brief explanation of how the communities were engaged. Also as written it seems they were already using the LISTEN model; if so, how had they been introduced to it.

- *We have revised the text to explain the process through which the communities were engaged (1st paragraph of the Problem-solving Journey of a CoP section), and have clarified in that paragraph that the groups were not already using the LISTEN model, but were introduced to it and agreed to adopt it. In each case, a group or organization was pre-existing to address specific issues, or a community's leaders had identified issues that needed to be addressed, and the CoPs were developed around these issues using the LISTEN process.*

A few terms could be explained briefly as they are not evident to all readers:

Enterprise networks: A definition of this in two or three words could be added in line 62.

- *The term is actually borrowed from digital technology, where it refers to networks that connect all users of a local network more widely to resources in the cloud, etc. We have added a footnote after the first mention of LISTEN to say that in the case of LISTEN, it refers to a network that connects groups of people to knowledge and resources beyond their own group.*

Human-centred design and how this concept differs from more widely agreed upon person- and people-centred services recommended by WHO

- *We have added an explanation of HCD in the 4th paragraph of the section on Communities of Practice and the LISTEN Model, and have noted that it is generally aligned with the WHO concept of people-centered services insofar as it prioritizes communities' knowledge and perspectives, rather than seeking to impose solutions from the outside.*

Regarding the last sentence (*By equipping communities with problem-solving skills to address their own challenges, we can create a more sustainable solutioning process*), the term solutioning process seems like jargon; consider simpler language such as sustainable solutions and do you mean 'they' create, rather than 'we'?

- *Thanks for reminding us to beware of jargon. We have revised the language in the final sentence.*

A minor point is the use of CP - although this is not my expertise, CoP seems to be the main acronym I have noted in the literature.

- *Thanks - we have made this change throughout the article.*

Some statements are made but lack references, even if they seem evident.

Para 1 Sent 3, (Yet local communities are often not engaged to their full potential, and innovations are not systematically identified, catalyzed, or scaled up.)

- *We have revised this sentence to emphasize the importance of engaging communities, rather than asserting that they are not properly engaged.*

Para 3 Sent 1.

- *We have added a reference to UNAIDS data.*

Are the references/links to tools available?

- *The potential tools we describe have not yet been developed.*

Minor edits to consider:

Two-way process, rather than street

- *We have revised this to describe a “responsive process”.*

Another reference for your information:

<https://www.who.int/servicedeliverysafety/areas/qhc/community-engagement/en/>

- *Thank you – we have added this reference in the 4th paragraph of the Communities of Practice and the LISTEN Model section.*

Competing Interests: No competing interests were disclosed.

Reviewer Report 25 August 2020

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Carlos Toledo

Centers for Disease Control and Prevention (CDC), Atlanta, GA, USA

The submission focuses on an important aspect of responding to health concerns—the establishment of communities of practice to address existing and emerging health issues. The authors propose a framework (or adaptation of an existing framework) for approaching the development and function of communities of practice and their application to the HIV response in two countries. However, the submission lacks the necessary details to make this useful for the reader. More details are needed that better explain “how” these steps are implemented, monitored, and evaluated rather than general descriptions about “what” each step encompasses. Below are specific comments.

Comments to be addressed:

- Reference is needed for the following statement. “Yet local communities are often not engaged to their full potential, and innovations are not systematically identified, catalyzed, or scaled up”.
- There is mention that LISTEN has been pioneered by local country teams to address HIV

prevention in Kenya, Eswatini, and Malawi. However, the paper only focuses on the experiences in Kenya and Eswatini and not Malawi. Is there a reason for this omission? Consider stating why the experience in Malawi is not included.

- Descriptions in the problem-solving journey lack details and/or specific examples from the countries where this was piloted. The journey is described in overarching descriptions, rather than more nuanced details that may allow for further application. The examples provided from Kenya and Eswatini seem to only suggest that these steps were followed, but no details about what exactly was done in each step in the process. For example, in “quick wins,” all it says it’s these things were established, rather than what specifically was established. What was the “win”? How was it measured? Etc. Without this level of detail, the paper appears overly general. Country-specific examples with sufficient details to understand “how” the process was followed would enhance the paper.
- The authors seem to suggest that this overall approach can be done for any health concern. However, the application has only been in HIV and although the process appears to not be disease-specific, the tools outlined are specific to HIV. If the intent is for this process to be HIV-specific, consider making that case much more evident including in the title and introduction. Otherwise, state HIV as an example but the process could be used for other diseases. However, the examples presented only focus on HIV so that may be difficult to justify.
- Throughout the paper, there is mention of the use of human-centered design. Some explanation is needed regarding this approach and how exactly it informed the process. Not all readers will know what HCD is, thus how it was used throughout the process would be beneficial.
- The “tools” mentioned in the problem-solving journey section seem like a list of activities or concepts rather than tools. Consider reframing this section to better describe what “tools” were actually used in the process and how to use the tool in the steps proposed.
- The authors do not present or propose any evaluation of this approach. If an evaluation has not been conducted that can identify quantifiable outcomes, perhaps the authors can consider proposing an overall approach to evaluating the impact of the proposed framework.

Is the rationale for the Open Letter provided in sufficient detail?

Yes

Does the article adequately reference differing views and opinions?

No

Are all factual statements correct, and are statements and arguments made adequately supported by citations?

Partly

Is the Open Letter written in accessible language?

Yes

Where applicable, are recommendations and next steps explained clearly for others to follow?

Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: HIV prevention; public health

I confirm that I have read this submission and believe that I have an appropriate level of expertise to state that I do not consider it to be of an acceptable scientific standard, for reasons outlined above.

Author Response 27 Jan 2021

Stephen J Kretschmer, DesireLine, Istanbul, Turkey

The submission focuses on an important aspect of responding to health concerns—the establishment of communities of practice to address existing and emerging health issues. The authors propose a framework (or adaptation of an existing framework) for approaching the development and function of communities of practice and their application to the HIV response in two countries. However, the submission lacks the necessary details to make this useful for the reader. More details are needed that better explain “how” these steps are implemented, monitored, and evaluated rather than general descriptions about “what” each step encompasses. Below are specific comments.

- *Thank you for these comments. In our revision to the article, we have sought to add detail about the process through which the LISTEN model is implemented in the different stages of a COP's development. Our responses below will give further indications of this.*

Reference is needed for the following statement. “Yet local communities are often not engaged to their full potential, and innovations are not systematically identified, catalyzed, or scaled up”.

- *We have revised this sentence to emphasize the importance of engaging communities, rather than asserting that they are not properly engaged.*

There is mention that LISTEN has been pioneered by local country teams to address HIV prevention in Kenya, Eswatini, and Malawi. However, the paper only focuses on the experiences in Kenya and Eswatini and not Malawi. Is there a reason for this omission? Consider stating why the experience in Malawi is not included.

- *We have added a sentence in the Introduction to explain that the LISTEN model had not been introduced in Malawi at the time of our observational visits to the two countries.*

Descriptions in the problem-solving journey lack details and/or specific examples from the countries where this was piloted. The journey is described in overarching descriptions, rather than more nuanced details that may allow for further application. The examples provided from Kenya and Eswatini seem to only suggest that these steps were followed, but no details about what exactly was done in each step in the process. For example, in “quick wins,” all it says it's these things were established, rather than what specifically was established. What was the “win”? How was it measured? Etc. Without this level of detail, the paper appears overly general. Country-specific examples with sufficient details to

understand “how” the process was followed would enhance the paper.

- *Thank you for this observation. We have added detail to the Quick Win example from Eswatini to explain how the work was done through prioritization, workshops, mapping of community resources and structures, identifying causes and conceptualizing solutions.*

The authors seem to suggest that this overall approach can be done for any health concern. However, the application has only been in HIV and although the process appears to not be disease-specific, the tools outlined are specific to HIV. If the intent is for this process to be HIV-specific, consider making that case much more evident including in the title and introduction. Otherwise, state HIV as an example but the process could be used for other diseases. However, the examples presented only focus on HIV so that may be difficult to justify.

- *Although the CoPs that we observed were involved in activities for HIV prevention, the LISTEN process itself is not geared specifically or exclusively toward HIV. As we note in the final paragraph of the Quick Win section, some CoPs have worked on investment projects, and tree planting to address deforestation. The tools that we propose could be developed to assist CoPs (in the Tools for the Problem-solving Journey section) are therefore not HIV-specific, and we now state this explicitly at the beginning of that section.*

Throughout the paper, there is mention of the use of human-centered design. Some explanation is needed regarding this approach and how exactly it informed the process. Not all readers will know what HCD is, thus how it was used throughout the process would be beneficial.

- *Thank you for pointing out this gap. We have added an explanation of HCD in the 4th paragraph of the section on Communities of Practice and the LISTEN Model.*

The “tools” mentioned in the problem-solving journey section seem like a list of activities or concepts rather than tools. Consider reframing this section to better describe what “tools” were actually used in the process and how to use the tool in the steps proposed.

- *The section on Tools for the Problem-solving journey presents concepts for tools that have not yet been developed. In the initial LISTEN process, the work was done through discussion, making lists, and so forth. In effect, it was “building the ship while sailing it”, rather than coming in with a fully preconceived methodology. The tools we propose are ways to formalize this process based on the experience gained, and using principles of human-centered design.*

The authors do not present or propose any evaluation of this approach. If an evaluation has not been conducted that can identify quantifiable outcomes, perhaps the authors can consider proposing an overall approach to evaluating the impact of the proposed framework.

- *The LISTEN approach has not yet been evaluated. We have added a sentence (end of the first paragraph of the Conclusion) to explain that indicators for evaluating its effectiveness will be developed in the second phase of LISTEN.*

Competing Interests: No competing interests were disclosed.