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SHORT COMMUNICATION

HEALTH MAJOR INCIDENT : THE EXPERIENCES OF MOBILE MEDICAL TEAM DURING MAJOR FLOOD

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Disaster is a sudden event that associated with ecological changes, disruption of normal daily activities, destruction of infrastructures, loss of properties, and medical disabilities. In disaster, there is a mismatch between available resources and patients need for healthcare service. During flood disaster, the victims were predisposed to different type of illnesses for various reasons such as inadequate supply of clean water, poor sanitation or drainage system, unhealthy foods, and over-crowded relief centers. Mobile clinic is an option for delivering medical care for the disaster victims who often have a difficulty to access to the medical facilities. In this article we would like to share our experiences during the provision of humanitarian services for flood victims at District of Muar Johor. Common illnesses among the flood victims at visited relief centers and advantages of Mobile Medical Relief Team were also highlighted and discussed.

Key words *: flood disaster, health disruption, mobile medical team*

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Introduction

On 19th December 2006, continuously heavy downpour occurred in Johor. Many towns such as "Muar" Muar, "Kota Tinggi" Kota Tinggi and \o "Segamat" Segamat were seriously flooded with water levels as high as 10 feet above ground level recorded in some areas. (1) Flood victims were evacuated to the unprepared designated relief centers. (2)

The sudden occurrence of unexpected floods in State of Johor creates varying degrees of chaos to the affected community. From health perspective, such events can result in immediate medical problems, as well as long-term public health and psychoemotional disruptions. (3) Usually there will be a mismatch between available health resources and patients needs. In addition, medical infrastructure and common roads may be totally disrupted during a disaster, and to reestablish them to normal function needs time and money. (4, 5) As a consequence, some of the flood victims may have poor accessibility to the nearest health facilities for a common treatment. Furthermore, continues routine medical care also may not be available to survivors due to damaged healthcare facilities. Both government and private clinics were badly affected by the floods. The doctors and paramedics were flood victims themselves. Beside an obligation to the public health they also have to ensure the safety of their own family The factors mentioned above may affect patient's health status. It is noteworthy that the restoration of an affected society back to its pre-event status requires detailed evaluation and extraordinary efforts.

Providing medical care in a disaster setting is always a challenge to the healthcare providers. The obstacles include varying amounts of resources, varying type of acute illnesses that may associated with mass event, and for varying periods of time. (6, 7) The success of medical care in such events is determined by various factors including appropriate

Table 1: Schedule of mission

Day 1 03/01/07 Wednesday	0830 1730 2230 0045	Team departef from Kubang Kerian, Kelantan to Kuala Lumpur Briefing by Dato' Ahmad and Medic Asia personnel near Mac Donald Restaurant at Jalan Sungai Besi, Kuala Lumpur. Meeting together with Muar District Officer Tuan Haji Abdul Rahman Jaafar. Team reached Kampung Raja, Pagoh.
Day 2 04/01/07 Thursday	0830 0900 0930 1000 1430 1530 1700 2000	Meeting and briefing at Seri Pekembar complex Team met Dr. Nizam, medical officer in-charged of Pagoh area. Extra supply received from Pagoh Health Clinic First location: Kampung Tulang Gajah, Lenga. Reseheduled as no villagers at the location. First Medical Clinic: Flood Relief Centre - Kampung Sungai Berani, Lenga Mosque. Team mer Yang Berhormat Tuan Haji Samat Aripin. Second Medical Clinic: Flood Relief Centre - Balai Raya Kampung Jawa Third Medical Clinic: Flood Relief Centre - Kampung Jawa Mosque Visit Kampung Sentosa. Debriefing at KEMAS office, Pagoh Jaya.
Day 3 05/01/07 Friday	0800 0830 0930 1300 1445 1515	Briefing and breakfast at a food stall at Pagoh Extra supply received from Lenga Health Clinic Fourth medical clinic: Balai Raya Kampung Tulang Gajah, Lenga. Extra supply received from Pagoh Health Clinic Fifth Medical Clinic: Kampung Sentosa Debriefing and dinner at Kesang Muar.
Day 4 06/01/07 Saturday	0900 1000 2000	Meeting with Yang Berhormat Tuan Haji Samat Aripin - cancelled. Travel back to Kuala Lumpur. Debriefing with Dato' Ahmad and Medic Asia team at Jalan Ampang, Kuala Lumpur.
Day 5 07/01/07 Sunday	0730	Travel back home to Kota Bharu, Kelantan.

Table 2: Distribution of victims according to place and gender

		Gender		Total
		Male	Female	
Place	Sg. Berani	10	11	21
	Balai Raya Kg Jawa	2	7	9
	Masjid Kg Jawa	3	3	6
	Tulang Gajah	29	21	50
	Kg Sentosa	21	63	84
Total		65	105	170

strategies, well distribution of resource matrix, trained health personnel, physically and mentally prepared staffs, as well as a great leadership. A logistic difficulty is another major issue that needs to be tackled wisely during disaster. The mobile medical relief team may work best during the flood disaster. The idea was to bring health care to those sick and disable victims who had difficulty accessing to medical facilities. Mobile clinic is also a viable option for victims who need routine medical requirements such as obtaining and administering cardiac or diabetic medications. Mobile medical relief teams that offered by the non-governmental organizations and private sectors are advantage for the local health authority.

Mobile Medical Team

Disaster and Emergency Medical Team (DEMAT) of Hospital Universiti Sains Malaysia (HUSM) together with a non-governmental organization called Medic Asia took an initiative to form a team with a primary objective of provision of medical and humanitarian assistance to flood victims at remote area. The selection of relief centre was made by Medic Asia Reconnaissance team who made the health disaster assessment earlier on prior to the mission.

The team composed of four medical officers from HUSM and the other four were representatives from Medic Asia organization, which is based in Kuala Lumpur. Medical equipments and medications were donated by HUSM and extra supplies were provided by Health clinics of Pagoh and Lenga. The visited villages were Kampung Sungai Berani, Balai Raya Kampung Jawa, Kampung Jawa Mosque, Kampung Tulang Gajah and Kampung Sentosa. In this mission, the mode of transportation was four wheel drive vehicles, provided by Medic Asia organization. Their mission started on 3rd January 2007 till 6th January 2007. Their tentative program was illustrated in table 1.

Within three days, a total of 170 patients were treated in their clinic. Sixty-five (38%) were males and 105(62%) were females. Among these victims, 123(72%) were adults and 47(28%) were children. Upper respiratory tract infections (URTIs), including viral URTIs, laryngitis, and pharyngitis presented most frequently (34.1%). Other illnesses were musculoskeletel problems (22.9%), headache (10.6%), hypertension (8.8%) and dermatological problems such as dermatitis and fungal infection (8.2%). Eleven victims were referred to the nearest hospital due to uncontrolled hypertension. One victim was referred for arthritis with a severe joint pain. Above data were summarized in table 2, 3 and 4. The volunteers from Medic Asia assisted the doctors by taking part in providing health education to the public and deworming to the children. Some of them conducted a drawing class and games and distributing presents to the children.

Table 3 : Distribution of victims according to place and age group

		Age Group		Total
		Paediatric (<12 years)	Adult	
Place	Sg. Berani	2	19	21
	Balai raya Kg Jawa	1	8	9
	Masjid Kg Jawa	1	5	6
	Tulang Gajah	16	34	50
	Kg Sentosa	27	57	84
Total		47	123	170

Table 4: Distribution of medical problems among visited flood victims.

Medical conditions	Place					Total
	Sg. Berani	Balai raya Kg Jawa	Masjid Kg Jawa	Tulang Gajah	Kg Sentosa	N(N%)
1. URTI	6	2	1	18	31	58(34.1)
2. Musculoskeletal pain	9	2	1	16	11	39(22.9)
3. Headache	0	0	1	1	16	18(10.6)
4. Medical Check up	1	0	0	3	12	16(9.4)
5. Hypertension	2	1	1	3	8	15(8.8)
6. Skin disease	1	3	2	5	3	14(8.2)
7. Trauma	0	1	0	0	1	2(1.2)
8. Dyspepsia	1	0	0	1	0	2(1.2)
9. Abdominal pain	0	0	0	0	1	1(0.6)
10. Asthma	0	0	0	0	1	1(0.6)
11. Others	1	0	0	3	1	4(2.4)
Total	21	9	6	50	84	170(100)

Even though this mission was very tiring, but the volunteers were very happy for the nice welcoming by the flood victims and the local authorities. They had morning briefing session everyday. The purpose of the session is to ensure everybody is in a good condition, all the equipments are ready and available and nevertheless to inform any changes made from the previous plan. At night the volunteers attended the debriefing session. A debriefing or also known as psychological debriefing is a one-time, semi-structured conversation with an individual who has just experienced a stressful or traumatic event. The purpose of debriefing is to reduce any possibility of psychological harm by sharing their experience or allowing them to talk about it. (8) The debriefing session was led by the team leader who is usually the most senior and experience person in the group.

Conclusion

Mobile Medical Relief Team is a great option in providing a medical care to the sick and disables flood victims who are unable to access the health services due to logistic difficulties and damaged healthcare facilities. In fact, volunteered mobile team is capable to assist the health teams organized by the local Health Department. Government and non-government agencies that provide such assistance should work together and have a communication-link for the benefit of the affected population. This kind of service should be coordinated between Ministry of Health and non-governmental bodies in a more organized manner without compromising regulatory and ethical requirements. The contribution of this team in such mission may not be that much. However, it can reduce the burden of the local health authority. We hope, in the future, this kind of rendered service can be offered not only to the community in a disaster area but also to those who live at the remote areas where health facilities are almost not accessible.

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