CHAPTER 25
LEADERSHIP, TEAMWORK, AND COMMUNICATION

INTRODUCTION

In 1989, the center engine on a DC-10 passenger aircraft with 296 people on board malfunctioned over the Great Plains. Severed hydraulic lines crippled the pilot's ability to control the plane. The three-person crew's response to this crisis was a model of effective communication and teamwork. Working together, and using input from a pilot traveling as a passenger, they improvised a means of controlling the aircraft with the throttles.

Skilled aircrews, rescue teams, and wilderness leaders have found themselves in challenging situations in which communication, teamwork, and leadership are not optimum and things don't work out well. Aircraft have crashed because flight crews failed to perform a routine task or a team member didn't speak up to report a problem. Ineffective communication of snowpack and terrain observation has contributed to avalanche incidents. Maps and headlamps left behind have embarrassed wilderness travelers caught in approaching darkness. Experts have unclipped from their climbing anchors, avoiding a dangerous situation only when their observant partners noticed the error.

Human error is a prominent cause of many accidents and critical incidents in team activities. NASA estimates that 70 percent of airline accidents involve some degree of human error. The Teton Park rescue rangers estimate that human error contributes significantly to most backcountry and mountain incidents. When the airline industry realized that well-trained and technically proficient crews could crash airworthy aircraft because of inadequate crew communication or interaction, it developed a series of programs--known as crew resource management or human factors in aviation--to focus on teamwork, communication, and leadership. The DC-10 crew had this training, and they credit it with helping them manage their emergency. Law enforcement, the nuclear power industry, surgical teams, and wilderness rescue groups are beginning to recognize the impact of human factors in risk management.

If you're involved in a medical situation in the wilderness, you will work with the members of your expedition or with outside rescue groups. You may find yourself needing to work fast in an emergency, or work slowly to plan a wilderness evacuation. You

can use the concepts from crew resource management to enhance how you serve patients in the wilderness by combining medical and wilderness skills with effective leadership and teamwork.

NOLS LEADERSHIP SKILLS

Leadership at NOLS means timely, appropriate actions that guide and support your group to set and achieve realistic goals. Leadership is a complex blend of skills. For teaching purposes, we organize our leadership skills into seven groups.

1. Competence
2. Self-awareness
3. Judgment and decision making
4. Tolerance for adversity and uncertainty
5. Expedition behavior
6. Communication
7. Vision and action
8.

Crew resource management has identified a number of behaviors demonstrated by well-functioning teams, including:

1. Sharing knowledge and experience
2. Avoiding self-imposed workloads
3. Recognizing and resolving fatigue and work overloads
4. Using advocacy, feedback, and questioning
5. Preparing for contingencies
6. Building teamwork
7. Setting appropriate tone
8. Addressing conflict
9. Stating decisions clearly
10. Briefing effectively
11. Prioritizing and staying vigilant
12.

In a wilderness medical scenario, leadership may involve assessing and treating a patient; protecting him or her from the cold and rain or heat and dust; and calling for help. Or it may involve leading a litter carry or technical rescue in remote terrain. We can take each NOLS leadership skill area, weave in lessons from crew resource management, and discuss how they apply to leadership, teamwork, and communication in a wilderness medical situation.

COMPETENCE

Competence refers to proficiency in technical (outdoor and first aid) and group management skills. Ideally, your outdoor, first aid, and group management skills are sharp, and you train to keep them fresh. The level of technical skill needed is situationally dependent.

The leader must manage the group to capitalize on the abilities of the team. You do not need to be a master of group management or technical skills; however, you must have sufficient skill in both areas to fill the leadership role. For example, in a large rescue operation, a leader may not be the most experienced medical person. He or she can delegate this task. However, the leader needs information from the medical people to make decisions about the organization of the evacuation. The leader needs group management skills to ensure that communication, decision making, and leadership are effective.

Share Knowledge and Experience. In a crisis, it is common to utilize a leadership style with one person overtly leading the group. A directive leader, however, does not have to act in isolation. Ideally, the leader utilizes the team's skill and experience to make the best decisions. The leader both leads and teaches. He or she takes the initiative and time to make sure that pertinent details on the medical or evacuation plan are shared with team members. Techniques can be explained and practiced before use on the patient. This knowledge and communication strengthen the team. Everyone feels respected and engaged. Higher-quality decisions are more likely to be made.

SELF-AWARENESS

Self-aware leaders learn from their experiences by acknowledging their abilities and successes, facing their limitations, admitting their mistakes, seeking feedback from others, and working to understand themselves. They know themselves well enough to know their bad habits and their tendencies to slip into the procrastination syndrome, the hurry-up syndrome, the do-it-all syndrome, or the perfectionist syndrome. The following are some behaviors that help avert these patterns.

Avoid Self-Imposed Workloads. Avoid self-imposed workloads and stress. A lack of situational awareness when mountaineering (e.g., ignoring building afternoon thunderheads) may self-impose a hasty descent in rain, wind, and lightning. Conversely, watch for a self-imposed hurry-up syndrome--working fast when you don't need to, and missing details or failing to complete procedures. Plan ahead, and prepare for the night shift. Will you need to rest, feed people, or find fresh folks to help carry the litter?

Recognize and Resolve Fatigue. Actively plan and schedule for transition and rest periods. In the excitement of an emergency, you tend to ignore the effect of fatigue on your performance. Pilots and rescue personnel have unrealistic attitudes about their invulnerability to stress and fatigue. Coauthor Tod Schimelpfenig learned a valuable lesson when he was assigned to

the night shift on a multiday search. Not wanting to rest when others were working hard, he found something to do. The incident commander noticed this, confirmed that he was on his night shift, and told him in no uncertain terms, "It's your job to sleep. I need you at 100 percent tonight."

Recognize and Report Work Overloads. Avoid trying to fix everything yourself and taking on too many tasks. Leaders need to be able to step back and keep their eyes on the big picture. The culture of emergency services and outdoor leadership can drive a strong work ethic and a sense that it is inappropriate for the helper to ask for help. It's a measure of wisdom and maturity to be able to say, "I'm getting loaded up here. Can you take over?"

JUDGMENT AND DECISION MAKING

The best medical protocols and practices cannot anticipate every situation, especially in wilderness. Leaders have to use their judgment by blending their knowledge, experience, character, situational awareness, and the knowledge of other resources into a decision. Wilderness medical teams need leaders who make wise decisions, and who can choose from a variety of decision-making styles. Leaders help a group put vague or complex information into a framework that makes sense. Leaders, regardless of their role as the designated person-in-charge or a team member, seek clarity, question assumptions, solicit input, listen, and thoughtfully share their observations and impressions.

Use Situationally Appropriate Decision-Making Styles. Effective leaders balance authority and teamwork. They choose from a range of decision-making styles, knowing when each is situationally appropriate. They tell others what style they and/or the group will use to make a decision: directive, consultative, a group decision, or a decision delegated to another. As a general principle, they take stands and are directive as needed while working toward maximum team participation.

Use Appropriate Advocacy and Assertion. Foster an environment in which your team can speak up and state their information, until there is resolution and decision. There are sad tales of a team member or leader making a mistake and another team member having the correct information but not speaking up or asserting his or her perspective. For example: "I'm uncomfortable with your delay in starting an evacuation. John has a persistent high fever. I think we should take him to a doctor."

You may need to provide a forum for communicating views. As a leader, model advocacy by checking in with your team and

listening to their responses. "Are you getting enough direction from me about what you need to be doing? If anyone disagrees, please speak up."

TOLERANCE FOR ADVERSITY AND UNCERTAINTY

The common definition of wilderness medicine includes lengthy transport times, arduous conditions, inclement weather, and lack of resources--a test of any leader's tolerance for adversity and uncertainty. Wilderness medical leaders must be able to live with uncertainty, endure hard work and challenge, and make do or improvise what they lack.

Prepare for Contingencies. Weather will turn bad. Helicopters will be delayed. Radios will break. Stable patients will take turns for the worse. Spring snow that's firm and supports weight in the morning can become soggy pudding in the afternoon. Stay ahead of the curve by analyzing your plan over and over and asking, what if? What if one of us sprains an ankle? It's sunny and warm now, but can I keep the patient dry if it rains?

Get Ready for the Long Haul. It's easy to be focused during the initial stages of a crisis. However, in wilderness medicine, the rubber often meets the road when you move into the long hours of work in difficult conditions as you carry a litter or wait through a storm for the helicopter. Leaders understand this change. They stay connected to the group, keeping everyone informed and focused on the task. They make sure that team members are eating, drinking, and staying warm and dry. They keep the process moving and energy and enthusiasm high.

EXPEDITION BEHAVIOR

You may be on a wilderness expedition when you have to practice your wilderness medicine. You may be part of a rescue group sent into the wilderness. In both cases, the style of the expedition--the respect the team members show for one another and their work and the effectiveness of the communication within the group--is a critical component of the quality of the leadership. NOLS values good expedition behavior--a balance among teamwork, personal initiative, and responsibility. Team members take care of one another. They watch for fatigue and hazards, lend a helping hand without being asked, yet ask for help when they need it. They treat everyone with dignity and respect and support leadership while they work toward accomplishing the mission. Each person does his or her share, and more. They're honest and polite; they listen, yet they speak up and share their thoughts with the group. They're flexible, take responsibility, and work hard.

Build a Team Environment. Build an environment that acknowledges and respects the skills, experiences, and contributions of team members. Your team members should clearly understand their roles and tasks: "Sandy, thanks for staying alert for hazards. I'll stay at the head of the patient and monitor the airway and c-spine. Jack, finish the head-to- toe assessment and measure the vital signs. Jill, find a foam pad and sleeping bag for the patient."
Establish a team concept and environment for open communication. If there is an urgent need for action, you may need to focus someone who is rambling or talking about a nonpertinent issue. In general, listen with patience, do not interrupt or "talk over," and do not rush through a discussion. Include as many team members as possible in the communication flow: brief and update them as needed on weather, delays, plans, and schedules. Students in outdoor education groups, clients in guided trips, helpful bystanders, and local rescue personnel may all be part of your team.

Set an Appropriate Tone to the Situation. Set an appropriate tone of urgency. If the situation isn't dire, you may need to slow down your team. "Folks, let's take it easy. We've finished the assessment, and the scene is safe. Next we have to splint Bill's fractured leg, then log-roll him onto a sleeping bag and treat for shock. Let's take it one step at a time." Conversely, you may have to remind them to keep conversation and attention on the situation at hand. "Let's worry about dinner later. Right now, let's RICE and evaluate this ankle sprain." Leaders ensure that non-operational factors such as social interaction or conversation do not interfere with necessary tasks (e.g., small talk does not interfere with climbing signals).

Address Conflict. Disagreements may occur. Personalities may clash. Unresolved conflicts can impede communication and cooperation and contribute to accidents. The leader may need to step in, identify the issue, and ask the team to put aside interpersonal differences until the emergency is over, addressing only immediate issues that are impeding progress. Later, when the crisis has passed, it's important to debrief these issues and emotions, work to resolve the conflict, and increase the team's ability to deal with its differences. A conflict during a crisis often means that expectations, roles, and responsibilities are unclear. People don't know what is expected of them or others, are missing information, or don't have a sense of the big picture. It's the leader's job to clarify structure and expectations.

COMMUNICATION

Effective leaders master communication skills. They have the courage to state what they think, feel, and want and to listen with openness to different viewpoints. Leaders keep their groups informed and give clear, usable, and timely feedback. They provide a safe forum where each group member can discuss ideas and contribute to the decision-making process.

Clearly State and Acknowledge Decisions. Clearly state and acknowledge operational decisions to team members. Restate communications, clarify, and question to see if everyone understands: "We're going to rig an anchor here and use it to belay the patient to the ground. Let's go around the group and have everyone say what they will do."

Effective Inquiry: Ask and Listen. Foster an environment where questions are asked regarding actions and decisions. If people do not understand, they should be encouraged to speak up, to ask for clarification of unclear instructions or confusing or uncertain situations. For example:
I don't understand this technique. . . . I'm not sure what you want me to do. . . . Why are we putting a tourniquet on this snakebite wound? I thought tourniquets weren't indicated for snakebite. . . . You said you can't hear breath sounds. Do you mean it's too noisy to listen or the patient is not breathing?

Give and Accept Appropriate Feedback. Give positive and negative performance feedback at appropriate times. Make it a positive learning experience for the whole crew--feedback must be specific to the issue at hand, objective, based on observable behavior, and given with respect and politeness. Likewise, accept feedback objectively and non-defensively. Inhibiting communication by having an unreceptive response to feedback has played a role in accidents.

VISION AND ACTION

Leaders assure that the group knows the mission. They keep team members informed about the plan and each person's task. They are decisive when the situation requires decisiveness and patient when it is appropriate to wait or gather more information. They are forward looking and flexible, revising the plan as necessary.

Workload Management: State Clear Expectations of Roles and Responsibilities. Make clear roles, responsibilities, and the big picture: "I'll keep myself visible and in the open in case the rest of the group comes by. John, you're in charge of Fred and Sally. Scout for the best trail through these boulders back to camp. Check back with me before a half hour is up. Allison,

you're in charge of patient care. Stay with the patient and monitor vitals. Blow your whistle three times if you need me." A team works well when people know what they have to do and have a sense of where this fits into the big picture. As well, this prevents people from doing unnecessary tasks or getting in one another's way. Let others know what you expect of them, and what they can expect from you. "Folks, let's splint this arm first, then move the patient to the litter."

Provide adequate time for completion of tasks. Half-completed tasks--for example, flaps not adjusted on takeoff--have caused aircraft accidents. Backboard straps left loose when a team stops one task to start another are a real possibility on an emergency scene. Identify your key tasks, tell people what needs to be done, allow enough time, and complete each task--one by one.

Brief Effectively. Briefings are clear, complete, and interesting and address team coordination and planning for potential problems. The team puts aside social conversation or low-priority tasks, pays attention, and asks clarifying questions. If it's an urgent situation, you may need to be concise. Expectations are set for handling possible deviations from normal operations or unusual conditions. For example: "We sent four people walking to the roadhead to ask for help carrying Pete. They should arrive tonight. If we don't hear from them by tomorrow noon, we'll send a second team."

Stay Vigilant during Both High and Low Workloads. Look around, check details, and check in with people when you're busy and when workload is low. It's easy to focus your attention when you're on duty and in the middle of the event. It's harder in the routine situation or when the initial excitement ebbs and the work of a long but apparently routine situation sets in. Accidents can happen when you overlook the obvious, missing the moment when you could have intervened or prevented a problem. How many of us have walked away from a rest break without looking around and noticing the water bottle and map left on the rock?

Prioritize Secondary Tasks. Prioritize secondary tasks to allow sufficient resources for dealing effectively with the important tasks. Talking about whether you will be able to continue your trip in the face of this illness may be the secondary task, the distraction. Feeding your team, having them gather personal gear, and preparing camp may be the primary tasks. Effective leaders keep their teams' eyes on the ball.

A WILDERNESS SCENARIO

Cindy, the designated leader, and her coleaders Pete, Sandy, and Juan were leading ten teenagers on a ski trip. They planned to ski across the pass from Arapaho Basin to Dodge Creek. The weather was warm and blustery, with alternating periods of sun and clouds. They moved as one big group.

Shortly after noon, as the group approached the top of the pass, the weather deteriorated into whiteout conditions. The leaders, concerned about a possible cliff band on the descent route, searched for almost an hour for a route off the pass. The students, in what to them was an exposed, cold, confusing, and new situation, were left alone. Standing around, the students became frightened, wet, and cold.

Cindy told Pete and Sandy to continue to try to find a route off the saddle, but to return in 20 minutes, regardless of their success. Cindy and Juan returned to the group to find several students excitedly pointing out two hypothermic students sitting hunched over on their packs. "They're really cold. We need to get out of here!" Juan began to pull out sleeping bags and tarps to treat the hypothermia. Cindy said, "Juan, first check everyone out. Let's be sure they're hypothermic."

A few minutes later, Juan reported that although cold and scared, everyone could walk and was still alert and oriented. Their hands and feet were still warm. "OK," said Cindy, "let's get everyone together and get extra layers on people. Have them eat some trail food. Have the cold people jog in place. We need to wait for Pete and Sandy before we descend the slope."

Pete returned shortly and said that he had found a good route to the saddle and a decent campsite in the trees. Sandy wanted to dig in on the pass, arguing that people were tired and the descent would take too long. Cindy listened and also asked Pete what he thought. Pete said, "People still have energy. Let's descend to better shelter before it's too late."

Cindy said, "I agree, that's what we'll do--descend to the trees in the saddle."

Cindy clarified details on the route and the campsite, checking the map and Pete's compass bearing. They pulled Juan aside for a moment and told him this information and the plan--emphasizing the need to stay together and planning what to do if someone was really slow on the descent. Cindy then briefed the entire group. "Let's move. Pete will lead. Juan will be tail person. We will stay close together and not lose sight of each other. The

weather is nasty, but we can deal with it. We're doing fine, and we will be in camp shortly."

The group descended to the saddle slowly but without incident and quickly rigged tarps. Within the hour the teenagers were enjoying hot drinks and stories of their adventure.

This incident has several examples of effective leadership and crew management:

1. Appropriate decision-making style. Cindy was directive when needed, and consulted with Pete, Sandy, and Juan before making the plan to descend the slope.
2. Effective inquiry. Cindy and Juan checked the report of hypothermia and thus avoided acting on misinformation. Cindy confirmed the route, compass bearing, and map with Pete.
3. Effective briefing. Everyone was told the plan before the descent. Roles and expectations were clear: Pete in front, Juan in back, everyone staying together.
4. Good situational awareness and an appropriate tone. The leaders knew that they had a challenge but not an emergency.
5. Appropriate advocacy. Sandy spoke up with her plan to stay on the pass, then deferred to the leader when her idea had been discussed.
6. Good preparation for contingencies. Layers and food were accessible, and the group was kept together. The leaders talked through possible problems on the descent.
7. Workloads were managed and tasks prioritized. Everyone stayed together. No one else became lost or cold during the descent to camp.

FINAL THOUGHTS

You may find yourself alone with a patient or in a small team performing wilderness first aid within a larger team of local rescue resources. The quality of your leadership, teamwork, and communication will determine how well you work within your team and with others. People working together add redundancy and synergism; one person may notice something that escapes the attention of others, and everyone can contribute knowledge and experience to the decision-making process. The team members must be effective advocates, and the leader must be an effective listener; multiple perspectives on an event are useless unless the information is shared. As well, we need to understand the impact of fatigue, the distraction of multiple tasks, and the value of effective briefing. Teamwork is enhanced, and many problems averted, when people are clear on their roles, responsibilities, and expectations. Effective leadership, teamwork, and communication are characteristics that lead to excellence.

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