Designing a Modern ICU – From an Architect Perspective
An fundamental objective of an ICU design is to provide an

- *Efficient and cost effective workplace*
- *Optimal environment for healing*
- *Adaptable for future change of use*
The Redevelopment of Kwong Wah Hospital
Diagrammatic Section

The Redevelopment of Kwong Wah Hospital
The Redevelopment of Kwong Wah Hospital
9/F Layout Plan

The Redevelopment of Kwong Wah Hospital
Intensive Care Unit (9F)

- Operating Theatre
- Intensive Care Unit (9F)
- Nurse Station
- Nurse Station
- ISO Room
- ISO Room
- ISO Room
- 4-Bed Room
- ISO Room
- ISO Room
- ISO Room
- 2-Bed Room
- Support
- Support
- Support
- Day Room
- Reception
- Waiting/Toilet
- Interview
- Treatment Room
- Staff Changing
- Staff Facilities and Office Area
- ICU Beds
- Medical Preparation
- Medical Preparation
- Equipment Store
- Equipment Store
- Equipment Store
- Operating Theatre
- Inpatient Bed Lift Lobby
- Public/Patient Arrival
- Hot Lift
Intensive Care Unit (9F)
Patient Flow (Emergency)
Intensive Care Unit (9F)
Inpatient Flow (Normal)
Intensive Care Unit (9F)
Visitor Flow
Intensive Care Unit (9F)
Intensive Care Unit (9F)
ICU Detail Layout

Efficient and cost effective workplace
Intensive Care Unit (9F)

Efficient and cost effective workplace

Ideal Pod Size: 8 beds

Central Nurse Station

- **Sufficient Work Space** for computer equipment and monitoring console
- **Pneumatic Tube Station** for medication delivery from the Pharmacy and rapid transfer of patient specimens to and from the Clinical Laboratories
Intensive Care Unit (9F)
ICU Detail Layout

Efficient and cost effective workplace

360 Degree Vision

- Direct Visual Observation to ALL patients including 4 isolation beds
Intensive Care Unit (9F)
ICU Detail Layout

Optimal environment for healing
Intensive Care Unit (9F)
ICU Detail Layout

Optimal environment for healing

Natural Daylight
together with direct visual access to outside skyline amid the ward is essential to the well-beings of all patients and staffs
Intensive Care Unit (9F)
ICU Bed Layout

Adaptable for future change of use

Nottingham University Hospital, UK
Intensive Care Unit (9F)
ICU Bed Layout

Adaptable for future change of use

Clear Floor Area
- No fixed items on the floor within the bed space
- Beds are separated by curtains
- Maximum opportunity for future change and portable equipment (i.e. COW, ECMO, and IABP)
- To allow rapid movement of patients and equipment
- To see and hear patients at all times
- To reduce reliance on video observation
- To reduce staff isolation when working 1 on 1

20 sq.m.
Adaptable for future change of use

Clear Floor Area

- All fixed items are mounted on ceiling (services pendant and TV) and wall (wash hand basin)
Intensive Care Unit (9F)
ICU Bed Layout

Adaptable for future change of use

Clear Floor Area

- All fixed items are mounted on ceiling (services pendant and TV) and wall (wash hand basin)
- All Building Services Provisions (including R.O. water for patient with Kidney Failure) are provided on walls or services pendant for adapting any changes of use
Intensive Care Unit (9F)
ICU Bed Layout

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- ICU bed, trolleys, equipment, and loose furniture are placed according to the mode of operation for any critically ill patients.

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Intensive Care Unit (9F)
ICU Bed Layout

Adaptable for future change of use
Thank You