

# Regional HIV knowledge hubs: a new approach by the health sector to transform knowledge into practice

EHSAN MOSTAFAVI<sup>1,2</sup>, ALIAKBAR HAGHDOOST<sup>2,3\*</sup>,  
ALI MIRZAZADEH<sup>2,3</sup>, GABRIELE RIEDNER<sup>4</sup>, PETER WEIS<sup>5</sup>,  
KRISTINA KLOSS<sup>5</sup> and FARZANEH ZOLALA<sup>2,3</sup>

<sup>1</sup>Department of Epidemiology, Pasteur Institute of Iran, Tehran, Iran, <sup>2</sup>Regional Knowledge Hub for HIV/AIDS Surveillance, Kerman University of Medical Sciences, Kerman, Iran, <sup>3</sup>Research Centre for Modeling in Health, Kerman University of Medical Sciences, Kerman, Iran, <sup>4</sup>Regional Office for the Eastern Mediterranean, WHO, Cairo, Egypt and <sup>5</sup>German Backup Initiative, GTZ GmbH, Eschborn, Germany

\*Corresponding author. E-mail: ahaghdoost@gmail.com

## SUMMARY

*This study aims to introduce the knowledge hub (KH) as an initiative to facilitate transformation of knowledge into practice and to highlight the activity and limitations with this new policy. The study was conducted through a review of articles; expert views in this field were sought for further information. Regional human immunodeficiency virus (HIV) KHs were developed by the World Health Organization and GTZ. A series of activities*

*including capacity building, development of training models, technical assistance, and application of studies are provided through these hubs. However, financial limitations are the main obstacle in achieving these aims. This piece of work introduces these HIV hubs in order to help countries, particularly developing countries, provide the support needed to fight the progression of HIV.*

**Key words:** knowledge; HIV hubs; practice

## INTRODUCTION

Human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) is a widespread and multi-dimensional public health problem. The HIV epidemic remains a major global public health challenge, with a total of 33.4 million people living with HIV worldwide. Because of the nature of this infection and also its impact on different sectors, management of this infection is one of the top priorities of many countries regardless of its current epidemiological level (Biesma *et al.*, 2009; NOAR *et al.*, 2009).

Despite many international organizations have put HIV as one of their top priorities and spend a considerable proportion of their budget in this area, the low- and middle-income countries are still in desperate need of the technologies, tools and training that high-income countries have used to address HIV (Braitstein *et al.*, 2006; Isenman *et al.*, 2010; Rosenberg *et al.*, 2010). In the first years of the new millennium, there were a few developing countries that developed sufficient capacity to battle the HIV epidemic effectively in different aspects; mainly HIV prevention, treatment and care (Božičević *et al.*, 2010).

In addition, while considerable progress has been made in establishing policy and strategies, lack of human resources remains an important constraint to achieve the goals of universal access (WHO, UNAIDS, UNICEF, 2010).

Furthermore, although knowledge production in the field of HIV has increased dramatically, more detail in Figure 1, it seems that, in practice, most countries still have many questions on how to translate scientific information into evidence-based, practical approaches to HIV prevention, care and treatment (Rebchook *et al.*, 2006; Fauci and Folkers, 2009).

Existing evidence has shown that decision-making—from clinical practice to policy-making and management—has frequently taken place regardless of available scientific evidence, or such evidence has been applied without local adaptation; and so, an appropriate application of health knowledge is of utmost importance to make the best use of projects' results (Graham and Tetroe, 2007; Brownson *et al.*, 2009).

Based on these problems, there was a need at national and regional level around the world to not only improve the basic level of knowledge among HIV experts and managers, but also to enable a better application of scientific models and methods in controlling the disease and translating the available knowledge into practice.

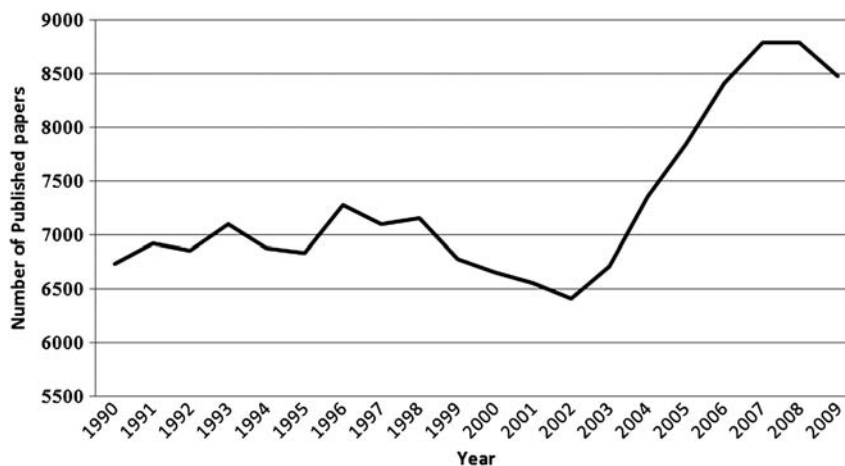
To respond to this need, World Health Organization (WHO) and GTZ jointly developed a new approach to knowledge sharing and capacity building: WHO agreed to support the

knowledge hubs (KHs), by gathering and providing up-to-date guidance on all aspects of HIV health-sector programme development and implementation (Božičević *et al.*, 2010). The next step is that thematic and geographic priorities were determined based on the region-specific capacity-building needs. Regional HIV KHs are currently active in the fields of harm reduction (HIV prevention among injecting drug users), second-generation surveillance or treatment and care in HIV infection or AIDS.

This study aims to introduce the KH as an initiative to facilitate transformation of knowledge into practice and to highlight the activity and limitations with this new policy. The study was conducted via a comprehensive literature review, and sought expert views to enrich the information about HIV hubs.

### Regional HIV KHs

Regional HIV KHs are established to promote scientific potentials and distribute HIV-related knowledge to the programmes of the WHO and other international organizations. Regional KHs are set up based on the regional differences in the HIV epidemic and targeted capacity development. The experience of such KHs has shown that these regional agencies have a vital role to play in helping countries with shared languages, similar public health challenges and health and education systems, to swiftly build capacity towards the global goal of universal access to services for HIV prevention, care, treatment and support. The hubs have confirmed the



**Fig. 1:** The number of cited papers in PubMed between 1999 and 2009 with 'HIV' OR 'AIDS' in their titles.

value of building regional communities of practice through joint training and technical assistance (Božičević *et al.*, 2010; WHO, 2010). They use technical experts from the region—rather than relying exclusively on international consultants—and tailor training and assistance to the specific demands and needs of different countries and regions. This fosters a regional exchange of best practice and helps to develop the capacity needed for effective and sustainable HIV services (Božičević *et al.*, 2009). It is also widely believed that regional advocacy and capacity development is the best guarantee that resulting services will be well suited to various socio-political, cultural and epidemiological contexts and, ultimately, be sustainable.

Most of the KHs work together as a kind of a consortium, but some of them work independently (Figure 2), covering more than one country. Institutions that work together complement each other by focusing on distinct aspects of the domain covered by them, e.g. Middle

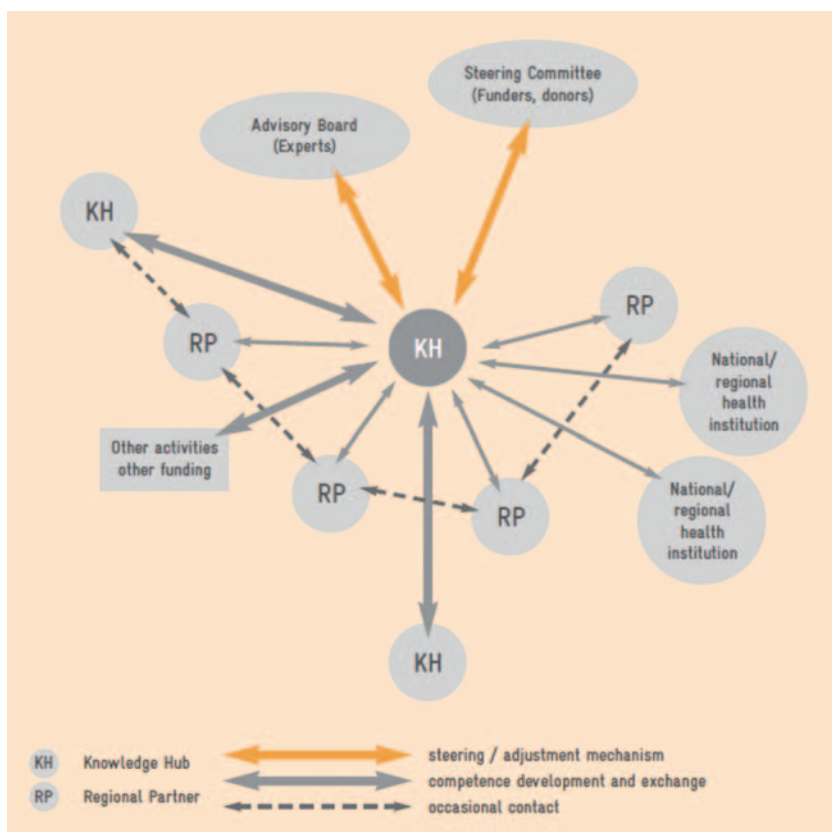
East and North Africa Harm Reduction Network (MENAHRN) are a regional KH covering East Mediterranean and North Africa region and consists of three sub-regional KHs (Beirut, Tehran and Rabat).

KHs are supported by WHO to implement plans at sub-regional, regional, inter-regional and international levels. These KHs are located in Africa, Eastern Europe and Asia and are working in three main domains: treatment and care (10 KHs), surveillance (3 KHs) and harm reduction (4 KHs) (Table 1). The global distribution of KHs is shown in Figure 3.

WHO is also considering the use of the KH method for tobacco control programmes in Africa (WHO, 2009).

### Fields of KH activities

One of the main aims of founding a KH is to distribute knowledge among executive managers according to the latest scientific



**Fig. 2:** Structure of regional KHs (Božičević *et al.*, 2009).

**Table 1:** The location and filed activity of existing KHs in the world

| Region located                  | Name of the KH                                                             | City located (Country)              | Fields of Activity             |
|---------------------------------|----------------------------------------------------------------------------|-------------------------------------|--------------------------------|
| Eastern Europe and Central Asia | Harm reduction KH for Eastern Europe and Central Asia                      | Vilnius (Lithuania) <sup>a</sup>    | Harm reduction                 |
|                                 | Regional KH for treatment and care of HIV/AIDS in Eurasia                  | St Petersburg (Russia) <sup>a</sup> | Treatment and care             |
|                                 | KH for capacity development in HIV/AIDS surveillance                       | Zagreb (Croatia) <sup>a</sup>       | Second-generation surveillance |
| Middle East and North Africa    | MENAHRA (Middle East and North Africa Harm Reduction) network <sup>a</sup> | Beirut (Lebanon)                    | Harm reduction                 |
|                                 |                                                                            | Teheran (Iran)                      | Harm reduction                 |
|                                 | Regional KH for HIV/AIDS surveillance                                      | Rabat (Morocco)                     | Harm reduction                 |
| West and Central Africa         | RAF-VIH (Réseau Africain de Formation) KH <sup>a</sup>                     | Kerman (Iran)                       | Second-generation surveillance |
|                                 |                                                                            | Ouagadougou (Burkina Faso)          | Treatment and care             |
|                                 |                                                                            | Bujumbura (Burundi)                 | Treatment and care             |
|                                 |                                                                            | Ouidah (Benin)                      | Treatment and care             |
|                                 |                                                                            | Bamako (Mali)                       | Treatment and care             |
|                                 |                                                                            | Niamey (Niger)                      | Treatment and care             |
|                                 |                                                                            | Abidjan (Côte d'Ivoire)             | Treatment and care             |
|                                 |                                                                            | Dakar (Senegal)                     | Harm reduction                 |
| Eastern and southern Africa     | Eastern and Southern African (ESA) KH network <sup>a</sup>                 | Ouagadougou (Burkina Faso)          | Treatment and care             |
|                                 |                                                                            | Nairobi (Kenya)                     | Treatment and care             |
|                                 |                                                                            | Kampala (Uganda)                    | Treatment and care             |
|                                 |                                                                            | Khartoum (Sudan)                    | Treatment and care             |
|                                 |                                                                            | Durban (South Africa)               | Treatment and care             |

<sup>a</sup>Regional KHs.

documents and also to facilitate the application of this knowledge. In other words, all activities are targeted towards providing education on the basis of HIV infection management from prevention to surveillance and treatment systems. Such an aim is directed to empower authorities in their decision-making and to help them to apply scientific concepts. On the other hand, the production of scientific evidence for decision-making such as preparation and provision of guidelines, etc. is included among other responsibilities of KHs.

The main activities of these KHs are as follows:

- (1) Capacity building: it is very important that policy-makers and managers receive up-to-date evidence-based messages and HIV-related health services improve their service delivery by developing the capacity of their health personnel. KHs work closely with academia to translate the new science into practical guidelines. Because of this need, training is one of the main activities of KHs. However, in their training, KHs pay very special attention to match the

appropriate messages to the appropriate audiences. The selection of participants is very important and KHs like to recruit participants appropriately. In addition, KHs explore the application of their training materials in a way that addresses the real needs of countries. Although workshops are the main training scheme of KHs, they are working on passing training materials to their target populations via alternative routes such as distance-based courses and the dissemination of simple periodical fact sheets.

- (2) Developing and adapting the training manuals and guidelines: KHs develop training modules and manuals out of the guidelines or other normative documents. They also help countries adapt and implement WHO and UNAIDS policies, recommendations, guidelines and training modules (Boothroyd, 2010; Božičević *et al.*, 2010).
- (3) Technical assistance: many participants may face problems during the implementation of course contents. KHs include technical assistance as part of their responsibilities to facilitate the implementation process. KHs play the role of expert services for those



**Fig. 3:** The global distribution of KHs, the regional KHs are shown by larger circles (WHO, 2010).

who need consultancy at a national or regional level. The KH can also play a role in planning, guiding, supervising and evaluating different research projects with respect to their field of activity (Boothroyd, 2010; Božičević *et al.*, 2010).

- (4) Active participation in applied studies at national and regional levels: in order to generate applied guidelines, respond to real needs in the field and also present the applicability of training materials, KHs are involved in many research projects. For example, Kerman KH used this opportunity to not only help to improve the surveillance of HIV in Iran but also to create real situations to improve the capacity of its technical staff in practice as well as by direct and close work with Ministry of Health in Iran.
- (5) Dissemination of knowledge: right now most KHs have comprehensive websites with unique materials in different languages. In addition, they serve large

audiences of their target population with new information through email lists.

- (6) Development of collaborative networks with national and international institutions: KHs work with ministries of health and other governmental and non-governmental agencies in order to foster mutual support and exchange of knowledge and strengthen research and teaching capacities at national and regional levels (Božičević *et al.*, 2010; WHO, 2010).

Since the start of the initiative, KHs have developed and adapted more than 200 training courses and modules in the field of HIV prevention, surveillance, treatment and care as well as in harm-reduction subjects. More than 8000 health and social workers have been trained over the years and about 5000 are subscribers to virtual information and learning platforms or to receive regular newsletters maintained and produced by KHs. Several guides, training manuals and books have been published (WHO, 2010).

It is expected that the quality of care of HIV service delivery in health services (e.g. in-service training, mentoring, technical assistance provision etc.) will be improved as an intended key outcome of KH activities.

### KH limitations

Common challenges faced by the hubs include a lack of stable, long-term financing, the tendency of governments to underestimate capacity-building needs and the hub's lack of profile (Božičević *et al.*, 2010). Since KHs are independent bodies, they have to continuously seek financial support from different grant-awarding bodies. Although such a system forces KHs to constantly improve the quality of their activities in order to survive, it may introduce a sense of insecurity. More importantly, it may prevent them from following a long-term plan, since most grant-awarding bodies request annual plans and their priorities may vary year by year. Therefore, securing the financial support of KHs is the main concern right now. A better understanding of their roles within a global picture could help to open up new opportunities in this regard. Quality assessment and quality of assurance are the other concerns of KHs and their supporters. KHs have to show the impact of their activities around the world to convince supporters of their long-term plan.

Monitoring and evaluation (M&E) of KH activities is one of the other main considerations right now. Without a doubt, appropriate assessment indicators and measurement tools are key issues in the M&E process. Therefore, KHs are working together to develop a comprehensive M&E work plan in the near future.

### CONCLUSION

KHs are novel nodes in the management of HIV/AIDS to more efficiently translate research findings into practical guidelines and to help to fill the gap between knowledge and practice. Their main activities are capacity building among key persons at different levels using applied topics and supporting them to implement these materials in their daily jobs.

Although nearly all of these KHs are very young, it seems that they are playing an efficient role and using all their power to address their main objectives forcefully. Nevertheless, they

are exploring the quality assessment of their work to maintain their progress over time. It seems that different stakeholders have to pay more attention to the role of these hubs, otherwise instability and a sense of insecurity will negate most of the strengths of KHs.

It has also been shown that the independence of KHs and WHO backing allows them to promote controversial evidence-based practices in ways that most national agencies cannot (Božičević *et al.*, 2010). Finally, the national and international health organizations should do more to recognize the value of the KHs, by working more closely with them and actively supporting their activities.

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