Does healthcare personnel responsible for epidemiological surveillance know how to identify mandatorily notifiable diseases?

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Dear editor,

In response to the article by Lugo-Caballero et al.¹ about knowledge on vector-transmitted diseases (dengue, rickettsiosis and Chagas disease) by physicians, where 62.5 % of physicians are described to have moderate knowledge, 37.5 % poor knowledge and 0 % adequate, I'll allow myself some remarks on the subject.

Epidemiologic surveillance of infectious diseases and harm that are subject to mandatory notification is crucial to the planning, implementation and evaluation of programs for the prevention and control of diseases, as well as to identify the most compromised regions and population groups.^{2,3} It depends on the definition of the case, recognition of the disease, collection of individual data, notification and analysis for opportune detection of outbreaks with the purpose to control the impact on the population.³ The process of epidemiological surveillance requires health personnel trained to submit a detailed or abridged report of diseases that have to be mandatorily notified to the relevant authorities.²

Studies carried out in different parts of the world have demonstrated that one out of every two persons felt informed about the obligation to notify; however, they did it incompletely. The most common causes for not complying with information requirements include the lack of knowledge on when to inform –not being sure that the diagnosed disease is reportable–, negative attitude towards reports and lack of motivation due to inadequate feedback.³⁻⁵

Currently, in Peru there are 19 infectious diseases subject to epidemiological surveillance, out of which

12 have been reported in the Lambayeque region.⁶ Most members of health personnel obtain their knowledge from TV programs, internet and other colleagues' experiences; however, reports indicate that 50 % have deficient knowledge on epidemiological surveillance.³

Peruvian Social Security has a coverage of approximately 34 %⁷ of the national population and, in September 2018, the annual national meeting was carried out with those responsible of the 33 networks that integrate the epidemiological surveillance system, who were applied the "Knowledge" section of the Knowledge on Epidemiological Surveillance, Attitudes towards Epidemiological Notification and Experience in the Reporting of Notifiable Diseases Questionnaire (validated by experts and with KR-20 of 0.71 for knowledge and Cronbach's alpha of 0.76 for attitudes).⁸ This questionnaire poses 12 questions, scenarios and problem-cases to identify mandatory report diseases. It was self-administered and answered by 36 health professionals (Table 1).

The results showed that most personnel responsible for epidemiological surveillance had received training; however, only 5.5 % answered the questionnaire correctly and more than 50 % had 8 or less correct answers.

Since 2013, reports of cases of dengue have increased. In 2014, there was warning for measles and rubella, owing to increased population flow between countries: in 2015, one case of measles imported from Germany, chikungunya imported cases and the first autochthonous case of the latter were reported; cases of human rabies and canine rabies dissemination in the Puno and Arequipa department were also reported. On that same year, an increased risk of influenza and other

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Table 1. Knowledge on epidemiological surveillance and mandatory reporting of infectious diseases procedures by health personnel (n = 36)

Characteristic	n	%
Training on epidemiological surveillance		
Yes	25	69.4
No	11	30.6
Frequency of answers for each question of the applied questionnaire	2	5.5
10 correct answers	3	8.3
9 correct answers	12	33.3
8 correct answers	10	27.8
7 correct answers	4	11.1
6 correct answers	3	8.3
5 correct answers	2	5.6
Recognition of clinical cases		
Mandatory notifiable disease	31	86.1
Dengue	29	85.6
Cholera	35	97.2
Malaria	5	13.9
Rubella	12	33.3
Pneumonic plague	29	80.6
Poliomyelitis	35	97.2
Actions when a notifiable case is identified		
Makes the mandatory report		
Identifies who is responsible for making the mandatory report in the health center	5	13.9
Identifies international notification report	12	33.3
Identifies international notification report	26	72.2
Recognizes epidemiologic link	36	100.0

respiratory viruses' transmission was informed in approximately 12.8 % (<http://www.dge.gob.pe/salasituacional>). During 2017, several outbreaks of dengue, malaria, zika, chikungunya, bubonic plague and other diseases subject to epidemiological surveillance have been identified in Peru.^{6,8}

According to the referred survey, there was higher recognition deficit for malaria (84 %), rubella (67 %), dengue (19 %) and pneumonic plague (19 %); when comparing the results with statistics, we can affirm that there is an underestimated number of cases of mandatory notifiable infectious diseases and, therefore, of unidentified outbreaks.^{6,8}

Moreover, it became evident that only 13.9 % of surveyed subjects used to make the mandatory report, and 33.3 % recognized those who were responsible for making the mandatory report in their health establishments, a fact that may be related to the causes found by Nader et al.,² Tan et al.⁵ and Mera et al.³

The delay in the identification of infectious diseases that are under epidemiological surveillance leads to Peruvian Ministry of Health intervention being suboptimal, with outbreaks and epidemics appearing that can cause the death of numerous people; therefore, it is important for the personnel in charge of health posts to be in constant training and updating for opportune recognition of infectious diseases that are subject to epidemiological surveillance and to know the correct form to carry out the mandatory report.

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