

## Appendix 1: Application of transmission-based precautions to key infections in the deceased

The causative agents for the key infections listed below have been arranged according to the most likely route of transmission, taking account of the activity when handling the deceased, eg through post-mortem and embalming.

Infection	Causative agent	Hazard group	Is a body bag needed <sup>1</sup> ?	Can the body be viewed?	Can post-mortem be carried out?	Can hygienic treatment be carried out?	Can embalming be carried out?
<b>Airborne</b> Small particles that can remain airborne with potential for transmission by inhalation							
Tuberculosis	<i>Mycobacterium tuberculosis</i>	3	Yes	Yes <sup>2</sup>	Yes <sup>3</sup>	Yes	Yes <sup>2</sup>
Middle East respiratory syndrome (MERS)	MERS coronavirus	3	Yes	Yes	Yes <sup>3</sup>	Yes	Yes <sup>2</sup>
Severe acute respiratory syndromes (SARS)	eg SARS coronavirus	3	Yes	Yes	Yes <sup>3</sup>	Yes	Yes <sup>2</sup>
<b>Droplet</b> Large particles that do not remain airborne for very long and do not travel far from source with potential for transmission via mucocutaneous routes (ie mouth, nose or eyes)							
Meningococcal septicaemia (meningitis)	<i>Neisseria meningitidis</i>	2	No	Yes	Yes <sup>3</sup>	Yes	Yes <sup>2</sup>
Flu (animal origin)	eg H5 and H7 influenza viruses	3	No	Yes	Yes <sup>3</sup>	Yes	Yes <sup>2</sup>
Diphtheria	<i>Corynebacterium diphtheriae</i>	2	No	Yes	Yes	Yes	Yes
<b>Contact</b> Either direct via hands of employees, or indirect via equipment and other contaminated articles where transmission is primarily via an ingestion route							
Invasive streptococcal infection	<i>Streptococcus pyogenes</i> (Group A)	2	Yes	Yes	Yes <sup>3</sup>	No	No
Dysentery (shigellosis)	<i>Shigella dysenteriae</i> (type 1)	3	No <sup>4</sup>	Yes	Yes	Yes	Yes
Hepatitis A	Hepatitis A virus	2	No <sup>4</sup>	Yes	Yes	Yes	Yes
Hepatitis E	Hepatitis E virus	3	No <sup>4</sup>	Yes	Yes	Yes	Yes
Enteric fever (typhoid/paratyphoid)	<i>Salmonella typhi/paratyphi</i>	3	No <sup>4</sup>	Yes	Yes	Yes	Yes
Brucellosis	<i>Brucella melitensis</i>	3	No	Yes	Yes <sup>3</sup>	Yes	Yes <sup>2</sup>
Haemolytic uraemic syndrome	Verocytotoxin/shiga toxin-producing <i>E.coli</i> (eg O157: H7)	3	No <sup>4</sup>	Yes	Yes <sup>3</sup>	Yes	Yes <sup>2</sup>

Infection	Causative agent	Hazard group	Is a body bag needed <sup>1</sup> ?	Can the body be viewed?	Can post-mortem be carried out?	Can hygienic treatment be carried out?	Can embalming be carried out?
<b>Contact</b> Either direct or indirect contact with blood/other blood containing body fluids via a skin-penetrating injury or via broken skin and through splashes of blood/other blood containing body fluids to eyes, nose and mouth							
Acquired immune deficiency syndrome (AIDS)-related illness	Human immunodeficiency virus	3	No	Yes	Yes <sup>7</sup>	Yes	Yes <sup>7</sup>
Anthrax	<i>Bacillus anthracis</i>	3	Yes	No	Yes <sup>8</sup>	No	No
Hepatitis B, D and C	Hepatitis B, D and C viruses	3	No	Yes	Yes <sup>7</sup>	Yes	Yes <sup>7</sup>
Rabies	Lyssaviruses	3	No	Yes	No	No	No
Viral haemorrhagic fevers	Specifically Lassa fever, Ebola, Marburg, Crimean-Congo haemorrhagic fever viruses	4	Yes <sup>9</sup>	No	No	No	No
<b>Contact</b> Either direct or indirect contact with body fluids (eg brain and other neurological tissue) via a skin-penetrating injury or via broken skin							
Transmissible spongiform encephalopathies (eg CJD)	Various prions	3	Yes	Yes	Yes <sup>10</sup>	Yes	No
<p><b>Key</b></p> <p><b>Red</b> Minimise procedures or handling of the deceased</p> <p><b>Yellow</b> TBPs are necessary when carrying out procedures or handling the deceased</p> <p>The highlighted areas indicate an increased level of risk associated with the infection to workers (with areas in red posing increased risk) and therefore require additional control measures when handling the deceased.</p> <p><b>Notes</b></p> <p><sup>1</sup> It is advised that a body bag is used for the deceased in all cases where there is, or is likely to be, leakage of body fluids.</p> <p><sup>2</sup> With appropriate measures to deal with potential release of aerosols (eg place cloth or mask over mouth when moving the deceased).</p> <p><sup>3</sup> With appropriate measures to deal with aerosol-generating procedures.</p> <p><sup>4</sup> With measures to minimise environmental contamination (because of low infectious dose; ie the amount of pathogen or number of bacteria required to cause an infection is low).</p> <p><sup>5</sup> With appropriate measures to prevent exposure of mucosal surfaces (eg a physical barrier to protect eyes, mouth and nose, such as a facemask or visor).</p> <p><sup>6</sup> Although illness may have increased likelihood of leakage of body fluids.</p> <p><sup>7</sup> With appropriate robust measures for the use of sharps (eg minimise use or use safer sharps devices).</p> <p><sup>8</sup> Before undertaking a procedure, the rationale for a post-mortem should be carefully considered where anthrax infection is suspected, particularly where examination may increase the potential for aerosol generation.</p> <p><sup>9</sup> With double body bag.</p> <p><sup>10</sup> With appropriate measures to minimise percutaneous injury and contamination of work area, and to help with decontamination (eg high-level sharps control or dedicated equipment).</p>							

## Hazard groups

The Approved List of biological agents ([www.hse.gov.uk/pubns/misc208.pdf](http://www.hse.gov.uk/pubns/misc208.pdf)) provides the approved classification of biological agents into hazard groups (as referred to in COSHH). The hazard groups are defined in the following table; when classifying a biological agent it should be assigned to one of these four groups according to its level of risk of infection to humans.

Group	Definition
Group 1	Unlikely to cause human disease
Group 2	Can cause human disease and may be a hazard to employees; it is unlikely to spread to the community and effective prophylaxis or treatment is usually available
Group 3	Can cause severe human disease and may be a serious hazard to employees; it may spread to the community, but effective prophylaxis or treatment is usually available
Group 4	Causes severe human disease and is a serious hazard to employees; it is likely to spread to the community and usually no effective prophylaxis or treatment is available

## Notification of reportable diseases

Certain diseases are reportable under national legislation. Please refer to the relevant legislation for notifiable diseases:

England – Health Protection (Notification) Regulations 2010  
<http://www.legislation.gov.uk/ukSI/2010/659/schedule/1/made>

Wales – Health Protection (Notification) (Wales) Regulations 2010  
<http://www.legislation.gov.uk/wsi/2010/1546/schedule/1/made>

Scotland – Public Health etc (Scotland) Act 2008  
<http://www.legislation.gov.uk/asp/2008/5/schedule/1>