

Providing First Aid in the Conditions of Remote Areas of the North

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Abstract

First aid by households is an effective way to save people's lives due to an illness or injury.

Providing first aid by households to the population of indigenous northern peoples engaged in fishing and reindeer herding is especially relevant.

Keywords: First Aid; Housekeeping; Indigenous Northern Peoples; Fishermen; Reindeer Herders

The organization of medical care for residents of rural areas has its own characteristics: low population density, scattered settlements and their remoteness; poor quality, and sometimes lack of roads; the specifics of agricultural labor (seasonality of field work, dependence on weather conditions, etc.); different from urban conditions and lifestyle of the population, etc.

At the same time, in a number of small settlements, numbering 50 - 100 people, the position of a medical worker is not provided, which creates problems with the availability of medical care. This fully applies to a number of territories of the Far North, the remoteness of which from large settlements, the lack of a stable cellular coverage area, the lack of certified medical workers in small settlements, the constant migration of reindeer herders and fishing brigades - all these are the main problems that negatively affect people's health. Special working conditions (fishing, reindeer herding), combined with the constant migration of the population, make it even more difficult to provide medical care. In such cases, it is necessary to focus on providing first aid in case of accidents, injuries, poisoning and other conditions, and diseases that threaten their life and health.

First aid is a set of measures aimed at restoring or preserving the life and health of the victim, carried out by non-medical workers (mutual assistance) or by the victim himself (self-help). One of the most important provisions of first aid is its urgency: the faster it is provided, the more hope for a favorable outcome. Such assistance can and should be provided in a timely manner by the one who is near the victim.

Quickly and correctly provided first aid, measures to prevent possible complications, save the victim not only health and ability to work, but often also life.

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The list of conditions in which first aid is provided is given below:

1. Lack of consciousness.
2. Cessation of breathing and blood circulation.
3. External bleeding.
4. Foreign bodies of the upper respiratory tract.
5. Injuries to various areas of the body.
6. Burns, effects of exposure to high temperatures, heat radiation.
7. Frostbite and other effects of exposure to low temperatures.
8. Poisoning.

In small settlements with a population of less than 100 people, including temporary (seasonal) ones located at a considerable distance from medical organizations or their structural units (more than 6 km), the organization of first aid to the population before the arrival of medical workers in case of accidents, injuries, poisoning and other conditions and diseases that threaten their life and health, is carried out with the involvement of households (which must be created at the rate of at least 1 household for each settlement).

The organization of first aid with the involvement of households includes:

- Providing households with communication means;
- Providing households with communication with the territorial center of disaster medicine;
- Providing households with access to the information and telecommunications network “Internet”;
- Formation of styling for first aid;
- Informing the population about the household providing first aid and training the responsible persons of the household in the first aid skills;
- Provision of reminders on the interaction of responsible persons of households with medical organizations;
- Provision of first aid providers, as well as those at high risk of developing sudden cardiac death, acute coronary syndrome and other life-threatening conditions, and their families, with methodological manuals and aids on first aid for the most common life-threatening conditions that are the main cause mortality (including sudden cardiac death, acute coronary syndrome, acute cerebrovascular accident), containing information about the characteristic manifestations of these conditions and the necessary measures to eliminate them before the arrival of medical workers.

First aid is provided at the scene of the incident, at home with citizens or when citizens apply to households.

After providing first aid, if necessary, the head of the household calls a medical worker from the state medical organization nearest to the settlement or its structural unit. In cases that do not require emergency assistance, the person in charge of the household can call a medical worker to the patient’s home.

The head of the household is obliged to undergo training in the first aid program in case of accidents, injuries, poisoning, other conditions and diseases that threaten life and health.

Financing of the organization and maintenance of the activities of the household is carried out at the expense of compulsory medical insurance funds within the framework of the financial and economic activities of the state medical organization.

All heads of households are given communication means - walkie-talkies, and where there is cellular coverage - mobile phones. On paper, there are questionnaires that can help in an unforeseen situation. The questionnaires are aimed at behavior in emergency situations and first aid in emergency situations. Particular attention is paid to the identification of patients with hypertension and diabetes mellitus, because these diseases can quickly lead to death. Attention is also paid to monitoring chronic patients. Questionnaires help to understand whether the help of a professional physician is really needed or whether it is possible to do it on their own. Control over the provision of first aid in sparsely populated areas is entrusted to health care institutions - feldsher-obstetric stations, geographically close to sparsely populated areas. In addition, they provide household first aid kit replenishment as drugs are used (or expired).

Most of the households in the High North are in migrant fisheries and reindeer herding teams. People live in them on a permanent basis, but they are all the time on the road, moving from one point to another, accompanying herds of grazing deer or changing areas of fishing.

The heads of households are usually approached to measure temperature or pressure, for ARVI, back pain. Trauma is often treated. A well-trained household manager can save valuable commuting time to the district center, and sometimes just save someone's life.

After the formation of households in the Far North, the total number of deaths in settlements decreased (Figure 1). The calculation of the group average revealed a clear trend towards a gradual decrease in the percentage of mortality depending on the year of foundation of the household. The relative mortality rates until 2012 (the formation of households) decreased by 0.25% per year. Then the rate of decline in mortality continued to decrease by 0.25% every year, and in 2016 there was a decrease in mortality by 0.75%, in 2017 by 1% and in 2018 by 0.5%. Thus, the analysis of mortality in the villages of Taimyr for 14 years of observation gives grounds to assert that the activity of households leads to a decrease in mortality.

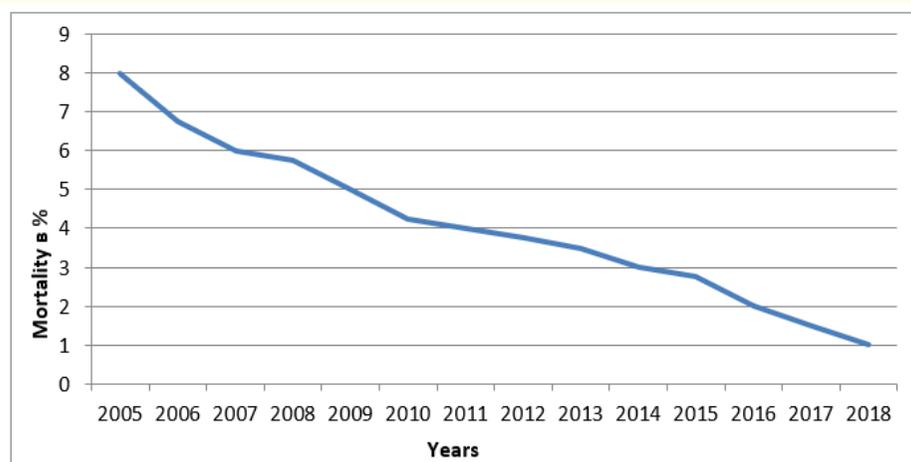


Figure 1: Dynamics of mortality from 2005 to 2018. Before and after the formation of households (2012) in northern villages (on the example of the Taimyr Dolgan-Nenets district of the Krasnoyarsk Territory of the Russian Federation).

In order to assess the quality of first aid by households in the Taimyr Dolgan-Nenets district of the Krasnoyarsk Territory, a questionnaire was conducted among the workers of fishing and reindeer herding brigades, where households were formed. The sample consisted of 50 people.

An analysis of the responses to the questionnaire suggests that almost half of the respondents (24 people) in villages with existing households needed first aid during the year. At the same time, 35 people out of 50 respondents applied for first aid with injuries or other emergency conditions during 2018. The presence of deaths in the brigade or camp was confirmed by 15 people out of 50. However, only 12 people associated this event with poor-quality or untimely provision of first aid.

Slightly more than half of the respondents (28 people) knew that they could receive first aid in their camp or brigade.

The overwhelming majority of the respondents (48 people) answered that they did not know the list of conditions, and 50 people did not know the list of first aid measures. Consequently, they are poorly guided in what cases it is necessary to seek first aid.

Everyone (50 people) knew, knew about the presence of a household in their camp (brigade) and what it does. All respondents (50 people) knew by sight the head of their household. The absolute majority (48 people) confirmed that the head of the household is appointed and not elected by the people. Despite the lack of medical education at the head of the household, 18 people considered that the level of preparation for the provision of first aid by the head of the household was sufficient. 43 people believed that having an education affects the quality of first aid.

At the same time, 37 people expressed their satisfaction with the quality of first aid in the camp or brigade. 39 people received first aid immediately after treatment. 15 people confirmed that they know cases of their fellow villagers applying for first aid this year. However, 5 people for various reasons did not receive first aid from the head of the household, although they applied for it.

45 people confirmed that the head of the household had a walkie-talkie, but only 3 people answered in the affirmative when asked whether they used it to call doctors. Almost half of the respondents (24 people) admitted that doctors were called for them by radio. 32 people answered in the affirmative to the question about the ability of the head of the household to support the patient's life before the arrival of doctors. 45 people have never received a refusal to provide first aid from the head of the household.

More than half of the respondents (30 people) stated the need to expand the powers of heads of households in terms of providing first aid.

However, 48 people do not know at all the list of conditions in which first aid is provided, 49 out of 50 people have never acquired knowledge of first aid themselves, and 50 people do not know the list of measures for first aid at all.

48 respondents expressed uncertainty that there are enough medicines and medical devices in the first aid kit of the head of the household to provide first aid.

In general, according to the survey, there was an opinion that people evaluate positively the activities of households in providing first aid. And a small number of requests for the latter may be due to mistrust in the level of professional training of the head of the household and the possible lack of medical products and drugs in the household medicine cabinet. In addition, the vast majority of respondents do not know the basic conditions in which first aid is needed.

The following conclusions were drawn from the survey:

- People assess positively the appearance of households, although not everyone knows what it is.
- The small number of first aid calls is most likely due to lack of confidence in the level of preparation of the head of the household, as well as the lack of medical devices and drugs in the household medicine cabinet.

The vast majority of respondents do not know the conditions in which first aid is needed (they are used to coping with diseases on their own).

The question of the interchangeability of the head of the household is also acute. If something happens to him or an unforeseen situation occurs, for example, a serious injury, then the fishing or reindeer herding brigade will be without first aid. The problem also lies in the fact that it is difficult to find a responsible person for the Head of Household Management, since his work is not paid, and he has to provide assistance at any time of the day.

High responsibility and self-sacrifice are the most necessary qualities in the work of the Head of Household Management in the Far North.

The identified problems can be resolved as follows:

- In reindeer herding camps and fishing brigades, regular educational work should be carried out about the need to seek first aid from the head of the household;
- Since the work of the head of the household is of a volunteer nature, it is advisable to provide for his material incentives for reducing or not increasing the number of deaths of the population from accidents and acute diseases.

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