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## Estimated Additional Number of Adults in HIV Care Who Have an Indication for Hepatitis A Vaccination Following 2020 US Guideline Update

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To the Editors:

### BACKGROUND

People with HIV (PWH) who contract hepatitis A may have higher level and prolonged hepatitis A viremia with an increased potential to transmit hepatitis A.<sup>1,2</sup> Many PWH have risk factors for which hepatitis A vaccination is recommended, including male-to-male sexual contact, injection and noninjection drug use, homelessness, and chronic liver disease.<sup>3,4</sup> However, in February 2020, the U.S. Advisory Committee on Immunization Practices (ACIP) recommended that all PWH age  $\geq 1$  year be routinely vaccinated for hepatitis A (<https://www.cdc.gov/vaccines/schedules/index.html>). The number of additional adults receiving HIV care who have an indication for vaccination based on the 2020 ACIP update is unknown and could inform public health practice and resource allocation.

### METHODS

The Medical Monitoring Project (MMP) is a population-based survey designed to produce nationally representative estimates of the behavioral and clinical characteristics of U.S. adults with diagnosed HIV.<sup>5</sup> In brief, the MMP uses a 2-stage sampling method in which, during the first stage, 16 states and 1 territory, including 6 separately funded metropolitan areas within selected states, were sampled from all states, the District of Columbia, and Puerto Rico. During the second stage, simple random samples of persons with diagnosed HIV age 18 years and older were drawn for each participating area from the National HIV Surveillance System, a census of persons with diagnosed HIV in the United States. Response rates were 100% (states and territory), 44% (persons, 2016 cycle), and 45% (persons, 2017 cycle). To estimate the additional number and percentage of adults with

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Single overriding communication objective: in 2020, the ACIP recommended all persons with HIV age  $\geq 1$  year be routinely vaccinated for hepatitis A. An additional estimated 275,048 adults in the United States may have an indication for vaccination; health departments, providers, and insurers may need to allocate resources to vaccinate this population.

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention or the authors' affiliated institutions.

diagnosed HIV who have an indication for hepatitis A vaccination based on the updated 2020 ACIP recommendation, we analyzed MMP interview and medical record data collected from 8299 adults with diagnosed HIV during June 2016–May 2018. Of these, 7634 adults, including 5559 men, 1945 women, and 130 people of other genders, had a medical record abstraction performed at their usual site of HIV medical care containing at least 1 diagnosis recorded in the medical record during the past 12 months, indicating that the care was received during this period and that the abstraction was complete. We assessed these persons for risk factors for which hepatitis A vaccination is recommended. We calculated the weighted number and percentage of persons with no risk factors for vaccination except HIV (ie, previously did not have an indication for vaccination) and risk factors for vaccination based on pre-2020 ACIP guidelines, including self-reported male-to-male sexual contact, use of injection or noninjection drugs, and homelessness during the past 12 months, as well as medical record documentation of a diagnosis of chronic liver disease. Estimates are presented overall and by gender. Data were weighted based on known probabilities of selection at state or territory and person levels. In addition, data were weighted to adjust for person nonresponse and poststratified to known population totals by age, race/ethnicity, and sex from the National HIV Surveillance System.

## RESULTS

During the past 12 months, an estimated 275,048 [95% confidence interval (CI), 264,347 to 285,750] U.S. adults receiving HIV care had no indication for hepatitis A vaccination pre-2020 ACIP recommendations,<sup>4</sup> representing 31% (95% CI: 30% to 32%) of adults receiving HIV care (Table 1). An estimated 145,875 (95% CI: 140,776 to 150,974) women had no previous indication, representing 68% (95% CI: 66% to 70%) of women receiving HIV care. An estimated 121,796 (95% CI: 113,690 to 129,902) men had no previous indication, representing 19% (95% CI: 17% to 20%) of men receiving HIV care. Among adults receiving HIV care, an estimated 49% (95% CI: 48% to 51%) reported male-to-male sexual contact, 29% (95% CI: 28% to 30%) used noninjection drugs, 2% (95% CI: 2% to 3%) injected drugs, and 8% (95% CI: 8% to 9%) experienced homelessness during the past 12 months. An estimated 14% (95% CI: 13% to 14%) had chronic liver disease.

## DISCUSSION

An estimated 275,048 adults receiving HIV care, including two-thirds of women receiving HIV care, had no risk factors for which hepatitis A vaccination was recommended before the 2020 ACIP recommendation to vaccinate all PWH age ≥ 1 year. Focusing efforts on vaccinating this population may reduce illness from hepatitis A and the occurrence of higher level and prolonged viremia, which can increase the potential to transmit hepatitis A. In addition, there are substantial gaps in vaccination of PWH who had pre-existing indications for hepatitis A vaccination.<sup>6</sup> Over one-third of PWH reporting male-to-male sexual contact or injection drug use during 2009–2012 were unvaccinated for and lacked documentation of immunity to hepatitis A.

Our study was subject to limitations. First, we did not assess all risk factors for which hepatitis A vaccination is recommended (eg, international travel, occupational exposure, and

exposure to international adoptees<sup>7</sup>). Second, self-reported male-to-male sexual contact and drug use could be subject to social desirability bias. Third, we did not collect medical record data documenting hepatitis A vaccination or laboratory evidence of immunity, which could be used to estimate the need for vaccination among adults with HIV who did not have an indication for vaccination before the 2020 ACIP update. However, MMP data collected during 2008–2013 included this information and indicated that 59% of people without an indication for hepatitis A vaccination had received at least 1 dose of vaccine or had a positive hepatitis A antibody test since diagnosis of HIV (CDC, unpublished), which may substantially reduce the number of people needing vaccination. Fourth, the MMP's person-level response rate was low; however, the data were adjusted for nonresponse, which should reduce bias.

It may be useful for state and local health departments, health care providers, and public and private insurers to estimate the need for hepatitis A vaccination among PWH whom they serve, allocate resources for vaccination, and develop quality improvement systems to ensure uptake of the new recommendation. A cost-effectiveness analysis of hepatitis A vaccination of PWH is needed to inform implementation efforts.

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**TABLE 1.** Weighted Frequencies and Percentages of Risk Factors for Hepatitis A Among People Receiving HIV Care, by Gender United States, 2016–2018, Medical Monitoring Project

Risk Factor for Hepatitis A Vaccination*	Number	Weighted Frequency	95% CI	Weighted Percent	95% CI
Total (N = 7634)					
No risk factor except HIV	2321	275,048	264,347 to 285,750	31.1	29.8 to 32.3
Male-to-male sexual contact*	3773	437,526	426,114 to 448,937	49.4	48.1 to 50.7
Noninjection drug use*	2306	255,020	244,733 to 265,306	28.8	27.6 to 30
Injection drug use*	205	19,329	16,441 to 22217	2.2	1.9 to 2.5
Homelessness*	669	74,528	68,314 to 80,742	8.4	7.7 to 9.1
Chronic liver disease <sup>†</sup>	1058	119,815	111,864 to 127,766	13.5	12.6 to 14.4
Male (N = 5559)					
No risk factor except HIV	969	121,796	113,690 to 129,902	18.6	17.3 to 19.8
Male-to-male sexual contact*	3773	437,526	428,001 to 447,050	66.7	65.3 to 68.2
Noninjection drug use*	1921	214,638	205,335 to 223,940	32.7	31.3 to 34.1
Injection drug use*	181	17,425	14,666 to 20,184	2.7	2.2 to 3.1
Homelessness*	493	55,512	50,121 to 60,902	8.5	7.6 to 9.3
Chronic liver disease <sup>†</sup>	759	88,685	81,743 to 95,627	13.5	12.5 to 14.6
Female (N = 1945)					
No risk factor except HIV	1294	145,875	140,776 to 150,974	68.0	65.7 to 70.4
Noninjection drug use*	336	35,206	31,189 to 39,223	16.4	14.5 to 18.3
Injection drug use*	21	1563	790 to 2337	0.7	0.4 to 1.1
Homelessness*	152	16,418	13,508 to 19,327	7.7	6.3 to 9.0
Chronic liver disease <sup>†</sup>	279	28,512	24,819 to 32,206	13.3	11.6 to 15.0

\* Self-reported during the past 12 months.

<sup>†</sup> Documented in the primary HIV medical record during the past 12 months.