

## **LegCo Panel on Health Services**

### **8062MM – Improvement of infection control provision for autopsy facilities in public hospitals**

#### **Purpose**

This paper seeks Members' support for the proposed capital works project to improve the infection control provision for autopsy facilities in 11 public hospitals.

#### **Problem**

2. The existing autopsy facilities in public hospitals are inadequate for meeting the present day requirements in respect of infection control provision.

#### **Background**

3. The need for improvement of infection control provision for autopsy facilities in public hospitals arose in the wake of the Severe Acute Respiratory Syndrome (SARS) outbreak in 2003 when the handling, storage and post-mortem examination of bodies carrying or likely to carry infective agents caused some major concerns. To ensure occupational health and safety for hospital personnel, existing autopsy facilities have been reviewed against such international standards as the "*Guidelines for Environmental Infection Control in Health-Care Facilities*" published by the Centre for Disease Control and Prevention (CDC) of the United States and the "*Health Building Note 20: Mortuary and Post Mortem Room*" published by the Department of Health and Social Security of the United Kingdom, in terms of physical environment, workflow logistics, staff amenities as well as equipment items.

4. The reference standards cover the following basic requirements-

- (a) The refrigerated body store should be kept at 4 °C, with facilities for regular cleansing and provision of hydraulic trolleys for the lifting of bodies.
- (b) Lighting in all areas must provide adequate illumination for the nature of work to be carried out.

- (c) Autopsy facilities should be physically segregated into “clean” area (i.e. area where activities prior to post-mortem examinations with no infection risk are carried out) and “dirty” area (i.e. area where post-mortem examinations and subsequent activities with potential infection risks are carried). Where such physical segregation is not feasible within the existing building configuration, the workflow logistics should be arranged to minimize chances of cross contamination.
- (d) All autopsy rooms should have –
  - (i) Ventilation rate of at least 12 air changes per hour with air to be exhausted through high efficiency particulate air (HEPA) filters;
  - (ii) Adjustable control for maintaining specified temperature range appropriate for staff working fully gowned up in personal protective equipment;
  - (iii) Autopsy tables with downdraft or laminar airflow system whereby air is drawn away from the staff working at the tables;
  - (iv) Negative pressure relative to any adjacent areas such that air flows into and not out of the autopsy rooms;
  - (v) A sealed safety cabinet with sink and table-top spacious enough for dissection of specimens under proper air extraction;
  - (vi) Adequate provision of exhaust hoods to minimize spreading of aerosols and dust generated by the use of oscillating saws; and
  - (vii) Non-slip wall and floor surfaces which are robust enough to withstand regular cleaning, scrubbing and the application of disinfectants.
- (e) The autopsy facilities should have adequate provision for hosing down with running water or dowsing with appropriate disinfectants for work surfaces, instruments and equipment items.
- (f) There should be adequate shower facilities for staff immediately adjacent to the autopsy room to facilitate decontamination and maintenance of best practice for autopsy work. Where such provision is made impossible by physical constraints in existing buildings, appropriate workflow logistics should be put in place to ensure that decontamination may be carried out without risks of cross contamination.

## **Present condition**

5. Deficiencies of varying degrees in meeting the above requirements have been identified in existing autopsy facilities of the public hospitals. Generally speaking, these facilities are poorly lit and ventilated, some with worn or damaged internal finishes that are prone to harbouring dust, bacteria, or fungi. Pathogens and contaminants released during autopsies cannot be removed at source due to the absence of effective means of extraction. Provision of showering facilities for decontamination is inadequate, and lacking for treatment of emergencies in case of accidental exposures to contaminants or chemicals. Lifting bodies onto and off autopsy tables or trolleys manually without the assistance of any mechanical device is undesirable from the occupational health point of view. As a result, the staff working in mortuaries have to exercise caution in their work. Improvement works are therefore required to rectify such deficiencies. This would ensure that the infection control facilities in the mortuaries are in line with international benchmarks, and provide a healthier working environment in the existing autopsy facilities of public hospitals.

6. If no improvements are to be made to these infection control provision and facilities, the health of staff handling the storage and post-mortem examination of bodies will be at stake. A single incident of infection may lead to community outbreak of an infectious disease. With the threat of pandemic influenza lurking in the horizon, we need to heighten our preparedness in all aspects.

## **Proposal**

7. We propose to improve the infection control provision for autopsy facilities in 11 public hospitals<sup>1</sup>. The scope of this project will comprise –

- (a) upgrading the mechanical ventilation and air-conditioning systems;
- (b) reconfiguring the layout to segregate between “clean” workflows and “dirty” workflows to avoid cross contamination;
- (c) replacing ceiling, wall and floor finishes which

---

<sup>1</sup> There are all together 14 hospitals under HA that have autopsy facilities. The other three hospitals are Princess Margaret Hospital, Caritas Medical Centre and Grantham Hospital. Since the autopsy caseload in Grantham Hospital was relatively low, its autopsy services have been taken up by Queen Mary Hospital. The other two hospitals are undergoing redevelopment and improvement works to their infection control provision for autopsy facilities are already included in the redevelopment works. In addition, there will be autopsy facilities in Pok Oi Hospital upon completion of its redevelopment and expansion project in December 2006.

have become damaged or worn out over the years;  
and

- (d) installing or procuring appropriate equipment items such as ventilated autopsy tables, biological safety cabinets and hydraulic trolleys for lifting bodies etc.

The list of the 11 public hospitals is at Annex.

8. We estimate the cost of this project to be \$68.4 million in money-of-the-day prices. We plan to commence construction works in November 2005 for completion in March 2007. Works will commence in phases so that disruption to existing services is kept to a minimum.

### **Advice sought**

9. Members are invited to support the proposed project outlined in this paper.

Health, Welfare and Food Bureau  
May 2005

**62MM – Improvement of infection control provision for autopsy facilities in public hospitals**

List of public hospitals covered under the project scope

- 1) Alice Ho Miu Ling Nethersole Hospital
- 2) Kwong Wah Hospital
- 3) North District Hospital
- 4) Pamela Youde Nethersole Eastern Hospital
- 5) Prince of Wales Hospital
- 6) Queen Elizabeth Hospital
- 7) Queen Mary Hospital
- 8) Tseung Kwan O Hospital
- 9) Tuen Mun Hospital
- 10) United Christian Hospital
- 11) Yan Chai Hospital