

Research priorities in the field of HIV and AIDS in Iran

AliAkbar Haghdoost¹, Masoomeh Sadeghi², Maryam Nasirian², Ali Mirzazadeh³, Soodabeh Navadeh³

¹Associate Professor, Research Centre for Modeling in Health, Kerman University of Medical Sciences, Kerman, Iran. ²MSc Student, Regional Knowledge Hub for HIV/AIDS Surveillance, Kerman University of Medical Sciences, Kerman, Iran. ³PhD Candidate, Regional Knowledge Hub for HIV/AIDS Surveillance, Kerman University of Medical Sciences, Kerman, Iran.

Background: HIV is a multidimensional problem. Therefore, prioritization of research topics in this field is a serious challenge. We decided to prioritize the major areas of research on HIV/AIDS in Iran. **Materials and Methods:** In a brain-storming session with the main national and provincial stakeholders and experts from different relevant fields, the direct and indirect dimensions of HIV/AIDS and its related research issues were explored. Afterward, using the Delphi method, we sent questionnaires to 20 experts (13 respondents) from different sectors. In this electronic based questioner, we requested experts to evaluate main topics and their subtopics. The ranges of scores were between 0 and 100. **Results:** The score of priorities of main themes were preventive activities (43.2), large scale planning (25.4), the estimation of the HIV/AIDS burden (20.9), and basic scientific research (10.5). The most important priority in each main theme was education particularly in high risk groups (52.5), developing the national strategy to address the epidemic (31.8), estimation of the incidence and prevalence among high-risk groups (59.5) and developing new preventive methods (66.7), respectively. **Conclusions:** The most important priorities of researches on HIV/AIDS were preventive activities and developing national strategy. As high risk groups are the most involved people in the epidemic, and they are also the most hard-to-reach sub-populations, a national well designated comprehensive strategy is essential. However, we believe with a very specific and directed scheme, special attention to research in basic sciences is necessary, at least in limited number of institutes.

Key words: HIV, AIDS, Priority, Iran.

INTRODUCTION

Nowadays, human immunodeficiency virus (HIV) infection is a global health concern and nearly all of countries face with its social, cultural, economic and political consequences.^[1] Globally, the number of HIV positives is remarkable and it has an increasing trend. It was estimated that 33.2 million people are living with HIV all around the world; 2.5 million people have become newly infected and 2.1 million people die of AIDS.^[2] Most of the new cases are occurring in developing countries and among young population which are the productive part of the population.^[3,4] This potential hazard is prominent in East Mediterranean region (EMR) countries including Islamic Republic of Iran.^[5]

Based on available statistics, Iran similar to many other countries in EMR, is facing with concentrated epidemic level for HIV infection from a few years ago.^[6] According to the latest United Nations General Assembly Special Session (UNGASS) report in 2010 more than 22000 HIV positive cases had been identified in Iran until September 2009; however, United Nations AIDS (UNAIDS) estimates that 86000 people are living with HIV in Iran.^[7,8]

Based on the above explanation, we have to comprehensively approach to HIV infection. HIV infection has many aspects, from molecular to social and political aspects. Hence, to tackle with this threat, many sectors and disciplines have to work together efficiently. In addition, because of many dilemmas in this field with specific responses that are compatible with local cultures, community oriented research plays a very important role. Therefore, we believe that a comprehensive map for researches based on a need assessment project is necessary. Our literature review showed that such a need assessment for the research topics is missing in many developing countries including Iran.

In this project, we assessed the research needs in HIV field. However, since HIV is multidisciplinary topic, we prioritized four needed research fields (topics); first, horizontal prioritization, then within each topic, we weighted subtopics (vertical prioritization). The main objective of this study was to create a comprehensive research map of topics and sub-topics in the field of HIV/AIDS and weight these themes based on their priorities using the expert opinions in Iran.

Address for correspondence: Soodabeh Navadeh, PhD Candidate, Regional Knowledge Hub for HIV/AIDS Surveillance, Kerman University of Medical Sciences, Kerman, Iran. Email: s.navadeh@hivhub.ir

Received: 17-02-2011; **Revised:** 25-03-2012; **Accepted:** 30-05-2012

MATERIALS AND METHODS

In a brain-storm session with the main national and provincial stakeholders, direct and indirect dimensions of HIV/AIDS and its related research issues were explored. The stakeholders were the experts in sub-national/national and international institutes working in the clinical fields of HIV treatment, care and support and also those involved in the basic and applied research and surveillance. We designed a questionnaire based on the conceptual diagram (Figure 1) which had achieved in the previous step. This questionnaire was categorized into four main topics based on the most important research fields in HIV/AIDS that were labeled 1) preventive measure, 2) estimating burden of infection, 3) basic research, and 4) national and sub national planning. Each topic consisted of some sub-topics and 40 subtopics in total were defined.

Afterward, we created a list of Iranian experts in all different fields of HIV/AIDS from the list of corresponding authors of the papers/documents published during five years before the study. We searched the entire local (Iranmedex, SID, Magiran) and international (Medline, Embase, Cochrane Library) databases as well as the CDC-Ministry of Health website with a highly sensitive search strategy for HIV/AIDS related fields. We have used HIV, AIDS, second generation surveillance, most-at-risk populations, female sex workers, men who have sex with men, injecting drug users, national strategies. We have chosen those records addressing a strategic areas in HIV epidemic and response at provincial and national level (within the past years). Then, we extracted the names and (e) mailing addresses of the corresponding authors which consisted of near to 120 records (20 corresponding authors). The questionnaire was emailed to all people by email merging system of MS-office. If someone did not response to the first email, another request was sent.

The experts were asked to score the four main topics (step 1) from 0 to 100. In the second step, they were asked to score all the subtopics in each topic again from 0 to 100. They continued this scoring till to the last level. Finally, the data were entered into and analyzed by STATA v.10. The 5% trimmed mean of scores was reported as the priority score for each topic and followed in each topic in different subtopics.

RESULTS

Out of 20 experts, we received 13 filled questioners (65% response rate). Among the main four topics, preventive activities got the maximum score (43.2 out of

100), after that, national and sub national planning (25.4), the estimation of HIV/AIDS burden (20.9), and basic researches (10.5) were scored, respectively (Figure 2).

The most important subtopics for researching in preventive activities were education (52.5) in high risk groups, general population and partners of infected cases. The second important priority in this topic were interruption of transmission chain (47.5) by condom promotion, clean injection, safe sex, safe blood transfusion and prenatal care programs, respectively. In the national and sub national planning, there were five subtopics ranked in this order: top national managerial organization (31.8), health system (31.2), cultural/ education system (13.2), legal system (12.9), mass media (11.2). In the estimation burden of infection, incidence and prevalence in high risk groups/general population (59.5), its direct and indirect consequence and complications (23.3), its indirect consequences and complication (17.1) were priorities in the estimation burden of the infection topic. At last, basic researches topic consists of researching in new preventive methods (66.7) and new treatments (33.3) subsections. Of course, each of these subsections were again divided which are shown in table 1.

DISCUSSION

Based on our results, preventive activities, national and sub-national planning, estimating burden of the infection and basic researches were the topics with highest priorities in HIV/AIDS researches, respectively. Here, we have presented the main agreed filed on the HIV/AIDS research, and discarded the outlier ranking scores by trimmed mean.

The highest priority was assigned to research in preventive dimensions which call for education about the content of disease, transmission and preventive interventions. But this is important that education covers the varying groups of community, especially the high risk groups and then general population. Although the growing epidemic of HIV/AIDS in Iran needs enhancing public awareness, decreasing the vulnerability of at risk and high risk populations through free counseling and clinical services and lowering the existing level of stigmatization and discrimination are necessary. Kaushik et al. showed that the low rates of condom use and high rates of other STI infections are the key determinants of HIV transmission.^[1] We also found that these preventive measures are more important priorities in Iran.

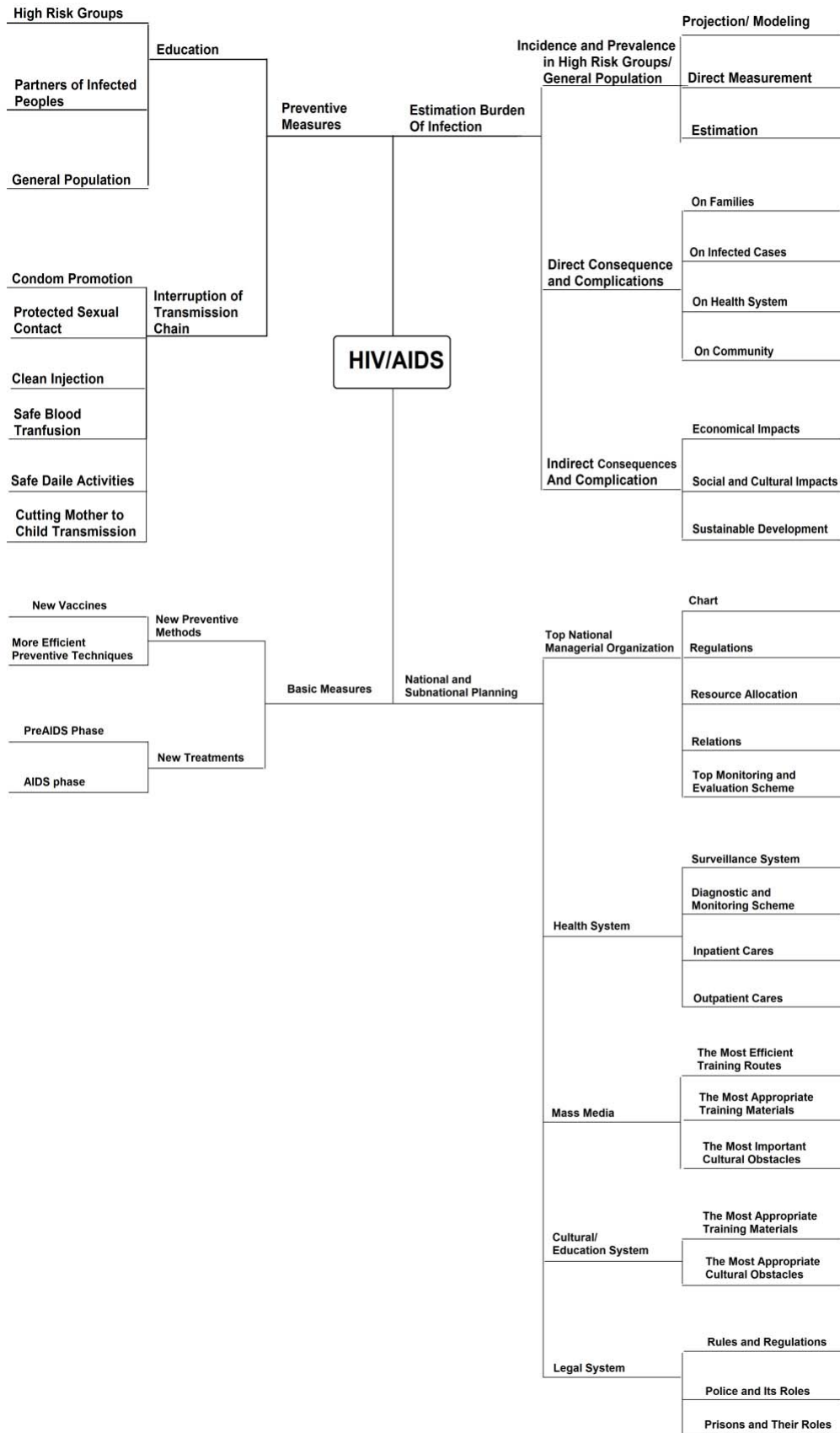


Figure 1. Conceptual diagram on different fields of research on HIV/ADIS

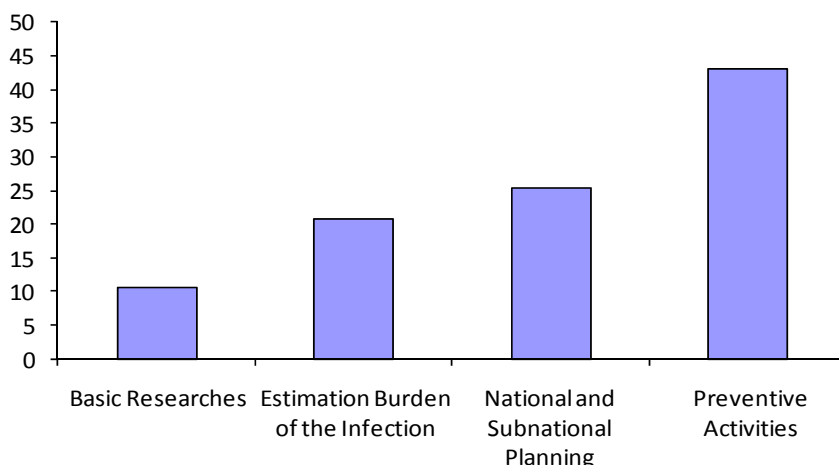


Figure 2. Scores of priorities (out of 100) which experts assigned to four different research sections in HIV/AIDS in Iran

Table 1. The scores of priority (out of 100) which people assigned to each HIV/AIDS related research section and subsections in Iran

Research Priorities			
Preventive activities			
Education interruption of transmission chain		43.2	
		52.5	
	High risk groups	40.5	
	General population	32.4	
	Partner of infected cases	27.1	
		47.5	
	Condom promotion	33.7	
	Clean injection	15.3	
	Safe sex	27.2	
	Safe blood transfusion	9.1	
	Cutting mother to child transmission	6.4	
	Safe daily activities	7.9	
			25.4
	National and sub-national planning		
Top national managerial organization Health System Cultural/ education System Legal system		31.8	
	Chart	24.3	
	Relations	23.9	
	Resource Allocation	20.7	
	Top monitoring and evaluation scheme	20.3	
	Regulations	10.8	
		31.2	
	Surveillance system	36.7	
	Diagnostic and monitoring scheme	28.7	
	Inpatient cares	19.5	
	Outpatient cares	15.1	
		13.2	
	The most appropriate cultural obstacles	50.8	
	The most appropriate training materials	49.2	
		12.6	
	Prisons and its roles	33.6	
	Rules and regulation	25.8	
	Police and its roles	40.6	
			20.9
Estimating burden of the infection			
Incidence and prevalence in high risk groups/general population its direct consequence and complications		59.5	
		38.1	
	Projection/modeling	32.3	
	Direct measurement	29.6	
	Estimation	23.3	

	On community	30.3
	On health system	27.1
	On families	24.1
	On infected cases	18.6
	Its indirect consequences and complication	17.1
	Social and cultural impacts	35.9
	Sustainable development	33.9
	Economic impacts	30.2
Basic researches		10.5
	New preventive methods	66.7
	More efficient preventive techniques	25.6
	New vaccines	74.4
	New treatments	33.3
	Pre-AIDS phase	66.3
	AIDS phase	33.7

The second priority was research in HIV/AIDS national and international planning topics especially in the national administrative organization, health and legal system. The involvement of peer educators and community leaders has been demonstrated to help improvement of the uptake and outcomes of targeted interventions in the countries. Furthermore, peer and community involvement plays a key role in reducing HIV-related stigma, which itself continues to act as a barrier to successful preventions.^[1]

Estimating the burden of HIV infection was the next priority. It is important to have information regarding HIV/AIDS prevalence and incidence in general population or in main subpopulations which can help planning for health care and preventive services at national level. The direct measurements of HIV incidence using population-based studies are difficult and expensive,^[3] so some alternative methods such as mathematical modeling are used to measure HIV incidence. The last main priority of HIV/AIDS was basic researches that can result in new efficient preventive techniques in HIV/AIDS prevention and treatment.

Nowadays research priority setting in health systems has remained a big challenge for policy makers and health managers all over the world. Specifying the research priorities helps decision makers to provide a guideline to conduct the applicable researches and allocate the budget.^[9-11] Due to scarcity of resources in the low and middle income countries such as Iran, this demand becomes more important and priority setting is as critical as conducting the research itself.^[9-11] Furthermore, Kafiriri et al. showed that lack of credible evidence, lack of systematic priority setting approaches, weak social structures and insurmountable barriers to implementation are the reasons for defining priority setting.^[9]

Limited sample size was the most important limitation in the study. However, using more than one way to get

responses to the questionnaires might have increased the response rate and designing open ended questions in each part could yield to the more varied opinion. Acquiring precise completed questionnaires by the experts in HIV/AIDS field to reach to the larger sample size was so difficult. Although by involving more experts in the study more reliable and valid results were expected, it seems that increasing the sample size did not change the priorities due to noticeable differences between topics and subtopics. We did not conduct a reliability check of the questionnaire while it was a simple ranking form and we only performed the item-by-item analysis.

In conclusion, according to the experts' opinion, the most important priorities of researches on HIV/AIDS were preventive activities and developing national strategy. Since the high risk groups are the most affected people, special strategies should be included in the national strategy for this target groups.

REFERENCES

1. Kaushik S, Levy A. HIV/AIDS. In: Moselio S, editor. Desk encyclopedia of microbiology. 2nd ed. Oxford: Academic Press; 2009. p. 391-413.
2. Barton-Knott S. Global HIV prevalence has levelled off, Improvements in surveillance increase understanding of the epidemic, resulting in substantial revisions to estimates. Geneva: WHO; 2007.
3. Harries AD, Zachariah R, Lawn SD. Providing HIV care for co-infected tuberculosis patients: a perspective from sub-Saharan Africa. *Int J Tuberc Lung Dis* 2009; 13(1): 6-16.
4. Muniyandi M, Ramachandran R, Balasubramanian R. An economic commentary on the occurrence and control of HIV/AIDS in developing countries: special reference to India. *Expert Opin Pharmacother* 2006; 7(18): 2447-54.
5. UNAIDS report on the global AIDS epidemic. status of the global HIV epidemic. 2008 [Online]. Available from: URL: http://data.unaids.org/pub/GlobalReport/2008/jc1511_gr08_executivesummary_en.pdf.
6. Nedjat S, Feizzadeh A, Asghari Sh, Keshtkar AA, Heshmat R, Majdzadeh SR. HIV risk factors in Iran; systematic review, meta-analysis and generalized impact fraction approaches. *Payesh Health Monit* 2007; 6(1): 45-54.

7. National AIDS Committee Secretariat, Ministry of Health and Medical Education. Islamic Republic of Iran country report on monitoring of the united nations general assembly special session on HIV and AIDS. 2010 [Online] Available from: URL: <http://www.unaids.org/fr/dataanalysis/monitoringcountryprogress/2010progressreportsubmittedbycountries/file,33662,fr..pdf> .
8. Epidemiological fact sheet on HIV and AIDS core data on epidemiology and response, (Islamic Republic of Iran). UNAIDS; 2008.
9. Kapiriri L, Martin DK. Successful priority setting in low and middle income countries: a framework for evaluation. *Health Care Anal* 2010; 18(2): 129-47.
10. Malekafzali H, Bahreini FS, Alaedini F, Forouzan AS. Health system priorities based on needs assessment and stakeholders' participation in I.R. Iran. *Hakim Res J* 2007; 10(1): 13-9.
11. Sibbald SL, Gibson JL, Singer PA, Upshur R, Martin DK. Evaluating priority setting success in healthcare: a pilot study. *BMC Health Serv Res* 2010; 10: 131.

How to cite this article: Haghdoost AA, Sadeghi M, Nasirian M, Mirzazadeh A, Navadeh S. Research priorities in the field of HIV and AIDS in Iran. *J Res Med Sci* 2012; 17(5): 481-6.

Source of Support: This study was funded by Regional Knowledge Hub for HIV/AIDS Surveillance, Kerman, Iran., **Conflict of Interest:** None declared.