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ORIGINAL RESEARCH ARTICLE

A multi-center study on the attitudes of Malaysian emergency health care staff towards allowing family presence during resuscitation of adult patients

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Abstracts
Background The practice of allowing family members to witness on-going active resuscitation has been gaining ground in many developed countries since it was first introduced in the early 1990s. In many Asian countries, the acceptability of this practice has not been well studied.
Aim We conducted a multi-center questionnaire study to determine the attitudes of health care professionals in Malaysia towards family presence to witness ongoing medical procedures during resuscitation.
Methods Using a bilingual questionnaire (in Malay and English language), we asked our respondents about their attitudes towards allowing family presence (FP) as well as their actual experience of requests from families to be allowed to witness resuscitations. Multiple logistic regression was used to analyze the association between the many variables and a positive attitude towards FP.
Results Out of 300 health care professionals who received forms, 270 responded (a 90% response rate). Generally only 15.8% of our respondents agreed to allow relatives to witness resuscitations, although more than twice the number (38.5%) agreed that relatives do have a right to be around during resuscitation. Health care providers are significantly more likely to allow FP if the procedures are perceived as likely to be successful (e.g., intravenous cannulation and blood taking as compared to chest tube insertion). Doctors were more than twice as likely as paramedics to agree to FP (p-value = 0.002). This is probably due to the Malaysian work culture in our health care systems in which paramedics usually adopt a 'follow-the-leader' attitude in their daily practice.
Conclusion The concept of allowing FP is not well accepted among our Malaysian health care providers.

Keywords Family presence · Witnessed resuscitation · Malaysian community

Introduction

Over the last century, technological and pharmaceutical advancement has spurred the health care profession to move beyond the scope of caring for the living to prolonging the dying process. Although the paternalistic, "top-down" paradigm, adopted from the Western concept of caring for the ill, has been in place for the past several decades [1], this concept, by and large, is incongruent with Asian culture in which a patient is foremost an individual of the community, and in dying, he or she returns to the community. Asian elderly usually die in the arms of their family and not in a cold, sterile room in an intensive care unit, a chaotic emergency department or a crowded ward.

Humanizing cardiopulmonary resuscitation (CPR) and affording peace, comfort and dignity during the dying process should therefore be a prime consideration during resuscitation [2]. The concept of witnessed resuscitation, which means allowing the presence of family members or relatives during the process of active resuscitation, has been gaining ground in the United States since it was first introduced in 1987 at Foote Hospital in Michigan [1, 3]. This concept then spread to other hospitals and has found

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strong advocates, especially among those involved in the resuscitation of pediatric patients [1, 4, 5].

Nonetheless, concepts like allowing family members to witness the process of resuscitation as well as other medical procedures have not been extensively studied in Asian populations. Ong et al., who studied the attitudes of medical staff at Singapore General Hospital towards witnessed resuscitation by family members, found that 80% of doctors and 78% of nurses said no to allowing family members to witness the process of resuscitation [6]. The reasons cited for not favoring witnessed resuscitation include concern that the experience will be traumatic for the family, that family members could ask too many questions and thereby interfere with the procedures, that family members impose additional stress on the staff performing the resuscitation and that medico-legal issues might arise [6]. A further study carried out at a later time to compare the attitudes of the public and medical staff towards witnessed resuscitation in Singapore found a great discrepancy between these two groups [7]. In that study, up to 73.1% of the public supported witnessed resuscitation; however, only 10.6% of the medical staff surveyed at Singapore General Hospital wanted to allow witnessed resuscitation [7].

Malaysia has a population of over 28.31 million people [8]: 50.4% are Malay, 11.0% indigenous groups from Sabah and Sarawak, 23.7% Chinese, and 7.1% Indians and others [9]. We conducted a multi-center, prospective questionnaire study to determine the general attitudes of health care professionals (HCPs) in Malaysia towards family presence (FP) to witness ongoing medical procedures during resuscitation.

Methods

This study was conducted from 1 June 2008 to 31 December 2008 in four locations: Hospital Kuala Lumpur (HKL), Hospital Pulau Pinang (HPP), Hospital Universiti Sains Malaysia (HUSM) and Universiti Malaya Medical Centre (UMMC). HKL is the largest hospital in Malaysia under the Ministry of Health Malaysia (MOH) and is considered to be one of the biggest in Asia [10, 11]. It is a government tertiary referral hospital, located on 150 acres of prime land, and has 83 wards and 2,302 beds [10]. HPP is the second largest MOH with 1,090 beds [12]. The MOHs are generally considered as service government hospitals in Malaysia and cater to a large volume of patients.

HUSM is a teaching hospital under the Ministry of Higher Education with 723 beds [13]. UMMC is another teaching hospital located in the Selangor state, with a total of 900 beds [14].

The self-administered bilingual questionnaire (in Malay and English language) is divided into three sections: demographic data, the attitudes of staff towards allowing family presence and the actual experience of staff with family requests to be allowed to witness the resuscitation. All personnel in emergency departments who are directly involved in the clinical care of patients in emergency departments (i.e., doctors, paramedics and health attendants) of the four hospitals mentioned were included, whereas personnel who are not directly involved in the care of patients, such as the radiological staff, laboratory technicians and cleaning staff, were excluded.

We handed out a total of 300 questionnaire forms in envelopes to the participants. After completing the forms, the participants were instructed to insert the forms back into the envelopes provided. We told them that we would collect the forms 2 days later. The participants were also reminded not to add their names as the survey was anonymous.

Data entry and analysis were done using Statistical Package for Social Studies (SPSS®) version 16.0 software. Univariate analysis was done for categorical data using simple logistic regression (SLR) with a p-value <0.05 considered statistically significant. Multivariate analysis using multiple logistic regression (MLR) was subsequently performed to reduce potential cofounders in our effort to analyse variables that favor family presence during resuscitation. Ethical approval was obtained from the various institutional research ethics boards of the hospitals concerned.

Results

A total of 300 forms were distributed, and 270 health care professionals responded (a response rate of 90%). Generally, only 15.8% of our respondents agreed to allow relatives to witness resuscitation, although more than twice that number (38.5%) agreed that relatives do have a right to be around during resuscitation.

The results of our descriptive analysis are shown in Table 1. The attitudes of HCPs towards FP are shown in Table 2, whereas Table 3 shows the results of the past experiences of HCPs towards dealing with relatives of patients, especially with regards to allowing FP during resuscitation.

Several variables were later re-coded into binary options, and using multiple logistic regressions to analyze the association between the acceptance of FP and various factors, we found that the type of occupation (doctors versus paramedics) has statistically significant influence on the acceptance of FP. Compared to paramedics, the adjusted odds of doctors agreeing to allowing family presence during resuscitation were 2.86 times more likely (p-value = 0.002).

Table 1 Results of descriptive analysis of respondents

Variable	Mean (SD)	Frequency (%)
Age (years)	31.57 (7.33)	
Sex		
Male		134 (49.6)
Female		133 (49.3)
Not-specified		3 (1.1)
Race		
Malay		213 (78.90)
Chinese		16 (5.9)
Indian		30 (11.1)
Others		11 (4.1)
Religion		
Muslim		218 (80.8)
Buddhist		12 (4.4)
Hindu		24 (8.9)
Christian		10 (3.7)
Others		6 (2.2)
Workplace: emergency department in		
HUSM		64 (23.7)
UMMC		46 (17.0)
HKL		83 (30.7)
HPP		77 (28.5)
Job description		
Emergency physician		2 (0.7)
Medical officer		87 (32.2)
Staff nurse		101 (37.4)
Medical assistant		64 (23.7)
Unspecified		16 (6.0)

Discussion

Allowing FP during resuscitation has many benefits. The benefits include ensuring continuing patient-family bonding and connectedness [15], facilitating the grief process [16], promoting a sense of closeness around a life shared together [17], assuring family members that everything possible has been done [5], allowing space for spiritual rituals and activities [15], conveying a message that the HCPs have been supportive and helpful to the patient [18], and helping to reduce fear and anxiety [19].

Nevertheless, while the concept of witnessed resuscitation is becoming popular in Western countries, it is practically unheard of in our Asian society [20]. It would seem, therefore, that Asian medical staff may have a greater resistance to allowing FP than their Western counterparts [6, 21].

In our study, we found that about 40.0% of HCPs would allow FP during IV cannulation and blood taking as compared to more invasive procedures. For example, for chest tube insertion, only 2.9% would say that they agree to

Table 2 Attitudes of HCPs towards FP

	Frequency (n), total n= 270	Percentage (%)
Would you allow relatives to witness resuscitation?		
Yes	43	15.8
No	227	83.2
Do relatives have a right to be present during resuscitation?		
Yes	105	38.9
No	161	59.6
Don't know	4	1.5
When should relatives be present?		
Never	66	24.4
After all invasive procedures	195	72.2
During the whole resuscitation	8	3.0
Missing data	1	0.4
Would you allow relatives to witness the following invasive procedures?		
IV line	110	40.7
Blood taking	112	41.5
Intubation	12	4.4
Foley catheter	11	4.1
CVL insertion	18	6.7
Chest tube insertion	8	3.0
Rectal examination	14	5.2
Close manual reduction of fracture	33	12.2
CPR	48	17.8
Agree that the following are reasons you are against allowing FP		
Traumatic experience	207	76.7
Medico-legal issues	184	68.1
Breach of privacy	152	56.3
FP interferes with resuscitative process	225	83.3
Overcrowding	174	64.4
Stress to staff	204	75.6
Prolonging futile resuscitation	84	31.1
Ideal no. of relatives during resuscitation		
None	140	51.9
1	100	37.0
2-3	30	11.1
Who should make the decision to allow FP?		
Senior doctor	118	43.7
Nursing officer	2	0.7
Team decision	62	23.0
Department policy	85	31.5
Don't know	3	1.1
Should HCPs provide emotional support during FP?		
Yes	228	84.4
No	35	13.0
Missing data	7	2.6
You agree that the following are advantages of FP		
Assuring everything has been done	192	71.1

Table 2 (continued)

	Frequency (n), total n= 270	Percentage (%)
Aids grieving	64	23.7
Strengthen bond	31	11.5
Enable last rites	172	63.7
You agree that the following family members would benefit from witnessing resuscitation		
Parents of a pediatric patient	230	85.2
Spouses of patient	197	73.0
Siblings of pediatric cases	31	11.5
Offspring of geriatric patients	146	54.1
You agree that the following categories of patients would benefit from FP		
Patients with acute illnesses	103	38.2
Patients with chronic illnesses	110	40.7
Trauma patients	97	35.9
Patients with terminal illnesses	129	47.8
Will you be uncomfortable with FP?		
Yes	229	84.8
No	39	14.4
Missing data	2	0.8
Will you be more willing to allow FP if the relatives are medical staff?		
Yes	164	60.7
No	103	38.2
Missing data	3	1.1

Table 3 The past experiences and attitudes of HCPs when dealing with relatives of patients

	Frequency n	Percentage, %
Previous requests from relatives for FP		
Yes	194	71.1
No	76	27.8
Number of requests for FP in last 6 months		
No	98	35.9
1–5	112	41.0
6–10	24	8.8
>10	30	11.0
Missing data	6	
Your first reaction when asked for FP		
Anxious	66	24.4
Dilemma	121	44.8
Frustration	6	2.2
Can't remember	77	28.6
Will you take the initiative to explain about resuscitation to relatives?		
Yes	230	85.2
No	34	12.6
Don't know	6	2.2
Relative's reaction to resuscitation?		
Shock	112	41.5
Disgusted	11	4.1
Accepting	112	41.5
Indifferent	9	3.3
Not sure	26	9.6

allow FP (see Table 2). Furthermore, it seems that HCPs are more likely to allow FP during procedures if the procedures are likely to be successful [22]. IV cannulation and blood taking are routine procedures performed even in non-emergent conditions. Procedures that involved exposing the patients' private parts were also less likely to be agreed to by HCPs for FP (e.g., only 4.0% agreed to FP during Foley catheterization and for rectal examination, 5.1%). This may be explained by the ethical principles upheld by HCPs to protect patients' privacy.

Surprisingly, however, we found that many HCPs (17.6%) agreed to allow FPs during CPR (see Table 2). This may be due to the fact that many HCPs realize that resuscitation moments may be the last chance for a family member to bid farewell to their dying loved ones. This is consistent with another finding in our study that 63.0% of HCPs agree that FP would enable the family members to perform last rites. This is because one aspect of dying in Islam is the pronouncement of the 'shahadah' to the near-dying patient. For Roman Catholics, there is also the giving of last rites during such moments.

As mentioned earlier, using multiple logistic regression, we found that doctors were more than twice as likely as paramedics to agree to FP (p-value = 0.002). This is probably due to the work culture in our health care system. This finding is consistent with another finding that 43.2% of respondents felt that the decision to allow FP should be made by a doctor compared to 22.7% who think that it is a team policy. In Malaysia, in the absence of a departmental policy or guideline, paramedics will usually adopt a 'follow-the-leader' attitude in their daily practice. Therefore, even if they do feel that family members have a right, they would be less likely to make the decision to allow FP, preferring to leave it to a senior doctor to make the decision (see Table 2).

On the other hand, doctors are usually the decision maker in areas where no institutional policies are implemented. They are more likely to make the decision to allow FP.

Our study has several limitations. The respondents in this study were HCPs working in busy emergency departments, and therefore some of them did not complete the survey forms. As the study was a voluntary, anonymous

survey, it is possible that respondents who did not favor family presence were less likely to participate in the study. Furthermore, as we allowed the respondents to fill in the questionnaire anonymously, this may allow potential information bias because of over or under reporting. And finally, as the study was confined to four hospitals, this may not be reflective of the true HCP population in Malaysia.

Conclusion

In conclusion, our study found that the concept of allowing FP is not well accepted among our Malaysian HCPs (only 15.8% would agree to allow FP). One of the potential future studies that we hope to conduct would involve trying to understand the perception of FP from the other end of the rope—that of the Malaysian general public.

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Conflict of Interest None.

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