

## Original Research Article

# Physicians as viral hepatitis advocates: empowerment through education

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## ABSTRACT

**Background:** Viral hepatitis is the most serious infections due to its asymptomatic nature for a long period and complications like liver cirrhosis and hepato cellular carcinoma. Also, available literatures suggest low vaccination status, poor to moderate knowledge about prevention and management of viral hepatitis. Moving forward, physicians can act as advocates in disseminating the correct knowledge about prevention and transmission of viral hepatitis. With this background one-day training program for physicians was conceptualised under project PRAKASH to educate and empower them about prevention and management of viral hepatitis.

**Methods:** A pre-post study design was undertaken among the physicians who registered themselves for hepatitis induction program. An online link to the knowledge, attitude and practice (KAP) questionnaire consisted of 59 questions of knowledge (35 questions), attitude (12 questions) and practice (12 questions) along with demographic variables was shared with the registered participants. Same knowledge questions were asked during post-test. Paired-t-test and Independent samples t-test were used in analysis using statistical package for the social sciences (SPSS) v-21. Level of significance was taken at  $p < 0.05$ .

**Results:** A total of 204 clinicians were trained over five training and pre-post was available for 170 participants. The mean knowledge, attitude and practice scores were found to be  $25.11 \pm 4.85$ ,  $50.17 \pm 6.86$ ,  $20.18 \pm 3.90$  out of total score of 35, 60 and 24 respectively. Post knowledge score had increased significantly when compared with pre-score. Pre-knowledge score was found significant with experience level.

**Conclusions:** Overall, study observed significant improvement of knowledge among physicians which can be attributable to training program and this program can be up scaled and help in empowering the physicians on various health-related topics across the country.

**Keywords:** Physicians, Hepatitis, Capacity Building, Health knowledge, Vaccination, Prevention, Transmission

## INTRODUCTION

World Health Organization (WHO) estimated 257 million hepatitis B cases and 71 million hepatitis C cases worldwide which accounted for 1.34 million deaths annually. Viral hepatitis is a major public health problem mainly because of its silent and asymptomatic nature in early stages but can cause considerable liver damage in the form of liver cirrhosis and hepatocellular carcinoma,

before its identification.<sup>1</sup> In India, burden of hepatitis B is estimated as 40 million cases and 6-12 million cases of hepatitis C.<sup>2</sup>

Healthcare workers (HCWs) are one of the most vulnerable group with respect to acquiring of hepatitis B virus (HBV) and hepatitis C virus (HCV) infections.<sup>3</sup> One study reflected that approximately 66,000 (6%) of HCWs across the globe were exposed to HBV infection.<sup>4</sup> Another

Northern Tanzanian study stated highest prevalence of blood-borne hepatitis infection among doctors as compared to other HCWs, mainly attributable to direct contact with blood and body fluids of patients while treatment and extremely low status of vaccination.<sup>5</sup> Moreover, resident doctors from a tertiary care hospital reported incidence of needle stick injury as high as 73.7%, thus predisposing them to increased risk of HBV and HCV infection.<sup>6</sup> Despite the high risk, a study suggest most of the HCWs are not-vaccinated or partially vaccinated, merely due to limited knowledge regarding the vaccine and low perceived susceptibility for getting the infection.<sup>7</sup> Another reason for HCWs to be at high risk is poor or moderate knowledge about hepatitis and its transmission.<sup>8,9</sup>

Though the physicians and clinical doctors are aware about hepatitis infection and important modes of transmission however, information about infrequent modes of transmission, clinical features and complications of hepatitis infection is limited.<sup>9</sup> A study among medical fraternity at Uttarakhand elaborated that participants who had higher knowledge and positive attitude towards hepatitis prevention and management, were following best practices to reduce transmission and prevent the infection.<sup>10</sup> Another study concluded that good practices towards prevention and transmission of viral hepatitis was directly attributable towards good knowledge among HCWs.<sup>11</sup> Thus, training and educating the clinicians is important and results in minimizing misconceptions and promotes acceptance towards the vaccine, eventually resulting in positive attitude and better practices.<sup>7</sup> Thus, higher level of knowledge and attitude towards the disease leads to positive attitude and better practices. Furthermore, physicians plays an important role in disseminating the correct information, busting myths and misconceptions among the general public because of their respectful and influential profession.<sup>12,13</sup>

With this objective, one-day training for clinicians titled 'hepatitis induction program (HIP)' was designed under the project programmed approach to knowledge and sensitization on hepatitis (PRAKASH). The main objective of the HIP was to educate and impart training about epidemiology of viral hepatitis, its diagnosis, screening and treatment among clinicians. The present study aims at assessing the knowledge, attitude and practice of the clinicians related to viral hepatitis and the effect of one-day training in improving the knowledge of the physicians.

## METHODS

A one-day training program on viral hepatitis for physicians titled 'hepatitis induction program' was conducted under the project PRAKASH, Institute of Liver and Biliary Sciences (ILBS), from May 2018 to March 2019. The aim of the training was to train and impart knowledge about management of viral hepatitis among physicians.

The scientific agenda and speakers were finalized and the study material was prepared in consultation with faculty members and hepatologists at ILBS. The speakers were chosen faculty members from ILBS or subject experts from the departments like hepatology, radiology, clinical virology and epidemiology. Based on the session objectives, the project team prepared the questionnaires for knowledge, attitude and practice (KAP) and post training assessment of the clinicians. These questionnaire were shared with the subject experts for validation and were finalized after incorporating their suggestions. The program provided provision of registration of the participants through online as well as offline modes.

Prior to commencement of the training program, an online KAP questionnaire on viral hepatitis was administered on the participants via SurveyMonkey platform. The link for KAP questionnaire was sent to the physicians on their registered email id and mobile number. The KAP questionnaire consisted of 59 questions and was divided into four sections: demographic details, knowledge (35 questions), attitude (12 questions) and practice (12 questions). All the questions were based on prevention and management of viral hepatitis. Each knowledge question was of one mark. Attitude questions were on 5 point likert scale of 1-5 whereas practice question used yes, no and don't know scale of 0-2, where 0 denoted no, 1 was don't know and 2 meant yes.

Following the KAP assessment, the training on scientific sessions related to viral hepatitis was delivered by the subject experts through face to face medium. The training program was scheduled for the whole day commencing from 8.30 a.m. to 5.00 p.m. The scientific sessions related to the training program were divided into four major themes with time duration ranging from 30 minutes to two hours for each theme. The four major themes were: introduction and overview, viral hepatitis, clinical case discussions and other process and procedures related to viral hepatitis. Following the end of the session, the queries of the participants were addressed by the subject experts. At the end of the scientific sessions, post assessment of knowledge among physicians was performed by sharing the link to online post assessment questionnaire on their registered contact details. The post assessment questionnaire consisted of same questions as in knowledge section of KAP assessment.

The knowledge section of KAP questionnaire was further divided into three domains: general awareness of hepatitis, transmission of hepatitis and prevention and immunization against hepatitis. General awareness on hepatitis domain consisted of 17 questions of 17 marks. Q1, Q3, Q8, Q9, Q11, Q14, Q16, Q17, Q18, Q20, Q23, Q25, Q26, Q27, Q30, Q31 and Q33 were included in general awareness domain. Further, Q4, Q7, Q15, Q21, Q28, Q29 and Q32 were included in transmission domain with seven questions of seven marks whereas prevention and immunization against hepatitis domain had 11 questions (Q2, Q5, Q6, Q10, Q12, Q13, Q19, Q22, Q24, Q34 and Q35) of 11 marks.

The data on KAP and post knowledge assessment was extracted in MS excel from SurveyMonkey and was analyzed using IBM-statistical package for the social sciences (SPSS) version 21.0. The continuous data was analyzed as mean and standard deviation while categorical data was summarized as frequencies with percentages. For the purpose of analysis, the age was categorised into two categories as less than 35 years and 35 years and above.<sup>14</sup> The experience was divided into four categories: less than 5 years, between 5-10 years, between 10-20 years and more than 20 years.<sup>15</sup> Similarly, knowledge score was divided as poor-to-moderate (<75%) and good ( $\geq$ 75%).<sup>16,17</sup> Independent t-test and one-way analysis of variance (ANOVA) was used to assess the mean KAP scores across various demographic variables. The paired t-test was used to assess the overall and domain wise mean difference in pre and post knowledge assessment amongst the participants. Pearson correlation coefficient was used to establish relationship between KAP score. The level of significance was taken as <0.05.

## RESULTS

A total of five trainings on viral hepatitis were organized by project PRAKASH, of which four were conducted at ILBS and one was conducted at two designated centers, one in North Delhi and other in West Delhi. A total of 204 clinicians were trained across five trainings, thus KAP and pre-assessment was available for 204 individuals, however pre-post data was available for only 170 participants as the participation was voluntary.

The mean age of the participants who attended training was  $39.43 \pm 12.35$  and approximately 64.7% were males. Median experience of the clinicians was 8 years (IQR: 2-20) and the study was conducted among clinicians from Delhi. The demographic characteristics were found to be similar with participants included in pre-post assessment (Table 1).

The mean KAP scores were found to be  $25.11 \pm 4.85$ ,  $50.17 \pm 6.86$ ,  $20.18 \pm 3.90$  out of total score of 35, 60 and 24 respectively. Correlation statistics between KAP score stated a positive correlation between knowledge and attitude ( $r=0.42$ ,  $p<0.05$ ), knowledge and practice ( $r=0.29$ ,  $p<0.05$ ), attitude and practice ( $r=0.28$ ,  $p<0.05$ ).

The association of knowledge score with demographic characteristics suggested that the mean knowledge score among clinicians with age less than 35 years was  $25.18 \pm 4.84$  while the knowledge score was  $25.05 \pm 4.87$  among physicians of 35 years and above ( $p=0.851$ ). Gender wise mean knowledge scores was  $25.03 \pm 5.22$  among males and  $25.26 \pm 4.10$  among females ( $p=0.743$ ). However, both these associations were not found to be significant, which indicated that there was no difference in knowledge level of the participants with respect to age and gender. Further, comparison of mean knowledge score across various experience categories was found to be significant ( $p=0.027$ ). The association between attitude and practice scores with demographic characteristics, were found to be insignificant, indicating there was no observed association between participant's attitude and practice and their demographic characteristics (Table 2).

**Table 1: Baseline demographic characteristics of clinicians in KAP (N=204) and pre-post assessment (N=170).**

Demographic characteristics	KAP n (%)	Pre-post n (%)
<b>Mean age (SD)</b>	39.43 (12.35)	39.05 (12.21)
<b>Age category (years)</b>		
<35	93 (45.6)	80 (47.1)
$\geq$ 35	111 (54.4)	90 (52.9)
<b>Gender</b>		
Male	132 (64.7)	109 (64.1)
Female	72 (35.3)	61 (35.9)
<b>Median experience (IQR)</b>	8.00 (2-20)	7.00 (2-20)
<b>Experience category (years)</b>		
<5	73 (36.7)	61 (36.5)
5-10	30 (15.1)	28 (16.8)
10-20	40 (20.1)	33 (19.8)
>20	56 (28.1)	45 (26.9)
<b>Marital status</b>		
Unmarried	75 (37.3)	61 (35.9)
Married	126 (62.7)	109 (64.1)

SD: Standard deviation; KAP: knowledge attitude and practice; IQR: interquartile ranges

Out of total score of 35, the mean knowledge score in pre and post assessment was found to be  $25.30 \pm 4.82$  and  $30.51 \pm 4.69$  respectively. The mean difference of 5.21 between pre and post knowledge assessment was found to be statistically significant ( $p<0.001$ ). Approximately 44%

of the participants were having poor to moderate knowledge level in the pre-assessment which was further decreased to 11% in the post-assessment of knowledge. The correct responses in pre-assessment questionnaire was found to be in range 21.0% to 98.0% with 72.3%

individuals responded correctly. The correct responses in the post-assessment increased to 87.1 % with range being 58.0% to 98.0%. Approximately, 84% of the physicians were aware about the correct schedule of hepatitis B vaccines among adults whereas only 58% have correctly answered the incubation period of hepatitis B infection. Further, a much lower proportion (32%) correctly responded about the association of age with hepatitis B chronicity. Approximately, 94% of the participants agreed with the safety and efficacy of hepatitis B vaccine and almost similar proportion confirmed that they were vaccinated against the virus.

Almost all the participants (99%) responded needle stick injury at workplace should be immediately reported to the concerned authorities. Of the total participants, 38% agreed that needle should be recapped or bent after use, however, with respect to medical practices, around 70% mentioned they were bending or recapping the needle after

use. Further, 77% of the physicians have got themselves tested for hepatitis B (supplementary 1).

Domain wise mean pre knowledge assessment score was found to be  $11.59 \pm 2.69$  out of 17 in general awareness domain,  $6.16 \pm 1.06$  out of seven for transmission domain whereas mean pre-assessment score in prevention and immunization domain was  $7.54 \pm 1.91$  out of 11. However, the scores of these three domains increased to  $14.76 \pm 2.45$ ,  $6.51 \pm 0.99$  and  $9.24 \pm 1.84$  respectively in the post-knowledge assessment following one-day training (Table 3). Further, no significant association was observed between pre-post knowledge score and demographic characteristics, which states that knowledge score of the physicians were indifferent with respect to age and gender. However there was marginal significance between experience categories and pre-knowledge score ( $p=0.058$ ), which was later found to be insignificant with post-knowledge score ( $p=0.189$ ).

**Table 2: Association of demographic characteristics with KAP score.**

Demographic characteristics	Mean knowledge score (SD)	P value	Mean attitude score (SD)	P value	Mean practice score (SD)	P value
<b>Overall</b>	25.11 (4.85)		50.17 (6.86)		20.18 (3.90)	
<b>Age category (years)</b>						
<35	25.18 (4.84)	0.851	49.98 (5.09)	0.714	20.43 (2.95)	0.406
$\geq 35$	25.05 (4.87)		50.33 (8.07)		19.97 (4.55)	
<b>Gender</b>						
Male	25.03 (5.22)	0.743	49.99 (7.61)	0.615	20.08 (4.12)	0.602
Female	25.26 (4.10)		50.50 (5.25)		20.38 (3.48)	
<b>Experience category (years) (N=199)</b>						
<5	24.96 (5.11)		49.29 (5.16)		20.32 (3.24)	
5–10	26.63 (4.82)	0.027	52.10 (3.43)	0.197	20.80 (1.94)	0.704
10–20	26.38 (4.22)		51.25 (8.24)		19.78 (5.26)	
>20	23.91 (4.65)		49.77 (8.85)		19.96 (4.48)	
<b>Marital status (N=201)</b>						
Unmarried	24.72 (5.06)	0.383	49.43 (5.33)	0.221	20.20 (3.97)	0.987
Married	25.34 (4.75)		50.66 (7.64)		20.19 (3.91)	

SD: Standard deviation

**Table 3: Total and domain wise pre-post knowledge assessment.**

Domain name	Mean pre-assessment score (SD)	Mean post assessment score (SD)	P value
<b>General awareness of hepatitis</b>	11.59 (2.69)	14.76 (2.45)	<0.001
<b>Transmission of hepatitis</b>	6.16 (1.06)	6.51 (0.99)	<0.001
<b>Prevention and immunization against hepatitis</b>	7.54 (1.91)	9.24 (1.84)	<0.001
<b>Overall knowledge score</b>	25.30 (4.82)	30.51 (4.69)	<0.001

SD: Standard deviation

## DISCUSSION

Among healthcare fraternity, physicians have the maximum risk of acquiring blood borne hepatitis infections due to their close proximity to the patients while performing medical procedures and giving treatment. Contemplating this, training and educating the clinicians is

important and results in minimizing misconceptions among them. Further, these physicians can serve as one of the best disseminators for spreading awareness about prevention and management of viral hepatitis among general public. Envisaging doctors as ambassadors, one-day training was designed under the project PRAKASH. The present study aimed at assessing the KAP of doctors

towards viral hepatitis and the effect of one-day training in improving the knowledge of the physicians.

The results of the study disclosed poor-to-moderate knowledge about viral hepatitis with a mean score of  $25.11 \pm 4.85$  out of 35. The knowledge score in our study was in line with a study conducted among clinicians and medical students of Rajasthan.<sup>18</sup> However, our study had reported slightly higher knowledge score as compared to other studies from India.<sup>19,20</sup> This could be attributable to the fact that our study had more participants with five to twenty years of experience as compared to other studies. The study also indicated decreased knowledge score among participants with more than 20 years of experience as viral hepatitis is relatively a new disease and they tend to be less informed about disease-specific knowledge.<sup>21</sup> The study indicated the knowledge, attitude and practice were found to be similar across demographic factors apart from experience. This could be attributable to the fact that the viral hepatitis is given least priority among clinicians.

Despite, being aware of the fact that the needles should not be recapped or bent after use (62% of the respondents), 70% of the participants were recapping or bending them after use, an indication of following incorrect practices that would put them at greater risk of needle stick injury. However, this incorrect practice can be explained by the absence or unavailability of puncture proof containers for disposing the sharp objects like needles as observed in the present study. It could also be attributable to absence of re-use prevention or auto-disable needles in their settings, however, our study could not assess the availability of re-use prevention or auto-disable needles.<sup>22</sup>

The study confirmed a positive correlation between knowledge, attitude and practice score, similar to previous studies indicating better knowledge results in positive attitude and good medical practices.<sup>23</sup> The study also demonstrated significant increase in knowledge score following a one-day training program. These findings were in line with studies published from Gujarat.<sup>24,25</sup> The educational awareness programs on awareness of risk and safety measures associated with use of injection have demonstrated reduction in incidences of percutaneous injury among healthcare workers in previous studies.<sup>26</sup>

To the best of our knowledge, this is the first study from India that has investigated the KAP about viral hepatitis among the physicians and also assessed the effect of one-day training on increasing the knowledge score related to viral hepatitis. However, there could have been a selection bias in participants who have filled the KAP questionnaire as the participation in the study was voluntary. The study could have also suffered a response-shift bias because of its pre-post design.<sup>27</sup>

Despite these inherent limitations, to the best of our knowledge, this is one of the pioneer studies that have trained a wide range of physicians across Delhi. Moreover, the study was able to assess the effect of one-day training on prevention and management of viral hepatitis. Overall,

study observed significant improvement of knowledge among physicians which can be attributable to one-day training program. However, more studies are required to study the factors associated with learning and training in future. In general, training program was successful in strengthening the physicians against viral hepatitis and creating ambassadors for viral hepatitis which can disseminate the correct information among general public. The present training program can be up scaled and help in empowering the physicians on various health-related topics across the country.

## CONCLUSION

There is poor-to-moderate knowledge among physicians on prevention and management of viral hepatitis. This study concludes significant improvement in knowledge among physicians which can be attributable to training program. Moreover, empowered physicians can act as advocates to general population and can create awareness among them. Thus, similar programs should be promoted for empowering the physicians on various health-related topics across the country.

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## SUPPLEMENTARY 1

Table 1: Knowledge related questions with percentages of correct responses in pre and post assessment.

Question	Correct responses	
	Pre-test score (n) (%)	Post-test score (n) (%)
Perinatal hepatitis B transmission is maximum in	129 (76)	148 (87)
Hepatitis B vaccine schedule in adults	143 (84)	166 (98)
Acute liver failure especially in pregnant women is caused in which hepatitis virus?	132 (78)	152 (89)
Who is not at risk for hepatitis B?	161 (95)	164 (96)
Route of administration of hepatitis B vaccine is	148 (87)	163 (96)
Prophylaxis of hepatitis B infection in general population	123 (72)	145 (85)
Hepatitis B is not transmitted by:	166 (98)	165 (97)
The following can be caused as a sequelae of HCV infection	148 (87)	164 (96)
What are the types of viral hepatitis known?	162 (95)	166 (98)
The following statements are true except:	124 (73)	148 (87)
Chronic viral hepatitis is hepatitis that lasts more than	131 (77)	165 (97)
Which of the following is NOT a protease inhibitor that is used for hepatitis C treatment?	80 (47)	124 (73)
Following are true about hepatitis B vaccine except:	148 (87)	156 (92)
The prevalence of hepatitis B in India is	88 (52)	154 (91)
Hepatitis A is transmitted through?	124 (73)	153 (90)
The most common genotype of hepatitis B in India is	36 (21)	110 (65)
Following people are at risk for hepatitis C virus infection:	159 (94)	163 (96)
Incubation period for hepatitis B is	99 (58)	137 (81)
A child born to a hepatitis B infected mother should receive	126 (74)	148 (87)
Which of the following is a DNA virus?	143 (84)	164 (96)
Hepatitis C virus is transmitted by all except:	161 (95)	163 (96)
Following is not true about hepatitis C virus treatment:	107 (63)	147 (86)
Infection with hepatitis B virus at what age can lead to maximum chance of chronicity?	54 (32)	142 (84)
Which of the following serum markers is indicative of hepatitis B vaccination?	95 (56)	120 (71)
Following viruses can cause hepatitis except?	109 (64)	146 (86)
The first virologic marker following acute infection with hepatitis B virus is	109 (64)	133 (78)
Which of the following type of hepatitis is more common among patients undergoing renal dialysis?	93 (55)	131 (77)
Following statement is true about hepatitis C virus infection	125 (74)	146 (86)
Needle stick injury can cause the following infection	158 (93)	160 (94)
The following needs to be done after a needle stick injury except	135 (79)	155 (91)
Which of the following hepatitis viruses can infect only as a super or co-infection?	138 (81)	158 (93)
Following are true about hepatitis A and E except?	149 (88)	153 (90)
To clean blood spills from a hepatitis B virus infected person what should be used?	105 (62)	127 (75)
Following are true for hepatitis B virus infection treatment:	140 (82)	152 (89)
The mechanism of action of sofosbuvir is	53 (31)	99 (58)

**Table 2: Attitude related questions with percentage of responses.**

Questions	Strongly agree (n) (%)	Agree (n) (%)	Neutral (n) (%)	Disagree (n) (%)	Strongly disagree (n) (%)
<b>I think I am not at risk for getting hepatitis</b>	18 (9)	27 (13)	18 (9)	71 (35)	67 (33)
<b>Hepatitis B vaccine is safe and effective</b>	101 (50)	88 (44)	10 (5)	2 (1)	0 (0)
<b>Needle-stick Injury at workplace should be immediately reported to the concerned authority</b>	180 (90)	19 (9)	2 (1)	0 (0)	0 (0)
<b>Patient with hepatitis should have the same rights as others</b>	147 (74)	43 (22)	6 (3)	4 (2)	0 (0)
<b>Hepatitis B and C patients should be isolated from the society</b>	5 (3)	5 (3)	7 (4)	54 (27)	128 (64)
<b>I have no concern of being infected with hepatitis B virus while caring for a patient with hepatitis B virus infection</b>	13 (6)	11(5)	11 (5)	55 (27)	111 (55)
<b>While caring for a patient with hepatitis B virus infection, it is my responsibility to follow universal precautions</b>	184 (92)	13 (7)	0 (0)	0 (0)	2 (1)
<b>Changing of gloves during blood collection and tests is waste of time</b>	4 (2)	4 (2)	3 (1)	25 (12)	165 (82)
<b>All patients should be tested for hepatitis B virus before they receive health care</b>	9 (5)	36 (18)	32 (16)	68 (34)	55 (28)
<b>Following the infection control guidelines will protect the healthcare worker from being infected with hepatitis B virus at work</b>	141 (71)	55 (28)	2 (1)	0 (0)	0 (0)
<b>Needle should be recapped/bent after use</b>	60 (30)	15 (8)	2 (1)	16 (8)	106 (53)
<b>I would refer a patient to appropriate health facility immediately if s/he has symptoms of hepatitis B</b>	144 (72)	49 (25)	4 (2)	1 (1)	2 (1)

**Table 3: Practice related questions with percentage of responses.**

Questions	Yes	Not sure	No
<b>Do you use gloves for exposure prone procedures?</b>	180 (93)	10 (5)	3 (2)
<b>Would you advise a patient who has just got diagnosed with hepatitis B to go for further investigation and treatment?</b>	185 (93)	1 (1)	11 (6)
<b>Have you been screened for hepatitis B?</b>	152 (77)	8 (4)	37 (19)
<b>Have you got yourself vaccinated against hepatitis B?</b>	186 (94)	2 (1)	9 (5)
<b>Do you make sure that you use a new/sterile syringe for any procedure?</b>	186 (94)	2 (1)	10 (5)
<b>Do you avoid recapping/bending the needle after use?</b>	58 (29)	2 (1)	139 (70)
<b>Do you dispose sharps in puncture proof container after use?</b>	1 (1)	1 (1)	197 (98)
<b>Would you educate your patient to ask barber to change blade/or for safe equipment's for ear and nose piercing?</b>	191 (95)	1 (1)	7 (4)
<b>Would you educate your patient to ask for screening of blood before receiving blood transfusion?</b>	195 (98)	2 (1)	2 (1)
<b>Would you advise a patient diagnosed with hepatitis B to share food/utensils/water etc. with others?</b>	151 (76)	13 (7)	35 (18)
<b>Would you advise a patient diagnosed with hepatitis B to meet/hug /share food with people?</b>	191 (95)	1 (1)	7 (4)
<b>Have you ever participated in health education program related to hepatitis B?</b>	80 (40)	8 (4)	112 (56)