



From health information systems to collective intelligence

Refocusing the health district on the population using ICT

Workshop Concept note

12 October version

Focus of the meeting	From health information systems to collective intelligence: Refocusing the health district on the population using ICT
Organizer	Community of Practice <i>Health Service Delivery</i>
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Language of the meeting	French and English
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Background

Health systems of sub-Saharan African countries still struggle to meet the health needs of their populations. This results in high morbidity and mortality rates for problems for which simple and cost-effective health solutions already exist. Weak health systems also have economic and social implications (loss of productivity, catastrophic health expenditures, distrust of government...). The Millennium Development Goals (MDGs) will soon be replaced by the Sustainable Development Goals (SDGs), but as the recent Ebola outbreak reminds us, in Africa, the challenge remains the same: to ensure that health systems provide quality health care and services to the entire population.

This challenge, which is certainly not new, is, however, becoming more complex. Over the last two decades, Africa has changed significantly. Trends include: strong urbanization, the emergence of a middle class, democratization, an increase in non-communicable diseases, etc. At the global level, new opportunities (emergence of global health initiatives, globalization, technologies,...), but also new constraints (terrorism, financial crises,...), have also emerged (1,2). In this rapidly changing context, the health district strategy on the continent has remained largely static.

In addition to all these new challenges, an even more entrenched problem persists: that African health systems are based on a bureaucratic and rigid logic. The Harare Declaration, which marked the adoption of the health district strategy by many countries, did not necessarily intend this. Yet, instead of building upon the original values of the Declaration (equity, solidarity, participation and autonomy), actors have historically opted for a bureaucratic implementation of the district strategy. Community participation has been limited (3), and populations' ownership of their health still remains a dream. Patient-centered care has not materialized, by and large, with dramatic consequences on all health-related sectors(4).

Against this backdrop, in October 2013, at the invitation of the Community of Practice "*Health Services Delivery*" (CoP HSD) and its partners of *Harmonization for Health in Africa (HHA)*, more than 150 experts gathered for a three-day conference in Dakar, Senegal, with the aim to develop a renewed vision of the health district strategy.

At the meeting, participants reiterated the validity of the health district model, but also identified 12 new priority actions for stakeholders. These measures aimed at refocusing the functioning of health districts around the population through a process of empowerment, an expansion of freedom of choice and accountability, and the strengthening of their 'voice'. Beyond translating the original values of the health district strategy, this proposal is transformative on its own. It is thus essential to mobilize stronger collective intelligence for better health at the local level.

The Dakar Conference identified new information and communication technologies as opportunities to facilitate implementation of this renewed vision. The conference suggested, among the 12 listed measures, the use of Information and Communication Technologies (ICT) to improve governance and accountability, equity, effectiveness and efficiency of local health systems. Furthermore, it encouraged stakeholders to support the development of ICT solutions adapted to African health systems. It also emphasized the need for health systems, and especially for the district management teams, to adopt the "Learning System" model in order to adapt to their complex and changing environment.

Two years after this conference in Dakar, the CoP HSD is focusing in on these two closely linked recommendations. Our hypothesis is that the full potential of ICT will not be unleashed unless ICT is put at the center of decision-making by **decentralized** health systems actors (district and health services managers, beneficiaries, communities and local authorities) and unless strengthening collective intelligence drives the use of these technologies (5) to support health at the local level.

Box 1: A quick introduction to Collective Intelligence

Collective intelligence (CI) is a form of universally distributed intelligence, constantly enhanced, coordinated in real time, and resulting in effective mobilization of skills, with the aim to mutually acknowledge and enrich people (5, 6).

According to Pierre Lévy, the 4 pillars of the concept are:

1. CI is distributed everywhere because it recognizes and mobilizes knowledge bits held by all individuals of a community, since "no one knows everything and everybody knows something";
2. As an emergent property of the interactions between individuals, CI is constantly being enhanced. Expanding all the time, CI exceeds the sum of all individual intelligences, and explicitly or implicitly determines how effective groups are when dealing with important issues;
3. Real-time coordination of intelligence refers to the organization of interactions between individuals who share events, decisions, actions. The revolution of these interactions in cyberspace, as created by ICTs, opens significant opportunities for optimizing coordination in real time;
4. The final aim of CI is the recognition and enrichment of all people involved. This implies the technical, economic, legal and human valorization of intelligence shared by all, in order to trigger a positive dynamic of acknowledgment and achievement of the common goal for the benefit of all (5).

This was the very goal that inspired our reflection on the Harare Declaration. In line with the Declaration, we seek the empowerment of decentralized actors in the health system and the effective mobilization of skills of the entire population who feel responsible, involved and valued in the (co-)production of health (2).

The Cotonou workshop: overview

It is in order to deepen this thinking about the role of ICT in the implementation of the Harare agenda that the CoP HSD invites experts to a three-day workshop in Cotonou, Benin. The workshop will use a 'lab meeting' format: creative collective thinking and brainstorming on new modes of functioning will be encouraged.

The workshop will specifically focus on innovative experiences that apply ICT to boost objectives such as decentralization, increased autonomy and empowerment of stakeholders, pluralistic mobilization, systemic coordination, accountability to stakeholders and citizen participation. These initiatives will be explored and analyzed, with particular attention given to the theories of change underlying them and their underlying hypotheses. Expert participants working on organizational and individual learning, and collective intelligence will together make a critical assessment of these different solutions.

More specifically, we will try to answer the following questions:

We will start with a quick assessment of 'historical' strategies:

- Why did traditional Health Information Systems (HIS) fail to apply the values of decentralization, empowerment and participation as promoted by the Harare Declaration? Why are these values implemented to such a limited extent at decentralized level? Is this due to design, orientation, culture, or implementation problems?

Then we will look at the current initiatives and experience:

- What are the new HIS solutions being tested today in Africa? Can we draw up a typology of these solutions? Do they put more emphasis on decentralization, empowerment, accountability and participation (or are they only intended to strengthen the power of the central level)? What are their implementation modalities (pilot, project, scaling up nationwide)? What is their purpose? What are their underlying theories of change? Do they also defend the status quo on some crucial determinants of collective intelligence processes?

We will also explore the future:

- What would be the ideal intervention? What would be the content? How about the process? What is collective intelligence exactly? Are theories of collective intelligence a source of inspiration? How would this ideal intervention combine the various known axes of intervention: classic capacity building (inputs, training), reforms (redistribution of roles and functions, new modes of payment...), hardware (tablets, cloud computing...), new interfaces for users, more advanced technology (algorithms...) or new models of behaviour (build upon social networks...)? What would be this ideal intervention's theory of change?

We will finally assess current practices in view of this ideal intervention:

- Is the international community doing enough to implement a collective intelligence system involving all stakeholders? What would be good strategies to document, research and learn from the new proposals that are emerging, especially on the side of startups, communities of practice and academic actors?

Cotonou Workshop : expected results

This workshop follows on from the Dakar Conference. It aims at deepening CoP HSD experts' understanding of ICT's potential to improve the functioning of health districts and make them more flexible. The main objective will be to launch a knowledge program on this issue, including:

1. Identifying issues that require further investigation (by experimentation, ICT application testing, research...).
2. Developing a light evaluation tool (grid) to assess to what extent an ICT solution contributes to the different objectives of the Harare Declaration.
3. Collective learning about approaches to bring out the theories of change underlying the solutions that are being implemented.

The expectation is that this knowledge program and this analytical reflection will serve a useful purpose for those currently engaged in revamping health information systems.

Participation and shared content

The workshop will bring together national, regional and international experts working on traditional and innovative models for producing and managing health information. To enhance the quality of the discussions, the number of participants will be restricted. Participants will include experts from the HSD CoP from the West-African region, experts in collective intelligence and learning systems, those involved in HMIS or ICT applications in health systems from low-income countries, representatives of funding partners such as UNICEF, and members of the Benin CoP hub. A number of local stakeholders will also be invited.

The organizing committee will identify guest speakers. We are particularly interested in "out of the box" experiences, that will allow us to get away from the rigid practices and models currently in place, in order to make a clear break and set a new agenda for the future.

Experiences we consider “innovative” include:

- **Solutions having already been implemented in multiple countries**, such as [DHIS2](#) which has been in use for the last 20 years or the more recent *Open RBF* experience. As these programs are constantly evolving, it will be interesting to explore to what extent current trends and developments can refocus the health district on the population.
- **Cellphone-based technological solutions.** *M-health* is not just hype anymore—it is quickly becoming a mature technology. Again, it will be interesting to assess to what extent current developments are aligned with the objectives of empowerment, boosting autonomy, participation...
- **Solutions using ICT, data visualization and social media in particular, with the aim to put new theories of change in practice.** An example is the Mobilisation 2.0 project of the CoP HSD, that aims at mobilizing health district management teams to control potentially epidemic diseases.

Workshop format

Five types of activities will take place during this meeting:

- 1- Plenary session presentations with innovative formats to stimulate thinking;
- 2- Plenary session discussions;
- 3- Discussions in small working groups using several formats to stimulate collective creativity and brainstorming;
- 4- Practical demonstrations;
- 5- Social events (a dinner, a cultural trip).

The workshop will last three days, from Wednesday the 16th to Friday the 18th of December, 2015. Activities will take place the first two days from 9:00 am to 5:00 pm, with two 30-minute coffee breaks, and a one-hour lunch. The last day we will just work half a day. Dinner is scheduled for Wednesday evening.

Floating of innovative ideas and dynamic interaction will be encouraged throughout the event. We will draw upon this opportunity to also lay the basis for essential next steps to advance this knowledge agenda further - we will welcome expressions of interest for possible follow-up activities, e.g. a research program.

Experts will be continuously updated on the workshop, results and follow-up activities through a number of channels and platforms such as the HHA communities of practice. Other communication tools and channels gathering ITM alumni and other actors will be used as well, including newsletters and social media.

Potential partners

The majority of participants will be experts from the CoP HSD and invited guest speakers. Conference subject matter experts will be requested to contribute to the design of the event and development of the program. These actors are, among others, the Institute of Tropical Medicine of Antwerp, the University of Oslo, the Bill & Melinda Gates Foundation, the Institute of Health Metrics and Evaluation and UNICEF.

Agencies which are part of *Harmonization for Health in Africa* will be informed about the event and invited to send an expert. This will allow them to provide operational follow-up on the priorities identified during the event.

Date and venue

The meeting is scheduled for December 16-18, 2015. The venue will be a hotel in Cotonou (still to be selected). More than 1 conference rooms will be available. The biggest room will be able to accommodate 50 persons. LCD projectors and a good internet connection will be available.

The Community of Practice Health Service Delivery

The Community of Practice 'Health Services Delivery' aims to bring together health professionals, planners and their technical and financial partners (national, regional and international) as well as policy makers in a partnership focused on sharing knowledge and experience on the implementation of health services in Africa. The ambition is to link managers of local health systems (health districts) and other technical experts and assistants working for NGOs or with relevant experience in Africa. The CoP organizes online and face to face activities. The CoP currently comprises over 1,200 experts.

Collaboration with partner institution

This meeting is organized with the institutional support of the "*Centre de Recherche en Reproduction Humaine et en Démographie*" (CERRHUD). CERRHUD will provide organizational support during the preparation of the event, at the conference, as well as in the monitoring and follow-up of recommendations and conclusions. The Centre's staff and premises will be made available throughout the organization of this event.



THE BELGIAN
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