

Opinion/Recommendation

A consensus for occupational health management of healthcare workers infected with human immunodeficiency virus, hepatitis B virus, and / or hepatitis C virus

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Abstract: Occupational health management plays an important role in the prevention of provider-to-patient transmission in healthcare workers infected with human immunodeficiency virus (HIV), hepatitis B virus (HBV), and/or hepatitis C virus (HCV). Therefore, the Japan Society for Occupational Health's Research Group on Occupational Health for Health Care Workers has proposed a consensus for the management of healthcare workers infected with HIV, HBV, and/or HCV based on recent evidence for each concerned group. The consensus recommends that: (1) employers in medical institutions should establish a policy of respecting the human rights of healthcare workers, management strategies for occupational blood exposure, and occupational health consultation; (2) occupational health staff should appropriately assess the risk of provider-to-patient transmission of HIV, HBV, and/or HCV infection and rearrange their tasks if necessary. When conducting risk assessment, occupational health staff should obtain informed consent and then cooperate with the physician in charge as well as infection control experts in the workplace; (3) healthcare workers infected with HIV, HBV, and/or HCV should disclose their employment to their treating physician and consult with their doctor regarding the need for special considerations at work; and (4) supervisors and colleagues in medical institutions should correctly understand the risks of HIV, HBV, and HCV infection and should not engage in any behavior that leads to discrimination against colleagues infected with HIV, HBV, and/or

HCV.

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Introduction

Healthcare workers are required to take precautions for the protection of patient health and safety; an obligation that includes preventing provider-to-patient transmission of blood-borne viruses. The pathogens of primary concern for the healthcare workforce are human immunodeficiency virus (HIV), hepatitis B virus (HBV), and hepatitis C virus (HCV)¹; the prevalence of previous hepatitis diagnosis among Japanese nurses has been estimated at 3.4%². Although the HIV incidence rate for the general population remains low in Japan (<0.1%), the incidence of HIV infection has been increasing recently³. Advances in treatment may lead to a cure for HCV infection⁴, and enable the reduction of HIV and HBV viral load to undetectable levels⁵. Such advances have allowed several healthcare workers infected with HIV, HBV, and/or HCV to continue their professional careers.

Stigma and discrimination against HIV, HBV, and HCV pose a significant barrier to employment in healthcare settings (e.g., denial of care, excessive precautions, and job loss)^{6,8}. In Japan, for example, there have been some incidents of discrimination against nurses infected with HIV, including unjust restriction of working rights and mandatory disclosure of HIV infection status⁹. Therefore, the Guidelines on AIDS Issues in Workplaces published by the Japanese Labour Standards Bureau were re-

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vised in 2010 to specify that healthcare workers cannot be fired simply because they are infected with HIV; and this law applies to medical institutions as well as other industries¹⁰. Furthermore, healthcare workers infected with HIV, HBV, and/or HCV must be treated in the same manner as anyone else and must not be discriminated against.

To eliminate unfair job loss in healthcare workers infected with HIV, HBV, and/or HCV; appropriate risk assessment for provider-to-patient transmission and special consideration for their working conditions are clearly important. If healthcare workers maintain low HIV, HBV, and/or HCV viral loads or if they are engaged in tasks that do not involve blood exposure, the possibility of provider-to-patient transmission is considered extremely low^{11,12}. Although some scientific committees or congresses in Japan have published guidelines for the management of hospital-acquired infection¹³⁻¹⁵, these guidelines focus mainly on prevention and do not provide advice on best practices for continuing the employment of healthcare workers after an infection. Therefore, the current management of healthcare workers infected with HIV, HBV, and/or HCV is decided on a case-by-case basis at each medical institution. Considering these issues, the Research Group on Occupational Health for Health Care Workers of the Japan Society for Occupational Health (JSOH) hereby proposes a consensus for the management of healthcare workers infected with HIV, HBV, and/or HCV based on recent evidence from relevant stakeholders.

Methods

This consensus report was supported by the members of the Research Group on Occupational Health for Health Care Workers of the JSOH. Among committee members are specialists in the areas of occupational health, clinical medicine, hospital administration, and public health. The membership supported the project from May 2016 at a conference until August 2016 via email as follows: first, the authors prepared a draft based on a review of recent and relevant national guidelines and literature. Second, a consensus of recommendations was achieved through discussion with the members at the conference, followed by the optimization of the consensus by authors based on several minor suggestions. Finally, the final draft of the report was approved by all members via email and there were no disagreements on any of the recommendations.

The statement is divided into sections by each concerned group that include employers, occupational health staff, infected healthcare workers, and supervisors and colleagues in medical institutions. Each section consists of a list of specific suggestions.

Results

Recommendations for employers in medical institutions

1) Establish a policy of respecting the human rights of healthcare workers. The International Labour Organization recommends a policy to prohibit stigma and discrimination against infected workers in any aspect of the employment relationship; which includes selection, recruitment, and conditions of employment¹⁶.

2) Establish management strategies for occupational blood exposure (for example, needlestick and sharps injuries). The Japanese regulation for hospital-acquired infection “the Ordinance for Enforcement of the Medical Service Act (*Iryou-hou shikou kisoku*)” requires medical institutions to establish a committee for prevention, to educate healthcare workers, and to take part in a surveillance and reporting system¹⁷.

3) All matters arising from and relating to the employment of healthcare workers infected with blood-borne viruses should be coordinated through an occupational health staff member¹⁸.

4) Provide educational opportunities for healthcare workers to promote greater understanding of individuals infected with HIV, HBV, and/or HCV. The Japanese regulation for hospital-acquired infection also requires regular in-house training for all healthcare workers twice a year¹⁹.

5) Each medical institution can decide whether to conduct HIV or hepatitis virus testing of staff at the time of employment. Some workplaces do not perform these tests because of special considerations at work and difficulties in managing personal health information²⁰. Providing hepatitis B surface antigen (HBs-Ag) to new employees is recommended for the prevention of occupational HBV infection through subsequent vaccination.

Recommendations for occupational health staff

1) Manage the personal information of healthcare workers confidentially and introduce appropriate medical protocols for diagnosis and treatment where HIV, HBV, and/or HCV infection is suspected in healthcare workers.

2) Treat healthcare workers infected with HIV, HBV, and/or HCV in the same manner as patients with any other diseases.

3) Assess the risk of provider-to-patient transmission of HIV, HBV, and/or HCV infection appropriately and arrange tasks accordingly if required. Established guidelines issued by the *Society for Healthcare Epidemiology of America* and the *United Kingdom Department of Health* can be used as references for the management of healthcare workers infected with HIV, HBV, and/or HCV (Table 1)^{11,12}. When conducting appropriate risk assessment, occupational health staff should cooperate with a physician in charge and infection control experts in the

Table 1. United States and United Kingdom guidelines for the management of healthcare workers infected with HIV, HBV, and/or HCV

	Society for Healthcare Epidemiology of America Guideline*	United Kingdom Department of Health Guideline†
Virus type	HIV, HBV, and HCV	HIV
Type of laboratory data	Circulating viral burdens	Plasma viral load
Criteria	HBV or HCV <10 ⁴ GE/ml OR HIV <5×10 ² GE/ml: No restriction HBV or HCV ≥10 ⁴ GE/ml OR HIV ≥5×10 ² GE/ml: Restrict conducting exposure prone procedures	<50 copies/ml: No action 50-200 copies/ml: Case-by-case approach 201-999 copies/ml: Second test after 10 days and cease conducting exposure prone procedures if HIV viral load is over 200 copies/ml >1000 copies/ml: Restrict conducting exposure prone procedures
Frequency of testing	Twice yearly	Quarterly
In charge of routine follow-up	Occupational health staff	Joint supervision by a consultant occupational physician and treating physician
Authority	Obtains advice from an Expert Review Panel consisting of (a) occupational health staff, (b) treating physician, (c) hospital epidemiologist, (d) infectious diseases expert, (e) hospital administrator, and/or (f) lawyer	Be registered with the Occupational Health Monitoring Register that consists of the United Kingdom Advisory Panel for healthcare workers infected with blood-borne viruses

HIV, Human immunodeficiency virus; HBV, Hepatitis B virus; HCV, Hepatitis C virus; GE, genome equivalents.

*Society for Healthcare Epidemiology of America. Guideline for management of healthcare workers who are infected with hepatitis B virus, hepatitis C virus, and/or human immunodeficiency virus, 2010.¹¹⁾

†United Kingdom Department of Health. The Management of HIV infected Healthcare Workers who perform exposure prone procedures: updated guidance, January 2014.¹²⁾

workplace after obtaining informed consent. A physician in charge can decide on a leave of absence for healthcare workers infected with HIV, HBV, and/or HCV for their medical treatment. In any case, occupational health staff are required to share only the minimum necessary personal health information of the infected healthcare workers among essential channels such as infection control experts, supervisors, and hospital administrators.

Recommendations for healthcare workers infected with HIV, HBV, and/or HCV

1) Disclose their employment to their treating physician and consult with their doctor regarding the need for special considerations at work. If special consideration at work is not necessary, disclosure of their infection status at the workplace is generally unnecessary. However, if special considerations at work are necessary, they should consult with occupational health staff regarding appropriate actions to be taken. However, in case unjust restriction of working rights in the workplace or the lack of an appropriate occupational health system is suspected, healthcare workers infected with HIV, HBV, and/or HCV should consult with the doctor in charge or a lawyer regarding the actions to be taken.

2) Make efforts to maintain their health through appropriate treatment and follow-up to continue working, while securing the safety of themselves and those around them.

3) Ensure the implementation of standard preventive measures to help minimize provider-to-patient transmission of blood-borne diseases.

Recommendations for supervisors and colleagues in medical institutions

1) Respect the dignity, honor, privacy, and comprehensive rights of other healthcare workers, even if it becomes apparent that they are infected with HIV, HBV, and/or HCV. Healthcare workers should not engage in any behavior that results in discrimination against colleagues infected with HIV, HBV, and/or HCV. Supervisors should support infected healthcare workers at work by understanding workplace policies, as well as making efforts to prevent any disturbances or other inappropriate events in the workplace.

2) Understand and interpret the risks of HIV, HBV, and HCV infection correctly.

3) Ensure standard preventive measures for performing first aid treatment of other healthcare workers in the event of a blood exposure accident in the workplace, irrespective of their HIV, HBV, or HCV infection status.

Discussion

This consensus statement has been developed as a guidance for the occupational health management of

healthcare workers infected with HIV, HBV, and/or HCV. Stigma and discrimination against healthcare workers infected with HIV, HBV, and/or HCV still exist in Japan²¹⁻²³). These recommendations emphasize the protection of the rights and responsibilities of healthcare workers infected with HIV, HBV, and/or HCV. In terms of patient health and safety, appropriate assessment of the risks of provider-to-patient transmission and special consideration of the working conditions of infected healthcare workers are clearly important. A comprehensive approach by stakeholders is required for the best practice of appropriate assessment.

A limitation of the current consensus statement is that it is not evidence based and may require adaptations to reflect local situations. Additional research should be undertaken at a national level to help better understand the extent of blood-borne disease transmission among Japanese healthcare workers.

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