Final Report
Board of Funeral Directors and Embalmers
Reporting of Infectious Disease Status of the Deceased

At the November 16, 1999 meeting of the Board of Funeral Directors and Embalmers an issue was raised concerning the disclosure of the infectious disease status of the deceased to the funeral home practitioner. Members of the Board voiced concern about the potential health risk when the infectious disease status is not disclosed. The Board of Funeral Directors and Embalmers recommended that the Board of Health Professions review the literature, investigate the relevant portions of the Code of Virginia and dialogue with the state agency responsible for enforcing the Code to determine if further study into the issue is warranted. The following is a preliminary report that highlights current literature in the field and provides a summary of information pertaining to the reporting of infectious diseases in Virginia.

Literature Review

There have been concerns raised about the risk of transmission of infectious disease from the deceased to the funeral home practitioner during embalming activities. There is literature available which addresses these concerns either in the form of empirical research or expert commentaries on the subject.

Two infections that have received recent attention are Methicillin-Resistant Staphylococcus Aureus (MRSA) and Vancomycin-Resistant Enterococcus (VRE). Cloud (1999) makes recommendations for the prevention of infectious disease transmission during embalming procedures. First, he recommends that all bodies should be treated as if they were infectious. He sites instances whereby rectal swabs of 30 patients known to harbor VRE were only positive in 14 of the cases. This points to the potential occurrence of false negative findings that may provide the healthcare provider with a false sense of security.

Cloud (1999) also makes a strong statement regarding strict hand washing techniques. Additional recommendations are made regarding the disinfection procedures in the preparation room and during actual embalming procedures. He summarizes by stating that "If we follow universal precautions properly, embalmers should not become infected while performing their work (before the chemicals have had a chance to disinfect)." (p.14)

A more recent disease raising concern among the funeral home profession is Creutzfeldt-Jakob Disease (CJD). CJD is a rapidly progressive fatal disease of the central nervous system characterized by dementia, myoclonus, and often times, an atypical electroencephalogram. The etiologic agent in CJD has not yet been identified. The mode of transmission is unknown in humans. However, the disease has been induced in laboratory animals that have been injected with brain tissue or cerebrospinal fluid from an infected person. Iatrogenic transmission has been associated with the use of contaminated neurosurgical instruments or transplantation of brain tissue. Person-to-person contact via skin contact or via environmental contamination has not been shown (Centers for Disease Control, 1999).

Collinson and Adams (1999), in their article in The Dodge Magazine, suggest that funeral home practitioners *not* panic about potential transmission of CJD. The potential for panic is high since CJD is lethal and agents typically used in the funeral home embalmer's preparation room do not disinfect it. However, one needs to consider the fact that transmission of infectious agents

is not significantly impacted by the disease's susceptibility to disinfectants. Exposure to sharps such as needles and scalpels and exposure to bodily fluid and jagged bones primarily occur before the injection of disinfectants. The risk for the mourners is negligible, as they would not be exposed to bodily fluids or exposed bones during the viewing.

It is recommend that waterless embalming with the use of bleach as the disinfectant of choice be used when handling those with known cases of CJD. In addition, it is recommended that disposable instruments and puncture resistant gloves be used whenever possible when managing these cases (Collinson & Adams, 1999). It should also be noted that the incidence of CJD is 1 case per 1 million persons a year (Centers for Disease Control, 1999).

Research has been done in the area of risk of acquired infection among funeral home practitioners. Gershon, Vlahov, Farzadegan and Alter (1995) investigated the risk of acquiring HIV, hepatitis B and hepatitis C virus infections among funeral home practitioners in Maryland. The study was designed to assess the frequency of exposure, the frequency of the use of gloves and the frequency of hepatitis B vaccination to determine the prevalence of selected infections among funeral home practitioners. Of the 130 respondents, 10% (n=13) indicated that they had at least one mucous membrane exposure in the past six months. In regard to needlesticks and sharps injuries, 14.6% (n=19) of the respondents reported occurrences in the last six months. Ninety-seven percent (n=126) of respondents reported glove use at all times during the embalming procedures.

Serological tests were done to determine the presence of infectious disease among the respondents. One respondent was HIV positive. This person had positive risk factors for HIV infection. Six respondents had markers for hepatitis B infection none of whom were HbsAg positive. Of the HBV positive respondents, four indicated positive risk factors for HIV and hepatitis B virus. The two others reported no history of recent exposures. Both had exposure to the HBV vaccine but neither completed the full vaccination course. No one tested positive for hepatitis C. Of the 130 respondents, 61% (n=79) reported receiving one or more doses of the HBV vaccination. Sixty of the seventy-nine received all three doses. These findings suggest that there is a low incidence of occupationally acquired infection among funeral home practitioners (Gershon et al., 1995). This supports earlier findings by Turner, Kunches, Gordon, Travers, and Mueller (1989) who found that 4 out of 133 subjects tested positive for the HIV antibody. One of these subjects had risk factors for HIV. Thirteen respondents tested positive for hepatitis B markers.

It appears that exposure to bodily fluid during the embalming process is not an uncommon occurrence. In a study of nursing home establishments in Texas, Nwanyanwu, Tabasuri and Harris (1989) found that 53% (n=45) of respondents had accidentally sustained needles sticks and/or scalpel cuts while preparing and/or handling human remains. Further, 70% (n=60) of respondents indicated that they had experienced frequent splashes with blood or other body fluids during their course of work. It should be noted that of those reporting frequent splashes, 85% indicated that they did not take adequate precautions as outlined by the Centers for Disease Control. Questionable compliance with recommended precautions has been identified in other research work. In a study of 864 funeral home practitioners, Gershon et al. (1998) found that 98% of the respondents were aware of the decendent's active tuberculosis status. However, only one half took precautions greater than that necessary to prevent the transmission of bloodborne pathogens.

Sterling, Pope, Bishai, Harrington, Gershon and Chaisson (2000) have linked, via DNA evidence, the transmission of mycobacterium tuberculosis from cadaver to embalmer. The

authors indicated that the embalmer always wore gloves and usually wore a mask. It is unclear if the practitioner took appropriate precautions to prevent the transmission of disease in this case.

There has been debate about the usefulness of disclosing the infectious disease status of the deceased to the funeral home practitioner. Some believe that for optimal protection infectious disease status should be disclosed at the time of death. On the other hand, some believe that disclosure of infectious disease status would result in negative unintended consequences in regard to practitioner safety. Handsfield, Cummings and Swenson (1987) indicate that by "fostering complacency in handling unlabeled specimens, the use of biohazard labels may paradoxically increase the risk that health care workers will be exposed to HIV."

The Code of Virginia:

Section 32.1-37.1 of the Code of Virginia addresses the reporting of diseases infecting dead human bodies. The Code reads as follows:

> "Upon transferring custody of any dead body to any person practicing funeral services or his agent, any hospital, nursing facility or nursing home, adult care residence, or correctional facility shall, at the time of transfer, notify the person practicing funeral services or his agent if the individual was known to have had immediately prior to death an infectious disease which may be transmitted through exposure to any bodily fluids. Any facility or members of its staff specified in this section shall not be liable for injury resulting from ordinary negligence in failing to identify, as herein prescribed, a dead body of a person known to have had an infectious disease immediately prior to death.
>
> The Board of Health shall determine the infectious diseases for which notification is required pursuant to this section." (Code of Virginia, Accessed 12/99)

The Virginia Administrative Code (VAC):

The Virginia Department of Health has regulations in place that addresses disease reporting and control. Title 12 of the VAC 5-90-90 (F) provides the following guidelines for reporting infectious disease status of the deceased upon time of transfer of the dead body:

> "In accordance with §32.1-37.1 of the Code of Virginia, any person in charge of a hospital, nursing facility or nursing home, adult care residence or correctional facility shall, at the time of transferring custody of any dead body to any person practicing funeral services, notify the person practicing funeral services or his agent if the dead person was known to have had, immediately prior to death, an infectious disease which may be transmitted through exposure to any bodily fluids. These include any of the following infectious diseases: **Creutzfeldt-Jakob disease, Human immunodeficiency virus infection, Hepatitis B, Hepatitis C, Rabies and Infectious syphilis**. Statutory Authority §§32.1-12 and 32.1-35 of the Code of Virginia." (Virginia Administrative Code, Accessed 12/99)

Penalties, Injunctions, Civil Penalties and Charges for Violations:

Title 32.1-27 Chapter 1, Article 4 outlines the consequences on non-compliance with title 12 VAC 5-90-90:

A. Any person willfully violating or refusing, failing or neglecting to comply with any regulation or order of the Board or Commissioner or any provision of this title shall be guilty of a Class 1 misdemeanor unless a different penalty is specified.

B. Any person violating or failing, neglecting, or refusing to obey any lawful regulation or order of the Board or Commissioner or any provision of this title may be compelled in a proceeding instituted in an appropriate court by the Board or Commissioner to obey such regulation, order or provision of this title and to comply therewith by injunction, mandamus, or other appropriate remedy or, pursuant to § 32.1-27.1, imposition of a civil penalty or appointment of a receiver.

C. Without limiting the remedies which may be obtained in subsection B of this section, any person violating or failing, neglecting or refusing to obey any injunction, mandamus or other remedy obtained pursuant to subsection B shall be subject, in the discretion of the court, to a civil penalty not to exceed $10,000 for each violation, which shall be paid to the general fund, except that civil penalties for environmental pollution shall be paid into the state treasury and credited to the Water Supply Assistance Grant Fund created pursuant to § 32.1-171.2. Each day of violation shall constitute a separate offense.

D. With the consent of any person who has violated or failed, neglected or refused to obey any regulation or order of the Board or Commissioner or any provision of this title, the Board may provide, in an order issued by the Board against such person, for the payment of civil charges for past violations in specific sums, not to exceed the limits specified in § 32.1-27.1 and subsection C of this section. Such civil charges shall be instead of any appropriate civil penalty which could be imposed under § 32.1-27.1 and subsection C of this section. When civil charges are based upon environmental pollution, the civil charges shall be paid into the state treasury and credited to the Water Supply Assistance Grant Fund created pursuant to § 32.1-171.2. (Code of Virginia, Accessed 12/99)

Reporting Mechanisms:

There is no standardized reporting form that is used to identify that the deceased human had a reportable infectious disease. According to a Virginia Department of Health Assistant State Epidemiologist, reporting of infectious disease status is typically done verbally by an employee at the facility releasing the dead human body. (Barrett, 1999)

Complaints from Funeral Home Practitioners to the VDH:

According to the Virginia Department of Health, there has only been one complaint in the past ten years related to reporting of the presence of an infectious disease in a deceased human body. In this case, a funeral director lodged a complaint against a hospital that failed to report the presence of hepatitis B in a deceased human body. The VDH addressed the issue with the facility and no further complaints have been received since that time. (Sivert, 1999)

Mechanisms to File Complaints:

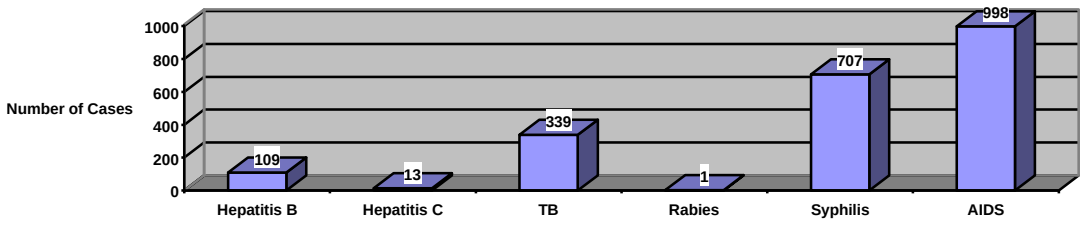
A funeral practitioner who believes that an agent of a hospital or nursing facility has violated the relevant sections of the Virginia Code in regard to reporting infectious disease, may file a complaint with the VDH Office of Health Facilities Regulation by calling the following toll-free number: 1-800-955-1819. (Sivert, 1999) Complaints involving correctional facilities and adult homes can be directed to the Board of Funeral Directors and Embalmers at 804-662-9907.

Risk of Harm of Infectious Disease Transmission:

As previously mentioned, reportable diseases at the time of death, as identified by the VHD, are Creutzfeldt-Jakob disease, human immunodeficiency virus infection, hepatitis B, hepatitis C, rabies and infectious syphilis. According to the Virginia Department of Health Assistant State Epidemiologist, the utilization of standard precautions is an adequate measure to prevent the transmission of infectious disease from the deceased human body to the funeral home practitioner. (Barrett, 1999) Furthermore, federal regulations mandate that funeral home practitioners adhere to the OSHA Bloodborne Pathogen standards (number 1910.1030).

Incidence of Selected Infectious Diseases in Virginia (1998):

The following chart depicts the number of hepatitis B and C, tuberculosis, rabies, syphilis and acquired immunodeficiency syndrome cases that were reported in Virginia in 1998.



Adapted from information obtained at: http://www.cdc.gov/epo/mmwr/preview/mmwrhtml/mm4753al.htm

Survey Findings:

INSERT TO BE PROVIDED AT THE APRIL 18, 2000 BHP MEETING

Policy Considerations:

Based on the literature and survey findings thus far, it appears that funeral home practitioners are at risk for exposure to potentially infectious bodily fluids. Due to the potential occurrence of false-negative tests and non-testing of the deceased, the literature supports an approach whereby the practitioner treats all human remains as if they were infectious. In addition, based on the survey findings, a proportion of bodies are retrieved from sites whereby reporting is not required. These sites include private residences, accident sites, and homicides. These findings further support the approach of treating all human remains as infectious. This approach is consistent with the spirit of federal regulations such as those set forth by OSHA in regard to management of bloodborne pathogens.

Based on the survey findings, there appears to be a knowledge deficit among funeral home practitioners in terms of which diseases are required to be reported by law. In addition, based on qualitative comments received during the survey period, some facilities are reluctant to share information about disease. References to "privacy laws" or "confidentiality" are often cited. These findings suggest a need for education for both employees in the funeral home business as well as employees who are responsible for releasing bodies in facilities such as hospitals, nursing homes and adult care facilities. Education should address relevant portions of the Virginia Code and the Virginia Department of Health regulations. In addition, practitioners should be informed about the appropriate precautions to take to prevent the transmission of infectious disease. A collaborative effort between the Department of Health Professions and the Department of Health may serve to reinforce the importance of this issue.

Options:

1. **OPTION 1:** In order to educate licensees of the Board of Funeral Directors and Embalmers, a brochure can be developed and mailed to all licensees. The brochure would contain information pertaining to relevant portions of the Virginia Code and Virginia Department of Health Regulations (including reportable diseases). The importance of universal precautions should be emphasized as well. The brochure should be developed collaboratively with the Virginia Department of Health.

2. **OPTION 2:** Collaborate with the Virginia Department of Health in order to educate personnel at hospitals, nursing facilities, adult care residences, and correctional facilities about the diseases which are required to be reported to funeral home practitioners at the time human remains are released.

3. **OPTION 3:** Collaborate with the Virginia Department of Health in order to develop educational tools that serve to address the learning needs of both funeral home practitioners

and personnel in hospitals, nursing facilities, adult care residences, and correctional facilities. This is essentially a combination of options 1 and 2 indicated above.

4. **OPTION 4:** No action.

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