Code of practice for funeral workers: managing infection risk and body bagging

SS Bakhshi

Summary: *There is substantial variation in the advice given to funeral workers on handling bodies with infection risk. Inconsistent advice results in inappropriate practice. A model code of practice is presented that uses risk assessment in response to statutory and executive responsibilities to provide health and safety advice to funeral workers. The code of practice should increase compliance with safety requirements, avoid unnecessary bagging and allow bereaved families freer access to the deceased.*

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body bags
embalming
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funeral workers
infection
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Introduction

The Chief Medical Officer (CMO) in a 1988 letter to the Medical Officers of Environmental Health (MOsEH) advised them to provide funeral workers with information on hazard safeguards when a body posed an infection risk[1].

A survey of Consultants in Communicable Disease Control (CsCDC) in England during 1995[2] showed uneven progress in providing suggested safeguards. A similar survey of management in 1995, conducted by the PHLS Communicable Disease Surveillance Centre, London[3], concluded that health care workers needed a greater understanding of the work of funeral workers. Guidance based on realistic infection risk assessment was recommended.

Modern funeral practice puts complex demands on its practitioners, and funeral workers require a wide knowledge of disposal procedures and regulations. Infectious disease regulations are often misunderstood and funeral workers become uncertain when hospitals adopt different practices. The increasing use of body bags leads to cumbersome procedures and anxiety for funeral workers. It is also traumatic for the bereaved families.

Objectives

To provide funeral workers with:

- advice on viewing, washing and touching of deceased,
- evidence-based guidance on use of body bags that avoids breaching patient confidentially,
- education in the practice of universal infection control and safety procedures.

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Review

Occupational risk

Despite predictions, infectious diseases have not waned. The associated death rate has increased 58% from 41 to 65 deaths per 100,000 population in the United States. Mortality due to respiratory tract infections increased by 20% from 25 to 30 deaths per 100,000 population[4]. In Northeast England deaths due to infection were quoted as 6.7% of all deaths during 1989-1993[5].

A sero-survey of 133 embalmers in an urban area in the United States showed the seropositivity rate of hepatitis B virus (13%) was twice that of a blood donor comparison group[6]. In a self-reported survey of 860 embalmers in the UK in 1988[7], 12 (1.4%) reported needle-stick injuries in the previous 12 months, and 15 (1.74%) gave a history of percutaneous exposure to the blood of those deceased with HIV infection. Frequently reported infections were hepatitis B (26, 3.0%), staphylococcal and other skin infections (27, 3.1%) and pulmonary tuberculosis (6, 0.7%). Other infections and infestations included viral respiratory infections (9, 1.0%), sepsis (5, 0.59%), and scabies and lice (6, 0.7%).

Professional knowledge, attitude and behaviour

A survey of Consultants in Communicable Disease Control (CsCDC) in England was conducted in 1995. A questionnaire was sent to 102 CsCDC in England. The CsCDC were asked to list their response to the letter from the CMO and give information about their knowledge, attitude and behaviour in relation to management of HIV, hepatitis B and tuberculosis after death.

Eighty-five (83%) CsCDC responded. Two thirds of the CsCDC had no policy for funeral workers, while one sixth had no policy for hospitals. Policies received with the responses related mainly to deaths associated with HIV infection. Two thirds of the CsCDC allowed unrestricted viewing with the three infections. Three quarters did so for tuberculosis.

Most CsCDC could not recall being consulted by a funeral worker. Their view was that putting bodies in bags was excessive, but there was no expectation that CsCDC would act to correct it. There was, however, agreement for a national policy to manage the deceased after death.

PHLS Communicable Disease Surveillance Centre conducted a postal survey in 1995 with samples of 50 each of funeral workers, hospital infection control officers, CsCDC and chief environmental health officers. The survey identified the nature of advice available to funeral workers about infection hazards from the deceased.

The survey showed variation in the advice given to funeral workers on handling bodies. Most funeral workers (67% to 87%) and infection control officers (85% to 94%), but only about half the CsCDC (36% to 64%), had access to guidance for the management of cases of hepatitis B and HIV infection and tuberculosis.

Legal framework

A complex of legislative, executive and advisory directives govern handling of bodies. Breakdowns in communication, misunderstanding of procedures and inconsistent practices are inevitable when human remains are transferred from one organisation to other. Added to this are the particular wishes of the family, which may be unnecessarily restricted and may be ignored.

Legal Position

- The Control of Substances Hazardous to Health Regulations (COSHH) 1994 requires risk assessment from exposure to hazardous substances including biological agents and control measures to be applied.
- Sections 2 and 3 of the Health and Safety at Work Etc. Act 1974 impose regulations for the safety of workers and public while they are on the hospital or funeral premises. The Act requires that they are made aware if the body is suspected to be infectious.
- Public Health (Control of Diseases) Act 1984, Section 10, names notifiable diseases. Under Section 43 a registered medical practitioner, or a medically qualified officer appointed by the Local Authority, may prevent removal of a body associated with a notifiable disease from a hospital except to a mortuary, cemetery or crematorium. Section 44 places responsibility on the owner of the premises where a notifiable disease was the cause of death to take steps to prevent others being exposed to the body. Section 45 forbids wakes to be held if the deceased had a notifiable infections.
- Regulation 3 and Schedule 1 of the Public Health (Infectious Diseases) Regulations 1988 define the additional 24 infectious diseases which are required to be notified.
- Regulation 14, Cremation Regulations, England 1993, gives power to a medical referee to order cremation if the death was due to a notifiable disease.

Risk assessment

Few organisms in a dead body pose infection risk in practice, but there are important hazards to be considered when it is handled. Infection present in the blood where the affected individual was asymptomatic when alive and undiagnosed at death is an example[8].

A practical risk assessment classification follows, though some infections may fall in more than one group:

1. *Infections that pose minimal transmission risk and are preventable with hygienic practice*. Usually there is available prophylaxis or treatment for such infections. Examples are chicken pox, influenza, measles, meningitis, mumps, rubella, scarlet fever, and whooping cough.
2. *Infections causing severe human illness, but with limited or no transmission risk*. Such infections have intermediate insect and animal vectors rarely met with in the UK. These infections may, however, be transmitted by accidental blood inoculations, transplantation or in research work. Examples are yellow fever, rabies, malaria and anthrax.
3. *Infection hazards, which present a quantifiable risk*.
   - Airborne droplets or particles - tuberculosis,
   - Discharges from body orifices - typhoid and paratyphoid fevers, amoebic or bacillary dysentery and food poisoning,
   - Inoculation risks - HIV infection, hepatitis B and C infections, leptospirosis and brucellosis,
   - Skin lesions - *staphylococcus aureus* and *streptococcus pyogenes*,
   - Skin infestations - body lice and scabies.

Embalming

Embalming retards putrefaction and preserves body appearance. It involves replacing body fluids with an antiseptic solution. With refrigeration facilities in funeral homes, embalming is a choice and not a necessity. Some funeral directors will embalm most bodies; others will do so on request. Its continued use is often due to the families' belief that embalming is a required procedure.

There are no recognised national standards for embalming. The funeral trade itself is divided about embalming. Trade organisations set voluntary standards of work for their members. There is no audit to check the practices. Embalming can expose embalmers to infection and is undesirable with blood-borne infection risk.

There is little research to validate the effectiveness of embalming in the elimination of virulent organisms. The UK climate is not warm enough for putrefaction to set in for the short period when the body is moved from a mortuary for burial or cremation, and embalming is not necessary for this purpose.

Recommended model code of practice

A safe working environment is a greater safeguard against infection than relying on body bagging and placing restrictions on ritual observances. The body bag should be seen more as an adjunct to safe practice than a barrier to enforce protection. It is desirable to stop prescription and move towards the application of standards proportionate to risk.

Communication

Funeral workers and relatives should be informed if there is an infection risk and advised on body preparation, bagging, examination or storage in the mortuary and body collection for disposal.

Preparation of body

The relatives should be asked about their requirements before body preparation is commenced. Relatives may be allowed to perform ritual body preparation under supervision. Gloves should be worn as some religions forbid strangers from touching a body with bare hands. Eastern religions require the same gender as the deceased to handle a body.

TABLE 1 Biohazard guidance table on the management of known or suspected infections which need precautions after death

r he table is for use in completing the e uidance dormJ which accompanies the body bag. r he form gives important health and safety information to funeral workers and others.
k ost infections do not warrant special precautions following death provided standard safe working practices are adopted. Advice should be sought from a f ospital gnfection a ontrol b octor or a onsultant in a ommunicable b isease a ontrol Fa a b a Gif in doubt. pecommendations also apply to deceased children. s se of body bags is recommended for safe transport between the mortuary and funeral home for bodies that impose an infection risk.

Infection/specific conditions (infection risk symbol in brackets or circle)	Use body bag	8 iewing	Wash	5 uitable to embalm	Comments
Blood-borne infection risk (B) Hepatitis B and C HIV infection/AIDS Blood stained with suspected blood risk Unconfirmed jaundice from abroad Intravenous drug abuse	Yes	Yes	Yes	No	Body bag from mortuary via funeral home to cemetery/crematorium.
Intestinal infection risk (G) Dysentery Typhoid/paratyphoid fever Profuse diarrhoea/gross faecal soiling Food poisoning	Yes	Yes	Yes	Yes	Body bag from mortuary only to funeral home. If leakage, body bag via funeral home to cemetery/crematorium.
Neurological infection risk TSE (CJD) Pre post mortem (N) Post post mortem Ⓒ	 Yes Yes	 No No	 No No	 No No	Body bag from mortuary via funeral home to cemetery/crematorium.
Respiratory/airborne infection risk Ⓡ Meningococcal meningitis/septicemia Tuberculosis including drug resistant	Yes	Yes	Yes	Yes	Place cloth or mask over deceased's mouth at all times. Body bag to funeral home.
Contact Ⓒ Invasive group A streptococcus	Yes	Yes	No	No	Body bag to cemetery/crematorium.
Fever of unknown origin / jaundice from abroad (B)/Ⓒ/(G)	*	*	*	*	* Seek advice of microbiologist/CCDC.
Notifiable disease Plague Typhoid Relapsing fever Cholera	Yes	**	**	**	** CCDC must be contacted for advice under Para. 43 of Public Health (Control of Diseases) Act 1984.
Imported infection Anthrax Diphtheria Rabies	Yes	***	***	***	*** CCDC must be contacted under Public Health (Infectious Diseases) Regulations 1988, Regulation 3 and Schedule 1.
Viral haemorrhagic fevers including yellow fever	Yes	No	No	No	Body bagging and sealed in a coffin before direct delivery to a cemetery/crematorium.

TABLE 2 Guidance form for funeral workers, cemetery and crematorium staff on handling the deceased

This form accompanies the body when enclosed in a body bag to the funeral staff. Refer to biohazard guidance table befoe completing the form.

PART 1 - PERSONAL DETAILS

NAME OF DECEASED PERSON ______________________________

ADDRESS ______________________________

____

____

GP NAME ______________________________

PART 2 - BODY BAG TO BE USED BECAUSE OF: (Refer to biohazard guidance table)

	Please circle
1. A known or suspected infection risk as follows:	
Blood borne infection risk (B)	YES/NO
Gastro-intestinal infection risk (G)	YES/NO
Neurological infection risk (N)	YES/NO
Respiratory/airborne infection (R)	YES/NO
Contact risk (C)	YES/NO
2. Likely leakage of body fluids during transportation	YES/NO
Poor physical condition of the body	YES/NO

PART 3 - BODY PREPARATION

1. Body can be removed from bag and washed.	YES/NO

PART 4 - FINAL PRESENTATION

1. Body can be viewed with bag open.	YES/NO
OR	
2. Limited viewing of face only with the bag open to allow this.	YES/NO
OR	
3. Viewing only permitted with the agreement of local Consultant in Communicable Disease Control.	YES/NO

PART 5 - SAFETY INSTRUCTIONS Adherence to precautions is necessary.

Universal Precautions

- No smoking, eating or drinking in work rooms.
- Wear protective clothing which should include an apron and gloves.
- Thoroughly wash hands after every procedure.
- Keep movement of the cadaver, especially chest area, to a minimum.

Accidents:
Cuts, stabs, pricks and wounds should be made to bleed, then thoroughly washed, treated with tincture of iodine or 70% alcohol and a waterproof dressing applied. Splashes to the eye should be washed immediately with saline/tap water.

REPORT ANY ACCIDENT TO HOSPITAL CASUALTY IMMEDIATELY

Where there is a risk of splashing of blood or any other body fluid:

Wear waterproof full-length apron, latex/vinyl gloves, boots and face protection.
Cover existing cuts and wounds with waterproof dressing.

For further advice contact: Consultant in Communicable Disease Control.

Responsibility

The lead responsibility lies with the Consultant in Communicable Disease Control (CCDC) in conjunction with the hospital infection control officer (HICO) for safety in handling bodies[8]. The CCDC is also responsible for training of funeral workers, while the HICO prepares the hospital policy and trains hospital workers. Expert advice from government and professional institutions is available on biological risks to health care and funeral workers[9-12].

Biohazard information for health care workers (table 1)

When a body imposes an infection risk the body should be placed in a bag for transportation from the mortuary to a funeral home. Table 1 classifies infection according to route of transmission and advises on management. Advice depends on the degree of hazard, transmission route and the procedures to be performed. Each body presents a differing degree of hazard, but the general control principles apply to all of them. A physician should complete a Guidance Form.

The Guidance Form for funeral workers (table 2)

The completed Guidance Form for funeral workers should accompany the body when it is released from a mortuary. It lists the reasons for the use of the body bag, whether the bag may be removed at the funeral home and body preparation carried out, and if so advice on body preparation. It will advise on procedures, including embalming and access to the deceased. It provides information on infection transmission routes to explain the need of precautions to be taken. This preserves patient confidentiality while controlling risk. Medical confidentiality is preserved after death. Funeral workers do not have the right to be told of a specific diagnosis.

Evaluation

A model Code of Practice was evaluated at a West Midland teaching hospital with the co-operation of local funeral firms. An evaluation form accompanied each body enclosed in a bag. Funeral workers were asked to complete the form every time a body was received in a bag following the introduction of the new procedures for six months during 1997-1998.

Seventy forms were dispatched and completed evaluation forms were received in all instances (100%)[13]. The adequacy of information provided was established on a sliding scale: excellent (29, 41%), good (39, 56%), average (2, 2.8%). There was satisfaction with the format of the procedures. A few funeral workers felt it would be better if they were informed of specific diagnoses. This may explain the restraint in assessing information despite satisfaction with the process. The healthcare workers found the procedures simplified decision making about when to use body bags. The number of complaints from funeral workers and bereaved relatives dramatically decreased following introduction of the Code.

The West Midlands Regional Cross Infection Advisory Committee (WMRCIAC) was asked to assess the guidance[14]. A revised Code of Practice was produced based on lessons learnt from the trial and advice from the WMRCIAC, and has been presented here.

Conclusion

The body of a deceased person changes hands from a ward to mortuary and then to a funeral home. An embalmer may take charge of the body thereafter. A Code of Practice ensures safety when infection is associated with death. A model Code of Practice is the starting point for construction of local policies. The place of routine embalming in modern funeral practice needs research. Unregulated practice is a cause for concern and a national standard for the practice of embalming is desirable.

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