Impact of Knowledge on Perceptions of Susceptibility to HAV and HBV Infection Among Methadone Maintenance Patients

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BACKGROUND

- Drug users (DUs) are at very high risk of infection with hepatitis viruses (A, B, C). (Garfein, 1996; Hutin, 1999)

- While hepatitis A (HAV) and hepatitis B (HBV) are preventable by vaccination, many DUs experience missed opportunities for vaccination and have low vaccination rates. (Kuo, 2004)

- Perceptions of susceptibility to infection are a significant predictor of vaccination acceptance. (Samoff, 2004)

- Additional provider efforts, such as patient education, might increase awareness to susceptibility and encourage vaccination acceptance.

OBJECTIVE

- This sub-study examined whether knowledge regarding hepatitis prevention and treatment would alter susceptibility perceptions among methadone maintenance (MM) patients.

METHODS

- DUs were recruited from MM clinics in San Francisco and New York City as part of a randomized hepatitis care coordination trial.

- Demographic characteristics, HAV/HBV status, drug use patterns, sexual risk behaviors, and perceived susceptibility to, and knowledge of, HAV/HBV infection were assessed at baseline and 3 months (3 MO).

- Between baseline and 3 MO, participants received 2 one-hour education sessions regarding prevention and treatment of hepatitis (A,B,C) and HIV.

- HAV/HBV susceptibility determined by self-report of previous infection or vaccination.

- Participants rated perceptions of susceptibility on a 5 item scale, 1-"Strongly Disagree" to 5-"Strongly Agree" (Rhodes, 2004):
  - Likelihood of infection as compared to others.
  - Risk of infection through sexual activity.
  - Risk of infection through drug use practices.
  - Risk of infection for others similar to themselves.
  - The ability of their body to fight off infection.

RESULTS

**Demographic Characteristics of Methadone Maintenance Patients (N = 307)**

Variable	M	SD
Age	45	10.20
	N	%
Male	217	71
Race/Ethnicity		
Caucasian	101	33
African-American	92	30
Hispanic	98	32
Other	16	5
Heterosexual	285	93
Single/Never Married	148	48
Unstably Housed/Homeless	192	63
Unemployed	233	76
12 or More Years of Education	172	56
HAV		
Previous Test	110	36
Vaccinated	56	18
HBV		
Previous Infection	31	10
Vaccinated	24	8
HCV Infection	115	38

Change in HAV & HBV Knowledge Over Time
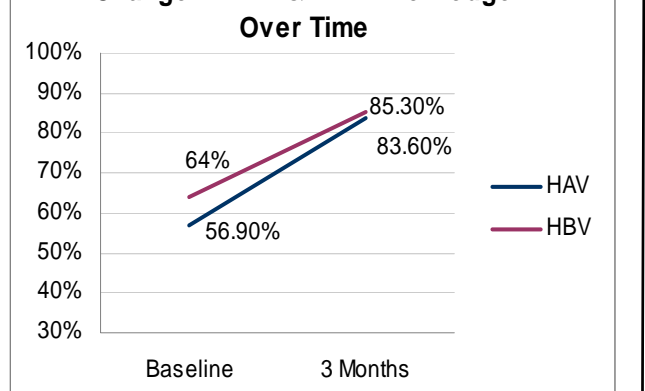
- There was an overall increase in knowledge from baseline to 3 MO for HAV (Mean = 26.66%, SD = 19.29) and HBV (Mean = 21.37%, SD = 20.91)

- There was a decrease in perceived susceptibility from baseline to 3 MO for HAV (Mean = 1.03, SD = 5.20) and HBV (Mean = 1.10, SD = 5.70).

Change in Perceived Susceptibility Over Time
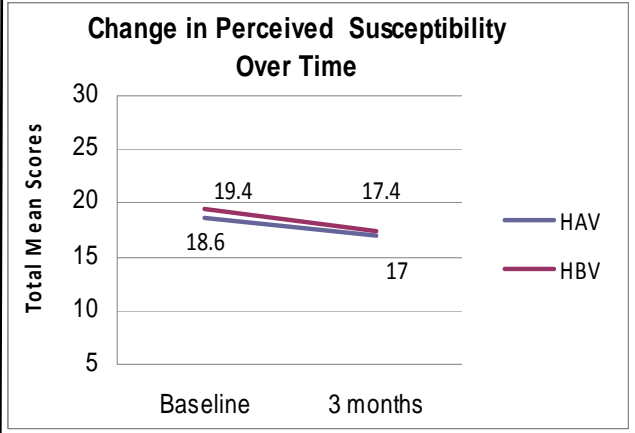
- Increases in hepatitis knowledge were positively correlated with decreased perceptions of susceptibility to HBV (p<0.05) but not to HAV.

CONCLUSION

- Decreases in perceptions of susceptibility to HBV may be related to more accurate knowledge about transmission risks, self-awareness of HBV status, and vaccination that occurred during the intervention.

- In addition, brief health interventions lead to an increase in knowledge that is maintained overtime.

- Future investigations should identify additional factors that DUs associate with infection susceptibility and how these factors are related to vaccination acceptance and completion.

- Understanding the complex relationship between knowledge and perceived risk is an important factor to consider when developing HAV/HBV prevention interventions.

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