



CLOSE CALLS

By Billy Goldfeder

Mayday Reality Check

Studies highlight the situations in which firefighters find themselves mitigating emergencies

I reached out to Chief (ret.) Don Abbott, my longtime friend and North America's resident mayday expert, to get the most recent data from Project Mayday (projectmayday.net). Abbott and his team study maydays so those firefighters' experiences become our lessons to learn. The latest facts are critical for us all to understand, train and prepare for these emergency events.

In addition to some of the Project Mayday findings—typically presented as a percentage of occurrence—I offer in this article some key points and questions for departments to consider. Understand that these are not *career* maydays nor are they *volunteer* maydays. These are *firefighter* maydays. Maydays occur in all types of departments to all types of members, regardless of being paid or not, elected or appointed. And if you are a fire officer, the responsibility of being in command is a huge undertaking, and the related practical training must be initial and ongoing.

Trigger phrases

In listening to more than 5,000 audio recordings from fireground scenes—repeated numerous times by a group of firefighters and fire officers, Abbott and his team identified 16 communication phrases that were heard more than 87 percent of the time in mayday incidents. In other words, if you hear one of these phrases, it should get everyone's attention, and a combination of these phrases should alert the incident commander (IC) that a



While searching for residents, two firefighters became trapped and called a mayday. One firefighter came down the ground ladder head first, and the second firefighter jumped. Photo by Daniel Jasina

mayday may be inevitable:

1. "We have zero-visibility conditions" – 41 percent
2. "We have fire above our heads" – 82 percent
3. "We have fire below us" – 57 percent
4. "We need more line, extend our line" – 34 percent
5. "We have not found the seat of the fire" – 66 percent
6. "We are running out of air" (low-air alarm in background) – 71 percent
7. "This is a hoarder house" – 56 percent
8. "We have had a flashover" – 35 percent
9. "We have had a roof collapse" – 33 percent
10. "We have lost multiple windows" – 27 percent
11. "It's really getting hot in here, we are backing out" – 45 percent
12. "Our exit has been blocked" – 20 percent
13. "We are sending a firefighter out with a problem" – 23 percent
14. "We have a hole/or floor collapse" – 57 percent
15. "Command has lost communications with multiple crews" – 18 percent
16. "We have a lot of sprinkler heads going off in here" – 64 percent

These phrases are critical to identifying a problem, often before it happens. One of the Project Mayday findings that may underscore this best is that 37 percent of all mayday victims did not transmit the mayday when they should have.

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For additional details about the trigger phrases, read Abbott's feature "Communication Clues" at firehouse.com/12387578.

Personnel involved

Many chiefs interviewed stated that they could have predicted the crew having the mayday based on the number of crewmembers with "move-ups," working out of assignment, and overtime/staffing issues, in other words, being outside the crew that normally worked together.

Crewmember having maydays

- Move-up company officer (normally an engineer but filling in as an officer) – 13 percent
- Move-up engineer (normally a firefighter but filling in as an engineer) – 25 percent
- Firefighter working overtime – 31 percent
- Crew running short on staffing – 32 percent

What training and qualifications do your personnel have when working "out of position"? How often do your driver/engineers train as part of a firefighting crew?

Crew size

The size of the crew calling the mayday was represented in the Project Mayday studies as follows:

- 2-person crew – 27 percent
- 3-person crew – 39 percent
- 4-person crew – 34 percent

Communication and radios

According to Project Mayday, 36 percent of mayday transmissions were missed on the first call by anyone on the fireground or dispatch. Most missed maydays were called on portable radios, and most radios were not fully charged. Further, it was determined that only 53 percent of the agencies actually followed their communications-related standard operating procedures (SOPs)/department policies during the event.

Some other communications-related findings from the Project Mayday studies:

- Emergency activation (EA) buttons were activated in 32 percent of all maydays
- 74 percent of mayday victims did not completely understand how their radio's EA button system worked and what functions/problems this may create
- 61 percent of fire departments change channels for a mayday

Only 53 percent of the agencies actually followed their communications-related SOPs/department policies during the mayday event.

Considering the number of missed mayday calls, it's important that communications be as clear as possible, with specific phrasing. For example, instead of saying "Engine 16," say "Engine one-six," and instead of saying "A side," say "Alpha side." Some additional tips:

- Keep radio cables from portable to lapel mic inside the coat or covered with a sleeve
- Clean lapel mics regularly
- Portable radios should be hard-charged at least every 48 hours
- Portable radio batteries should be replaced every 3 years
- All radios should be set up so that if you turn the channel selector all the way right or left, it is on the same channel

You'll also want to consider these questions: What is your department's mayday policy related to the above factors, including daily radio maintenance and checks, channels used, radio control, dispatch involvement, responsibility of the non-mayday companies on the fireground, radio discipline, and command managing that mayday? Do you train and therefore operate based upon your written policies, or are your policies one thing but how you operate on the fireground another thing? Does your department have a battery-management tracking system?

Mayday callers report

The experience of the mayday callers themselves cannot go unrecognized. Firefighters who called maydays reported the following:

- Command offered reassurance/instructions – 63 percent
- Frustration due to too much radio traffic – 47 percent
- Not turning on/off PASS unit or muffling it, making communications difficult – 57 percent



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- Confidence in the IC (93 percent); company officer (84 percent) and rapid-intervention team (RIT, 20 percent)

Additionally, mayday-callers reported an inability to get radio air time after transmitting the mayday. The studies also showed an average time of approximately 79 seconds from the mayday transmission to the point the call was answered or acknowledged.

Radio discipline is a big deal. Many departments have adopted the policy of “no good news” on the radio. In other words, there is no need to advise anyone if you have water on the fire; after all, that’s what you were told to do. On the other hand, if you are *not* making progress and things are getting worse, that is a valid transmission. As we have shared in this column before, a good term to remember is DIM-WIT: “Does It Matter What I’m Transmitting?” If not, don’t transmit.

Further, can your dispatchers monitor and transmit on the fireground channels throughout the entire incident? Are there policies related to what the dispatchers are

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expected to do on those channels? When training, are your dispatchers training with you, on the radio, as they would operate in a real emergency?

Mayday causes and survival

Firefighters involved in maydays reported the following contributing factors to their mayday:

- Situational awareness – 77 percent
- Disorientation – 65 percent
- Decision-making – 64 percent
- Individual actions – 71 percent

- Communications – 36 percent
- Not enough resources – 39 percent
- Unsafe acts – 65 percent

Additionally, firefighters involved in maydays reported the following methods for how they survived the incident:

- Self-rescue – 36 percent
- Assisted by their own crew – 26 percent
- Assisted by another interior crew – 25 percent
- RIT rescue – 7 percent
- Other – 6 percent

Although RIT affected a rescue in only 7 percent of mayday incidents studied, their presence at the scene is important, as it provides a dedicated team to respond if teams already in the structure are unable to assist. In the cases studied:

- RIT had been established prior to the IC’s arrival – 15 percent
- IC established a RIT – 89 percent
- When first RIT was activated, second RIT was immediately established – 18 percent

A key finding from Project Mayday: One out of every nine RITs that is put to work to conduct a rescue has their own mayday. It was determined that in many cases, the RIT went in too quickly without understanding the entire situation, most often because the IC did not define the actual problem prior to RIT’s entry.

Are all firefighters who respond to your fires fully qualified to be rapid intervention? What policy identifies who can serve in a RIT function? The RIT should be your best crew on the scene. Nobody wants to depend on crewmembers who are out of shape, have poor training habits, or are just lazy.

Command issues

Strong and effective command is vital in mayday situations. Following are Project Mayday findings related to the experience level of those in positions of command during mayday events:

- Average years of service – 16.7 years
- Average years of IC experience – 6.6 years
- Initial training time ICs receive related to running an incident – 4 hours
- Continued in-service training annually for IC – 3 hours

Following are general findings related to incident command at mayday events:

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- Average response time for a chief to arrive on scene and assume command – 6 minutes, 39 seconds
- Responding chief could hear all radio traffic while responding – 76 percent
- Tactical priorities were established and announced by first-arriving unit – 64 percent
- IC operated alone in command vehicle without an aid – 77 percent
- IC reviewed or evaluated their incident action plan during the incident prior to the mayday – 67 percent
- IC used a formal tactical worksheet – 64 percent
- Tactical benchmarks were transmitted during the fire – 73 percent (face to face: 22 percent; radio: 82 percent)
- Safety officer assigned for each incident – 22 percent
- Automatic aid or mutual aid in use at the time of the mayday – 46 percent
- IC served as a mutual-aid chief handling a mayday – 24 percent
- No accountability management in operation at the time of the mayday – 68 percent

Additionally, Project Mayday found a nearly three-way split among the command options on scene:

- IC ran both command and mayday rescue operations – 38 percent
- IC ran the fire but was able to pass the rescue to another officer – 29 percent
- IC ran mayday rescue and passed fire operations – 35 percent

Some questions to consider: What is your area or regional policy for the initial and ongoing training to develop qualifications for an IC? How often are those who *may someday* be in command re-trained or re-certified as a fire commander? Is everyone from the chief of department to the newest company officer trained and qualified, at least annually in a classroom as well as during hands-on training programs, in addition to their field firefighting experience?

After the mayday

Learning from emergency incidents is vital to reducing future occurrences. Project Mayday found the following related to actions after a mayday incident:

- Scene debriefing – 74 percent
- On-site critique – 52 percent
- Investigation into mayday/incident – 34 percent
- Policies reviewed – 74 percent
- Policies changed – 36 percent
- Training changed – 56 percent

Final thoughts

Here we've covered the latest findings related to *what actually happened* during mayday incidents. Some issues that still need further research specific to firefighter survival include the impact of several additional factors: sleep, energy drinks, fitness, behavioral health, and training specific to flow path.

Abbott and his team continue to gather more data from those who have been in mayday scenarios and those who were in command at the time. It is incumbent upon all of us to use this information at our own departments, so we learn from what our brothers and sisters have already experienced. ■

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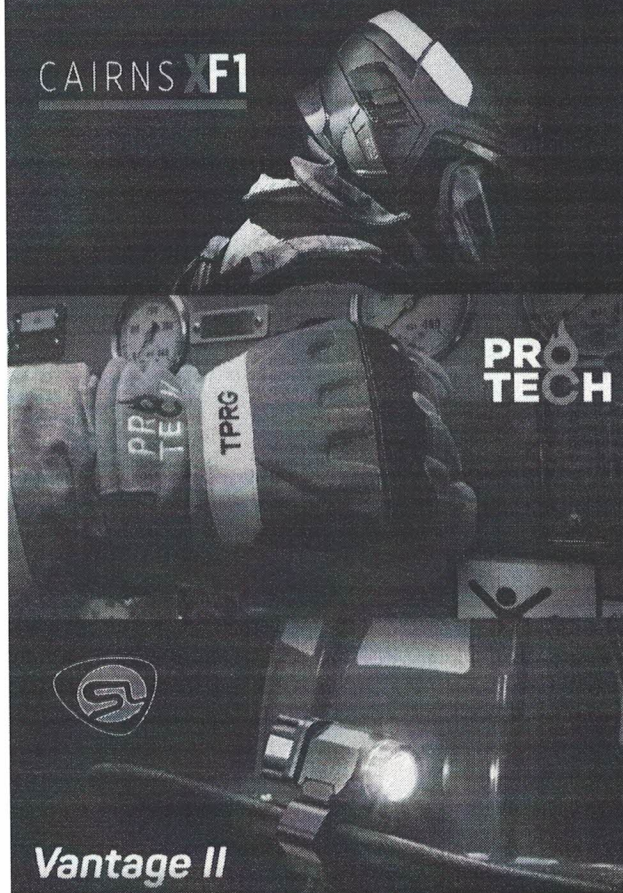
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