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Defense Intelligence Agency

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DIA SEAL

## *Defense Analysis Report*

U-145,035-04/(b)(3):10 USC 424

20 May 2004

### **(U) Iraq: Risk of Bloodborne Infection in US Forces Very Low or Zero**

*(U) Although US personnel deployed to Iraq in combat or support roles may have exposure to blood or body fluids, the risk of infection by bloodborne pathogens is very low.*

(U) US personnel deployed in combat, humanitarian assistance, contingency operations, or other support roles may have contact with blood or body fluids of wounded or dead Iraqi civilian and military personnel. Contact with blood or body fluids raises concerns for possible exposure to bloodborne pathogens, including hepatitis B, hepatitis C, and human immunodeficiency virus (HIV).

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(U) US military populations with the highest likelihood for blood or body fluid exposures include medical personnel and mortuary affairs personnel.

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(U) Other personnel also may have incidental exposures to blood or body fluids in battlefield situations.

(U) Although US personnel may have varying exposures to blood or body fluids,

[Redacted]

We based these risk

estimates on the following factors:

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(U) Hepatitis B, hepatitis C, and HIV are not efficiently transmitted--to carry any risk of infection through contact with blood or body fluids, exposure must involve percutaneous exposure (from a needle stick or exposure from sharp penetrating object); direct contact with mucous membranes such as eyes, nose, or mouth; or direct contact with non-intact skin (abraded, chapped, or afflicted with dermatitis). Exposures on intact skin are not a risk for these bloodborne infections.

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(U) Hepatitis B, C, and HIV are relatively rare in the Iraqi population--the likelihood of being exposed to the blood or body fluids of a particular infected person is low. Estimated prevalence in the Iraqi population is as follows:

- (U) Hepatitis B: 1 in 25 infected

(b)(3):10 USC 424;(b)(3):50 USC 3024(i)

- (U) Hepatitis C: 1 in 50 infected

[Redacted]

(b)(3):10 USC 424;(b)(3):50 USC 3024(i)

- (U) HIV: 1 in 10,000 infected

[Redacted]

(b)(3):10 USC 424;(b)(3):50 USC 3024(i)

(U) The risk of infection for US personnel in Iraq from exposure from contact with mucous membrane or non-intact skin can be infection from bloodborne exposures to a known infected person population (See table).

(U) Percutaneous or mucous membrane/non-intact skin exposure under 3 percent overall. Hepatitis B immunization of medical and other occupationally exposed personnel (including mortuary affairs) greatly lowers the risk; the use of gloves and other barriers further lowers risk.

(U) [Redacted]. No vaccines are available for these infections; prevention of infection relies on avoidance of direct contact with blood and body fluids through use of barrier protection.

(U) There are no reliable estimates for bloodborne infection rates from incidental battlefield-type exposures to blood or body fluids. Such exposures vary widely, but are assessed to be typically less than those for the percutaneous exposures outlined above.

(U) The risk from percutaneous, mucous membrane/non-intact skin, or incidental battlefield exposures to body fluids other than blood is assessed as considerably lower than the estimates above, based on comparable data from civilian exposures provided by the US Centers for Disease Control and Prevention.

**(U) Risk of bloodborne infections in Iraq**

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	(A) Incidence of infection from exposure to known blood from a known infectious patient*	(B) Prevalence of infection in Iraqi population	(b)(3):10 USC 424;(b)(3):50 USC 3024(i)	
<b>Needle stick/sharp object exposure</b>				
Hepatitis B	23-62%	4%		
Hepatitis C	1.8% (0-7%)	2%		
HIV	0.3% (0.2-0.5%)	0.01%		
<b>Mucous membrane/non-intact skin exposure</b>				
Hepatitis B	Less than 23-62%	4%		
Hepatitis C	Rarely	2%		
HIV	0.09%	0.01%		

\* Source: US Centers for Disease Control and Prevention

Prepared by: (b)(3):10 USC 424

AFMIC, (b)(3):10 USC 424

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Defense Analysis Report

(b)(2)

20 May 2004

(U) Iraq: Risk of Bloodborne Infection in US Forces Very Low or Zero

(U) Although US personnel deployed to Iraq in combat or support roles may have exposure to blood or body fluids, the risk of infection by bloodborne pathogens is very low.

(U) US personnel deployed in combat, humanitarian assistance, contingency operations, or other support roles may have contact with blood or body fluids of wounded or dead Iraqi civilian and military personnel. Contact with blood or body fluids raises concerns for possible exposure to bloodborne pathogens, including hepatitis B, hepatitis C, and human immunodeficiency virus (HIV).

- (U) US military populations with the highest likelihood for blood or body fluid exposures include medical personnel and mortuary affairs personnel.
- (U) Other personnel also may have incidental exposures to blood or body fluids in battlefield situations.

(U) Although US personnel may have varying exposures to blood or body fluids, (b)(1), Sec. 1.4(c)

We based these risk estimates on the following factors:

• (U) Hepatitis B, hepatitis C, and HIV are not efficiently transmitted--to carry any risk of infection through contact with blood or body fluids, exposure must involve percutaneous exposure (from a needle stick or exposure from sharp penetrating object); direct contact with mucous membranes such as eyes, nose, or mouth; or direct contact with non-intact skin (abraded, chapped, or afflicted with dermatitis). Exposures on intact skin are not a risk for these bloodborne infections.

• (U) Hepatitis B, C, and HIV are relatively rare in the Iraqi population--the likelihood of being exposed to the blood or body fluids of a particular infected person is low. Estimated prevalence in the Iraqi population is as follows:

- (U) Hepatitis B: 1 in 25 infected (b)(1), Sec. 1.4(c)

- (U) Hepatitis C: 1 in 50 infected (b)(1), Sec. 1.4(c)

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- (U) HIV: 1 in 10,000 infected (b)(1), Sec. 1.4(c)

(U) The risk of infection for US personnel in Iraq from exposure to blood through percutaneous contact or from contact with mucous membrane or non-intact skin can be approximated by multiplying the incidence of infection from bloodborne exposures to a known infected person by the prevalence of infection in the Iraqi population (See table).

- (U) Percutaneous or mucous membrane/non-intact skin exposures to hepatitis B are the highest risk, but are under 3 percent overall. Hepatitis B immunization of medical and other occupationally exposed personnel (including mortuary affairs) greatly lowers the risk; the use of gloves and other barriers further lowers risk.

- (U) (b)(1), Sec. 1.4(c) No vaccines are available for these infections; prevention of infection relies on avoidance of direct contact with blood and body fluids through use of barrier protection.

- (U) There are no reliable estimates for bloodborne infection rates from incidental battlefield-type exposures to blood or body fluids. Such exposures vary widely, but are assessed to be typically less than those for the percutaneous exposures outlined above.

- (U) The risk from percutaneous, mucous membrane/non-intact skin, or incidental battlefield exposures to body fluids other than blood is assessed as considerably lower than the estimates above, based on comparable data from civilian exposures provided by the US Centers for Disease Control and Prevention.

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**(U) Risk of bloodborne infections in Iraq**

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	(A) Incidence of infection from exposure to known blood from a known infectious patient*	(B) Prevalence of infection in Iraqi population	(b)(1), Sec. 1.4(c)
Needle stick/sharp object exposure			
Hepatitis B	23-62%	4%	
Hepatitis C	1.8% (0-7%)	2%	
HIV	0.3% (0.2-0.5%)	0.01%	
Mucous membrane/non-intact skin exposure			
Hepatitis B	Less than 23-62%	4%	
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HIV	0.09%	0.01%	

\* Source: US Centers for Disease Control and Prevention

(b)(6)

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