



A Mass Gathering Medicine and Event Medicine during Thaipusam 2023: A Crowd Medicine and Medical Standby Perspective

Muhamad Syis Zulkipli, Gurjeet Singh a/l Harvendhar Singh*, Tan Chun Jin, Nabil Muhammad bin Al Kuddoos, Suhash Damodaran, Mohamed Alwi Bin Hj Abdulrahman

Emergency and Trauma Department, Hospital Selayang, Selangor, 68100 Malaysia

*Corresponding Author's E-Mail: gurjeet.s@live.com

Abstract

Medical standby is an event that was assigned to the emergency department to orchestrate the flow of medical management and the safety of the people who were involved during the event. The challenge started weeks or sometimes months before the occasion, as it may include more than one team for the event according to the requirements that have been standardized by the governing bodies. The preparedness of medical standby becomes more challenging as it requires dedicated and state-of-the-art resuscitation equipment to perform maximum medical life-saving procedures prior to the patient's dispatch to the selected hospital. This is a report of the Selayang medical team, which led multiple medical agencies to stay alert 24 hours a day during the first Thaipusam's medical stand-by after the pandemic.

Keywords: *Mass Gathering Medicine; Event Medicine; Thaipusam; Crowd Medicine; Medical Standby*

Introduction

The dates of February 3rd to 6th have been branded among the most challenging dates for the Selayang Hospital emergency team, as she was selected to lead teams from medical and medical volunteers to organize and execute medical standby for Hindus' holy event, Thaipusam (Karupiah, 2022). These dates will be a major test for the Selayang emergency team to make sure all medical stand-by teams are steadfast every second for any medical emergencies that might occur during the event. As for the record, this will be the first major medical stand-by, which will be hosted by the Selayang emergency and trauma team after the pandemic. This year, the expectation of Thaipusam's participants was more than 2 million, and Batu Caves will be the center for the event. Selayang's batu caves will start to become crowded about 2 weeks prior to the event as they will start to receive participants from all over Malaysia, and those who stay outside the Klang Valley choose to stay in hotels or nearby relatives' homes around the area (Xygalatas, 2022). As a result, a few days before the event, Selayang Hospital had already maximized its preparation to accommodate the influx of patients from outside the city.

Case Study

Preparation for the Major Standby

The preparation started almost a month before the real event, as it requires Selayang Hospital to identify the manpower for this event and the human resource challenge so that it may be addressed as soon as possible. The preparation started with a major meeting, which was held in Selayang Hospital. The Selayang Hospital emergency and trauma team hosted the meeting with the involvement

of other major agencies such as the Malaysian Civil Defense Force (JPAM), Malaysian Royal Police Force (PDRM), Malaysian Red Crescent Society (PBSM), Hospital Orang Asli Gombak (Hoag), Kualakubu Hospital, and the Malaysian Fire Department (Bombam Malaysia). The challenge started when we needed to gather more capable medical personnel to cater to the influx of patients from all over Malaysia. This has triggered us to involve more medical personnel from nearby clinics such as klinik amanehsan, klinik batu tiga, klinik huluselangor, and klinik rawang. We are so fortunate to receive assistance from major hospitals in the Klang Valley, such as Kuala Lumpur Hospital (HKL), Sungai Buloh Hospital, Ampang Hospital, and Tengku Ampuan Rahimah Hospital, Klang (HSTAR).



Figure 1: Briefing before staffs' deployment

First Challenge: The Gather of Force

The first obstacle that appeared in this event was identifying the manpower that could contribute to the service. As we all already know, the event will not only involve more than 2 million participants but also people with unknown medical complications. As a result, more medical personnel are required to fill up the service, and more synchronization will take place. The challenge became more heightened as we noticed most of the staff have limited experience in medical standby, and some of them have no experience at all. The purpose of the major first meeting was to project a real-based scenario into everybody's clinical perception so that all the staff involved are no strangers to the real situation. The meeting was held with an introduction and briefing led by the Selayang emergency and trauma team, and the meeting consisted of table-top exercises, a simulated disaster drill, communication control, and a mass crowd control simulation. From the meeting, we were able to achieve service synchronization with all agencies and a mutual understanding of medical perception at each level.



Figure 2: Involvement of emergency department Selayang in the event



Figure 3: Showing briefing and passover of the medical teams during each shift of the medical coverage

Days of Medical Stand-by (5th February, 2023)

On the day of February 5, Thaipusam, at 7 p.m., it started with dark clouds, drizzling, and strong winds. As the day got darker, the weather became a thunderstorm with heavy rain. Healthcare workers have to wear raincoats in freezing weather to remain on duty to transfer injured victims from the scene to the nearest medical base, despite the rain. The floor was slippery, and winds were blowing in the rain. Fortunately, the downpour did little to dampen devoted spirits and fulfil their prayers. Visitors watching the procession sought shelter under nearby canopies. We don't want to see scenarios like multiple falls and crowd crushes like what happened in Itaewon, South Korea, during Halloween night repeating here in Batu Caves, Malaysia. This was highly attributed to the self-discipline among devotees, visitors, and police officers who stood guard at the scene 24 hours a day, tirelessly standing guard at the scene, efficiently crowd control, and kept the peace.

There were a total of 29 cases that were collectively encountered during my 12-hour shift at the medical base. 3 out of 29 cases need emergency care and need to be transferred to hospitals in Kuala Lumpur and Sungai Buloh. Common complaints that presented to the medical base were fainting spells, fatigue, shortness of breath, chest pain, and musculoskeletal injuries. Life-threatening or emergent events that were encountered were acute coronary syndrome, cardiac syncope, cardiogenic shock, and acute cerebrovascular accidents. All these emergent cases during my night shift were timely treated at the medical base and safely transferred to the nearest hospital for further appropriate treatment and management. A good seamless teamwork from medical assistance, nurses, medical officers, and ambulance drivers works collaboratively to address patient needs, reduce inefficiencies, and improve patient outcomes. 2. In order to shorten the interfacility transfer time from the medical base to the nearest hospital, negotiate with the police officers to set up exclusive ambulance access for entrance and exit through gate B, which was just beside the medical base. The public is prohibited from using this gate to prevent crowds from gathering outside the medical bases, thereby delaying response time by our rescue team and ambulance dispatch time to transfer patients. In certain life-threatening emergency cases, we also utilized marshals escorting convoys from traffic police outriders to assist ambulances by helping clear their pathway in the congested traffic from the temple all the way to the nearest hospital.

Days of Medical Stand-by (6th February, 2023)

February 6, 2023, is the final moment of the event, and the day was instilled with heavy rain from 2 a.m. until 9 a.m. The patients kept on presenting to the medical base, but the numbers were reducing. Three patients complained of presyncope while climbing up the stairs and were treated symptomatically on the site. After resting for a while, the patient was discharged.

A stampede of people while climbing up the stairs or rushing through the main area may lead to mass casualty incidents (MCI). This aspect has been addressed during the morning briefing to keep the staff alert. Luckily, no incident was reported, as we received very good crowd control from other agencies, especially PDRM.

The rainy situation led to more anticipation of a combination of medical and trauma cases, especially on the stairs site, as the steps became more slippery, and handling of the site was more difficult due to wet surfaces. More medical personnel were put on alert at the site to anticipate major and minor trauma cases. As we already noticed, the participants came from different medical backgrounds, and some of the participants were extremely advanced in age.

Due to continuous rain, the teams were instructed to be more alert outside the area as the road became more slippery and prone to motor vehicle accident (MVA) cases. However, we were fortunate because no MVA cases were reported because the traffic was coordinated efficiently by PDRM.

No critical case or red tag was noted on the final day, and the team was ordered to stand down at 3 p.m. A few green cases were spotted and handled efficiently by PBSM. The stand-down process was executed efficiently, and the site was wrapped up by each team according to their designated site.

The stand-down process was well-informed to PDRM, and the number of cases on that day was finalized by the Selayang hospital team and sent to the respective governing team.

Discussion

Lesson Learnt:

1. Medical stand-by is a teamwork process as it requires multi-agency back-up with holistic management to accommodate an increasing number of patients and unexpected issues that may involve medical or non-medical-related outcomes.
2. All personnel need to stay alert, as the moment may become chaotic unexpectedly.
3. Crowd control is one of the major aspects that need to be addressed efficiently, and it requires every agency to participate in contributing their systematic approach and management (Kanaujiya, & Tiwari, 2022).
4. Good communication is the key factor in maintaining an efficient workflow for the event and smoothing the process of the occasion, especially in the transportation aspect to preserve the efficiency of ingress and regress.
5. All medical personnel need to equip themselves with basic life support (BLS) and advanced cardiac life support (ACLS) skills.
6. The awareness of the pandemic needs to be highlighted among frontliners as the status of the pandemic is still on high alert.
7. In major mass gatherings, early anticipation of hazards may prevent disaster.

Challenges:

1. Identifying the location of the victim - no clear remarks on landmarks or location.
Recommendation: Create a map with labelling of locations for a more specific approach.
2. Crowd clearance and assisting the medic team to bring the patient to base: medics face difficulty carrying a collapsed patient and bringing it to base.
Recommendation: Upon patient collapse, when medic code: code blue- real/security- to help clear the crowd and give space for medic. conduct drills at the venue.
3. Few of the medic teams from NGOs didn't have the expertise to use grin.
Recommendation: More training
4. Medical base: didn't have facilities such as electricity, an extension plug, and enough space at the river site and bride.
Recommendation: Temple committee to provide facilities required.

Clinical:

1. Initially, there was confusion on medic response to cases: PBSM and other NGOs were supposed to respond to green cases, but they were sent to the hospital team base.
2. It is not convenient or suitable to perform CPR on the transport trolley.

Administrative:

1. Notification or report of a white tag. There was no communication or proper Passover flow between police and medics.
2. A briefing should be attended by all medics, including NGO leaders. So clear instructions and commands can be given.

Conclusion

Malaysia's Thaipusam is one of the biggest religious festivals in Malaysia (Polytropy, 2022). It is celebrated among the Tamil and Hindu communities. Devotees must maintain a complete fast, dress in proper attire, and walk to Murugan temple with bare feet; sometimes the procession will be long and slow. After two years of celebrating Thaipusam on a small scale with a limited number of visitors and the compulsory wearing of face masks due to the COVID-19 pandemic, Hindu devotees as well as foreign tourists are going all out to celebrate this year, 2023. 2023 is the special year where chap gohmei, the end of the Chinese New Year celebration, and Thaipusam both fall on the same day. On this special occasion, 2 million devotees and foreign visitors are expected to throng Batu Caves for the Thaipusam celebration. As preparation for such a huge mass gathering event, emergency department hospital Selayang takes the lead in collaborating with multiple government agencies like PDRM (police department), tertiary hospitals in Klang Valley, district hospitals, and primary healthcare clinics, together with non-government agencies like PBSM (Malaysia Red Crescent), PKSM, and Saint John to participate in a feasible tabletop exercise course named MGER (mass gathering emergency response). This exercise introduced an incident command system and disaster triage concepts, followed by tabletop scenarios with challenges. This immensely improves inter-agency coordination, planning, and communication during disasters.

Conflict of Interest

The authors declare that they have no conflict of interest.

Acknowledgement

The author and co-authors would like to thank the temple committee, Royal Malaysian Police (PDRM), the Fire and Rescue Service (BOMBA), other NGOs, and uniform bodies who were at the standby event providing technical help and general support. There are no sources of funding or potential conflicts of interest to declare.

References

- Kanaujiya, A. K., & Tiwari, V. (2022). Crowd management and strategies for security and surveillance during the large mass gathering events: The Prayagraj Kumbh Mela 2019 Experience. *National Academy Science Letters*, 45(3), 263-273.
- Polytropy, O. R. (2022). THE THAIPUSAM FESTIVAL IN. *Routledge Handbook of Asian Transnationalism*.
- Xygalatas, D. (2022). Extreme Rituals. *The Oxford Handbook of the Cognitive Science of Religion*, 237.