



## Health Assistance (Medical Team) Tourist Activities on Mount Bromo

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### ABSTRACT

To ensure the safety and health of tourists. They also play a role in maintaining the security of tourists in the area. In addition, the accompanying medical team can also provide health services such as light health checks, simple medical procedures, and providing health information to tourists. This will make it easier for the medical team to provide emergency medical care if there are tourists who need it. This aims to monitor the health of tourists and provide first aid if there are tourists who need it. Must-have medical equipment such as defibrillators, oxygen, resuscitation equipment, and so on. This can include how to manage common health symptoms and steps to prevent disease. Several cases were encountered in the health assistance, namely: bruises (contusions), cramps and bleeding. Traveling to the mountains can cause serious injury if proper precautions are not taken. In addition, it is important to follow the guidelines given by experienced climbers, avoid trails that are too dangerous, and not take excessive risks when doing activities on the mountain. With proper preparation and wise precautions, we can reduce the risk of injury and enjoy a safe and enjoyable mountain travel experience

### KEYWORDS

Medical, Mountain, Escort

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### INTRODUCTION





Understanding the meaning of tourism has many definitions, this is one of the definitions of tourism according to experts. According to Hunziger and Krapf of Switzerland in *Grundriss Der Allgemeinen Fernverkehrslehre*, states tourism is the entire network and symptoms associated with the stay of foreigners in a place with the condition that the person does not do an important job (Major Activity) that provides benefits that are permanent or temporary (Rustan, 2009). So it can be said that basically tourism is the motive of its activities is to fill leisure time, for fun, relax, study, religious activities, and possibly for sports activities. In addition, all of these activities can benefit the perpetrators both physically and psychologically both temporarily and in the long term, as well as for long-term prospects (sustainable tourism).

Health assistance by the medical team when traveling to Mount Bromo is very important to ensure the safety and health of tourists visiting the area. Mount Bromo is one of the famous tourist destinations in Indonesia that offers beautiful and spectacular natural scenery. However, as with other tourist destinations, Mount Bromo also has risks associated with the health and safety of tourists.

A healthcare team is a group of professionals who have clear rules, common goals and different expertise. The team will run well if each team member makes a good contribution. Members of the healthcare team include doctors, nurses, physiotherapists, radiologists, laboratorians, nutritionists, and pharmacists.

The tourist assistance medical team is tasked with providing first aid and emergency medical care to tourists in need (Aditya et al., 2022). In addition, they also provide health education to tourists on how to maintain their health while on vacation at Mount Bromo. This includes education about common health symptoms such as fever, colds, headaches, and so on (Al Razeeni et al., 2021).

The opening of tourist destinations is always equipped with health protocols that must be followed by tourists as well as prepared health infrastructure. In fact, many tourism management institutions have obtained CHSE certificates. The implication of CHSE is the implementation of health protocols based on Cleanliness, Health, Safety, and Environment Sustainability (Suidarma & Afrita, 2021).

However, in reality, many visitors violate CHSE, such as not being disciplined in wearing masks, not maintaining distance and ignoring hand washing with soap and hand sanitizer. If this condition is left unchecked, it will certainly have fatal consequences that will lead to new clusters in tourist destinations. If new cases in tourism destinations emerge, it is certain that they will be closed again. Potential vulnerability will emerge if tourists are not disciplined in implementing health protocols (Saraceno, 1998).

Thus, the recovery of the tourism industry needs to be accompanied by a new strategy to revive the tourism industry in the midst of the Covid-19 pandemic. The strategy does not simply rely on the beauty of tourism, art, culture, but must also prioritize other advantages, namely the implementation of health protocols and supervision in a number of tourist attractions.

This strategy is very rational, because people traveling certainly do not want to get sick or contract a disease. Consequently, managers of tourist destinations must ensure the safety of visitors to stay healthy, both when entering and leaving tourist attractions. For this reason, a standard mechanism or Standard Operating Procedure (SOP) is needed in every tourist destination (Saraceno, 1998).

Of course we also agree, if the SOP is strictly applied in every tourist destination. It is precisely with this strict application that attracts tourists, because they will feel safe and comfortable when visiting tourist attractions. The supervision system must also be tightened. For example, those who



do not comply with health protocols are excluded from tourist attractions rather than endangering others. If necessary, those who are proven to have violated health protocols are fined to deter them.

The recovery of the tourism industry requires confidence that all travelers will adhere to health protocols. Digging deeper, public non-compliance with Covid-19 pandemic protocols is not new or unique to this pandemic alone.

In fact, our society's level of compliance with all regulations in general is still quite low (Rosana, 2014). Some regulations or social habits are successfully instilled, only through comprehensive and massive behavior change strategies. For example, traffic behavior is reinforced through a mechanism of severe punishment for violations.

Without massive strategies and assertiveness from policy makers, changes in public behavior will not be realized. If the policy of assertiveness in applying normative rules in the tourism sector is not implemented immediately, it is feared that there will be a crisis of public confidence in the government and tourism object managers (Fairuza, 2017).

Thus, it is now necessary to intensify health protocol-based tourism policies with the aim of travel comfort that prioritizes health protocols as its parameter. This policy can be realized if there is synergistic cooperation of all parties, so that health protocols can be applied to the practical level for the sake of mutual convenience (Kilpatrick et al., 2021).

In tourist activities on Mount Bromo, the medical assistance team is very important to ensure the safety and health of tourists. They also play a role in maintaining the safety of tourists in the area, as well as monitoring and providing warnings regarding the weather conditions and conditions of Mount Bromo to maintain the safety of tourists. In addition, the medical assistance team can also provide health services such as minor health checks, simple medical actions, and provide health information to tourists (DeGrande et al., 2018).

In this case, the role of the tourist assistance medical team is very important to ensure the success of tourism activities on Mount Bromo. Therefore, tourists visiting Mount Bromo are expected to pay attention to preventive measures and comply with instructions from relevant officers in order to maintain the safety and health of themselves and others

## MATERIALS AND METHODS

Here are some methods of activities that can be carried out by the medical team accompanying tours on Mount Bromo for 3 days:

1. Placement of medical posts: The medical team can place medical posts around the Mount Bromo area. This will make it easier for the medical team to provide emergency medical care if there are tourists in need.
2. Medical patrols: The medical team can conduct medical patrols around the Mount Bromo area. This aims to monitor the health of tourists and provide first aid if there are tourists in need.
3. Procurement of medical equipment: The medical team should ensure that they have the medical equipment and medicines needed to provide emergency medical care. Must-have medical equipment such as defibrillators, oxygen, resuscitation equipment, and so on.
4. Provision of health services: The medical team can provide health services such as light medical check-ups, simple medical procedures, and provide health information to tourists.
5. Cooperation with related parties: The medical tourism assistance team can cooperate with related parties such as tourism managers, health agencies, and security forces to obtain support and assistance if needed.





6. Health education: The medical team can provide health education to tourists on how to maintain their health while in the Mount Bromo area. This can include how to manage common health symptoms and steps to prevent illness.

The division of activity personnel in this activity is in table 1.

**Table 1.** Medical Team Personnel

No	Personnel	Total
1	Doctor	1
2	Nurse	1
3	Health and Recreation Physical Education Lectures	1
4	Public Health Science Students	2

## Results and Discussion

Some of the cases encountered in health assistance include:

### A. Bruise (Contusio)

A bruise is a change in skin color caused by bleeding into the tissue from a ruptured blood vessel. In general, the older a person is, the more easily blood vessels will rupture (Susilawati & SK, 2018). There is no way, however, to determine exactly how much force is needed to produce a bruise. The age of the bruise is difficult to determine due to the great variability of the body's reaction to trauma (Amalia et al., 2018). People with blood disorders and liver disease may develop more severe contusions than healthy people. As healing occurs, bruises change color from blue or red, red-blue, green, brown, and finally yellow. These color changes, however, may appear irregular and may overlap. There is no way of knowing how long each color stage will last. Sometimes a recent bruise will have a brown tinge (Rajuddin et al., 2020).

A bruise is an injury condition that exists in the connective tissue under the skin. Bruises are generally caused by an impact or blow to the skin. The tissue at the base of the skin surface is damaged and small blood vessels are broken, allowing blood and cellular fluid to seep into the surrounding tissue. This bruise gives rise to a bluish or blackish area on the skin (Sukartini et al., 2016). When there is considerable bleeding, the appearance of bleeding in a limited area is called a hematoma. The pain in bruising is generally mild to severe and the accompanying swelling is severe to severe (Rohmi et al., 2015). Some bruises may occur on the head, shoulders, elbows, hands, chest, abdomen and legs. A bruise is a hemorrhage in the tissue under the skin or cuticle due to rupture of capillaries and veins caused by blunt force. Bruising can result from pressure or blows, but can also arise spontaneously, which can occur in elderly people and in people with blood clotting disorders such as hemophilia (Sukartini et al., 2016). Extravasations of blood more than a few millimeters in diameter are called bruises or contusions, smaller ones are called ecchymoses and the smallest ones the size of a pinhead are called petechiae. A hard blow to the head can cause bruising as well as allowing cut injuries. Bruise treatments that are tried:

1. Compress with ice for 12-24 hours to stop capillary bleeding (Kica & Rosenman, 2020).
2. Rest to prevent further injury and speed up recovery of damaged soft tissues.

### B. Muscle Cramps

Cramps that occur during physical activity or exercise in people without metabolic, endocrine and neurological disorders are called Exercise Associated Muscle Cramps (EAMC). In addition



to exercise, these cramps have also been reported to occur within 8 hours of exercise (Damayanti, 2022). Research conducted by Norrism reported that the incidence of cramps during exercise was experienced by 95% of students majoring in sports, 26% of whom also complained of having experienced cramps some time after exercise (Nirmalasari et al., 2020). Although not a dangerous condition, muscle cramps can cause discomfort for sufferers and can interfere with daily activities (Rohmawati et al., 2020).

Muscle cramps are continuous contractions that are felt by a muscle or group of muscles and cause pain. the trigger for cramps is a very tired muscle, lack of warm-up and stretching, there are obstacles to blood circulation leading to the muscle so that it gives rise to spasms (Coleman, 2019). Movement performed in an unprepared muscle state can result in excessive tension that cannot be controlled in the muscles, or what is often referred to as muscle cramps. Muscle cramps generally occur near the end of an exercise. Mild muscle contractions/spasms initially develop at the start of exercise, which increase in severity as a person experiences fatigue and decrease if muscle work is reduced or the muscle is stretched. Muscle cramps are more likely if the length of the muscle is severely shortened (Arovah, 2009). A cramped muscle will appear very tense, twitch at its center and cause pain. Muscle cramps are thought to be caused by something to do with an imbalance of minerals in the body, particularly sodium (Nafisyah, 2023). Lack of fluid and muscle fatigue are also believed to affect the likelihood of muscle cramps. Other studies have found that old age, long-distance running, excess weight, lack of stretching and a family history of cramps also play a role in causing muscle cramps (Baskoro et al., 2018). Some of the things that can cause cramps include:

1. Muscle fatigue during exercise resulting in the accumulation of metabolic waste in the form of lactic acid which then stimulates the muscles / nerves to cause cramps.
2. Inadequate warm-up and cool-down so that the body does not have the opportunity to adapt to the exercise.

Common injury treatments for muscle cramps are as follows:

1. Athletes are rested, given chlor ethyl spray to relieve localized pain and or ice.
2. Hold the muscle when contracting so that myosin filament and actin myosin can occupy the proper position so that the cramp stops. When held can be sprayed with chlor ethyl spray, until the pain disappears.
3. Stop the activity - relax the muscle Stretch the cramped muscle passively by pulling the associated joint in the opposite direction, until the muscle length returns to normal and muscle twitching is no longer visible.
4. Stroke/massage the cramped area towards the heart.
5. Drink fluids containing electrolytes (sodium) 5.

The incidence of muscle cramps can be reduced by doing the following:

- a. Stretch and warm up before and after exercising. Stretching makes your muscles more flexible so they are more difficult to cramp.
- b. Make sure you get enough fluids. Everyone's fluid needs are different, but generally the body loses 0.4-1.8 liters of water for every hour of exercise.
- c. Consume fluids or foods that contain lots of electrolytes before and after exercise.
- d. Avoid excessive physical activity and exercise in hot weather.

### c. Bleeding





Ariningrum & Subandono (2018) states that bleeding is the discharge of blood from an injured blood vessel. There are various types of bleeding based on the cause, namely mechanical bleeding (local bleeding) and biochemical bleeding (systemic bleeding). According to Handayani et al, (2016) Mechanical bleeding is bleeding that comes from various sizes of injured blood vessels and cannot stop because blood vessels cannot form or because blood vessels that have occurred rupture or escape from the open end of the vessel. Mechanical bleeding is divided into three types, namely (1) primary bleeding that occurs immediately after surgery and will soon stop spontaneously which is normal bleeding; (2) recurrent bleeding or intermediate bleeding that occurs within 24 hours after surgery; (3) secondary bleeding which also occurs within 24 hours after surgery but is usually the result of blood clot damage due to infection (Aditya et al., 2021).

Bleeding is established due to rupture of blood vessels as a result of the trauma of a blow or fall. Severe bleeding problems can lead to circulation problems and even shock. In this case, the hemorrhage occurred in the conjunctiva of the eye. The treatment that was tried was a cold compress. In this condition because there is no injury to the cornea, treatment occurs relatively quickly (Hayati et al., 2022).

Bleeding will be dangerous if the blood comes out too much and cannot be controlled. In general, there are two types of bleeding, namely:

1. External (Open) Hemorrhage

External (open) bleeding is bleeding that occurs due to damage to the blood vessel wall which is then followed by skin damage. In this condition, blood will leave the body through the wound and will be clearly visible.

2. Internal (Closed) Hemorrhage

Internal (closed) bleeding is bleeding that is usually invisible and not accompanied by skin damage. However, internal bleeding can also be visible under the surface of the skin which looks like a bruise. Not only external bleeding can be dangerous and life-threatening, but internal bleeding can also be life-threatening if the bleeding is classified as severe.

Here's how to control bleeding.

1. Control of External (Open) Bleeding

- a. Direct pressure

Pressing the bleeding area directly above the wound and placing a thick wound cover on the area. Remember, if the blood still does not stop coming out, you can add another cover without removing the previous cover.

- b. Elevation

This is usually done for bleeding that occurs in the limbs by elevating the bleeding area above the heart.

- c. Pressure Point

This stage is carried out by pressing the artery above the bleeding area. There are two pressure points, namely the upper arm artery (brachial artery) and the thigh artery (femoral artery).

2. Control of Internal (Closed) Bleeding







- a. Lay the patient down
- b. Check and maintain airways, breathing, and pulse (circulation)
- c. Provide oxygen
- d. Checking breathing and pulse periodically
- e. Perform shock treatment if shock occurs or is suspected to occur
- f. Do not give food or drink to the patient
- g. If there is an injury or other disturbance, it can be treated immediately
- h. Refer to the nearest health facility

### CONCLUSIONS

Mountain travel can lead to serious injuries if proper precautions are not taken. Some preventive measures include physical preparation before the trip, such as strengthening leg muscles and carrying necessary equipment such as comfortable and safe mountaineering shoes. In addition, it is important to follow the guidance provided by experienced hikers, avoid trails that are too dangerous, and not take excessive risks when doing activities on the mountain. Mountain travel can be a fun and rewarding experience, but it can also carry the risk of serious injury. With proper preparation and wise precautions, we can reduce the risk of injury and enjoy a safe and enjoyable experience on the mountain.

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### Conflict of Interest

The authors affirm that they have no known financial or interpersonal conflicts that would have appeared to have an impact on the research presented in this study.

### REFERENCES

- Aditya, R. S., Yusuf, A., Razeeni, D. M. A., Al-Sayaghi, K. M., & Solikhah, F. K. (2021). "we Are at the Forefront of Rural Areas" Emergency Nurse's Experience during Pandemic: A Qualitative Study. *Health Equity*, 5(1). <https://doi.org/10.1089/heq.2021.0080>
- Aditya, R. S., Yusuf, A., Solikhah, F. K., Kurniawan, S. B., & Abdullah, S. R. S. (2022). Nurse's Experiences in Handling Stretcher Patients on Commercial Medical Escort in Indonesia: A Qualitative Study. *Bangladesh Journal of Medical Science*, 21(3). <https://doi.org/10.3329/bjms.v21i3.59562>
- Al Razeeni, D. M., Al-Wathinani, A., Alhazmi, R., Samarkandi, O. A., Ronal, S. A., Salameh, B., & Alenazi, A. (2021). The Preparedness of Emergency Medical Services Students for Coronavirus Disease 2019: A Cross-Sectional Study among Paramedic Students. *Indian Journal of Pharmaceutical Sciences*, 83. <https://doi.org/10.36468/pharmaceutical-sciences.spl.349>





- Amalia, R., Sumartini, S., & Sulastri, A. (2018). Gambaran Perubahan Psikososial dan Sistem Pendukung Pada Orang Dengan HIV/AIDS (ODHA) di Rumah Cemara Gegerkalong Bandung. *Jurnal Pendidikan Keperawatan Indonesia*, 4(1). <https://doi.org/10.17509/jpki.v4i1.12346>
- Ariningrum, D., & Subandono, J. (2018). Buku Pedoman Manajemen Luka. In *Fakultas Kedokteran Universitas Sebelas Maret Surakarta*.
- Arovah, N. I. (2009). Diagnosis dan Manajemen Cedera Olahraga. *Diagnosis dan Manajemen Cedera Olahraga*.
- Baskoro, F. Y., Moerjono, S., & Anggraheny, H. D. (2018). Pemanasan Fisik Menurunkan Kejadian Kram Otot Triceps Surae pada Atlet Renang. *MAGNA MEDICA: Berkala Ilmiah Kedokteran Dan Kesehatan*, 2(4). <https://doi.org/10.26714/magnamed.2.4.2018.71-75>
- Coleman, P. (2019). Purpose, Quality, and Value in Critical Realist Research within Nurse Education. *Nurse Media Journal of Nursing*, 9(1). <https://doi.org/10.14710/nmjn.v9i1.23485>
- Damayanti, A. (2022). Kurangnya Pemanasan Sebelum Berolahraga Dapat Menyebabkan Cedera Siswa Sd N 01 Tanjung Iman. *Jurnal Edukasimu*, 2(3).
- DeGrande, H., Liu, F., Greene, P., & Stankus, J. A. (2018). The experiences of new graduate nurses hired and retained in adult intensive care units. *Intensive and Critical Care Nursing*, 49. <https://doi.org/10.1016/j.iccn.2018.08.005>
- Fairuza, M. (2017). Kolaborasi antar Stakeholder dalam Pembangunan Inklusif pada Sektor Pariwisata ( Studi Kasus Wisata Pulau Merah di Kabupaten Banyuwangi ). *Kebijakan Dan Manajemen Publik Volume*, 5(3).
- Handayani, G., Lintong, F., & Rumampuk, J. F. (2016). Pengaruh Aktivitas Berlari Terhadap Tekanan Darah Dan Suhu Pada Pria Dewasa Normal. *Jurnal E-Biomedik*, 4(1). <https://doi.org/10.35790/ebm.4.1.2016.11044>
- Hayati, Anggareni, A., & Rizkanto, B. E. (2022). *Fisiologi Daya Tahan Aerobik dan Anaerobik* (S. R. Hadi, Ed.; 1st ed.). Samudra Biru.
- Kica, J., & Rosenman, K. D. (2020). Multisource surveillance for non-fatal work-related agricultural injuries. *Journal of Agromedicine*, 25(1). <https://doi.org/10.1080/1059924X.2019.1606746>
- Kilpatrick, K., Tchouaket, E. N., Chouinard, M. C., Savard, I., Bouabdillah, N., Houle, J., St-Louis, G., Jabbour, M., & Atallah, R. (2021). Identifying indicators sensitive to primary healthcare nurse practitioner practice: A review of systematic reviews protocol. In *BMJ Open* (Vol. 11, Issue 1). <https://doi.org/10.1136/bmjopen-2020-043213>
- Nafisyah. (2023). Pengolahan Abon Lele tanpa Minyak di Desa Buyut Ilir Kabupaten Lampung Tengah ( Processing Shredded Lele without Oil in Buyut Ilir Village, Central Lampung Regency). *Jurnal Nusantara Mengabdi*, 2(2), 79–86.
- Nirmalasari, N., Nofiyanto, M., & Hidayati, R. W. (2020). Studi Demografi: Riwayat Kejadian Cedera dan Penanganan Pertama Cedera Olah Raga di Unit Kegiatan Mahasiswa. *JHeS (Journal of Health Studies)*, 4(2). <https://doi.org/10.31101/jhes.1018>
- Rajuddin, R., Budiman, Shalahuddin, & Taufika, D. A. (2020). Hyperthyroid in pregnancy: A case report. *Systematic Reviews in Pharmacy*, 11(5). <https://doi.org/10.31838/srp.2020.5.03>





- Rohmawati, D. L., Yetti, K., & Sukmarini, L. (2020). Praktik Berbasis Bukti: Masase Intradialis Untuk Mengurangi Kram Otot pada Pasien Hemodialisis. *Media Keperawatan: Politeknik Kesehatan Makassar*, 11(1). <https://doi.org/10.32382/jmk.v11i1.1524>
- Rohmi, F., Soeharto, S., & Lestari, R. (2015). Pengaruh Psikoedukasi Keluarga Terhadap Tingkat Kecemasan dan Kemampuan Keluarga dalam Merawat Penderita TB di Puskesmas Sumbermanjing Wetan Kecamatan Sumbermanjing Kabupaten Malang. *The Indonesian Journal Of Health Science*, 5(2).
- Rosana, E. (2014). Kepatuhan Hukum sebagai wujud Kesadaran Hukum Masyarakat. *Jurnal Tapis: Jurnal Teropong Aspirasi Poliik Islam*, 10, 61–84.
- Rustan, S. (2009). Layout Dasar dan Penerapannya. In *American Journal of Research Communication* (Vol. 5, Issue August).
- Saraceno, B. (1998). “Nations for mental health: A new who action programme on mental health for underserved populations. *European Psychiatry*, 13(S4). [https://doi.org/10.1016/s0924-9338\(99\)80120-5](https://doi.org/10.1016/s0924-9338(99)80120-5)
- Suidarma, I. M., & Afrita, N. N. (2021). Upaya Meningkatkan Sektor Pariwisata Melalui Pengembangan Chse (Cleanliness, Health, Safety, Environment) Dalam Kawasan Pantai Jimbaran. *Abdimas Universal*, 3(1).
- Sukartini, T., Nursalam, N., Mishbahatul, E., Asmoro, C. P., & Misutarno, M. (2016). Meningkatkan Respon Psikologis Tenaga Kerja Indonesia yang Terinfeksi HIV Melalui Dukungan Keluarga dan Peer Group Support. *Jurnal Ners*, 11(2). <https://doi.org/10.20473/jn.v11i2.2803>
- Susilawati, F., & SK, N. (2018). Faktor Resiko Kejadian Stroke. *Jurnal Ilmiah Keperawatan Sai Betik*, 14(1). <https://doi.org/10.26630/jkep.v14i1.1006>