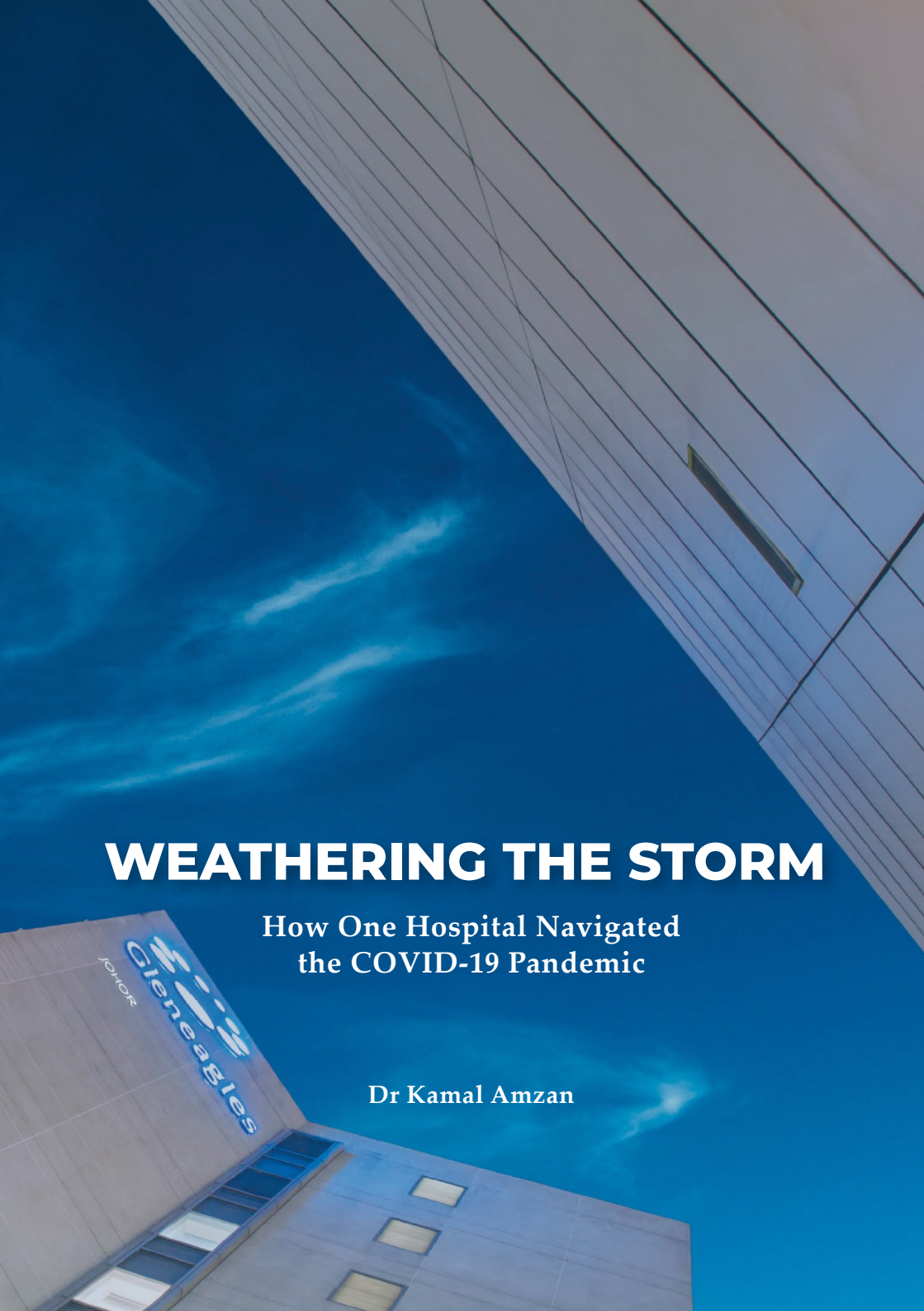

WEATHERING THE STORM

How One Hospital Navigated the COVID-19 Pandemic

Dr Kamal Amzan

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Introduction

As the first echoes of an enigmatic virus floated across from Wuhan, China, in December 2019, an insouciant pallor cloaked Malaysians as we believed ourselves cocooned from turmoil by the oceanic buffers - a mirage of invincibility.

However, this comfort rendered itself transient when, within whirlwind months, vernacular such as lockdowns, quarantines, isolation, and masking infiltrated our colloquial discourse, metastasising globally at breakneck speed.

During this embryonic phase of the viral maelstrom, not only Malaysia but nations worldwide were thrashing in the vortex of uncertainty, grappling with a novel aggressor defying antecedent medical axioms. Leadership around the globe floundered to decipher a contagion destined to rewrite medical literature, commandeer economies, usurp governments, and cast long shadows over the quotidian existence of its populace.

At the inception of the pandemic, media channels were awash with parallels drawn between the emergent pathogen and the last global health onslaught of comparable magnitude. The SARS pandemic of 2002-2004, having annexed 29 nations and marking in excess of 8,000 lives worldwide, was a reference point. The new faceless enemy, soon christened SARS-CoV-2, was viewed through the prism of its antecedent: SARS, the disruptor birthed in the heart of Hong Kong in the burgeoning years of the current millennium.

Despite presenting clinical symptoms akin to those of SARS and MERS - fever, cough, respiratory distress - this enigma would prove itself a Titan, its reach and tenacity eclipsing both its predecessors and etching a brutal timeline that still remains to find a terminus.

A few months after the inception of the pandemic, the government's various border control measures managed to keep the virus at bay. Yet, January 23, 2020, marked a historic day for Malaysia as Gleneagles Hospital Johor admitted the first confirmed COVID-19 case.

The hospital operated under existing pandemic response frameworks and an efficient regimen of containment control. Nevertheless, the unique conundrum presented by SARS-CoV-2 necessitated a novel approach. This fresh path comprised crisis control initiatives, inter-departmental synergy, and the flexible adaptation of hospital protocols to match the government's evolving directives in real-time.

Through comprehensive planning, effectual communication, and an unwavering ethos of teamwork, the hospital ventured to conquer the undeniably arduous medical crisis it had ever faced.

An anthology of experiences has since been birthed from Gleneagles Hospital Johor's encounter with the pandemic's initial phase and the subsequent trials. Tales abound of medics labouring relentlessly through the days and nights for their patients, management

partnering with department heads to streamline processes amidst the relentless inflow of patients, and nurses willingly enduring months of separation from their vulnerable loved ones.

Let's not allow the grit displayed by Malaysia's healthcare warriors during this deadliest pandemic's onslaught fade into oblivion. The objective of this manuscript is to pay homage to these experiences and enlighten both frontliners and healthcare institutions that navigated through similar circumstances.

By chronicling the journey of GHJ and recounting the collaborative endeavour against the ruthless adversary, our aspiration is to ensure such trials of the past go into the annals of history so they can be referenced by future generations when tackling other tumults of this magnitude.

01
The First Wave

Establishing the Hospital Infectious Disease Outbreak Committee (HIDOC)

Before the first case of COVID ever appeared in Gleneagles Hospital Johor, we had already established the Hospital Infection & Antibiotic Control Committee (HIACC). Within this committee, health experts' advice was integrated into hospital policies and procedures on infection control, antimicrobial resistance (AMR) and antibiotic usage in the hospital.

In December 2019, the hospital had two existing policies relating to pandemic management, namely a pandemic response plan and guidelines for containment control of index patients for outbreak prevention of infectious diseases.

Our pandemic response plan was considered a framework in preparing the hospital in terms of the management of new emerging diseases. These guidelines encompassed hospital operations and

the logistical questions of resource management within various departments in response to a pandemic.

Meanwhile, the Containment Control of An Index Patient for Outbreak Prevention of Infectious Disease was a framework used to manage the treatment and handling of an index patient in both outpatient and inpatient settings.

At the beginning of the COVID-19 pandemic, the struggle we faced as a hospital was to find related guidelines on this new emerging threat. As a team, we needed to work quickly to develop new policies and guidelines to face this new virus.

In the face of accelerating cases of a new coronavirus, which began to be identified in other countries such as Thailand and Japan in January 2020, these guidelines would eventually need to be updated in response to the threat of what would eventually be named SARS-CoV-2, which was globally proving to be more difficult to contain.

At the time, there was also an alert from the Malaysian Ministry of Health (MOH) regarding an Influenza A case surge, involving multiple outbreaks across the country.

Staff needed to be vaccinated urgently. Unfortunately, there was a nationwide shortage of influenza vaccines. These worrying developments led to the establishment of HIDOC in GHJ, a committee placed under HIACC that we decided would be activated for the handling of any new outbreaks detected or identified.

"In this committee, my roles were to provide expert advice in any matters related to new emerging disease preparedness, such as developing policies and procedures in the hospital related to emerging disease," explains Dr Cheong Wai Seng, who specialises in internal medicine at GHJ and is Chairman of HIDOC.

"HIDOC had to make the decision to vaccinate our staff in stages by prioritising the high-risk group first, which included the elderly and immunocompromised staff."

While its initial conception was primarily the Influenza outbreak, the committee would soon play an integral and central role in the mitigation and strategising of what would soon become a much larger crisis to arrive in Malaysia.

Defining the COVID-19 patient

By January 23, 2020, Singapore had announced their first imported case of the virus that had originated in Wuhan, China. The patient was reported to be a traveller from China and MOH had taken the necessary steps to alert all healthcare facilities in Johor to prepare for possible incoming imported cases, particularly in view that the patient who tested positive had recently travelled to Johor.

The focus at the time was on any patients who had recent travel histories and had developed respiratory problems, which were the main symptom of the first strain of the virus.

HIDOC was convened immediately following this alert to discuss the workflow and management of this new emerging disease.

Knowing what to look for in the process of active screening was crucial for the sake of time and resources. It was still early days and many countries were still in the process of defining what symptoms were associated with the SARS-CoV-2 virus and what to keep an eye out for in patients.

Before the MOH officially defined the COVID-19 patient, HIDOC had decided to adopt the Ministry of Health Singapore's case definition of the new pneumonia-like virus from Wuhan in order to begin preparations. The case definition stated:

- A person with clinical signs and symptoms suggestive of pneumonia or severe respiratory infection with breathlessness AND travel to or residence in Wuhan city within the last 14 days; or
- A person with an acute respiratory illness of any degree of severity who, within 14 days before onset of illness, had close contact with a pneumonia case of unknown cause linked to the Wuhan cluster.

Subsequently, GHJ switched to the definition developed by MOH Malaysia, which was released on January 17, 2020. The Malaysian case definition of someone infected with the virus was as follows:

- A person with clinical signs and symptoms suggestive of pneumonia or severe respiratory infection with breathlessness AND travel to mainland China within the last 14 days; or
- A person with an acute respiratory illness of any degree of severity who, within 14 days before onset of illness, had been to a hospital in mainland China or had close contact with a case of 2019 novel coronavirus infection.

Malaysia's first cases of COVID-19

On January 22, 2020, HIDOC was planning for the first COVID-19 screening counter to open in GHJ after Chinese New Year 2020. However, that same night, a couple who had travelled from Wuhan, China, sought treatment in the hospital's emergency department (ED) and presented with respiratory symptoms.

The patients were attended to by a medical officer and an assessment was conducted by Dr Kan Foong Kee, Infectious Disease Physician at GHJ. A chest X-ray was performed and the images were concerning. However, the patients appeared stable and were eventually discharged.

"We always knew the first COVID-19 cases would come to our shores either from Singapore or via KLIA as these were the popular entry points for Chinese tourists, particularly during Chinese New Year," Dr Kan recalls.

"Hence, we set up our ED to be COVID-safe on January 22, 2020 right after a HIDOC meeting in the evening. By then, there was a couple from Wuhan with mild upper respiratory tract infections being isolated in our negative pressure room in the ED."

As both these patients appeared rather well with mild symptoms, and the chest X-ray only showed rather vague changes, a government hospital screening was not requested at the time for COVID-19.

"While we did have our suspicions, they did not yet fulfil the case definitions by the Ministry of Health at the time. Therefore, they went back to their hotel to continue their holiday," Dr Kan added.

The next day, on January 23, when Dr Kan was in Singapore celebrating Chinese New Year with her family, she received a WhatsApp notification from a GHJ ED medical officer about another couple from Wuhan presenting with high fever.

The suspicions were high that this couple had been infected with SARS-CoV-2 as they had resided in the same hotel as the first couple from Wuhan who had come into the ED the previous day.

At this point, the husband of this second couple was already experiencing respiratory failure. During observation, it was found that he was low on oxygen and was given an oxygen supply. He was then attended to by a medical officer and the necessary examinations were performed.

Our suspicions were confirmed and the patient was diagnosed with what was known then as the Wuhan pneumonia and the patient was immediately transferred out to Hospital Permai, which at the time was the designated government hospital for suspected or confirmed cases.

After a week, we received confirmation from Hospital Permai that the patient was positive for a confirmed case of the Wuhan

pneumonia, which would be later known as COVID-19. These two were then identified as the 4th and 5th cases of COVID-19 documented in Malaysia and the first to be diagnosed in Johor.

Efforts to strengthen GHJ's facilities, equipment and training had all been underway in preparation to face surges of the virus, but when the fateful day finally arrived, we were still taken aback that the first case to be documented in the country was at GHJ.

Dr Kan adds, "To this day, I still wonder about that first Wuhan couple who presented with COVID-19 symptoms and whether they were indeed positive for the virus. I learnt a huge lesson from this to never conform to case definitions, especially those pertaining to new diseases. It's always better to be brave and investigate upon any suspicion during the early days of a disease."