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UNIVERSITI SULTAN ZAINAL ABIDIN



KAMPUS UNISZA

Kampus Gong Badak



Kampus Besut



Kampus Perubatan



Programs Offered

- Diploma in Radiography
 - 3 years (full-time)
 - Current: 65 students
- Bachelor of Medical Imaging (Honours)
 - 4 years (full-time)
 - Current: 153 students
- Masters and Doctor of Philosophy
- Website: <http://fsk.unisza.edu.my>

Radiology and COVID-19: How to establish safe workflows?

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Brief History

Radiographer
(2006 – 2011)

Diploma Medical Imaging

BSc Medical Imaging
(Honours)

UiTM

Radiology Department at
Damai Service Hospital
(HQ), Kuala Lumpur.



Lecturer
(2012 – 2014)

MSc Medical Imaging

UiTM Puncak Alam

KL Metropolitan University
College

Radiographic Equipment;
Healthcare Management;
Physics for Radiographers;
Nuclear Medicine.

Senior
Lecturer
(2018 till now)

2015 – 2018

Further PhD at University of
Sydney, Australia.

Head of School of Medical
Imaging, Faculty of Health
Sciences, UniSZA

Computed Tomography; Digital
Imaging Process; Writing for
Scientific Purpose; Research
Methodology

In this presentation, we will be looking at two ways perspectives:-

- ✓ Steps taken by the Hospital Administration
- ✓ Steps taken by the Radiology Department

Steps Taken by Hospital Administration

Creation of a Communication Infrastructure

- Pandemic Management Team (Task Force)
- All departments nominate pandemic representatives
- Daily updates
 - Video conferences (ONLINE meeting, Whatsapp, Telegram etc.)
 - Dedicated intranet page (Radiology portal, Staff portal etc. including website links)

RESPONSIBILITIES OF TASK FORCE

Receive
report and
begin to act

Contact
PIC/HOD

Isolate the
suspected

Schedule
disinfection

1. Mengambil tindakan segera terhadap aduan jika seseorang di tempat kerja dikesan mempunyai gejala COVID-19.

2. Berhubung dengan Penyelaras atau Pegawai Perubatan (jika ada) untuk dimaklumkan kepada majikan.

3. Mengasingkan orang yang bergejala COVID-19 ke tempat khas yang disediakan dan seterusnya dirujuk ke hospital untuk pemeriksaan lanjut.

4. Membantu majikan melaksanakan kerja disinfeksi di tempat yang dikenalpasti bersama agensi berkaitan (jika perlu)

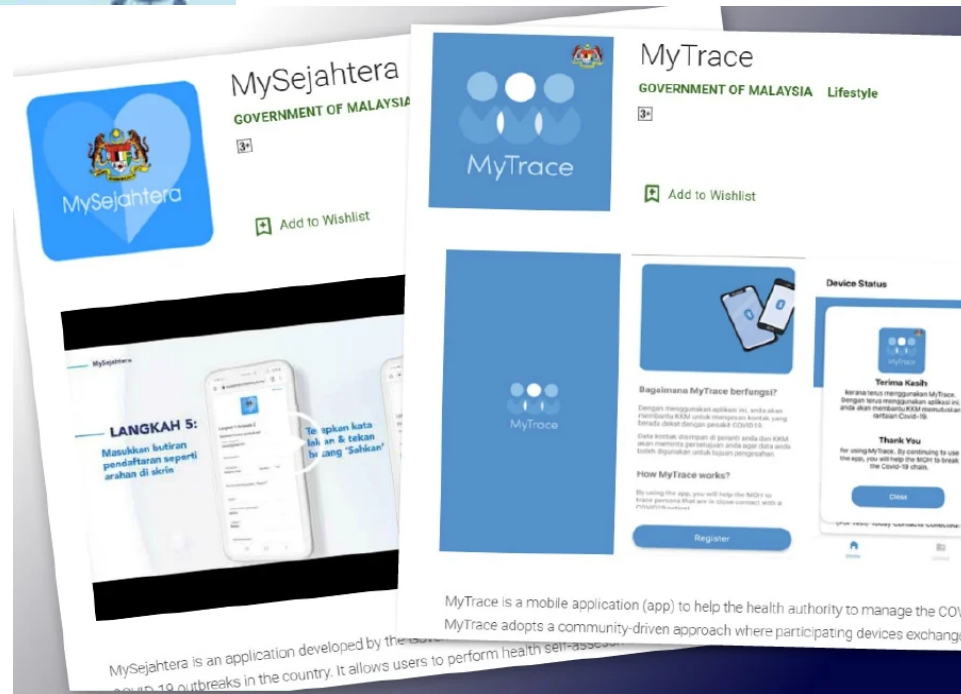


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From MOH, 2020

Patient Management

- Elective procedures cancelled / postponed (3 - 6 months)
- Ban on vacations and official trips
- Dedicated COVID-19 emergency unit
- Dedicated hospitals/wards for COVID-19 patients (currently 40 COVID-19 hospitals in Malaysia)
- Expanded intensive care capacity (improve number of beds, medical equipments etc.)
- Mobile apps – MySejahtera, MyGerak etc.



Protection of Staff

- Process instruction on protective gear
- Rationing of protective gear (if limited supplies)
- PCR-testing for
 - Staff with unprotected COVID-19 contact
 - Staff returning from travels
- Vaccination for staff (influenza, pneumococci,...)

Protective gear used by Covid-19 frontliners

Number of days before stock finishes (As of March 14, 2020)



78 days

Footwear
/boot cover



52 days

Protective
head cover



47 days

3-ply masks



37 days

N-95 masks



25 days

Disposable
face shield



23 days

Disposable
fluid
resistant
apron



19 days

Jumpsuit /
protective
coverall



Plastic
gowns and
other PPE

Source: Health Ministry

TheStar graphics



Noor Hisham Abdullah Facebook

Contact Restrictions

- No visitors allowed to any wards / NEW visiting hours
- Closure of entrances, checks on staff in-out (daily temperature check etc.)
- Nearly or completely closed canteen/café (bring from home, deliveries etc.)

Steps Taken by Radiology Department

Creation of a Communication Infrastructure

- Daily communication via telephone, social apps, etc. with head of department
- Nomination of a chief coordinator for COVID-19 pandemic (person-in-charge)
- Briefing of all staff by e-mail at least twice a week (update any changes to the workflow etc.)
- Provision of information and scientific publications

Protection of staff

- Centralized storage and distribution of protective gear (dedicated room, have PIC and control in-out)
- Ordering of larger amounts of protective gear and disinfectants (as back up if required)
- Information on psychological counselling services (mental health)
- Simulation trainings – donning and doffing PPE
- Follow specific hygiene **guidelines (SOP)** for each modality (CT, MRI, Mobile, Ultrasound etc.)

WORKFLOW AND WORK PROCESS FOR RADIOLOGICAL EXAMINATION DURING COVID-19 OUTBREAK

1. Mobile X-ray

- Request made manually or online
- The ward staff shall call and inform the radiology personnel of the examination to be performed.
- An appropriate time is determined for the examination to be carried out.

1.1.Registration

All request for radiological exam shall be pre-registered prior to receiving the patient.

1.2.The Radiographer

- The radiographer has to abide by the precautions given in the Infection Prevention and Control measures (**Annex 8**) on the necessary steps to limit COVID-19 transmission.
- Recommended to have just a core number of radiographers trained for this exercise.

1.3.Lead gown

- Clean on both sides (front and back).
- Lead gown to be worn before the radiographers donned the PPE for infection control.

From MOH, 2020

**THE INFECTION PREVENTION AND CONTROL (IPC) MEASURES
WHEN 2019 NOVEL CORONAVIRUS (2019-nCoV) INFECTION IS SUSPECTED OR
CONFIRMED**

THE INFECTION AND PREVENTION CONTROL GUIDING PRINCIPLES

The principles of IPC for acute respiratory infection patient care include:

- a) Early and rapid recognition AND source control that includes promotion of respiratory hygiene
 - Early recognition and investigation, prompt implementation of IPC precautions, reporting and surveillance, and supportive treatment to make patients non-infectious by strictly adhering to Interim definitions of the epidemiological AND Clinical Criteria in the case definition
 - Post visual alerts (in appropriate languages) at the entrance to outpatient facilities (e.g., emergency departments, physicians' offices, outpatient clinics) instructing patient and the persons who accompany them to inform healthcare personnel of symptoms of a respiratory infection when they first register for care, and practice respiratory hygiene/cough etiquette

- a) Application of routine IPC precautions (Standard Precautions) for all patients;



Wearing appropriate protective gear at department.



Radiographer is going to do mobile examination.



Waiting Area – social distancing, disinfection

Contact Restrictions

- Reception counters closed (only phone registration)
- Only scheduled examinations of outpatients
- Limited access to waiting areas
- Guiding for staff accompanying patients isolated because of COVID-19 / suspected
- Restrictions for staff in control room

- Only allow teams of two radiographers for X-ray, CT, MRI:
 - Surgical masks in control room.
 - Surgical/FFP masks, gloves, coats, face shields when handling patient in examination room.
 - Visiting Team will wait in corridor with patient transport service/critical care team accompanying patient and will then disinfect the room and equipment.

Patient Management

- Dedicated scanners / rooms for COVID-19 patients
- CT: Structured reporting of chest and head scans (for fast results); patient is isolated before and after exam.
- Ultrasound: All isolated patients are examined bedside (at Ward/Room).
- X-ray: Separate X-ray unit in COVID-19 emergency unit. Disinfect before/after examination.

Shared Values

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SEKIAN,

TERIMA KASIH

