

# How should front-line general practitioners use personal protective equipment (PPE)?

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## Abstract

The COVID-19 outbreak continues to evolve with the number of cases increasing in Malaysia, placing a significant burden on general practitioners (GPs) to assess and manage suspected cases. GPs must be well equipped with knowledge to set up their clinics, use Personal Protective Equipment (PPE) appropriately, adopt standard protocols on triaging and referrals, as well as educate patients about PPE. The correct use of PPE will help GPs balance between personal safety and appropriate levels of public concern.

## Introduction

The COVID-19 outbreak continues to evolve, and there is a possibility that larger-scale community outbreaks could occur across Malaysia, placing a significant burden on general practitioners (GPs) to assess suspected cases. However, as the risk associated with COVID-19 infection continues to evolve, GPs must act consistently with updated guidance on the appropriate use of personal protective equipment (PPE) such as masks, gloves, gowns and eye protectors.

This commentary focuses on the appropriate use of PPE for front line GPs to complement official guidance on its use.

## PPE is only one part of risk mitigation for GPs

In GP clinics, a hierarchy of control measures should be used to mitigate risk of infectious diseases.<sup>1</sup> PPE is an important part of a basket of solutions and should be considered as supplementing but not substituting other measures such as administrative, environmental and engineering controls. Administrative controls include ensuring appropriate infrastructure, clear infection prevention and control policies, facilitated access to laboratory testing, appropriate triage and placement of patients, and adequate staff-to-patient ratios.<sup>2</sup>

In parallel, environmental and engineering controls reduce contamination of surfaces and inanimate objects, and hence the spread of pathogens. Where possible, clinics must

provide adequate space of at least 1 meter to be maintained between all persons, and ensure that well-ventilated isolation rooms are available for patients with suspected or confirmed disease.<sup>1</sup>

The use of PPE may be seen as cumbersome, nonetheless, GPs must choose the right type of PPE, and be knowledgeable in wearing, removing and disposing used PPE. However, in an outbreak, PPE alone is not a magic solution, and other measures including good hand hygiene and social distancing should be prioritised.

## How should GPs receive information about PPE

GPs must perform risk assessments to determine the most suitable combination of PPEs for their individual clinics. As the situation evolves, GPs need to be aware of and adhere to the latest updated guidelines on the use of PPE from the COVID-19 Management Guideline by Ministry of Health Malaysia (currently Version 4.0).<sup>3</sup>

There are several types of PPEs manufactured with different standards and methods for donning, removing and disposal of the PPE. It is advisable for GPs to follow the manufacturers' recommendations and complement it with the recommendations from the MOH.

Other sources of information for PPE and PPE quality assurance standards come from the Standards & Industrial Research Institute of Malaysia (SIRIM) and the Department of Occupational Safety and Health (DOSH) under the Ministry of Human Resources.<sup>4</sup>

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Malaysia**How should GPs set-up their clinics and use PPE**

At the entrance of the clinic, clear signage such as posters and visual alerts in local languages should be placed to inform patients who fall under the category of patients under investigation (PUI) and ensure that they notify the health personnel at triage counters or receptions.

PUI are defined as patients who have fever or acute respiratory infection (sudden onset with at least one of the following: shortness of breath, cough or sore throat) and have travelled to or reside in affected countries in the 14 days prior to illness, or have close contact with a confirmed case of COVID-19 in the 14 days before onset of illness.<sup>3</sup>

In addition, healthcare personnel at triage counters or receptions need to undertake risk assessment of all patients and visitors to identify possible PUI. This risk assessment is based on the MOH guidelines. Healthcare personnel should wear a face mask and regularly use an antiseptic hand rub or alcohol-based hand sanitizer at the counter.

Once a PUI is identified, they must be placed in a special isolation room (where available) or designated waiting area. This area should be well ventilated allowing staff and other patients to be placed 1 meter apart, free of clutter and with minimal fixtures. It should be equipped with a no-touch bin to discard used tissue and hand sanitizer dispensers.

In most instances, a physical examination is not required prior to referral to a designated hospital. However, if a physical examination for a PUI is warranted, healthcare personnel must wear N95 masks (fit checked) or surgical masks with face shield or goggle, standard isolation gown (fluid repellent long-sleeved gown) and gloves. There should be strict adherence to frequent and strict hand hygiene when examining patients in the isolation room.

All healthcare personnel must be skilled in the process of donning and doffing PPE.<sup>5</sup> A video link to these procedures can be found on the official social media page of the Director-General of Health of Malaysia.<sup>6</sup>

After examining patients, cleaning and disinfection according to standard procedures must be followed. Waste management, packing

and transporting patient-care equipment, linen and laundry must be performed according to standard infection control procedures as described by the Department of Environment, Malaysia.<sup>7</sup>

Moreover, to avoid physical interaction with suspected COVID-19 cases, clinics can consider rescheduling routine appointments or ensure appropriate measures are taken to isolate high-risk patients.

**Triaging and Referrals**

All PUI should be offered hand sanitizer and surgical masks, provided the patient is not tachypnoeic or hypoxic. If the patient is unable to tolerate these, the patient is advised to cover their nose and mouth during coughing and sneezing with tissue. Patients, especially foreigners, must be asked for their Health Alert Cards, which are given at the point of entry into Malaysia if they have travelled from affected countries.

All PUIs should be referred to the nearest MOH hospitals accepting patients. This list is regularly updated on the MOH website and the COVID-19 Management Guidelines. Each PUI must be discussed with the Infectious Disease (ID) Physician/Physician at the designated hospital before transfer.

PUI must never be allowed go to MOH designated hospitals on any form of public transport or private hire vehicles. GPs can liaise with the local District Health Office or designated hospital emergency department to arrange transport for these patients. They must wear a face mask during the journey. The ID Physician or Physician will be able to guide the attending GPs further.

**Educating Patients about PPE: How and What?**

Currently, there is no evidence that those without respiratory symptoms should wear face masks. If a patient has cough, they are advised to practise good cough etiquette, which includes covering the nose and mouth with tissue whenever coughing or sneezing, to throw the tissue into proper trash bins immediately after use and to wash their hands with soap and water or use hand sanitizer frequently. If a tissue is not available, they are advised to use the fold of their elbow. These patients are also advised to wear a face mask.

PUIs who do not fulfil criteria for admission to hospital will be placed under home surveillance and be monitored daily by the district health office for 14 days. During this time they are strictly prohibited from leaving their home. Other measures prescribed are available in the home surveillance assessment tool.<sup>3</sup>

GPs should also provide patient and family with ongoing support, education and monitoring. This can be done by using Health Alert Cards with information useful for patient and family and counselling on any concerns they may have. This Health Alert Card can be easily obtained from the COVID-19 Management Guidelines 2020 of Ministry of Health Malaysia.<sup>3</sup> GPs can make photocopies of these cards to be given to patients who come to their clinics.

#### **Public Health and Public Policy Implications of PPE**

GPs need to train and retrain all staff on the safe use of PPEs. Where possible, GPs must ensure that there is an adequate supply of PPE for their clinics, without tipping over into hoarding or inappropriate stockpiling. GPs must consider the psychological well-being and fatigue of their clinic staff.

The long-term use of PPE can lead to complacency and carelessness, or a false sense of security about other important measures of infection control, or prolonged stress or pressure from fear or other negative emotions from either the outbreak itself or from PPE use.

District Health Offices are important resources for information, PPE supply and a Psychological First Aid (PFA) unit. The PFA unit includes a Family Medicine Specialist together with Medical Doctors who are also trained to provide counselling for those who need support with mental and emotional wellbeing.

Malaysia's national preparedness, manufacturing capacity and stockpiling of PPE requires a relook after this outbreak is over. The health system must address questions on the equitable distribution of limited resources, such as whether the first face-masks go to front line professionals or the sickest patients.

Another public policy question is to determine the rights and duties of front line professionals during outbreaks where little is known about the disease. PPEs are a form of risk mitigation, but governments and the health system equally must provide adequate information, supplies and risk communications for PPE. This unwritten social contract between professionals and the government must be strengthened after this outbreak.

GPs have a role in helping to reassure appropriate levels of public concern and vigilance, and PPEs are very visual reminders of the severity of the threat. Therefore, GPs must continuously update themselves with the right information to deliver the right level of concern to the public, especially during outbreaks whose peak, duration and severity are unpredictable and unknown.

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