

Pre and Post Medical Deployment Experiences: A Qualitative Study

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ABSTRACT

The Royal Medical and Dental Corps have served in a variety of medical deployments over the last fifty years, including battlefields, peacekeeping missions, and natural and man-made disasters, to provide the best care possible for the Malaysian Armed Forces, rescue disaster victims and refugees, and alleviate their sufferings. The healthcare professionals serving in military field hospitals encounter several hurdles during field operations that require mental and physical preparation, especially for first-timers. By sharing their invaluable prior experience, perhaps the military and other organisations will learn how to execute medical missions more effectively. This study was conducted to determine the pre- and post-medical deployment experiences of military healthcare professionals. Utilising face-to-face interviews, a qualitative study was conducted using a sample of twenty-one healthcare professionals who served in various field hospital deployments. To guarantee a varied population of informants, both purposeful and snowball sampling techniques were used. All interviews were transcribed from audio recordings and analysed for recurring issues and themes in the text, which were separately coded and validated by the researchers. Seven significant themes were highlighted. Four themes emerged for pre-medical deployment experiences: operational assessment and preparation, personal preparation (mental, medical skills, fitness and family readiness), force health protection (vaccination and medical check-up), and logistic preparation. Meanwhile, three themes emerged in terms of post-medical deployment experiences: operational withdrawal, force health protection (mental and physical check-up), and logistic withdrawal.

Keywords: Medical Deployment, Field Hospital, Pre and Post, Qualitative, Experience

INTRODUCTION

The Royal Medical and Dental Corps was established in May 1967 and has since participated in a variety of medical deployments around the country and abroad, including battlefields, peacekeeping missions, and natural and man-made disasters ¹. The organisation's mission was to offer the finest possible treatment for the Malaysian Armed Forces and to extend their participation in rescuing catastrophe victims and refugees and alleviating their pain.

Since armed conflict is no longer the dominant source of population displacement, natural and man-made disasters occur ². Inherited from the battlefield, military field hospitals continue to assist disaster victims and refugees today ^{3,4}.

The primary distinction between field hospitals and conventional hospitals is that the former are more provisional, mobile, and portable. In comparison to other organisations, the military has greater capacity and expertise of operating in hazardous and harsh environments.

Each healthcare professional, especially those new to deployment, has questions about what medical deployment is and how it works. What preparations and actions should they make prior to deployment? Sharing prior experiences can aid the military and other organisations in conducting more effective medical deployments. This study aimed to determine the pre- and post-medical deployment experiences of military healthcare professionals.

METHODS

The qualitative approach was selected because it allows for a flexible exploration of the issue, including experiences and perceptions of healthcare professionals. In the present study, a total of twenty-one respondents were interviewed, who were recruited by a combination of purposive and snowball sampling through contacts made by the researchers. A semi-structured interview guide was developed and used during the interview process after reviewing previous studies and consultations with experienced academics and practitioners in related disciplines.

Written informed consent was obtained from each of the healthcare professionals prior to their participation in the interview. Their demographic information was gathered using a self-administered questionnaire that was attached with the consent form. The interviews focused on the participants' pre- and post-medical deployment experiences. All respondents were asked the same open-ended questions, and appropriate probing questions were used when necessary to draw out information required for the study from each respondent. They were also given freedom to express additional views on the topics discussed at the end of each interview session. Each interview session, which lasted for about 30 to 60 minutes, was fully conducted by the researchers at a place and time convenient for respondents. The interviews were all audio-recorded and transcribed verbatim,

while the transcripts were manually analysed line by line for relevant content and themes. Empirical data analysis and interviews occurred concurrently based on the theory of analytic induction. Preliminary analysis of the interviews shows that data saturation was reached after twenty interviews.

RESULTS

Twenty-one respondents from different demographic characteristics were recruited and their descriptions are outlined in Table 1.

Table 1. Characteristics of the Interviews Healthcare Professionals (N=21)

Description	Frequency
Gender	
Male	18
Female	3
Working Experience in Armed Forces	
1 to 10 Years	5
11 to 20 Years	12
21 Years and Above	4
Healthcare Profession	
Medical Specialist	5
Medical Officer	3
Pharmacist	4
Paramedics and Nurses	5
Others	4
Sampling Technique	
Purposive	13
Snowball	8
Venue	
Kuala Lumpur	9
Kedah	4
Selangor	3
Malacca	3
Negeri Sembilan	1
Perak	1

Thematic content analysis of the interviews identified seven major themes: four themes emerged for pre deployment and three themes emerged for post deployment experiences. The descriptions of each theme with illustrative excerpts from the respondents’ transcripts are set out below.

Theme 1: Operational assessment and preparation before deployment

Medical deployment requires thorough planning with regard to administrative, operational, and logistic matters. Therefore, the mission commander needs to plan the mission properly and cascade the tasks from top to bottom before deployment.

“As a mission commander, the first thing you need to know is what the objective of the mission.” [R12]

“From my experience, before deployment, we distributed the task; decided who will do what, and who will be in-charged.” [R15]

Intelligence is very crucial in mission planning and performing health threat assessment.

“Yes, we send recce team to evaluate the location and situation...” [R6]

Theme 2: Personal preparation (mental, medical skills, fitness, and family readiness) before deployment

Staff members need to prepare mentally because they will be facing great challenges and harsh environments.

“We must ensure that the mission will not cause mental problem or post traumatic.” [R2]

Staff members need refresher courses prior to deployment to polish their medical skills.

“During the force integration training (FIT), we train them on advanced trauma life support (ATLS), cardio pulmonary resuscitation (CPR), trauma management and tactical combat casualty care (TCCC).” [R12]

Staff members need to ensure their good health and high fitness level.

“Officer or staff should make sure their self in the best fitness state. Keeping good health and preparation for the deployment...” [R10]

Family preparation is very important for married staff members to ensure their family remains safe and sufficient. “I left one credit card for their expenses, phone number for emergency, bank account and so on...” [R8]

Theme 3: Force health protection (vaccination and health screening) before deployment

Staff members need to be vaccinated before deployment to protect them from contagious diseases. Besides that, staff members must undergo proper health screening before top management allows them to be deployed. Any medical repatriation will incur additional costs for the organisation, place additional strain on the mission team, and jeopardise mission objectives.

“Within 48 hours, vaccines were given to all troops.” [R1]

Theme 4: Logistic preparation before deployment

Medical deployment requires resilient medical and general logistic support. Both elements include planning, execution and controlling of all activities such as procuring, renting, packing, transporting, obtaining permit clearance, evacuating

and distributing.

“We have to think medical equipment, medicines and others. We need to prepare load manifest as well.” [R12]

“We know there will be mission’s issue regarding water source or about food poisoning cases or outbreak. So, we prepare all related equipment to bring with...” [R11]

Theme 5: Operational withdrawal after deployment

Staff members must complete correct handover and takeover procedures to ensure the mission’s continuance.

“I handover to the next group before I return back to unit.” [R10]

The team needs to produce a post-mortem report and identify areas for further improvement.

“After deployment, we do post section review.” [R6]

Some staff members mentioned that they would share scientific knowledge and experience gained via publication.

“We collect the videos, pictures, data and we publish. This is an opportunity for future study...” [R10]

Theme 6: Force health protection (mental and physical check-up) after deployment

Staff members need to undergo health screening and quarantine to prevent and curb contagious diseases.

“They took our blood for medical check-up.” [R3]

Some staff members need to undergo a psychological test.

“When he came back, he became disoriented and can’t sleep.” [R20]

Theme 7: Logistic withdrawal after deployment

Medical and general logistics activities before end of mission involve packing, transporting, storing, maintaining, repairing, and reporting. It must be done meticulously and in a timely manner.

“Yes, we did stock checking.” [R14]

“We need to submit damage report to do repair.” [R15]

“Some equipment needs to be in place inside special box to prevent it from shaking or falling down during transportation.” [R20]

DISCUSSION

During a medical deployment, challenges include harsh

environments, extreme weather, different cultures and tasteless foods that necessitate sacrifices, in terms of mental strength, and physical endurance to complete the mission^{5,6}. The current study highlighted that staff members need to prepare mentally and physically before deployment. Besides that, they must ensure their family remains safe and sufficient at home.

Providing medical training prior to deployment as a refresher course will improve staff members’ skills and competency, as well as build teamwork. Most of the time, the team is made up of staff members from various units, and they have different perceptions of medical practice, yet they need to work together with other team members during the mission. The current study suggests that training can provide professional and social interactions between them.

Extended working periods and excessive workload may result in fatigue and stress among staff members, which affect performance and decrease morale. The findings were consistent with those from a study conducted by Lang et al⁷. The current study indicated the importance of appropriate and optimal human resource management in order to enhance the performance of the medical team during deployment and to ensure the stability of mental and general health⁸.

The current study discovered that pre- and post-deployment operational preparation and withdrawal are equally critical, which means that they need to be effectively planned and executed. Prior to deployment, the mission commander must participate in the planning process and allocate tasks to subordinates. The planning process necessitates intelligence from the preceding or reconnaissance team. Meanwhile, the team must guarantee an orderly transfer to the next team at the conclusion of their deployment to ensure that the mission may continue smoothly. After returning to their home country, the team members need to conduct a post-mortem in order to identify areas for improvement and provide a comprehensive report to higher command.

Medical operations or health service support require robust medical and general logistical support to run efficiently and effectively^{9,10}. Therefore, medical logistic planners must plan meticulously before deployment; otherwise, the mission would be on short medicine and supplies^{11,12}. Local procurement may have certain advantages over central procurement in terms of resolving supply chain issues during humanitarian missions¹³. However, this strategy is not practical in areas hit by natural disasters if all local suppliers have been impacted by the flood, tsunami, or earthquake. Thus, the team must be self-sufficient and rely on their own stocks and supplies. Meanwhile, the majority of medical equipment is delicate and requires extra care while packing and transportation. Besides that, logistic planning must account for the expense of ship or aircraft transport and adhere to particular dimension and weight constraints.

CONCLUSION

According to the experience of healthcare professionals, four vital aspects must be focused and completed prior to any medical deployment: force health protection, pre-operational assessment,

medical and general logistic planning and personal preparations. Meanwhile, there are three vital aspects remaining following the conclusion of a mission: force health protection, operational and logistical withdrawal.

Declarations

Conflict of Interest

The authors declare that they have no conflicts of interest to disclose.

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