Fire Service 101 for Finance Officers

BY J. DAVID FEICHTNER, DAVID DONOHUE, AND JOHN RUKAVINA

GFOA and the International Association of Fire Chiefs (IAFC) are working together to develop resources that will promote better collaboration between finance officers and fire chiefs. Below, three IAFC members—J. David Feichtner, David Donohue, and John Rukavina—answer our budgeting questions.

How many firefighters are needed to fight the typical structure fire?

Three organizations have studied the question of "how many firefighters are enough?"

The organization most closely associated with setting standards for fire departments is the Insurance Services Office (ISO). Those standards are used by member fire insurance companies to set fire insurance rates. It's interesting to note that the "ISO Grading Schedule" was never intended for use by local governments or fire departments to measure their level of service, but, to the extent that the ISO standards were available, units of government and fire departments did use them.

Second in seniority to ISO is the National Fire Protection Association (NFPA), a national organization of people, businesses, fire departments, and any other organization that have an interest in fire safety. They come together in committees to develop consensus codes and standards for the fire safety community to use—including government agencies.

Some NFPA standards are adopted as law by state and local governments—NFPA's model fire code, for example. But far more often, NFPA codes represent what its members agree on as "state of the art" in fire safety and protection. While these codes aren't law, they represent the "industry standard" that can serve as evidence of level of effort.

NFPA 1710 and 1720 are the most relevant examples. These standards concern personnel deployment and response times to fires and medical emergencies. 1710 applies to career/full-time fire departments, and 1720 applies to volunteer fire departments. NFPA has developed a presentation for local government officials about 1710 and 1720.

The National Institute of Standards and Testing (NIST), part of the U.S. Department of Commerce, has conducted field studies about the relationship between firefighter crew size and firefighting effectiveness, using actual firefighting crews fighting fire in actual structures. The NIST study, published as "Report on Residential Fireground Field Experiments," is the first to quantify the effects of crew sizes and arrival times on the fire service's lifesaving and firefighting operations for residential fires. NIST conducted a similar study of firefighting in high rise structures.

These analyses form a significant part of the Center for Public Safety Excellence Commission on Fire Accreditation International's voluntary fire department accreditation program.

The Commission on Fire Association International (CFAI) provides to interested fire departments the accreditation model, various accreditation publications and trainings, and access to experienced peer assessors. The fire department seeking accreditation uses CFAI tools to perform a self-assessment. A listing of accredited fire departments is available on the CPSE website at cpse.org. You might find that a neighboring department is accredited and can serve as a resource.

As communities grow, is there a point where an all-volunteer fire department should include full-time firefighters, or transition to a "career" department?

There are generally three indicators that it might be time to add career firefighters to a volunteer fire department if the answer to one or more of these is no.

1. Is the department meeting its response time goals?
2. Is the department meeting its on-scene firefighter mobilization goals (the time it takes to mobilize X number of firefighters at the fire scene)?
3. Is the department meeting its volunteer recruitment goals?

These questions can't be answered unless the department has response-time, on-scene-mobilization, and recruitment goals. NFPA 1720 is a helpful resource for this.

Please see **gfoa.org/fireservice101** for links to all the resources referenced in this article.

See **gfoa.org/finance-fire-colab** for information about GFOA's Finance + Fire Collaboration.

Do all fire departments provide teams like hazardous material response, technical rescue or emergency medical services (EMS)?

Because the critical nature of medical emergency response time is widely recognized, and because fire stations are usually more widely dispersed than ambulance stations, most U.S. fire departments provide emergency medical services (EMS) at some level, from response to EMS events that an ambulance service has designated an "emergency" (red-lights-and-siren-response) to responding to all EMS events.

The level of fire department service ranges from two firefighter-EMTs responding in a small emergency vehicle (like a pickup truck) to four firefighters (e.g., two EMTs and two paramedics) responding in an ambulance to combinations of responses. The consensus minimum level of EMS training for firefighter responders is EMT.

Please explain how the 56-hour workweek works.

According to one review, "the 24/48 schedules (or equivalent) with a 56-hour work week is generally the most cost-effective way to provide 24/7 coverage. Once the base level services have been established and adopted, though, increasing call demand can be handled effectively by introducing 12-hour shifts. In other words, if call volume has increased by 20 percent, and the majority of that 20 percent occurs during the day, then it is more cost effective to purchase only the peak demand time where the growth has occurred" (Steven Knight, "Full time, part time, overtime: How to fill fire department vacancies," FireRescue1, March 12, 2019).

The relationship between work shift length and firefighter health and safety can be significant on a case-by-case basis in stations or departments with high volumes of nighttime fire and EMS responses. There is research that examines the health and safety effects of 24-hour shifts for medical interns, and there is no comparable research on the relationship between the 24-hour firefighter workday schedule and firefighter health and safety generally.

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Other work schedule options include an alternating 10-hour day/14-hour night/4 day off (48 hours/week average); 12-hour shifts (42.5 hours/week average); and a 48/96 24-hour workday schedule (again averaging 56 hours per week).

What is our budgetary responsibility for cancer presumption?

Some states have cancer presumption legislation and some don't, so you'll need to familiarize yourself with your state's legislation. There is no federal yet, so states have all put their own spin on it from requirements to prove, smoking cessation, policies and procedures about gear cleaning, clean cab initiatives, and so on.

What is "community risk reduction"?

Community risk reduction (CRR) is a systematic process to help communities find out what their fire risks are, and to develop plans to reduce the risks viewed as high priority. It emphasizes the importance of enlisting the help of community agencies and organizations in conducting a community risk assessment (CRA), developing a CRR plan, implementing the plan, continually measuring the effectiveness/outcomes, and revising the plan accordingly, with the overarching goal of reducing fire incidence, fire injuries and deaths, and fire loss.

Vision 20/20 is an organization created with the support of the Institution of Fire Engineers-USA. It has tasked itself with promoting CRR and providing CRR training and resources to fire departments and local government officials. Information on Vision 20/20 and its training and educational opportunities is available online.

NFPA has developed a CRR standard that fire departments and interested other parties can use: NFPA 1300, *Standard on Community Risk Assessment and Community Risk Reduction Plan Development*. The International Association of Fire Chiefs (IAFCC) has also taken a strong interest in community risk reduction. IAFC will hold its first "Community Risk Reduction Leadership Conference in May 2024.

With some governments changing from defined benefit to defined contribution retirement plans, do you think this will hurt recruiting? What else can be done to recruit and develop firefighters?

Uniform allowances, increased 401k matching, retirement health savings, changes to scheduling, and more vacation and comp time.

How can Assistance to Firefighters Grant Program (AFG), Staffing for Adequate Fire and Emergency Response (SAFER), and other grants help fund budget shortfalls?

These answers can be found on the grants web pages. AFG funds things from equipment, to physicals, to vehicles. SAFER funds full- and part-time employees for differing years and amounts. You can start getting an idea of the many other grants available by simply doing an online search.

If we wanted to get into transporting patients to the nearest appropriate medical facilities, what are some shorter- and longer-term issues to consider?

Transporting is a revenue stream that doesn't fit all services. Private EMS is still a great option in many cases. If not, fire departments may be called upon to fill the gap.

Perhaps the first issue that needs to be overcome is staffing. There is a national paramedic shortage that has left both public and private EMS agencies struggling to fill slots. The reasons for this include the loss of defined benefit pensions, the amount of time and effort that goes into an individual's initial paramedic education, lower pay, the difficulty of the national paramedic exam, and so on.

Then, if you can get the medics you need, then you have to worry about retention. And after that, depending on where your hospitals are, crews could be gone transporting for extended periods of time. This is exacerbated by nursing shortages in some areas, which results in extended turnaround times at the hospitals.

You also need a good relationship with a billing company so you can get paid for the calls. Depending on your service area, reimbursements could be anywhere from 40 to 80 percent. Knowing that will inform you if it is something EMS transport you want to get it involved in.

Why is training for firefighters so expensive?

The training is expensive because it is extensive. Hundreds of hours go into fire training. Emergency Medical Response/ Emergency Medical Technician/ paramedic can be at least 1,500 hours of training. The necessary gear and equipment isn't cheap, either, and the required physicals also get expensive.

Is there anything that can be done to reduce costs for fire service?

Perhaps the easiest answer here is group purchasing, which is effective not only for apparatus but for medical supplies, janitorial supplies, and other operating supplies.

We need to get better at budgeting as well. We simply cannot assume broad brush strokes like "cut 10 percent across the board" will be effective. We need to be better at statistics and understanding that somethings can be cut at 10 percent, while others can be cut by more than that, and some can't be cut at all. If we don't educate ourselves about the basic statistical methods for more accurate forecasting—to understand what the data is telling us—we won't get any better.

Why are fire trucks so expensive? Are there opportunities to purchase equipment in larger quantities using joint procurement methods?

Fire trucks are expensive because they generally aren't built on an assembly line. Fire apparatus manufacturers don't operate on the scale of a Ford or GM, so the labor costs of assembling a fire truck are relatively high. Costs can go down if they build a fire truck on a commercial truck chassis, but what is mounted on the chassis (truck body, pump, etc.) is mounted one vehicle at a time.

Fire departments can save some money by joining together for a purchase of multiple fire trucks. That way, design costs are spread over all the vehicles, and there may be savings associated with using the same pump, body configuration, etc.

Although the ISO/Verisk (a firm that provides risk analytics) examines the age and condition of fire apparatus as part of its evaluation of a community for fire insurance rating purposes, there is no magic "time-to-replace" formula.

Why are maintenance expenses for fire equipment so expensive?

There is a backlog of nearly 3 years on fire truck orders, and of 24 to 36 months for ambulances. This is because of several issues, not the least of which is that parts some can't be sourced from overseas, or if they can, there are long wait times. There are fewer and fewer truck manufacturers as well. Long-standing companies like American LaFrance are being bought out and eliminated, so the pool we can pick from gets smaller and smaller.

This is exacerbated by the lack of qualified mechanics to work on fire trucks. If one breaks or goes out of service, and you don't have your own department of publics that can work on them, then you are paying a lot and waiting even longer for repairs.

Is it typical for equipment to require annual testing?

Every piece of our equipment requires testing. From yearly flow testing of the self-contained breathing apparatus, to hydrostatic testing of the air bottles, to gear inspection and repair that must be done every year (gear is only good for 7 years if you don't do the maintenance, while it can last for up to 10 if you do the maintenance), to Department of Transportation inspection of ambulances, and preventative maintenance of vehicles, jaws of life equipment—the list goes on. These codes and standards are from the Occupational Safety and Health Administration (OSHA), NFPA, and other code-making bodies.

Is this expensive yearly testing and preventative maintenance schedules required by OSHA or another code/ standard?

Yes, and the particular code-making body will depend on what the equipment is.