



■ WILDERNESS MEDICINE



Rising Search and Rescue Incidents Highlight Need for Enhanced Wilderness Medical Training



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Recent years have seen a notable increase in search and rescue (SAR) missions and outdoor injuries in the United States. A striking example of this trend occurred in Zion National Park, Utah, where a single weekend in 2021 saw over ten separate SAR incidents, straining the park's resources. Rangers were called to rescue hikers trapped in treacherous slot canyons by rising floodwaters, assist rock climbers who had fallen and sustained serious injuries (e.g. broken bones and head trauma), and search for lost visitors who had wandered off established trails and were found dehydrated and disoriented with heat exhaustion. This surge in emergencies underscores the growing number of SAR missions and the strain on resources, highlighting the urgent

need for increased public awareness and education in wilderness medical skills.

Surge in Outdoor Activity and SAR Missions

The rise in SAR missions strongly correlates with the increased popularity of outdoor activities. The COVID-19 pandemic significantly contributed to this trend, as people sought safe and socially distanced recreational opportunities. National parks, forests, and other outdoor areas experienced record visitation numbers. For instance, Yellowstone National Park had its busiest July ever in 2021, with over a million visitors, while Grand Teton National Park saw a 20% increase in visitors compared to 2019.

This surge in outdoor activity has brought more people into nature and highlighted the unpreparedness of many new visitors. According to the National Park Service, several parks have seen a significant increase in SAR missions. Acadia National Park in Maine experienced a one-third increase in SAR operations in 2021 compared to 2019. Zion National Park, Arches National Park, and Canyonlands National Park in Utah also reported record numbers of SAR missions.

Factors Contributing to Increased SAR Calls

Several factors contribute to the increase in SAR missions. One major factor is the influx of inexperienced visitors. Many newcomers to outdoor



activities often underestimate the challenges and risks associated with wilderness environments. Inadequate preparation, lack of proper gear, and overreliance on technology for navigation are common issues. For example, at Acadia National Park, rangers frequently receive calls from hikers who venture onto trails without sufficient planning or equipment, often finding themselves stranded or lost.

Unpredictable weather conditions have also exacerbated the situation. Sudden changes in weather can catch even experienced hikers off guard, leading to dangerous situations that require rescue. Climate change has made weather patterns more erratic, increasing the likelihood of such incidents.

Increased accessibility of cellphones and other communication devices has made it easier for people to call for help, even in minor situations. While this accessibility can be life-saving, it also means that SAR teams are called out for incidents that might not have required intervention in the past.

Strain on SAR Resources

The rising number of SAR missions has placed considerable strain on SAR teams, many of which are volunteer-based and operate with limited resources. Staffing shortages, partly due to the COVID-19 pandemic, have further complicated the situation. National parks have struggled to hire and retain enough rangers to meet the growing demand for SAR services.

For example, Acadia National Park relies on a partnership with a local volunteer SAR group and agreements with local fire and emergency services to manage the increased workload. Despite these efforts, low staffing levels and the physically demanding nature of SAR operations have made it challenging to keep up with the rising number of calls.

Importance of Wilderness Medical Education

The increase in SAR missions and outdoor injuries underscores the need for enhanced wilderness medical education. Proper training and preparation can significantly reduce the number of incidents requiring rescue and improve outcomes for those who do need assistance.

One key component of wilderness medical education is learning first aid and CPR. In remote settings where

professional medical help may be hours or even days away, knowing how to perform basic first aid and CPR can be lifesaving. For instance, a hiker who knows how to treat a severe cut or stabilize a broken limb can prevent a situation from worsening while waiting for rescue. In the case of cardiac arrest in a remote area, CPR performed by a companion can mean the difference between life and death before professional help arrives.

Navigation and survival skills are also crucial aspects of wilderness medical education. Many SAR missions are initiated because individuals become lost or disoriented in the wilderness. Understanding how to use a map and compass, read the terrain, and navigate without relying solely on electronic devices can prevent many of these incidents. For example, during the weekend in Zion National Park with over ten SAR missions, many lost hikers could have avoided trouble with better navigation skills. Additionally, knowing how to build a shelter, find and purify water, and create a fire can help individuals survive unexpected situations, such as being stranded overnight due to injury or getting lost.

Risk assessment and planning are essential skills that can help prevent accidents and injuries. Educating people on how to assess risks, plan their trips, and prepare adequately for different scenarios is vital. This includes checking weather forecasts, understanding the terrain, and knowing one's physical limits. For instance, many SAR missions in national parks involve hikers who overestimate their abilities and underestimate the difficulty of trails. By teaching individuals how to properly assess and prepare for their adventures, many of these incidents can be avoided.

Proper use of outdoor gear is another critical element of wilderness medical education. Many SAR incidents involve individuals who are inadequately equipped for their outdoor activities. A surprising number of rescue calls come down to two simple issues: wearing inappropriate footwear, such as sandals on rugged trails, and not carrying enough water. Understanding what gear is necessary for different activities and conditions, and knowing how to use it properly, can prevent many common injuries and emergencies.

Implementing education programs to address these needs can be highly effective. Public awareness campaigns by

national parks and outdoor organizations can educate the public on the importance of preparation and safety. For example, using social media, brochures, and workshops can reach a broad audience and provide valuable information on how to stay safe outdoors. Additionally, mandatory training programs for certain activities or permits can ensure that participants have the necessary skills and knowledge. For instance, requiring hikers to complete a safety course before obtaining a backcountry permit can reduce the likelihood of SAR incidents.

Partnerships with educational institutions can also play a significant role. Collaborating with schools, universities, and outdoor education centers can help integrate wilderness medical education into broader curricula. Offering courses and certifications can attract a diverse group of learners, ensuring that more people are prepared for outdoor activities. Enhanced volunteer training for SAR teams and ensuring they have the necessary resources can improve response capabilities and reduce the strain on these teams.

Community involvement is another important aspect. Encouraging local communities to get involved in SAR operations and outdoor education can foster a culture of safety and preparedness. Community-led initiatives, such as local hiking clubs and outdoor skill workshops, can effectively spread knowledge and skills.

By implementing comprehensive education programs and raising public awareness, we can reduce the strain on SAR teams and ensure that outdoor recreation remains a safe and enjoyable activity for all. Wilderness medical education is not just about responding to emergencies but also about preventing them through proper preparation and knowledge. ▶

ABOUT THE AUTHOR



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