

# CARING OF PONKESDES NURSES FOR OUT OF HOSPITAL CARDIAC ARREST (OHCA)

(Case study on East Java Province)

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## ABSTRACT:

**Purpose of the study:** Patients with out of hospital cardiac arrest (OHCA) have a critical condition at their place of residence at any time. A caring of PONKESDES nurse's was needed for help during repeated attacks in cardiac arrest patients. The purpose of this study was to explore the caring experience of PONKESDES nurses to OHCA patients in rural East Java Province.

**Methodology:** This qualitative research used a phenomenological interpretation approach. Participants as many as 5 people were selected by purposive sampling, with criteria of experience as a PONKESDES nurse at least 3 years and having experience treating patients with OHCA in the village. Data collection by in-depth interviews and observations. Analysis used the Colaizzi model.

**Main Finding:** The results found five themes namely fast and responsive, needing family trust, calming the family, worrying, and minimal facilities.

**Applications of this study:** Need to improve the quality of basic life support skills for PONKESDES nurses and village communities on a regular basis, the provision and improvement of pre-hospital

emergency infrastructure facilities in the PONKESDES work area.

**Novelty / originally of this study:** Patients with OHCA lived in families in the village can experience repeated attacks. PONKESDES nurses were in all villages in East Java Province. The caring of PONKESDES nurses was needed to provide emergency assistance for patients with OHCA.

**KEYWORDS:** Caring, PONKESDES, OHCA

## INTRODUCTION:

PONKESDES (Pondok Kesehatan Desa / Village Health Centers) nurses in East Java Province have been around since 2009, their main duties and functions are providing health services to all residents in the work area. Health services include medical and nursing services. The main ability that must be possessed is to provide basic lives support for residents before being referred to the Puskesmas.

Patients with cardiac arrest are not always hospitalized. Patients after being allowed to go home from hospital, stay with family every day. This patient is often called a patient with out of hospital cardiac arrest (OHCA). Patients with OHCA get a repeat attack

or relapse, and must get prompt and proper treatment.

Efforts to deal quickly and appropriately for patients with OHCA can be done by nurses PONKESDES. The reason, PONKESDES nurses have the competence to provide of basic lives support, are in the community, and are ready to provide services for 24 hours. So that through caring nurses PONKESDES given can give important meaning in improving the quality of public welfare in the health sector, not least when providing assistance to clients with critical conditions that require fast and proper handling of airway-breathing-circulation stabilization.

The purpose of this study is to explore the caring experience of PONKESDES nurses when dealing with clients with OHCA in rural-East Java.

#### LITERATURE REVIEW:

PONKESDES (Pondok Kesehatan Desa / Village Health Centers) held in East Java Province aims to improve the degree of public health, provide primary health services to realize healthy village communities, create a clean and healthy village environments, communities implementing PHBS (Perilaku Hidup Bersih dan Sehat / clean and healthy life behaviors), and facilitate access to health services quality for rural communities (Bidang Pelayanan Kesehatan Dinas Kesehatan Magetan, 2011; Peraturan Gubernur Jawa Timur No.4, 2010).

Nursing practice at PONKESDES is demanded to prioritize ethics, sensitive to environment, culture, and legal. PONKESDES nurses are required to be sensitive to emergencies for patients with out of hospital cardiac arrest (Jainurakhma, Winarni, & Setyoadi, 2013; Mumpuni, Winarni, & Haedar, 2017; Siregar & Antoni, 2015; Winarni, 2017). Caring of PONKESDES nurses is needed to provide care for patients in critical or

emergency conditions, make clients and families as whole people, respect the trust of clients and families, and appreciate differences that exist (Izzah, Waluyo, Irawaty, & Mansyur, 2018; Jainurakhma et al., 2013; Mailani & Fitri, 2017). So, to create a harmonious relationship between patients, families, and nurses (Mailani & Fitri, 2017)

#### METHODS:

This qualitative research used a phenomenological interpretation approach. Participants as many as 5 people were selected by purposive sampling, with criteria of experience as a PONKESDES nurse at least 3 years and having experience treating patients with OHCA in the village. Data collection by in-depth interviews and observations. Analysis used the Colaizzi model.

#### DISCUSS:

Participant characteristics are presented in Table 1. Table 1 Participants of PONKESDES nurses characteristics

Participant	Education	Long time being a PONKESDES nurses	Emergency Training
1 (P1)	BSN	5 years	BLS (2005, 2015)
2 (P2)	Diploma of Nursing	5 years	BTLS (2012)
3 (P3)	BSN	5 years	BLS (2017)
4 (P4)	Diploma of Nursing	7 years	BLS (2007)
5 (P5)	BSN	8.5 years	BLS-BCLS (2005)

Five themes about caring of PONKESDES nurses for patients with OHCA are 1) fast and responsive; 2) need family trust; 3) calms the family; 4) worried; and 5) minimal facilities. The details are described below.

### 1) Theme 1: fast and responsive:

The themes raised are clarified by several sub themes, where the fast and responsive themes raised by PONKESDES nurses when dealing with client conditions with emergencies are shown when conducting initial assessments of client conditions, providing first aid by prioritizing handling for airway-breathing-circulation (ABC) stability. ask for help (refer clients) to more complete facilities. The caring behavior exhibited by PONKESDES nurses is a demand when the conditions of the clients we care for are in the airway-breathing-circulation (ABC) state, where the provision of airway-breathing-circulation stabilization handling is important to do, and responsive in determining the importance of not referring the client to the facility more complete health as long as the client is still in the golden period (golden time) for help, so the client is able to be saved from death

"...the main determinant of success is our speed, the speed of our help speed is referring to the client's speed of handling, so that more quickly and precisely help with client emergency can be resolved immediately." (P4)

"... our emergency patients prioritize ABC, so that the life process can go on ..." (P2)

"The determinant of success is timing, our speed in providing help, or referring to a better place ... because a client with cardiac arrest, can immediately stop his heart, because we have to be fast." (P2)

"Patients with cardiac arrest, we immediately resuscitate the heart ..." Our alertness as a health worker, speed when handling clients with emergencies ... "(P2)

"... I will check the circulation, airway, and breathing, and determine the timeliness and provide assistance to sufferers ..., and think to immediately refer patients to the nearest hospital immediately" (P1)

### 2) Theme 2: need family trust:

PONKESDES caring nurses need family trust, one of which is by making good communication with families who are experiencing anxiety, especially when facing clients with critical conditions, when trust does not arise from the family in providing freedom to provide emergency assistance such as airway stabilization, breathing and circulation, then PONKESDES nurses do not get the authority to do first aid that can be sought.

" ... the main determinant, the family's trust in us, as a helper, as a village nurse, to provide first-aid to clients and to bring better service, as the main key ..." (P1)

"... the main determinant of dealing with clients with emergency conditions is the trust of the family, to provide help, so that the family is not anxious when these relief measures are taken ..." (P3)

"... ordinary people do not know what we are doing, we at least help, they think we are amazing we want to help, the family is very supportive ..." (P4)

"... communication with family about the condition of cardiac arrest, cardiac massage, if the family refuses, it will not be done ..." (P1)

### 3) Theme 3: calm the family:

The third theme shows caring nurses who are very important to do in maintaining family and patient trust by calming anxious and anxious families over conditions experienced by clients, so that the situation at the scene is not increasingly tense, and the process of emergency relief can proceed with better

"... the nurse gives an explanation of what happened and what must be done ... by telling (to the family) ..." (P4)

"... I immediately gave help to the client, and explained the condition to the family ..." (P1)

"... the family is very anxious in facing the emergence of the family, the PONKESDES nurse only gives an explanation to the family ..." (P2)

#### 4) Theme 4: Anxiety:

The fourth theme shows the feelings that are often experienced by PONKESDES nurses when finding clients with cardiac arrest in the village community, anxiety often arises during these events, this is due to the rarely occurrence of cardiac arrest events or emergency conditions that occur in the PONKESDES work environment

"... worry, panic, when facing an emergency ..." (P4)

"... I have faced clients with emergency situations in the community, anxiety and anxiety in facing emergencies, ... how to immediately help and send clients to the hospital ..." (P3)

"... nervous, because I face a client with an emergency, but I show still not be nervous alert ..." (P2)

"... anxiety arises when facing emergency conditions in the village, worried that the lives of our patients will not be helped ... the distance is far enough, and the rescue staff is only one person, there is no means of transportation to immediately help ... take them to the hospital nearest .." (P1)

#### 5) Theme 5: minimal facilities:

The fifth theme shows the lack of facilities, which are compiled from several sub themes, including: minimal health personnel, unavailability of special emergency transportation in the village, emergency equipment available in the village community where the PONKESDES nurse works, so that equipment there is a shortage, limited health personnel, no village transportation facilities for residents experiencing emergency conditions, and no village emergency response system that supports initial management and relief of emergency conditions when they occur in the village, as expressed by the following participants:

"... Patients with cardiac arrest, I am alone, while at the victim's home, the interval of 3 minutes of the incident ..." (P1)

"... there is no pre-hospital assistance, there are no infrastructure facilities ... there is no caal center facility to provide assistance, nurses PONKESDES 24 hours of service, transparency, facilities, village assistance are also not available ..." (P1)

"... working with the minimum amount of equipment, patients with cardiac arrest, we use manuals, still use manual tools, oxygen-only equipment available in other health centers does not yet exist ... does not support rescue, because the equipment is available does not meet the standards for emergency relief ..." (P3)

"... there is only oxygen and nasal cannula, no bag valve mask, long spinal board, or cervical collar, automatic defibrillator (AED) also does not exist ... if there is a cardiac arrest patient yes we CPR, and if there is a vehicle immediately we take the client by car to the closest hospital in 30 minutes, the fastest trip ..." (P1)

PONKESDES nurses in carrying out their duties are required to always prioritize the holistic needs of clients, not least in the face of emergency conditions when in the village community, emergency conditions in the PONKESDES area are very rare, but this does not close the possibility of occurring around the community. The policy of establishing PONKESDES nurses in East Java Province itself is inseparable from the policies of the East Java Gubernur who want the formation of a prosperous, moral, fair, independent, and competitive East Java community in the Unitary State of the Republic of Indonesia, particularly in the field of health: East, healthy village communities, clean and healthy village environments, change the behavior of rural communities in the clean and healthy East Java region, by providing easy access to affordable,

quality and quality rural communities. Even emergency conditions do not rule out the possibility of occurring in rural communities in the East Java region, therefore PONKESDES nurses according to the East Java Gubernur Regulation No.4 (2010) states that in carrying out their duties nurses gain authority in conducting health services outside of the authority as stipulated by professional organizations with the aim of saving lives.

Fast and responsive, is one of the caring values raised by PONKESDES nurses in dealing with clients with critical conditions in the village community, fast and responsive in identifying client's emergencies by reviewing the client's airway-breathing and circulation (ABC), helping or providing action to meet ABC's needs client, responsive in solving emergency problems that occur to the client, inform the client's condition to the family, and immediately take a referral action to the nearest health facility (hospital) that can be taken the most quickly is 30 minutes by using a vehicle vehicle. The ability of nurses in conducting primary surveys must be fast and precise, so as to be able to determine the gravity that occurs, and immediately make decisions in situations that occur, and how to stabilize the airway-breathing and circulation conditions that occur (Hidayah & Amin, 2017; Kaban, KB ; Rani, 2018; Prawesti, Ayu; Emaliyawati, E .; Trisyani, 2018). The speed and responsiveness of PONKESDES nurses in dealing with emergency conditions often have problems, where the level of community (family) knowledge and responsiveness in reporting emergency conditions is still felt to be very lacking, so this also influences the success of emergency cases that occur in rural communities.

The time of help in patients with emergency and critical conditions largely determines the survival (golden hour) and the phase of victim care (Bachtar, 2016; Gruyter,

Saunders, Stavreski, & Jennings, 2019; Winarni, 2017), and increases client-family client satisfaction when critical conditions (Mailani & Fitri, 2017; Nastiti, 2017), the speed in which AEDs are given by people who find cardiac arrest victims are also very influential in increasing OHCA life expectancy and neurological conditions (Auricchio et al., 2019; Karlsson et al., 2019; Leung, Lo, & Tong, 2000), but unfortunately in the PONKESDES work area there are no AED facilities available, as well as the ability of officers when providing quality CPR will determine the success of rescuing clients with cardiac arrest at home, whether done on the floor or above the place sleep against chest recoil accuracy (Ahn et al., 2019). Providing cardiac pulmonary resuscitation (CPR) with two rescuers is more effective, where the first helper performs CPR and provides oxidation through BVM (bag-valve mask) and the second helper opens the airway with both hands (Shim et al., 2017), but the phenomenon what happens PONKESDES nurses often work alone when doing resuscitation, including CPR

Requires family trust, a nurse's caring relationship will form properly where interpersonal relationships are created with a bond of trust (Jainurakhma et al., 2013; Watson, 2017), an important key in providing emergency nursing care when in rural areas is family trust, when this trust is not obtained, so emergency response licenses are not given by family members, so that PONKESDES nurses are not able to provide assistance quickly and precisely, because there are times when families do not give confidence will have an impact on the demands on PONKESDES nurses, and this is what is not desired by the PONKESDES nurse. . Emergency conditions are often constrained when requiring patient and / or family trust to be immediately referred to the hospital, this is not only detrimental to the client physically but also financially, the longer



the waiting time referring to the hospital will further aggravate the condition and treatment when at home sick (Gruyter et al., 2019; Sulistio, Franco, Vo, Poon, & William, 2015)

Communication about client emergency information, which is carried out by PONKESDES nurses when clients experience critical conditions in the village, is needed to increase their trust in PONKESDES nurses, good and focused communication (focus) on the conditions experienced by clients when emergencies have a major impact on patients and families (Jainurakhma et al., 2013; Januar, M.; Ratnawati, R.; Lestari, 2017; Ocak & Avsarogullari, 2018).

Calming the family, confusion is a reaction often experienced by families when they find family members lying unconscious, and fears that occur in the family's mind about the death of the client (Nugroho, 2017), and ignorance of the family in providing first aid during emergency events such as cardiac pulmonary resuscitation (Nugroho, 2017; Rosyid, MF; Hariyanto, T .; Ardiyani, 2018; Winarni, 2017), the family is not calm. Families with patients with critical conditions need to be provided with information about emergency conditions experienced by clients (Herawati, TM; Faradilla, 2017; Paputungan & Bataha, 2018), and what efforts can be done to help clients, both personally, conditions physical, and requires emotional reinforcement when dealing with the condition of one of their family members who are threatened with death, and how the life expectancy of this critical client (Ocak & Avsarogullari, 2018; Siregar & Antoni, 2015).

Facing emergency conditions in rural areas, PONKESDES nurses who work alone and are responsible for village community health problems, must have sensitivity to the environment that occurs in the family, so after identifying the emergence of nurses, the victim immediately informs the victim's condition to

the family. in a language that is easily understood by family members, this is very important for nurses to calm their families who are waiting or anxious about family conditions that are experiencing an emergency, by soothing the family the nurse can do first aid more calmly and in focus. Effective and efficient communication skills between family-clients and health workers in a way that is good and understood by the family are needed in an effort to calm family anxiety (Herawati, TM; Faradilla, 2017; Jainurakhma et al., 2013; Nastiti, 2017), no exclude the possibility of facts that occur in an emergency in the work area of the PONKESDES nurse. The family is calm when the client is in critical condition as an effort to involve the client's family helping the nurse in making decisions (Januar, M.; Ratnawati, R .; Lestari, 2017)

Anxious, an unsettling tension towards a problem and resulting in mental discomfort (Herawati, TM; Faradilla, 2017), this feeling often arises with the PONKESDES nurse's feelings when facing clients with emergency in a rural environment, this is due to emergency airway-breathing conditions - circulation is very rare in rural areas, besides that the lack of facilities and infrastructure in the PONKESDES triggers nurses 'anxiety during first aid, and the distance from the hospital is a threat in nurses' minds, for fear that the victim will die before reaching nearest hospital. Anxiety or even panic during emergency conditions or cardiac arrest is often called wind seated by the people of East Java, the action that must be taken immediately is to activate the medical emergency service system and immediately refer to the nearest health service (Winarni, 2017), but this is a dilemma for PONKESDES nurses where medical emergency services are not available and are ready for use within 24 hours, and assistive devices such as AED (automatic external defibrillator) are not available, the presence of AEDs greatly

contributes to efforts to rescue victims with cardiac arrest before getting further help at the hospital, this is evident victims with cardiac arrest who received AED facilities life expectancy increased threefold compared with the help of victims of OHCA without AED (Karlsson et al., 2019).

Referral travel time of more than 15 minutes affects the level of safety of cardiac arrest victims (critical conditions), where the rate of rescue of victims with cardiac arrest requires early resuscitation less than 8 minutes after the event, and the activation of emergency services is carried out less than 4 minutes after the event, as well as the provision of defibrillation less than the first 6 - 11 minutes (Winarni, 2017), while the phenomenon in the rural areas of defibrillation was obtained at the nearest hospital a 30-minute drive from the village

Facilities are minimal, PONKESDES nurses often rely solely on the use of oxygenation devices (oxygen cylinders and nasal cannul) in emergency management when in rural areas, while other rescue equipment such as BVM, long spinal boards, AEDs, and cervical collar are not available. There is no stand-by village transportation facility, and there is no emergency response system in the countryside. Referring clients to emergency conditions should ideally involve the family, and referral facilities require an adequate supply of oxygen, portable monitors, suction devices, emergency medicine, and other devices (needles) (Lutman, 2011), AED (Karlsson et al., 2019)

Village nurses are often alone in their work when facing emergency conditions, and try to find means of transportation or help from the surrounding community to immediately refer clients to the nearest hospital, in the hope that the client will get better emergency assistance. The success of resuscitation from rescuers to emergency

conditions is strongly influenced by human resources, where the ability and willingness of helpers to provide quality resuscitation, such as CPR, good bag-mask ventilation, and adequate team work (Jainurakhma et al., 2013; Zhang, Zhang, Fu, Qian, & Lu, 2015).

Cardiac arrest is one of the emergencies that often occurs in the community, does not rule out the possibility in rural communities, where heart function stops suddenly, takes place quickly, so it is necessary to report the incidence and administration of pulmonary resuscitation quickly and appropriately (Winarni, 2017; Yasin, DDF; Ahsan; Rachmawati, 2017).

The condition felt by PONKESDES nurses when dealing with emergency cases is by themselves, where the ability of the surrounding community is still very unfamiliar with RJP actions and only relies on PONKESDES nurses, the unavailability of transportation services for emergency cases if it occurs in the village, there is no call center specifically contacted when emergency conditions occur, limitations experienced and felt PONKESDES nurses are at risk of death of rural residents, where the rescue rate of victims with cardiac arrest requires early resuscitation less than 8 minutes after the incident, and the activation of emergency services carried out less than 4 minutes after the incident, and giving defibrillation less than the first 6-11 minutes (Kaban, KB; Rani, 2018; Rosyid, MF; Hariyanto, T.; Ardiyani, 2018; Winarni, 2017). The lay community or family is the initial link that determines the success of relief in emergency cases (Nugroho, 2017), it is possible in the work area of PONKESDES nurses

The emergency care caring phenomenon that occurs in PONKESDES nurses requires a solution that can improve welfare in the health sector for rural communities, including the need to increase the empowerment of resources available in rural

communities, such as the need for basic life support training (Hidayah & Amin, 2017; Nugroho, 2017; Rosyid, MF; Hariyanto, T.; Ardiyani, 2018; Winarni, 2017) for the village community, so that the villagers become sensitive to any emergencies that occur in the community and are able to synergize with the PONKESDES nurses in providing client first aid with emergency airway -breathing-circulation. The existence of an integrated emergency response service system (Mumpuni, RS; Winarni, I.; Haedar, 2017; Winarni, 2017) in the village area, initiated by the village, where there are transportation services and emergency information for village communities that are ready to provide services for 24 hours (24 hours) emergency medical service) (Fahmi, Ismail; Afriani, 2017; Lutman, 2011) in the village, and the completeness of emergency equipment in an effort to reduce the death rate of villagers due to cardiac arrest (Fahmi, Ismail; Afriani, 2017; Mumpuni, RS; Winarni, I.; Haedar, 2017; Prawesti, Ayu; Emaliyawati, E.; Trisyani, 2018; Winarni, 2017) and also integrated emergency training every year for villagers, health workers in the PONKESDES working area, so as to facilitate community skills and responsiveness. and nurses in dealing with emergency cases in the village area (Chan, 2017; Kaban, KB; Rani, 2018; Leung et al., 2000; Mumpuni, RS; Winarni, I; Haedar, 2017; Prawesti, Ayu; Emaliya wati, E.; Trisyani, 2018; Rosyid, M.F; Hariyanto, T.; Ardiyani, 2018; Singleton, 2005)

## CONCLUSION:

Five themes that need to be done by PONKESDES nurses for patients with OHCA are fast and responsive; need family trust; calm the family; anxious; and minimal facilities.

## LIMITATIONS AND LEARNING TO FRONT:

Limitations obtained namely (1) not all of PONKESDES nurses have provided

patient with OHCA while providing health services, (2) patients with OHCA never tell to PONKESDES nurse, and (3) emergency treatment equipment is not available namely BVM, long spinal boards, AEDs, and cervical collar. It is expected that each PONKESDES has equipment for emergency care and patients with special problems provide information to PONKESDES nurses.

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