

## EDITORIAL

## Evaluation of the AIDS risk perception among healthcare workers in the hospital University Unit of Messina (Italy)

I. PICERNO, P. SPATARO, G. CANNAVÒ, I. STURIALE, A. DI NOLA, S. SIDOTI, M.L. CALISTO  
Department of Hygiene, Preventive Medicine and Public Health, University of Messina, Italy

### Key words

Questionnaire • AIDS • Knowledge

The Acquired Immuno Deficiency Syndrome HIV related, has represented, in the last decades of last century, the illness that has aroused the most interest in the world population [1-4]. All of this, not so much for the severity of the clinical picture induced by HIV infection, but because, it is automatically connected to the behavioural circles of the sexual sphere, with all the possible moralistic lapels. Many scientists have ventured in the arduous enterprise to clarify the tangled and fleeing physiopathology of AIDS [5, 6]. At the same time the media, in more a positive and effective way, has given enormous resonance to the scientific matter, through popular program sponsored by ministerial offices and popular association engaged in many educational programs of prevention and information. The contradictory ability of the media to amplify and exacerbate any problem of public attention, has had, with AIDS the most disruptive demonstration. In fact for several years, there has been a decrease in attention to the "AIDS" problem by the media, thus affecting the real interest by the general population. The consequence of all this has led to the decline in risk perception in the public [7, 8] and probably also among healthcare workers [9-11]. Therefore it would be interesting to know what remains of it among the latter, which, because of their cultural formation, should always have been not influenced by the media and should be objectively critical over every kind of given information. For this reason, the present research has been produced with the aim to evaluate, in the context of healthcare workers of the hospital University unit in Messina (Italy), what exactly is the current perception of "AIDS" risk, whether, and to what extent, their knowledge of HIV has lessened, hand in hand to that of the common people. The research started in January and went on till December 2006. The survey was carried out by handing a written and anonymous multiple-choice questionnaire to 1917 healthcare workers. The practicality of this methodology allowed to carry out the survey in the intervals of work and in moments of pause of the healthcare workers of the Hospital University Unit in Messina (Italy). The questionnaire was composed of 17 questions, 6 of which were related to the generic knowledge (transmission ways, preventive measures, biological fluid, infection, defense of personal data rela-

ted to the seropositive subject, legality revelation of the seropositivity), and 11 were about specific knowledge evaluation (AIDS definition, biological samples on which it is possible to do the test, significance of window-period, surgical instruments sterilization measures, illness evolution stages, HIV transmission among seropositives, healthcare workers more exposed to the risk of infection, mandatory notification, precautionary measures for AIDS patients, correct elimination of surgical instruments and possibility of HIV testing effectuation without patient consent). Moreover, the questionnaire collected some personal data as sex, age, the interviewer instruction level, qualification, service years given and source of information about this problem, working unit. The results obtained by the analysis of the answers were analyzed by the  $\chi^2$  test employing the Epi Info statistic software. A p value of  $< 0.05$  was considered significant. The data pointed out that of 1917 healthcare workers who were given the questionnaire, 623 (34.06%) completely compiled it. The female subjects were 384 (58.8%) and those male 259 (39.7%) whereas 10 (1.5%) did not specify their sex, therefore their answers were not considered for the present study. The year range was included between the 24 and 65 years. The results obtained are explained in the Tables I, II, III, IV and in the Figures 1, 2, 3. The data obtained from our surveying allow to high light interesting issues: In the first place, it shows the insufficient will of collaboration of the interviewed subjects, considering that out of 1917 questionnaires only 643 have been completed. It is a very indicative symptom of the insufficient attention on the surveyed subjects part towards the AIDS topic, also considering that the questionnaire has been given in a way to gather the largest number of subjects, placing particular attention to the time in which it was carried out; that is during working day intervals, and meal breaks as to not distract the workers from their occupational engagements. We can only assert that the topic of our survey has not turned out particularly worthy of attention as it would have in the case of a problem relative to social and/or scientific interest. Moreover, it was evident that women represented 58.8% of the subjects who completed the questionnaire thoroughly and that is in agreement with the fact that women have always

**Tab. I.** Percentages of correct answers given to general knowledge questions about HIV infection, by the interviewed subjects, grouped by areas of work competence. The highest percentages of correct answers are in bold.

Question	Medical area (%)		Surgical area (%)		Emergency area (%)		Diagnostic area (%)		All areas (%)	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
A	<b>67.52</b>	32.48	46.75	<b>53.25</b>	<b>58.33</b>	41.67	<b>51.06</b>	48.94	<b>59.72</b>	40.28
B	<b>67.34</b>	32.66	<b>56.76</b>	43.24	48.00	<b>52.00</b>	<b>52.38</b>	47.62	<b>61.65</b>	39.35
C	<b>68.29</b>	31.71	50.00	50.00	<b>100</b>	0.00	<b>66.67</b>	33.33	<b>64.79</b>	35.21
D	<b>65.18</b>	34.82	50.00	50.00	<b>63.33</b>	36.67	48.86	<b>51.14</b>	<b>58.70</b>	41.30
E	<b>71.15</b>	28.85	50.00	50.00	50.00	50.00	<b>78.95</b>	21.05	<b>68.13</b>	31.87

A What are the ways of transmission of HIV?  
 B What are the major preventive measures?  
 C Which are the biological liquids through which it's possible to give HIV?  
 D Is it legitimate to reveal the Seropositive status of a person?  
 E Is it mandatory, on the physician's part to declare the seropositive status of a patient?

**Tab. II.** Percentages of correct answers given to specific knowledge about HIV infection, by the interviewed subjects, grouped by areas of work competence. The highest percentages of correct answers are in bold.

Question	Medical area (%)		Surgical area (%)		Emergency area (%)		Diagnostic area (%)		All areas (%)	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
F	<b>68.52</b>	31.48	<b>55.26</b>	44.74	<b>72.73</b>	27.27	<b>53.33</b>	46.67	<b>62.87</b>	37.13
G	<b>84.62</b>	15.38	<b>66.67</b>	33.33	20.00	<b>80.00</b>	<b>100</b>	0.00	<b>71.43</b>	28.57
H	<b>60.87</b>	39.13	42.86	<b>57.14</b>	0.00	0.00	50.00	50.00	<b>55.26</b>	44.74
I	<b>77.14</b>	22.86	<b>75.00</b>	25.00	33.33	<b>66.67</b>	<b>63.64</b>	36.36	<b>70.00</b>	30.00
L	<b>66.83</b>	33.17	48.84	<b>51.16</b>	<b>57.14</b>	42.86	<b>53.03</b>	46.97	<b>61.08</b>	38.92
M	<b>60.71</b>	39.29	<b>52.63</b>	47.37	<b>80.00</b>	20.00	<b>75.00</b>	25.00	<b>64.21</b>	35.79
N	<b>65.71</b>	34.29	50.00	50.00	<b>62.07</b>	37.93	<b>56.92</b>	43.08	<b>61.71</b>	38.29
O	<b>61.70</b>	38.30	42.86	<b>57.14</b>	<b>60.00</b>	40.00	37.50	<b>62.50</b>	<b>57.14</b>	42.86
P	<b>67.60</b>	32.40	<b>52.81</b>	47.19	<b>54.55</b>	45.45	<b>50.55</b>	49.45	<b>60.99</b>	39.01
Q	<b>66.46</b>	33.54	<b>51.67</b>	48.33	37.50	<b>62.50</b>	<b>63.33</b>	36.67	<b>60.52</b>	39.48
R	<b>63.38</b>	36.62	50.00	50.00	<b>59.38</b>	40.62	<b>52.22</b>	47.78	<b>58.63</b>	41.37

F What is the correct definition of AIDS?  
 G Which are the biological samples upon which it is possible to execute an HIV test?  
 H Which sterilization methods are more appropriate to prevent HIV transmission?  
 I What do we mean by "window period"?  
 L What's the evolution average time elapsing between seropositivity and AIDS?  
 M Can a sexual encounter between two infected people happen without any precautions?  
 N Do infected people have the obligation by law to inform their partner?  
 O Which is the medical figure mostly infected by the virus?  
 P With what kind of patients it is wiser to avoid accidental blood contact?  
 Q What's the best way to eliminate needles and any used cutters?  
 R Is it possible to require an HIV testing of a patient without his/her consent?

**Tab. III.** Percentages of correct answers given to general knowledge about HIV infection, by the interviewed subjects, grouped by areas of fulfilled years of service. The highest percentages of correct answers are in bold.

Question	10 years	20 years	30 years	40 years
A	<b>70.90</b>	57.60	64.50	49.10
B	<b>69.70</b>	55.40	68.40	67.90
C	10.60	<b>14.10</b>	11.80	5.70
D	62.60	66.30	<b>67.10</b>	58.50
E	<b>15.00</b>	10.90	9.20	13.20

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 E Is it mandatory, on the physician's part to declare the seropositive status of a patient?

**Tab. IV.** Percentages of correct answers given to specific knowledge about HIV infection, by the interviewed subjects, grouped by areas of fulfilled years of service. The highest percentages of correct answers are in bold.

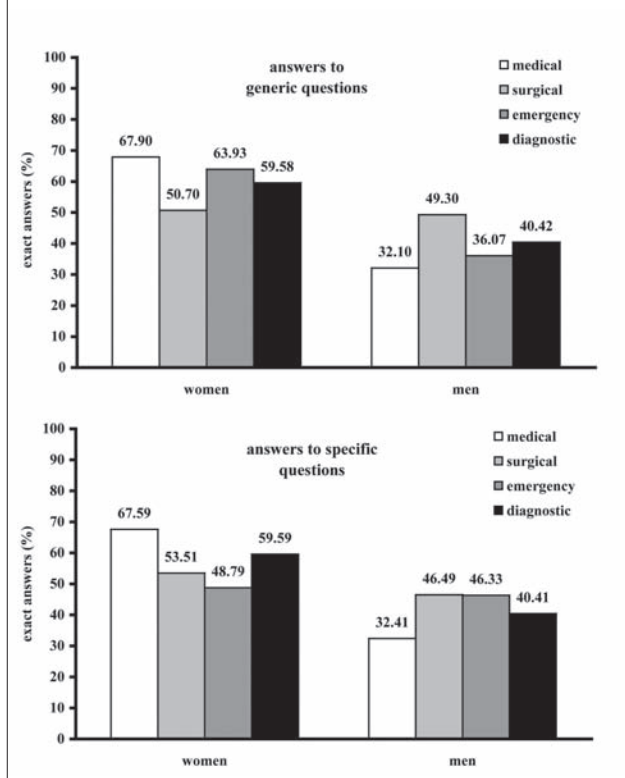
Question	10 years	20 years	30 years	40 years
F	<b>35.60</b>	23.90	31.60	22.60
G	4.40	2.20	6.60	<b>7.10</b>
H	6.50	1.10	<b>9.20</b>	3.80
I	9.40	<b>9.80</b>	6.60	3.80
L	<b>55.30</b>	50.00	38.20	41.50
M	<b>15.60</b>	15.20	13.20	15.10
N	<b>55.60</b>	55.40	50.00	49.10
O	<b>22.10</b>	20.70	6.60	17.00
P	77.60	77.20	<b>80.30</b>	71.70
Q	40.00	<b>53.50</b>	44.70	39.60
R	75.60	70.70	<b>76.30</b>	66.00

**F** What is the correct definition of AIDS?  
**G** Which are the biological samples upon which it is possible to execute an HIV test?  
**H** Which sterilization methods are more appropriate to prevent HIV transmission?  
**I** What do we mean by "window period"?  
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**O** Which is the medical figure mostly infected by the virus?  
**P** With what kind of patients it is wiser to avoid accidental blood contact?  
**Q** What's the best way to eliminate needles and any used cutters?  
**R** Is it possible to require an HIV testing of a patient without his/her consent?

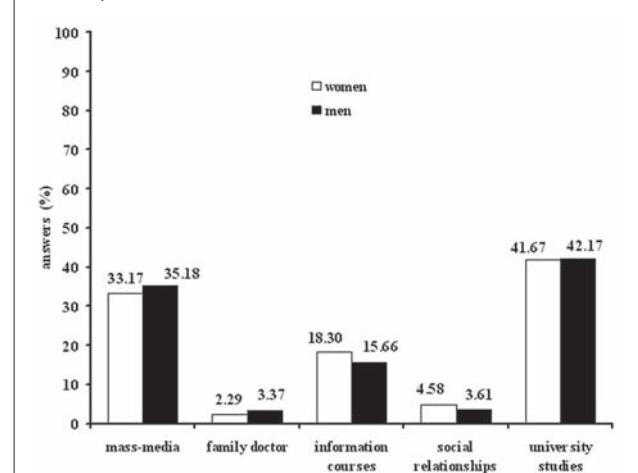
shown a particular attention to the AIDS topic; but this is not an acceptable data for a group statistically constituted by healthcare workers whose scientific competences should exceed their specific interests in a medical topic. To that, one might add the precision with which female subjects answered to questions both in general and speci-

fic culture on the AIDS topic (with the exception of some least statistically important cases, as is shown by Figure 1). However the most relevant statistical data remains that no subject, neither women nor men have correctly answered to all the questions. The our questions wanted to distinguish a pure technical preparation that all healthcare workers must have from a general preparation, which is presumed to be spread among general population, at the widest cultural level possible. Therefore we do not believe that the inaccuracy of the answers is due to the difficulty of the given issues: Instead, we believe that such imprecise response to the questions is due to a cultural detachment that has left in the interviewed subjects only a merely poor memory of previously acquired knowledge. The evaluation of statistical analysis of the exact answers given, also show such a thesis, if we classify them by the amount of years work in the workplace (Tabs. III

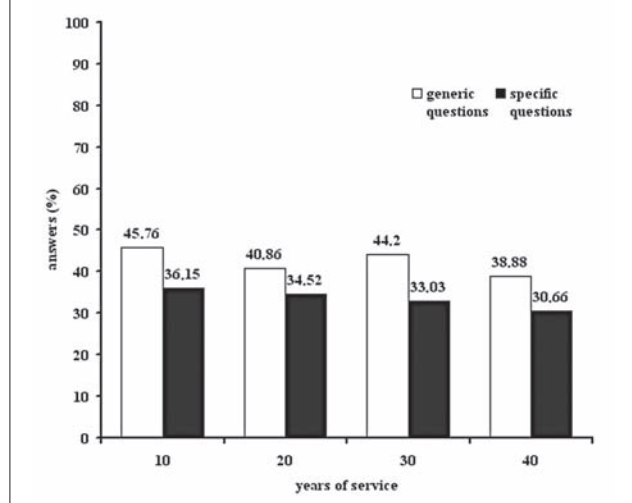
**Fig. 1.** Average percentages relative to the complete correctness of the answers to the questionnaire, for both sexes, and by area of work competence.



**Fig. 2.** Percentage of answers given by the interviewed subjects to the question relative to information sources.



**Fig. 3.** Percentages of exact answers in relation to fulfilled years of service of the interviewed subjects.



and IV). It is impossible to comprehend how seniority is inversely proportional to the exactness with which the answers have been supplied. One would expect an almost general leveling among all the service years, if it is considered that the professional modernization is mandatory, and were it not for the fact that seniority would have to involve greater experience and greater sensitization. Therefore the classes of young seniorities turn out more well informed because they preserve a recent memory of the studies just acquired. It is also interesting that the data of the diversity in the correctness of the answers, when sex and doctor-surgical area questionnaires were analyzed (Fig. 1, Tabs. I and II), with the exception of the number of exact answers given from the men of the surgical and diagnostic area, all the other areas defer in statistically meaningful way as far as precision, showing an unhomogeneous cultural level towards the AIDS topic. Actually,

AIDS should not have determined differences in the degree of scientific preparation among the various doctor surgical areas, given the extension of social resonance and the level of involvement in the sanitary level. There should not be any difference among answers to questions like “ways of HIV transmission”, “measures of prevention”, “organic liquids as vehicle of infection”, “measures of sterilization of the sanitary instruments”, “patients needing particular precautions”, “corrected elimination of cutting needles”. Nevertheless, analyzing statistically these questions in particular, the answers showed a statistically meaningful difference among all doctor-surgical areas, also when the issues weren’t exclusively about HIV, but about any microbiological agent and about hygiene concerns of health workers, doctors and non. Furthermore, about a third of the interviewed subjects of both sexes, indicated the media as the sole information source. Such a fact arouses some perplexity. It would be expected from them to have a more scientific and objective knowledge, such as from university courses, (which very few attend), or from professional updating courses. Therefore, we can actually affirm that the interviewed subjects have been (just as most of the general population) influenced by the mass media moods and fluctuations in facts. In conclusion, we advance the hypothesis that, not only the disinterest of the mass-media is at the base of the phenomenon, but also the inattention to the problem and the decrease of the risk perception on the part of the same healthcare personnel (doctors and not), could reinforce the idea that it is possible to underrate HIV risk among common people. It is considered, in fact, that the healthcare staff (family doctors, hospitals worker, outpatient doctors) is without a doubt, the interlocutor most authorized in order to contrast the spread of this idea. Therefore one of the primary of campaigns of information, should be represented actually by healthcare staff, not only corporate but also from that which operates directly on the territory.

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■ Received on October 31, 2007. Accepted on September 10, 2008.

■ Correspondence: Isa Picerno, Department of Hygiene, Preventive Medicine and Public Health, via Consolare Valeria, 98125 Messina, Italy - Tel. +39 090 2213627 - Fax +39 090 221351 - E-mail: ipicerno@unime.it