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RESEARCH ARTICLE

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## Task force training activities of the members UKK KSR PMI IAIN PEKALONGAN 2022

Dina Nur 'Amilah, IAIN Pekalongan, Indonesia

Yunestria Rizkiana, IAIN Pekalongan, Indonesia

Umi Fauziah, IAIN Pekalongan, Indonesia

Drs. H. Muhlisin, M. Ag., IAIN Pekalongan, Indonesia

Syarif Hidayatullah, A. Md., IAIN Pekalongan, Indonesia

### Abstract

Task force training is a form of training carried out by the Abdimas Division in order to improve the skills of UKK KSR PMI Unit IAIN Pekalongan members. This training is devoted to young members who incidentally have never done a task force. Therefore, task force training is the first step or introduction for young members to be able to understand common cases that occur when carrying out a medical duty task force. In addition, the task force training also has another goal, namely to increase preparedness, confidence, and knowledge for members of UKK KSR PMI unit IAIN Pekalongan. This training was held on February 13, 2022, which took place in the building of the Faculty of Economics and Islamic Business, Pekalongan State Islamic Institute. The reason for holding this activity is that even during a pandemic, such as now, natural disasters or cases of medical emergencies still occur, for example the case of disaster emergency response flooding in Pekalongan City where refugees need medical emergency treatment. Therefore, it is very important to carry out this task force training even during a pandemic like now. The output or result of this activity is that members can understand the handling of medical cases that commonly occur during the task force, increase the confidence of members during the task force, introduce cases that commonly occur during the task force, and train the preparedness of the task force members, especially young members.

*Keywords: training, task force, Indonesian red cross.*

### Introduction

UKK KSR PMI Unit IAIN Pekalongan is a red cross organization at the tertiary level. Dedication to disaster management, health and social services, as well as humanitarian duties to the community are the goals of this organization, including the community at IAIN Pekalongan and the general public. As a form of community service, UKK KSR PMI Unit IAIN Pekalongan contributed to the media guard task force on several community activities. To be able to carry out this task, members need skills in dealing with medical problems that occur in the field. As a debriefing and improvement of the competence and skills of members in the field, training is needed that must be carried out by all members. The training needed is in the form of First Aid (PP), tension, and medicine training.

## Method

This method of service activity is carried out through training of the medical guard task force. The activity began with an opening and remarks by the General Chairperson of the UKK KSR PMI Unit IAIN Pekalongan, then continued with the presentation of the material by the presenters. The medical guard task force training activity was held on Sunday, March 5, 2022, at 08.00 at the Islamic Business and Faculty Building, IAIN Pekalongan.

This training is carried out in the following sequence:

- a. Participant Registration
- b. Opening and welcome
- c. Presentation of materials regarding first aid commonly encountered during the task force which includes material and handling of hypothermia, sprains, urgent calls
- d. Ishoma
- e. Presentation of materials regarding the use of tensimeters, contents of first aid bags and medicines.
- f. Sayonara

## Result

The medical guard task force training activity was held on Saturday, March 5, 2022, at 08.00 at the Islamic Business and Faculty Building, IAIN Pekalongan. This training was attended by 36 participants. Participants in this training were young members of the UKK KSR PMI Unit IAIN Pekalongan. This activity is carried out from 08.00 to 15.00 WIB, with a series of events as follows.

Activity	Date and time	Time	Event
Medical Guard Task Force Training	Saturday, March 5, 2022	8.00-8.30	Participant Registration
		8.30-9.00	Opening
		9.00-11.00	Material 1 First Aid that is commonly encountered during the task force which includes materials and handling of hypothermia, sprains, urgent calls
		11.00-13.00	Ishoma
		13.00-15.00	Material 2 Commonly encountered First Aid during the task force which includes training on the use of sphygmomanometer, introduction to PP bag contents and medicines
		15.00	Sayonara

Table 1. Series of Medical Guard Task Force Training

### First Aid

The presentation of the first material is about first aid which is commonly encountered during the medical duty task force. Such as handling hypothermia, sprains, urgent cells and so on. First aid is the provision of immediate assistance to sick or injured persons/accidents that require basic medical treatment. medical treatment that can be owned by a layman or a specially trained layperson. The limit is in accordance with the certificate held by the first aid actor. The goals of first aid are: <sup>70</sup>

<sup>70</sup> Ulla Nuchrawaty Usman. "Pertolongan Pertama". (Palang Merah Indonesia Pusat, 2008), hlm. 2.

In carrying out first aid, equipment in the form of personal protective equipment is needed. According to Usman (2008: 6) argues that the personal protective equipment includes: Latex gloves, Helper Mask, Protective Glasses



Picture 1. First Aid Practice

In addition to PPE (personal protective equipment), in carrying out PP (first aid) we also need some equipment. For example: Sterile Gauze, Rolled bandage/bandage, Adhesive/plaster, Sanitary Napkin, Splint, Tweezers, Flashlight, Blanket, Alcohol 70%, Cotton

First aid that is often found in the field include:

Fainting or Syncope. Syncope is a state of sudden loss of condition due to lack of blood to the brain, dehydration, heart disease, anemia, diabetes rises or falls suddenly (Perdana, 2021: 93-94) Fainting usually occurs suddenly. Fainting can be caused by the patient being in the sun for too long. Mild symptoms that often occur in people with syncope are generalized fatigue, headache or dizziness, dizzy eyes, thirst, shortness of breath. Fainting can also be caused by external disease (weather, wind, heat) or internal disease, namely emotion or shock (Sukanta, 2008). About 20% of people have experienced at least one fainting in their lifetime and 10% of people have experienced fainting more than once (Sheldon, R, Rose, S, and Connolly, S, 2003). The most common syncope is vasovagal syncope (21.1. %), cardiac syncope (9.5%), and (36.6&) syncope of unknown cause (Alimurdianis, 2010). Common triggers for syncope in multiple positions decreased standing frequency were pain (12.77%), smell (10.64), fear (8.51%), and seeing blood (4.26%). While in the supine and sitting positions, odor (50% and 18.75%, respectively) was a common trigger. Situational syncope is seen in standing (17.12%) and sitting (4.5%) positions (Khaldikar, 2013).

Asthma. Asthma is difficulty breathing which is characterized by spastic contractions of smooth muscles of the bronchioles that partially block the bronchioles. Experts argue that asthma is a lung disease characterized by reversible airway obstruction (but recovery may be incomplete in some patients) either spontaneously or with treatment. Airway inflammation occurs due to increased airway response to various stimuli (hyper-reactivity). The most widely used asthma medication is a mixture of 2 agonists and 52.6% corticosteroids (Otavianingsih dan Oktianti, 2022: 95)



Picture 2. Asthma Management Practice

**Muscle cramp.** A muscle cramp is a very intense pulling or contraction of a muscle without relaxation, resulting in extreme pain. The exact cause of muscle cramps is not yet known, but the possibilities are dehydration, low salt levels in the body, low carbohydrate levels, muscles in a stiff state, lack of warming up (Juardi: 14)

**Fracture.** Fracture or fracture is a break in the continuity of the bone, most fractures occur due to trauma, some fractures occur secondary to a disease process such as osteoporosis which causes pathological fractures. (Engram, 1998: 266). The cause of fracture is trauma, which is divided into direct trauma, indirect trauma, and minor trauma. Direct trauma is an impact on the bone, usually the patient falls in an oblique position where the greater trochanter area is directly hit by a hard object (street). Indirect trauma is the fulcrum of impact or distant fracture, for example falling and slipping in the bathroom. Minor trauma is a condition that can cause fracture if the bone itself is fragile or the underlying disease or pathological fracture (Sjamsuhidayat and Win de Jong 2010). Fractures are often experienced by adults and are dominated by men because men do more activities than women (Jhonet, et al. 2022: 649).

**Burns.** Burns are a form of tissue damage or loss caused by contact with heat sources such as fire, hot water, chemicals, electricity, and radiation (Hardisman, 2014). Burns are a type of trauma with high morbidity and mortality that require special management since early (the shock phase) to the advanced phase (Nugroho, 2012). Burns are a form of severe injury that requires the best management from the start.

**Hypothermia.** Hypothermia or hypothermia is a condition in which the body loses heat quickly, causing body temperature to drop dramatically. A person can be said to be hypothermic if his body temperature is below 35°C. Hypothermia is very dangerous because it can develop quickly. If left untreated, it can lead to shock and be fatal. Then the weather is one of the most important contributing factors. Cold environment including air temperature or low temperature (or both), strong winds, low solar radiation, high rainfall can increase the heat transfer coefficient. (Milne, 2009).

**Abraded.** A torn wound is an open wound caused by a less sharp bandage. The edges of the wound are irregular lines, and the skin tissue around the wound is also damaged. These tears usually require stitches. Because the first aid action is to disinfect, then cover it with sterile gauze and send the patient to the hospital, the dressing should be compressive. The pressing bandage is intended so that the area of the torn wound does not get worse.

**Nosebleed.** Epistaxis or better known as mimisa, is a condition of bleeding in the nose. Epistaxis is often found in everyday life and usually in children and young adults is not a serious condition that can be life threatening. However, epistaxis in children often causes parental anxiety. (Middleton, 2004: Quoc, 2017) Epistaxis which is bleeding often causes panic both for children and those around

them, including the child's parents. The incidence of epistaxis increases at the age of 6-10 years which is the age of elementary school children (Viljoen, 2008).

Injury. According to (Meikahani & Kriswanto, 2015), injury is a disorder that occurs in the body that causes pain, heat, redness, swelling, and does not function properly in muscles, tendons, ligaments, joints, or bones due to excessive activity or accidents.

#### Sphygmomanometer/Tensimeter

The next presentation of material is about the use of Tensimeter. The speaker explains and practices how to use a sphygmomanometer. The participants also did hands-on practice using a sphygmomanometer to better understand the material presented, A sphygmomanometer is a physical instrument used to measure blood pressure. The measured blood pressure is the relative blood pressure between the pressure inside the blood vessels compared to the outside air pressure or atmosphere. The unit used in measuring blood pressure is mm Hg.

In measuring blood pressure, accuracy is a very important aspect because blood pressure parameters determine the accuracy of the diagnosis of a disease. Many diseases can be detected by increasing blood pressure or decreasing blood pressure in the patient. The most common diseases are increased pressure in the blood vessels, hypertension or high blood pressure and hypotension or low blood pressure. There are two physical parameters in measuring blood pressure, namely diastolic and systolic. Diastolic blood pressure is when the heart pulls blood from the arteries or veins towards the heart. While systole is the pressure of blood in the vessels when the heart pumps blood into the arteries.

Blood pressure measurement can be done using a sphygmomanometer with different physical principles, namely a digital sphygmomanometer and a spring sphygmomanometer. Digital sphygmomanometer measurements are very easy to perform and do not require special training. Digital sphygmomanometer measurements can be done by ordinary people. Measurement of a spring sphygmomanometer is much more difficult than a digital sphygmomanometer. This is because these two types of sphygmomanometer rely on accuracy in seeing the drop in blood pressure through a numbered pointer that is synchronized with the use of a stethoscope on the ear, so the use of this sphygmomanometer requires experience, special expertise and high concentration in its use. The use of a sphygmomanometer is also prone to errors caused by an asynchronous between the sight of a drop in blood pressure and the sound of a heartbeat heard through a stethoscope.<sup>71</sup>

#### Kinds of sphygmomanometer

In general, blood pressure is divided into 2, namely manual and digital sphygmomanometers. Manual sphygmomanometer is further divided into mercury sphygmomanometer and non-mercury or aneroid sphygmomanometer.

##### a. Mercury Tensimeter

It is a conventional sphygmomanometer which is actually rarely used abroad, because this sphygmomanometer uses mercury which is dangerous if the instrument breaks and the mercury is exposed to the respiratory tract or skin. This sphygmomanometer requires a stethoscope to hear the sound of blood pressure appearing in the heart.

##### b. Non-Mercury Tensimeter

It is a conventional sphygmomanometer which is safer than a mercury sphygmomanometer, because it does not use mercury but uses a round frame instead of mercury. Non-mercuric sphygmomanometer still needs to use a stethoscope in its use.

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<sup>71</sup> Zuhdi, Muhammad, et al, "Keunggulan Pengukuran Tekanan Darah Menggunakan Tensimeter Digital Dibandingkan dengan Tensimeter Spring dan Tensimeter Raksa", *Jurnal Penelitian dan Pembelajaran Fisika Indonesia*, Vol. 2 No. 2, (2020), hlm. 28-29



### c. Digital Sphygmomanometer

It is a modern and accurate sphygmomanometer because it immediately shows the results in the form of numbers. Digital sphygmomanometer does not require a stethoscope to listen to sounds as a marker of systolic and diastolic pressure. Digital sphygmomanometer uses a sensor as a detection device so it is good for everyone without exception for those who have hearing loss.

### Strengths and Disadvantages of Tensimeter

#### a. Mercury Tensimeter

The advantages are standard blood pressure checks, accurate and long-lasting results. The disadvantages are that it requires the help of experts in its measurements, can be contaminated with heavy metals if mercury leaks or breaks, requires additional tools when measuring, namely a stethoscope and is more expensive.

#### b. Non-Mercury Tensimeter

The advantages are more practical, easy to carry, the measurement results are quite accurate, not contaminated with heavy metals. While the disadvantages are that it requires the help of experts in measurement, requires additional tools, namely a stethoscope and is expensive.

#### c. Digital sphygmomanometer

The advantages are that the sphygmomanometer is the most practical to use, not contaminated with heavy metals, easy to carry, does not need to require experts in its measurement, the price is cheaper because it does not require additional measuring tools. The drawback is that the measurement results are not always more accurate because they are influenced by how to use the alar, movement during inspection, and the strength of the battery used.<sup>72</sup>

### Medicine



Picture 3. Explanation of Medicine

The next presentation of material is about drugs. Members of UKK KSR PMI Unit IAIN Pekalongan were given an explanation about the classification of drugs, their uses, methods of administration and forms of drugs. Drugs based on Health Law number 36 of 2009 are materials or combinations of materials, including biological products that are used to influence or investigate physiological systems or pathological conditions in the context of determining diagnosis, prevention, healing, recovery, health improvement and contraception, for humans (Siahaan, et al, 2017).

Sembara et al., (2014:685) mention that drugs can become drugs if used at the right dose and time, but can also be toxic if used incorrectly in treatment or exceed the usual dose. So that in the treatment

<sup>72</sup> Ismed, N, Thesis : "Aplikasi Sensor Tekanan MPX5100DP pada Tensimeter Digital Berbasis Mikrokontroler Atmega 8535" (Politeknik Negeri Sriwijaya, 2015), hlm. 5-7.

selection process there is communication that occurs between consumers, pharmacists, and doctors who also influence the decision to take drugs, besides that the mass media is also a supporting tool in educating the public about drugs, (Morison, et al.), 2015: 45).



Picture 4. Medicine Logo Class Type

The explanatio regarding the classification of medicine according to (Haeria, 2017: 123-133) is as follows:

No	Medicine Classification	Explanation
1	Obat bebas (Free medicine)	Perda Number 12 of 1994 concerning drug Perdagangan Eceran Obat (PEO) contains the definition of over-the-counter medicine are drusvthe can be sold freely to the public without a doctor’s prescription, are not included in the list of narcotics, psychotrpc, hard medicine, limited over-the-counter drugs, and are registered with the Indonesian Ministry of Health.
2	Obat Bebas Terbatas (Limited Over-th-Counter Medicine)	According to the Decree of the Minister of Health of the Republic Indonesia, which stipulates drugs to be included in the list of medicine, “W” provides the definition of limited over-the-counter medicine as hard medicine that can be deliderd to the user without a docter’s prescription, if the delivery meets the requirements.
3	Obat Keras(Potent Medicine)	According to the decision of the Minister of Health of the Republic of Indonesia that stipulates/ includes medicine into the list of hard medicine, giving the definition of hard medicine is medicine that are stipulated as follows: 1. All medicine that are in their outer packagin by the manufacturer stated that the medicine can only be given with a prescription doctor. 2. All medicine that packaged in such a way that it is obvious to be used parentally, either by injection or by other means of use by tearing the orginal series from the tissue. 3. All new medicine, except if the Ministry of Health has stated in writing that the new medicine are not harmful to human health. 4. All medicine listed in the list of hard medicine, the medicine it self in substances and all preparations containing the medicine, unless other provisions are stated behind the name of the medicine or there is an expectation to the Limited Free Medicine List.

4	Obat golongan narkotika (Narcotic Drug)	The definition of narcotics according to Law Number 22 of 1997 concerning narcotics, is a substances or drug derived from plants or non-plants, both synthetic and semi-synthetic which can cause a decrease or change in consciousness, loss of taste reduce to eliminate pain, and can cause a differentiated dependance into groups I, II, dan III.
5	Jamu (Herbs)	An herb is called jamu if it is used by the community through 3 generations. That is, if the average age of one generation is 60 years, an herb is called herbal medicine if it lasts at least 180 years. For example, people have used ginger rhizomes to treat hepatitis for hundreds of years. Proving the efficacy is only limited to experience, as long as there is no scientific research that proves that ginger is an antihepatitis.
6	Obat herbal terstandar (Standardized Herbal Medicine)	Standardized herbal medicines are medicinal preparations of natural ingredients that have been scientifically proven to be safe and effective by preclinical testing and standardized book materials.
7	Fitofarmaka (Phytopharma)	Fitofarmaka is a medicinal preparation of natural ingredients that have been scientifically proven to be safe and effective by means of preclinical and clinical trials, the raw materials being standardized.

Table 2. Explanation of Types of Medicine Logo

#### Method of Administration of Medicine:

##### a. Oral

Is the administration of drugs by mouth. This method is the most common method because it is very practical, safe and easy to do. However, not all drugs can be given orally, for example drugs that are stimulating or are broken down by gastric juice.

##### b. Sublingual

That is, after the drug is chewed finely and then placed under the tongue, where resorption takes place by the local mucous membrane into the veins of the tongue, which are very abundant in this location. The advantage of this method is that the drug directly enters the large blood circulation without going through the liver. Therefore, this method is used when a rapid and complete effect is desired, for example in asthma, migraine. The disadvantage is that it is less practical to use continuously and can stimulate the oral mucosa.

##### c. Injection

Namely administration of drugs parenterally or outside the intestine. Usually chosen to get a fast, powerful and complete effect. The drawback is that this method is relatively expensive and is generally difficult to do by the patient himself. In addition, there is a danger of infection with germs and the danger of damaging the vessels or nerves if the injection site is not chosen properly.

##### d. Subcutaneous Implant

That is the administration of drugs by inserting the drug in the form of small cylindrical tablets under the skin using a special tool. Used mainly for drugs with long-lasting effects, for example sex hormones. Because of its slow resorption, one pellet can release its active substance regularly for 3-5 months. There is even an implantation of a pregnancy delay drug with a duration of action of 3 years.

##### e. Rectal

Is a way of administering drugs through the rectum or rectum. This method is suitable for drugs that stimulate or are broken down by stomach acid. Usually in the form of suppositories, sometimes also as a liquid.



## Conclusion

Competencies and skills that must be possessed by members of UKK KSR PMI Unit IAIN Pekalongan as a provision for implementing the task force include three things, namely: First Aid, knowledge of tension, and knowledge of drugs. First aid is the provision of immediate help to sick or injured people/accidents that require basic medical treatment. Then, blood pressure is a blood pressure measurement using a device in the form of a sphygmomanometer, a non-mercury sphygmomanometer, and a digital sphygmomanometer. Each type of sphygmomanometer has advantages and disadvantages. And the last is drug, where in medicine there are classifications of type of drugs, namely over-the-counter drugs, limited over-the-counter drugs, hard drugs, narcotic drugs, herbs, standardized herbal medicine, and phypharmaca.

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