



CHIEF'S FILE CABINET

Ronny J. Coleman

Keeping Score; Winners and Losers

What did you do on New Year's Day in 1993? If you were like millions of others, you found yourself either attending or watching a football game. In actuality, it was very difficult to avoid the football games. They were on practically every channel almost all day.

Like many of you, I found myself sitting in front of a television set watching one such game. In our family my wife is the football fanatic and I am the football widower. However, January 1 seems like a good day to do little of nothing. Therefore, I started paying attention to what was happening on the field.

I found the announcers most fascinating. At the end of practically every play they were able to give you statistical significance of what just happened. If a runner made so many yards and passed a certain point they could tell that this individual had achieved an all-time record. If a quarterback threw a pass which was caught by a receiver they could tell you the number of times, in the collective experience of both men, they had teamed together to make successful pass completion. During the halftime there was a complete review of the statistics of each side as to whether they were successful in scoring touchdowns or on the losing side of the proposition.

I began to contrast this statistical cornucopia with a recent conversation I had regarding fire statistics in the United States. The conversation centered around basic statistics such as the number of fire departments, number of paid professional firefighters, the number of volunteers, the number of structure fires, etc. During the discussion, it was noted by one individual that almost all the statistics used by the fire service in the United States are classified as "estimates". The implication is that these statistics are not particularly scientific. They are not. In spite of the best efforts of our national fire protection organizations and the United States Fire Administration in bringing some structure to the collecting of information regarding the American fire service, one of the most ringing indictments of 'America Burning' still remains true. We simply do not know, with a great deal of accuracy, what fire statistics are relevant.

Why? How is it as we near the end of this century, after almost 100 years of providing fire protection in an organized fashion, that we have absolutely no single source of information about the fire service? It's not as if people haven't tried. We have the National Fire Information Council, which has done an extraordinary job over the last few decades of trying to raise the level of consciousness of fire protection statistics. Many, if not most of the states, have now adopted statewide reporting systems on fires and fire losses but they stop short of collecting information other than what they are mandated to report.

If we compared state of the art in fire statistics to the national census, statistical data collection is primitive and has huge gaps of information. One of the reasons can be found in the fire station itself.



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The same person who can spout off the statistics of a baseball team or football team with a great deal of accuracy often resents filling out common fire reporting documents. They discount them as being irrelevant, immaterial, “paperwork”, etc., as if they made no significant contribution to the profession as a whole. If statisticians in the NFL felt that way about football teams, the only thing we would have to talk about in between plays would be the shenanigans of the onlookers.

The collection of fire service statistics is highly dependent upon the activities of local fire protection agencies. Those agencies that prize statistics and do a good job of organizing their information are few and far between. Instead, the act of collecting statistics is often considered to be an afterthought as well as being something beneath the dignity of the average member of the organization.

If we accept the fact that the collection of fire service statistics begins with local government, the next step in the evolution of adequate statistics is the level of cooperation among governments to develop meaningful databases. If we were going to compare this to a sporting event it would be like individual teams keeping statistics as they report them to the league, which they swear their allegiance to. Cooperation and coordination of the collection of information is not a sometime thing. It has to have continuity as well as consistency in order for the information to ultimately be meaningful.

This leads to our next stage of the use of statistics - comparison. The fire service has historically shied away from comparisons. We often state that it is virtually impossible to compare the fire service statistics from one community to another because of all the variables. Well, once again using sporting analogies it is probably true you cannot use the statistics from a minor league team to support the behavior of an individual as they go into the big leagues. Yet, the sporting industry has realized it is appropriate to collect certain statistics even you are playing in the little leagues.

The question becomes not one of are we drawing comparisons, but what kind of a league are we playing in? Several years ago, the Research Triangle Institute tried to make a cut at this particular problem. They came up with a series of formulas that dealt with measuring the level of effectiveness of firefighting agencies. This column cannot address all the aspects of that study. As a matter of fact, there are certain statistics that the only way you can improve would be to have more fires. We're not after that either.

However, one point still remains. In order for statistics to be relevant, one has to compare apples against apples and oranges against oranges. The fire service statisticians in the United States have never attempted to draw comparisons from community to community based on some other demographic parameters that tend to discriminate between small urban communities and large metropolitan communities.

The last element of statistical comparisons has to do with championships. At the end of every athletic season, someone is declared as being the winner. The fire service has made some attempts to



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accomplish this through the recognition of individual fire departments that have achieved specific program advances. Who is the true champion of the fire service? No one really knows because we can't declare that without going back through the previous four or five steps.

We must recognize that championships are often lost when people fail to perform up to their previous season's performance levels. There is a tendency to regard certain benchmarks as being recognition of levels of professionalism in the fire service that are not based on performance at all. For example, many departments are labeled with a reputation as a direct result of a single large loss fire. In the event that the fire was managed well but burned the building down nonetheless, the department may have a reputation of being a good department in spite of its losses. Another department may mismanage an emergency but out of a fluke of circumstances may not end up burning the building down and still have the reputation of being a bad firefighting agency.

Of course, there are some real problems in comparing a firefighting agency against an athletic team. For example, if a team loses on any given weekend, they may still get a chance to come back and play the game next week. The consequences of failure on the athletic field may be demoralizing to the individual but seldom do they result in the losses of life and property. Not so with the fire service. Our ability to provide predictable, quality level service to our communities is often measured in the individual losses experienced by that community.

The comparison also sometimes fails the test of credibility because, after all, athletic teams often change their team members from year to year and that is what results in different kinds of championship configurations. The fire service, on the other hand, is a relatively stable organization in which the individuals tend to enter, mature and exit after an extended period of time with a minimum amount of reshuffling of the deck. When we look at this part of the analogy between sports and the fire service it seems like we should be even further ahead in the statistical analysis than they are because, after all, we are truly a long-term team effort.

Of course, one of the last ways in which this analogy suffers a little is that very seldom do our wins make the front cover of the newspaper. Almost always it is our losses. How many sporting teams do you know which continue to attract a large crowd into the stadium every Sunday if the only thing that was ever printed about them was the major losses?

To draw to a close this discussion of statistical comparisons, there was another thing that really impressed me about the football teams. As the commentators finished up the games they started talking about next week's games. They were beginning to predict who would be the winners next time. In almost all cases, they were able to justify their choices as to who ought to be the winners based on the statistical performance of the previous games. In other words, people who tend to win a lot tend to win even more in the future.



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In the fire service, we need to keep better score so we can not only determine if we are winning, but rather whether or not we will continue winning. If we can identify some of the things we are doing that is protecting the economy and the quality of life in our communities, and clearly establish in the minds of policy makers that these activities must be sustained in order to continue being a winner, perhaps this information can serve to continue justifying why fire protection programs are necessary in a community. If we continue to treat statistics as if they are an inconvenience, the lack of this information will ultimately result in other statistics being substituted in their stead.

I recall a city manager referring to a fire department as being nonproductive because we were sitting in a firehouse waiting for a fire. When I pointed out to him that police officers could best be classified as nonproductive when they are patrolling looking for crime, he responded with the argument that a patrol car is a deterrent against crime.

A firefighting agency has a tremendous need to start keeping better score of what it is to deter the losses in our communities instead of basing our justification on the accumulation of what the community has lost in spite of our best efforts.