



CORRESPONDENCE

Healthcare students and workers' knowledge about transmission, epidemiology and symptoms of Zika fever in four cities of Colombia



KEYWORDS

Zika;
Knowledge;
Epidemiology;
Colombia;
Latin America

Dear Editor,

Latin America has recently witnessed the unprecedented arrival of emerging arboviruses such as Chikungunya and Zika [1–4]. This represents complex epidemiological scenarios, where assessing knowledge amongst healthcare students and workers about the epidemiology, symptoms and transmission of Zika in cities of Colombia would be relevant [5]. Particularly because no information about Zika was available in national or local settings before 2015.

An observational cross-sectional study was performed among assistants who attended a symposium on Zika on June–July (2015), simultaneously in four cities: Pereira and Dosquebradas, Risaralda; Sincelejo, Sucre and Cartagena, Bolivar (all of them, endemic for Dengue and Chikungunya).

Attendees who agreed to be part (convenience sample), filled out a questionnaire about basic knowledge on the epidemiology, symptoms and prevention of disease (five questions), before and after the meeting.

A total of 269 questionnaires were applied (93 in Pereira, 91 in Sincelejo, 65 in Dosquebradas and 30 in Cartagena). The mean age of participants was 32.2 year-old (± 12.1 ; range 17–78, 65.9% female), 32.6% were physicians (15.4% general practitioners and 17.2% specialists), 20.4% nurses, 15.8% medical students.

Knowledge about virus transmission was significantly higher previous to the intervention in Cartagena (100%), being consistently high as well in the other assessed cities

(>80%). Regarding the frequency of symptoms, initial degree of knowledge was low among all of cities ($<35\%$, $p \geq 0.05$). Information about incubation period was significantly higher before at Pereira (80%) and lower in the other cities ($<65\%$). Regarding the most frequent symptoms associated and disease prevention, knowledge was also significantly higher in Pereira (91% and 100%, respectively). Also, in Pereira we observed a significant increase in questions 2 and 3 (33.3%–83.3% and 80.0%–97.9%, $p < 0.05$), reaching 100% of correct answer choice for the rest of the questions. In Cartagena 100% of correct answers were reached after. A similar pattern was observed for Sincelejo, except for question 5 in which 95.7% was obtained after intervention, with significant increase when compared to the baseline ($p = 0.04$). For Dosquebradas, a significant rise was observed for question 2 ($p = 0.001$), with a boost of up to 100% for question 1, as well as a >89% trend in final correct answers for the other questions (Table 1).

Despite its limitations, this is the first study to measure the level of knowledge on transmission, epidemiology and symptoms of Zika fever. Up to July 15, 2015, when the trainings were held, there were not officially confirmed cases of Zika in Colombia, contrasting to its neighboring country of Brazil, where almost 50 cases were reported. Since September 22, 2015, the first nine cases, were reported. Until November 28, 2015, there have been more than 3700 suspected cases, with 578 RT-PCR-laboratory-confirmed Zika cases in Colombia. This would have been impact in clinical and epidemiological suspicion, then giving the relevance of preparedness and alert before the arrival of Zika to these regions, in order to achieve a timely diagnosis and optimal disease management in endemic regions, but also for travelers returning from these areas [2,4].

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None.

Conflict of interest

None of the authors report conflict of interests.

Table 1 Results of questions about knowledge about transmission, epidemiology and symptoms of Zika fever in four cities of Colombia.

Cities																						
Pereira					Dosquebradas					Sincelejo					Cartagena					All cities comparison		
Pre		Post			p	Pre		Post			p	Pre		Post			p	Pre	Post			
n	%	n	%	n %		n %	n %	n %	n %	n %		n %	n %	p	p	p						
1. Zika fever is a disease transmitted by (answer: mosquito bite)																						
Correct	44	97.8	48	100.0	0.3	16	94.1	48	100.0	0.26	36	81.8	47	100.0	0	15	100.0	15	100.0	n/a	0.0249	n/a
Incorrect	1	2.2	0	0.0		1	5.9	0	0.0		8	18.2	0	0.0		0	0.0	0	0.0			
Total	45	100.0	48	100.0		17	100.0	48	100.0		44	100.0	47	100.0		15	100.0	15	100.0			
2. Regard symptoms, which proportion of patients present them? (answer: 75%)																						
Correct	15	33.3	40	83.3	<0.001	3	17.6	32	66.7	0	10	22.7	47	100.0	n/a	0	0.0	15	100.0	n/a	0.0592	<0.001
Incorrect	30	66.7	8	16.7		14	82.4	16	33.3		34	77.3	0	0.0		15	100.0	0	0.0			
Total	45	100.0	48	100.0		17	100.0	48	100.0		44	100.0	47	100.0		15	100.0	15	100.0			
3. Usual incubation period is (answer: 3–12 days)																						
Correct	36	80.0	47	97.9	0.01	11	64.7	46	95.8	0.49	28	63.6	47	100.0	n/a	5	33.3	15	100.0	n/a	0.0004	0.4691
Incorrect	9	20.0	1	2.1		6	35.3	2	4.2		16	36.4	0	0.0		10	66.7	0	0.0			
Total	45	100.0	48	100.0		17	100.0	48	100.0		44	100.0	47	100.0		15	100.0	15	100.0			
4. More frequent symptoms are (answer: fever, conjunctivitis and arthralgia)																						
Correct	41	91.1	48	100.0	0.05	14	82.4	47	97.9	0.05	40	90.9	47	100.0	n/a	8	53.3	15	100.0	0.01	0.0023	0.5113
Incorrect	4	8.9	0	0.0		3	17.6	1	2.1		4	9.1	0	0.0		7	46.7	0	0.0			
Total	45	100.0	48	100.0		17	100.0	48	100.0		44	100.0	47	100.0		15	100.0	15	100.0			
5. In order to prevent disease spread in communities, is necessary to (answer: to reduce mosquito bite exposure)																						
Correct	45	100.0	48	100.0	n/a	13	76.5	43	89.6	0.08	35	79.5	45	95.7	0.04	10	66.7	15	100.0	0.04	0.0029	0.0723
Incorrect	0	0.0	0	0.0		4	23.5	5	10.4		9	20.5	2	4.3		5	33.3	0	0.0			
Total	45	100.0	48	100.0		17	100.0	48	100.0		44	100.0	47	100.0		15	100.0	15	100.0			

Bold values corresponded to statistically significant differences ($p < 0.05$).

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