

Jack Stout has long been involved in designing and implementing EMS systems. With his company, the Fourth Party, he was the major force in implementing the Public Utility Model concept for providing prehospital care in Tulsa, Oklahoma, Little Rock, Arkansas, Kansas City, MIssouri, and most recently, Fort Wayne, Indiana. He has lectured nationally on the topic of the Public Utility Model and EMS system design, and will be a regular columnist for *jems* beginning this spring. His latest article in *jems* was an account of the Hyatt Regency Hotel disaster in Kansas City, which he witnessed.

The following article is based on a presentation he made at the November 1982 meeting in New Orleans of the American Ambulance Association.

ome months ago I had the pleasure of visiting the Syracuse, New York operations of Eastern Ambulance. Eastern's Chief Executive Officer, Marty Yenawine, had invited me to go salmon fishing, but the weather turned sour, bitter cold and blowing snow, so Marty asked me to look over Eastern's operations with a critical eye. During my stay in Syracuse, I talked with people working in all aspects of Eastern's business and field operations. Eastern's people were unusually relaxed, open, and offered their own observations and constructive criticisms in a casual and relaxed manner. Obviously, Eastern is a company where it is okay, even encouraged for an employee to identify a problem in plain English so that solutions can be pursued.

Weeks later, Marty was still squeezing free consulting out of me by trying to get me to talk more about my "findings" over beer. In the course of his efforts, he observed that I apparently employ a fairly elaborate, though perhaps informal, set of criteria for evaluating a prehospital care system. I said that was probably true, but I assured Marty that my way of looking at prehospital care systems would bear no resemblance to the federal government's "Fifteen Components." (The way you look at a problem has a lot to do with your ultimate ability to solve that problem, and I have always felt that the federal "Fifteen Mandatory Components," as a way of looking at an EMS System, did almost as much damage to our industry as the federal money did good.)

When I was later asked to present "Stout's Standards of Excellence" at the November 1982 New Orleans meeting of the American Ambulance Association, I decided to put some real effort into analyzing my own thought processes, and the result is this modest attempt to apply numbers and scores to a process of judgment that is, in truth, far too complex for this kind of simplification. Even so, as I review the contents of this article, I find that the various criteria are, in fact, those that really matter. Other things matter too, but not as much. And while I might quibble with myself concerning how I have distributed scoring points among the various criteria, I have to admit that this evaluative instrument comes awfully close to describing how I look at and evaluate the performance capabilities of modern prehospital EMS systems, regardless of type or design.

Caution: "Stout's Standards of Excellence" are intended to evaluate the performance of an *entire* prehospital EMS system — not an ambulance company, not an EMS Department, not a fire department EMS operation, not any single component of an EMS system. In far too many American communities, there is no single organization that is responsible for all aspects of EMS system performance. Such communities can expect to find very low scores on several criteria while scoring very high on other criteria. When a serious performance problem

by Jack L. Stout

exists, yet no individual or organization is at fault, you can be certain that the organizational structure itself is seriously flawed. In many EMS systems today, it is entirely possible to have each element of the system performing *its* task admirably well, while the overall system performance fails miserably. In such cases, there is no point in looking for someone or some organization to blame. Instead, the system itself must be restructured and reorganized so that accountability exists for every important aspect of system performance.

How to Use This Rating System

It depends upon your purpose. If you are simply interested in checking out your prehospital EMS system to gain a better personal understanding of how things are going, then there is nothing wrong with using Stout's Standards yourself.

If you disagree with the way I have weighted the various criteria, reassign your own weights. For personal use, Stout's Standards are a good way to raise issues that otherwise may be overlooked. However, if you use Stout's Standards to rate your own system, do not try to compare the score you gave your system with the score someone else gave another system. Intersystem comparisons require that the same independent, objective, and expert evaluator rate both systems being compared.

You can use Stout's Standards strictly as an internal assessment tool to do "before" and "after" comparisons of the same system. Your scores may be way off compared to scores for other systems, but the *relative* comparison of the same system, "before" and "after," should be reasonably valid as a measure of improvement or deterioration, provided the same person or organization performed both assessments.

While metropolitan or large regional EMS systems stand the best chance of scoring high, Stout's Standards can and should be used to evaluate rural EMS systems as well. Rural EMS systems, even fully regionalized systems, can rarely achieve the response time performance or clinical excellence of a highly organized metropolitan system, simply because the low population density, poor economy of scale, and relatively low frequency of lifethreatening emergency cases work against high-performance system development in rural areas. On the other hand, many of these barriers to rural EMS development can and have been overcome by more aggressive regionalization of production, finance, and operational control. Therefore, Stout's Standards can be applied to the rural EMS system, sometimes as a means of demonstrating the true costs, in terms of lost performance, of maintaining a hodgepodge of tiny but nearly autonomous municipal, county, and even township based operations. On the other hand, the more effectively organized rural systems can use Stout's Standards to demonstrate their ability to approach some of the best known urban EMS systems on all but a few criteria.

A Warning About Efficiency

Stout's Standards, objectively and expertly applied, can give you a pretty clear idea as to your system's performance capabilities. But Stout's Standards tell you nothing about your system's efficiency. As Alan Jameson is fond of saying, "An idiot with enough money and enough time can produce performance." (The federal EMS grants programs demonstrated that such is not always the case.) In this writer's opinion, questions of performance are more important, because the nature of this industry's work is critical. But performance at any price is certainly not the answer, and perhaps a sequel entitled "Stout's Standards of Efficiency" may be in order someday. In any case, efficiency is directly related to performance; since an expensive system may still be efficient if it performs extremely well, while an inexpensive system may be a bad deal. financially, if it performs more poorly than its equally inexpensive counterpart. In short, how your system scores on Stout's Standards of Excellence tells you nothing about whether your system is a "good deal" financially.

Exception: Any system that scores poorly probably creates more costs than it could possibly save even if such a system were entirely free to its users and to the taxpayers. Complicated recoveries, premature death, and astronomically expensive long-term disabilities are the by-products of poor prehospital care EMS performance. At any price, these consequences are no bargain to the consumer, taxpayer, the

third-party payors, or even the heirs.

Summary of Criteria

Stout's Standards of Excellence employ ten general criteria of system performance, several with multiple subcriteria, with a possible score of 100 points for the "nearly perfect" system.

	Summary Sco Stout's Standards of	oresheet	nce
Nan	ne of Prehospital EMS System:	an ada to uch	
Org	anization Performing Assessment:		
Sup	ervisor in Charge:		and the second
Date	es of Assessment: From	То	
		Possible Score	Group Score
1.	Clinical Performance	15	a contraint
2.	Medical Accountability	6	
3.	Dispatching and System Status Management	15	All the second s
4.	Access, First Responder and Citizen CPR	15	
5.	Disaster Capability	8	
6.	Personnel Management Practices	10	
7.	Stability, Reliability and Fail Safes	7	
8.	Pricing Policies, Billing and Collection Practices	5	and a second
9.	Response Time Performance	15	
10.	Public Accountability	4	
	TOTAL SCORE	100	

Additional comments and observations:

Stout's Standards of Excellence (continued)

1. Clinical Performance (possible 15 points)

An ambulance system's *actual* clinical performance is extremely difficult to evaluate, except on a diagnosis-specific and case-by-case basis. Many systems handle certain kinds of cardiac cases very well, but tend toward poorer performance when faced with serious trauma. Some may do well with emergency childbirth, but not so well when dealing with diabetic coma or insulin shock. Realizing these complexities, this scale resorts to simplifying by determining whether clinically sound medical protocols exist at all; whether onboard equipment, communication systems, and inventory control systems are compatible with sophisticated medical protocol; and finally whether field crews are even potentially capable of clinically excellent performance.

The rating scale favors systems where all field crews are paramedic, and where each crew handles both emergency and nonemergency work, since other types of systems result in a community served by a combination of "elite" emergency crews and less capable so-called non-emergency crews. The overall clinical performance capability of a fully professionalized service system is obviously greater than that of a system which is only partly professional.

Score

SCORE 1A

A. Select the sentence which most nearly describes your community's ambulance system.

• All ambulances in the system (emergency and nonemergency are capable of full paramedic performance at all times. (Score 10 points)

• Paramedic units are dispatched to all emergencies; BLS units handle non-emergencies. (*Score 4 points*)

• Paramedic units are normally reserved for lifethreatening emergencies; all other emergencies and non-emergency transports are normally handled by BLS crews (Non-transporting paramedic teams assisted by BLS transport crews rate the same). (Score 2 points)

B. Select the sentence which most nearly describes your community's ambulance system.

• Medical protocols are current, clinically sophisticated, not unreasonably restrictive, and are detailed and extensively documented. (Score 3 points)

• Medical protocols are: not current, overly restrictive, vague or not well documented. (Score — SUBTRACT 2 points)

C. On-board equipment, medical communications system, medical control, and inventory control systems are state-of-the art, fully compatible with medical protocols in use, formal, and documented. (*If true, ADD 2 points, if not, SUBTRACT 2 points*)

SCORE: 1C

SCORE: 1B

YOUR TOTAL SCORE - SECTION 1:

2. Medical Accountability (possible 6 points

A critic might fairly comment that if a system has no bonafide medical accountability, then by definition it must be impossible to assess that same system's clinical performance, and to some extent that makes sense. On the other hand, a system may be performing beautifully without being able to document the fact, and so I have elected to separate the quesiton of clinical performance from the question of medical accountability.

Each of the characteristics listed below count one additional point toward your system's total score, if your system *substantially* exhibits that feature. (If you are tempted to say something like, "we sort of have that feature, but it's more informal ..." then you probably don't have the characteristic and should score your system zero on that feature.)

Give yourself one point if your system shows strength in any of the following areas; zero points if it appears weak.

A. Our medical protocols are developed by the same

physician(s) who has responsibility for monitoring directly our system's street performance. (zero or 1 point)

B. Medical audits are regularly (i.e. several each week) conducted by an emergency physician who is not affiliated with or on the payroll of any ambulance provider organization. (zero or 1 point)

C. A widely known and convenient procedure exists whereby any receiving facility physician, patient's personal physician, or field medic can request that a formal physician-supervised audit be performed relative to a given case, and such audit shall be performed. (zero or 1 point)

D. At regular intervals, the physician(s) responsible for medical monitoring and clinical quality control in our system reviews multiple cases of a single problemoriented or diagnosis-specific basis in order to assess our system's ability to deal effectively with specific medical problems. (An EMS system is not "bad" or "good" *in general* — it may do well with some types of emergencies, but not with others.) (zero or 1 point)

SCORE: 2D

SCORE: 2A

SCORE: 2B

SCORE: 2C

E. The findings and recommendations resulting from our independent physician-supervised medical audits may call for change in medical protocols, specific inservice training for individuals or the entire organization, call for equipment additions or deletions or change, or may require the suspension or termination or other restrictions on personnel, and such findings are not merely advisory, but have the force of binding policy and must be implemented. (If your physician oversight is not fully independent of the provider organization(s), score this zero. Similarly, if medical audits are not regularly performed by a physician expert in emergency medicine, or are merely "paper audits" conducted without the mandatory presence of crew members involved in the case, also score zero here.) (zercor 1 point)

F. Emergency physicians at the principal receiving facilities in our area are not allowed to provide medical control (via radio) to field personnel without first demonstrating knowledge of the EMS system's operating policies and procedures, radio protocols, medical protocols, personnel capabilities, and on-board equipment and medical supplies. (zero or 1 point)

SCORE: 2F

SCORE: 2F

YOUR TOTAL SCORE - SECTION II:

3. Dispatching and System Status Management (possible 15 points)

The scale favors systems with fully centralized and complete control over the placement and movements of all ambulances in the system at all times. The scale also favors systems where control center personnel managing the system's responses are both medically trained and specifically trained in more sophisticated aspects of system status management, that is, a system that is continuously controlled by a single group of medically trained personnel, and which is controlled in a manner that allows the system to continuously maintain and constantly re-establish the best possible emergency response configuration at any point in time, given the area's demand patterns and given the level of emergency production capacity remaining in the system at the moment.

Select the sentence in each group below which most nearly describes your community's ambulance system in all of the following categories.

A. Span of Control:

SCORE: 3A

• All ambulance(s) operating in the community, emergency and non-emergency, are *exclusively* controlled by a single ambulance dispatch center. This control includes all vehicle movements including dispatches, post assignments/reassignments, i.e. *complete and direct* control

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over all ambulances. (Score 8 points)

• All emergency requests are managed by a single facility, and all emergency ambulances are under the exclusive complete and direct control of this single dispatch facility. Non-emergency ambulances are controlled by others. (Score 5 points)

• A single control center receives nearly all emergency requests (e.g. a 911 center) and assigns those requests to ambulances or multiple providers, but does not possess exclusive, complete, and direct control over all movements of all ambulances. (Score 3 points)

• No single EMS control center receives and manages nearly all emergency requests. The system is characterized by multiple control points and multiple providers. (Score 0 points)

B. Quality of Dispatch Personnel:

 Persons receiving telephone requests and dispatching ambulances possess the verbal skills and didactic knowledge of a field paramedic. They also have completed additional training in System Status Management, disaster response management, and clinically oriented telephone protocols. (Score 3 points)

 All persons receiving telephone requests and managing system response are basic EMT's with additional dispatcher training in system status management, disaster response management, and telephone protocols. (Score 2 points)

 All persons receiving telephone requests and managing system response are basic EMT's with little or no additional training in system status management, disaster response management, and telephone protocols. (Score 1 point)

Most emergency requests are received by "911 complaint takers" or by other 911 communication center personnel (e.g. police or fire dispatchers) who gather the information from the caller, terminate the telephone conversation, and then "hand off" the request to an "ambulance dispatcher" who is located either in the same facility or elsewhere. (Score 0 points)

 A regional EMS agency receives most telephone requests, and "hands off" the calls to multiple providers. (Score 0 points)

• Any other configuration of control not described in the list immediately above, or any configuration wherein persons receiving telephone requests for ambulance services are not basic EMT's or paramedic trained. (Score 0 points)

C. System Status Management:

 All ambulances in the community (i.e. emergency and non-emergency) are continuously located and relocated, in strict accordance with a detailed master plan so as to maintain the best possible response capability at any given level of remaining ambulance availability taking into consideration time of day, day of week, historical demand patterns and demand fluctuations, traffic flow patterns and congestion, special events and weather conditions, and other factors. Such system status management plan also allocates quantities of ambulances to be in service by time of day, day of week and special event to adjust production capacity to fit demand patterns and demand fluctuations. (Score 4 points)

• Emergency ambulances are controlled as described above, but non-emergency ambulances are not. (Score 2 points)

 Our system makes some effort to adjust both temporal and geographic ambulance distribution to match remaining response capacity to estimated demand patterns, but not to the level of sophistication described under the first description in this group. (Score 1 point)

• Ambulances are assigned to their respective posts and generally remain at those same posts throughout a shift, unless dispatched to a call or released for meals, repairs, shift change, or occasionally provide back-up coverage for another unit or post at dispatcher's discretion. (*Score 0 points*)

• Ambulance posts and post assignments are largely the result of historical accident, or a result of a relatively static plan of vehicle placement, and only modest effort is made to control vehicle placement on a "real time," "even driven" basis to preserve the best possible response capacity at any given level of remaining resources. (Score 0 points)

YOUR TOTAL SCORE - SECTION III:

4. Access, First Responder and Citizen CPR (possible 15 points)

Highly organized and reliable citizen access methods are favored, as are effective organized first responder programs and citizen CPR programs.

Select the sentence in the following categories which most nearly describes your community's ambulances system.

A. Access:

SCORE: 3B

SCORE: 3C

SCORE: 4A

 All telephone requests (both emergency and nonemergency) for ambulance service terminate at a single EMS control center. These may enter via 911, a wellpublicized standard number, or by combination of these.
 If 911 is employed, the "complaint taker," immediately upon discovering that the request is ambulance related, hands off the caller to the EMS control center personnel who speak directly with the callers, non-emergency requests employ a separate number — not 911. (Score 5 points)

 All emergency requests are handled as described immediately above, but non-emergency requests terminate elsewhere. However, persons receiving nonemergency requests follow strict protocols for referring calls likely to involve emergency conditions to the EMS Control Center and are monitored and regulated to insure compliance. (Score 3 points)

• Emergency calls are handled as described under the first sentence in this group and there is no regulation or significant monitoring of calls received by non-emergency providers. (Score 2 points)

• There exists in our community multiple telephone numbers for accessing emergency ambulance service. (Even if 911 is present in your community, give your system zero points if more than 10% of emergency ambulance requests enter the system via a telephone number which is not 911 and which does not terminate in the EMS control center which would handle a 911 request. (Score 0 points)

B. First Responder:

SCORE: 4B

Our community has a formal police and/or fire department first responder program capable of placing a trained first responder team on the scene of 90% of all life-threatening emergencies within a maximum 4-minute time limit after receipt of request at the EMS control center. The decision to employ a first responder is made by a medically trained EMS dispatcher, using physician approved telephone protocols, and who is in direct com-

C Stout's Standards of Excellence (continued)

munication with the person requesting service. The first responder team is trained and equipped at essentially the basic EMT level, but need not be EMT certified, and has had additional paramedic-assist training to better participate in highly organized multiple crew ALS team procedures. Some integrated/first responder in-service training is routine and first response team members do participate, when requested, in medical audits of cases in which they were involved. The EMS data system is capable of capturing and documenting arrival times of both ambulance and first response teams as well. (Score 5 points)

 Our community does have a police and/or fire first responder program which is employed on nearly all lifethreatening ambulance calls, but which lacks the formality or performance capabilities described immediately above in one or more significant ways. (Score 3 points)

• Our community either has no such police or fire first responder program, or the program we do have is significantly deficient, when compared with the first sentence in this group, in more than a few ways. (Score 0 points)

C. CPR:

SCORE: 4C

Our community currently has — not on paper but in fact

 a functioning CPR training and annual recertification
 program which has achieved and currently maintains
 CPR certification for not less than 20% of our
 community's adult population, or our community has in
 place a CPR training program which, at present levels of
 participation, will achieve the 20% bare minimum adult
 level within two years. (Score 5 points)

• Our community has a CPR training program that we all like very much and are very proud of, but we haven't achieved the 20% minimum adult level, and at *present* levels of participation, we don't know when we might. (Score 0 points)

• Our community has some really involved people with some impressive credentials and financial contribution, and we have or are developing a CPR training program or plan which will knock everyone's eyes out some day. (Score 0 points)

• We don't have any CPR program and there is no plan for one. (Score 0 points)

YOUR TOTAL SCORE - SECTION IV

5. Disaster Capability (possible 8 points)

Keeping in mind that we are discussing the disaster capability of the prehospital EMS system only, the scale favors those communities whose day-to-day field operations are so effective and so flexible that they are designed to function with little change in a disaster situation. Similarly, the scale favors systems which have the capability of focusing large forces of advanced life support production capability upon a disaster event without resorting to exotic or elaborate plans and procedures which are not tested on a routine (i.e. daily or weekly) basis. A system's ultimate disaster capability is more difficult to predict and probably requires the judgment of more experienced evaluators than other areas of the scale.

A. Application of day-to-day working systems of control and coordination.

SCORE: 5A

• If the communications, dispatch, and control systems which function normally on a day-to-day basis are capable of effecting and coordinating a system-wide response to a single disaster without change in personnel, equipment, or operating protocol, ADD 4 points.

· If much of the system's routine control network must

change to effect a switch to "disaster mode," give your system a zero on this criterion.

• Use your judgment to rate your system if it falls somewhere in between these extremes, as most do. (zero to 4 points)

B. Normally working production capacity and reserve capacity:

SCORE: 5B

Again, judgment must be employed to assess this criterion. An all paramedic system (both emergency and non-emergency) with high response time performance on a day-to-day basis obviously has the ultimate normal working production capacity for immediate disaster response, as well as having the best reserve production capacity for an extended mass-disaster, since off-duty crews are fully ALS capable as well. At the other extreme are multiple provider BLS systems employing many crews who rarely perform under life-threatening emergency circumstances. (zero to 2 points)

C. Disaster site communications, supply systems, and support services:

SCORE: 5C

SCORE: 5D

Considerable attention was given to these issues in the article on the Hyatt Regency disaster, *jems*, Vol. 6, No. 9, September 1981. This is essentially a binary criterion — i.e. either you have it set up or you don't. *(zero to 1 point)*

D. Integration of communications, equipment, and procedure with neighboring providers:

Again, either plans have been made throughout the region to effect fully integrated communications among neighboring providers, and to insure that, where possible and practical, on-board equipment is compatible or that crews have been cross-trained in the use of each other's equipment; or these steps have not been taken. Federally sponsored regional EMS groups have all worked to establish such regional coordination, and a few have been effective. Having a plan to provide such coordination in disastre situations, and being able to actually pull it off are two different things. Experience-based judgment alone can distinguish between the two. (zero to 1 point)

YOUR TOTAL SCORE - SECTION V

6. Personnel Management Practices (possible 10 points)

The scale favors heavily those systems which recognize that the caliber of field personnel and control center personnel is extremely important to system performance. Smart, well-trained, creative and resourceful personnel have been known to make some really poor systems perform pretty well, at least for awhile. Similarly, there are probably no system designs that can squeeze consistent high performance out of low caliber personnel. The scale looks at and categorizes recruitment methods, initial screening of employees, the interview process, and system reputation. The highly inbred "first-guy-off-the-street" systems suffer on the scale, whereas systems that actively recruit the best in the industry are favored.

Select the sentence in each of the following categories which most nearly describes your community's ambulance system.

A. Recruitment Methods.

SCORE: 6A

When a job position becomes available in our system, the employer(s) seeks and attracts the best possible person for that job by utilizing recruitment and screening procedures generally as follows:

 A continuous national advertising program insures a steady incoming flow of applications, and the advertising is concentrated to impact in American communities which enjoy ambulance service of the highest reputation. (Score 4 points)

• A continuous recruitment program is in place with nationwide advertising, but no real effort is made to attract applicant's from the most respected ambulance systems. (Score 3 points)

• A continuous recruitment program exists, but it concentrates on applicants from within our regional area, and very few of our new personnel have experience in remote metropolitan ambulance systems of high reputation. (Score 2 points)

• Our recruitment is intermittent and most of our new hires are graduates of one or two local training programs, and if they have previous experience, it is usually with a neighboring provider organization, and as a result, our EMS system is somewhat "inbred." (Score 1 point)

• We have no formal recruitment program, so when a position opens up, "word gets out" and someone's friend, relative, or classmate is usually hired as soon as possible to avoid too much overtime pay to cover the unfilled vacancy. (Score 0 points)

B. Initial Screening:

SCORE: 6B

SCORE: 6C

SCORE: 6D

 After a good number of qualified applications have been received, a professionally oriented, fair, and reasonably objective process is used to narrow down the applications to the most qualified applicants for interviews. References and work histories are thoroughly checked out before interviews are held. (Score 2 points)

• The "boss" looks over the applications and interviews whoever the boss likes best, but 3 or 4 people are normally interviewed for each job and references and work histories are usually thoroughly checked. (Score 1 point)

• Sometimes only 1 or 2 applications are received before the boss interviews and selects, and the boss checks out whatever he thinks is necessary. (Score 0 points)

• The "boss" says he can tell mostly by the look in their eye, and he will hire whoever he wants to hire, even if only one application has been considered, if that's what he feels like doing. (Score 0 points)

C. Interview Process:

 After thorough checking and screening of applicants, a minimum of 2 or 3 applicants are interviewed by a review team whose collective decision is final, or whose advice concerning selection is given to "the boss," who normally but not always accepts the judgment of the team. (Score 2 points)

 Applicants "tour the facility," chatting with several people, and before deciding, "the boss" usually asks for opinions. (Score 1 point)

• The boss usually talks to people before he hires them. (Score 0 points)

D. System Reputation:

 Our system is widely known and respected as a high performance ambulance organization that demands excellence from its personnel and gets it ______ a place where only the most qualified people are employed and where peer group pressure demands professional conduct, clinical excellence, and skill maintenance. This reputation is deliberately employed to attract and retain the best, and to deliberately discourage applications from others. (Score 2 points)

· We think our organization is pretty good, but our excel-

lence is not widely known or recognized, and so our reputation doesn't play much of a role in recruiting and retaining good people. (*Score 0 points*)

• Frankly, our EMS system isn't all that great, but we tell applicants with good credentials that we need them to help us do better. (*Score 0 points*)

• Our EMS system really isn't as bad as a lot of people think it is, and if you think it is that bad, maybe you should work somewhere else. (Score 0 points)

YOUR TOTAL SCORE - SECTION VI:

7. Stability, Reliability, and Fail Safes (zero to 7 points)

Here again we have an area that requires expert judgment to evaluate. Many systems appear to be stable and reliable, only to prove extremely vulnerable to a shift in majority leadership on the City Council. Some systems are heavily dependent upon the leadership of a single individual, upon hand-to-mouth financing from the local tax resources of a single unit of government, or are entirely dependent upon the financial stability and integrity of the present owners of a single private ambulance organization. An additional one point each can be given to the system which displays significant strength in the following areas:

Give yourself one point if your system shows strength in any of the following areas; zero points if it appears weak.

A. Financial strength, soundness of business practices, rainy-day financial reserves, and system net worth, the debt to equity ratio of the system, and general insulation from local politics. *(zero or 1 point)*

SCORE: 7A

SCORE: 7B

B. Soundness of hardware financing and replacement practices, favoring those systems which employ heavily funded depreciation programs, or some equally sound commercial financing mechanism backed up by a solid cash management program. (zero or 1 point)

C. Performance security in the form of performance bonds or similar security, equipment ownership in the public sector or protective lease arrangements, and a variety of devices to insure uninterrupted field performance even during an emergency changeover from one operator to another or from one type of system to another. (*zero or 1 point*)

D. Insurance against fraud and mismanagement, such as a well-managed company being sold out to owners of questionable character, ability, or intent. (zero or 1 point)

E. Empire building inhibitors such as prohibitions against an oversight agency becoming an operator of the system, a training organization taking on an evaluative role in the system, or other tendencies of organizations to assume functions and responsibilities which are inherently incompatible with those already being carried out by that same organization. (zero or 1 point)

F. Public relations efforts designed to help insulate the system from uninformed and misguided press coverage, non-constructive and damaging attacks by opportunistic local politians, or other unfair criticisms which may damage the system's reputation, the morale of its personnel, or which may even result in the demise of the system and its replacement by an inferior but better sold system. (The better and more accountable EMS systems are the most visible and the most open to criticism, both deserved and unfair. Responding to thousands of emergencies each year, and under the most adverse of conditions, while dealing with patients, families, and bystanders who are upset and sometimes out of control, an EMS system is, perhaps more than any other service organization, vulnerable to unfair yet damaging attack. Effective public relations efforts designed to counter this SCORE: 7C

SCORE: 7D

SCORE: 7E



unfortunate fact of EMS life are essential to long-term system stability.) (zero or 1 point)

G. Strike protection in some form is essential to system stability and reliability especially when the labor force is organized. Strike protection can be provided for in a variety of ways without undermining the intent of fair labor practices, but there is not space here to elaborate further on this complex area of system management. (zero or 1 point)

SCORE: 7G

SCORE: 8A

SCORE: 8B

SCORE: 7F

YOUR TOTAL SCORE - SECTION VII:

8. Pricing Policies, Billing and Collection Practices (possible 5 points)

The way an ambulance service system conducts itself financially, especially its management of revenues, is itself a measure of its service to the community. More than a few otherwise well-managed ambulance services place an impossible burden upon senior citizens by failing to accept assignment, where appropriate, and by failing to prepare Medicare claim forms for routine mailing with statements to Medicare eligible clients where assignment is not accepted. Pricing policies, billing, and collection procedures which reduce local tax subsidies, which minimize patients' out-of-pocket expenditures, maximize patients' third-party recovery, and which make the patients' claim filing simple and speedy . . . all add to the system's ability to serve the community. At the other extreme are systems which employ token prices and billing efforts, thereby placing an unnecessary load upon the local taxpayer, and systems which make little or no effort to maximize third-party recovery or to assist patients in making third-party claims. The community cannot escape the effects of less service oriented financial management practices, and for that reason the EMS system and its management cannot escape responsibility for this area of evaluation.

Obviously, in a multiple provider system, some patients may experience highly effective and professional, yet quite humane billing and collection practices, while other patients may experience the opposite. Thus, it is entirely possible for a system to get a "mixed review" on this area of service.

Like several other areas of this assessment, the evaluator must have at least a solid basic understanding of the rate setting and reimbursement world of an ambulance service health care provider organization. (Keep in mind that ambulance services fall under Part B of Medicare, while hospital services fall under Part A, and that these two programs bear almost no resemblance to each other where rate setting and reimbursement practices are concerned.)

Rate your system in terms of its general compliance with the purposes of sound pricing policies, billing, and collection practices as follows:

A. Pricing policies should: (zero to 2 points)

 Maximize third party recoveries while minimizing outof-pocket expenditures, especially by insured patients;

• Avoid cutting the throats of providers sharing same geographic profile;

 Be capable of covering full system costs, in the event of subsidy reductions;

 Discourage use of 911 or other emergency access phone number for purposes of a non-emergency nature.

B. Billing and Collection Practices should: (zero to 3 points)

• Provide easy maximum third-party recovery for senior citizens:

 Insure that most uncollectible writeoffs are related to services delivered which were truly medically necessary and provided to persons whose true financial situation is such that payment of the ambulance bill would produce an unreasonable hardship. In such cases, the billing and collection procedure should be capable of identifying such conditions early in the billing/collection cycle, so that the responsible party is not "badgered" extensively; • Discourage abuse of the ambulance service in cases where there is no reasonable medical necessity for emergency or non-emergency ambulance use;

• Help educate the public, politicians, and public as well as third-party payors as to the need for extensive reform in the ambulance segment of America's health care finance programs.

YOUR TOTAL SCORE - SECTION VIII:

9. Response Time Performance (possible 15 points)

Stout's Standards deal with a system's response time performance by looking separately at response times to life-threatening emergencies, non-life-threatening emergencies, non-emergency calls, and at response time performance distribution among the various neighborhoods or districts of the service area. This scale deliberately avoids reference to "average response times," since an impressivesounding average may well be achieved at the expense of lifethreatening excessive response times to a sizeable percentage of patients in more difficult-to-serve areas. (There is not space here to go into such matters as response time definition, adjustments for no-hauls and turn-arounds, or validation of response time reporting, but these issues should be dealt with in depth in any serious application of the scale. Additionally, a system incapable of documenting its performance relative to this scale is simply incapable of being evaluated on this criterion, and no attempt should be made to guess at what may be happening in the field.)

Select the sentence which most nearly describes your community's ambulance system in all of the following categories. (Note: this rating assumes presence of medically trained dispatch and medically sound telephone protocols for presumptively defining a life-threatening emergency. If these conditions are not met, utilize your emergency response times for all emergency requests, both life-threatening and non-life-threatening emergencies, for both Categories A and B, below.)

A. Life-threatening Emergencies:

(Note: If your system is all BLS, assign zero points to this category)

SCORE: 9A

• For less than 10% of all presumptively defined lifethreatening emergency requests, the system fails to place paramedic ambulance on life-threatening scene within 8 minutes or less after call received. (Score 9 points)

• For between 10 and 15% of all presumptively defined life-threatening emergency requests, the system fails to place paramedic ambulance on life-threatening scene within 8 minutes or less after call received. (Score 7 points)

• For between 15 and 20% of all presumptively defined life-threatening emergency requests, the system fails to place paramedic ambulance on life-threatening scene within 8 minutes or less after call received. (Score 4 points)

• For between 20 and 30% of all presumptively defined life-threatening emergency requests, the system fails to place paramedic ambulance on life-threatening scene within 8 minutes or less after call received. (Score 2 points)

• For more than 30% of all presumptively defined lifethreatening emergency requests, the system fails to place paramedic ambulance on life-threatening scene within 8 minutes or less after call received. (Score 0 points)

B. Non-life-threatening Emergencies:

• Ambulance response time (paramedic or other) is under 12 minutes on 90% or more of all non-lifethreatening emergency calls. (Score 4 points) SCORE: 9B

• Ambulance response time (paramedic or other) is 12 minutes or longer on more than 10% but less than 20% of all non-life-threatening emergency calls. (Score 1 point)

• Ambulance response time (paramedic or other) is 12 minutes or longer on 20% or more of all non-life-threatening calls. (Score 0 points)

C. Non-emergency calls:

SCORE: 9C

SCORE: 9D

 Ambulance response to non-emergency transport requests are reasonably prompt (i.e. within 20 to 30 minutes) for unscheduled requests, except under unusual system overload conditions which occur rarely (i.e. not more than 2 or 3 periods lasting less than 1 or 2 hours weekly) and previously scheduled transports are almost never delayed. When delayed non-emergency response does occur, the requesting party is contacted immediately, and explanation is given and a revised ETA is offered and adhered to. (Score 1 point)

• The description immediately above does not characterize non-emergency service in our community. (Score — Subtract 2 points)

D. Geographic Performance

• Response time performance is approximately, but not precisely equal amongst the various neighborhoods, quadrants, sectors, or districts of our community. (Score 1 point)

• Certain parts or neighborhoods of our community usually enjoy good response times, while other areas in our community experience chronically poorer response time performance. (*Score* — *Subtract 2 points*)

YOUR TOTAL SCORE - SECTION IX:

10. Public Accountability (possible 4 points)

Sophisticated prehospital care EMS is becoming increasingly complex and specialized. By default or by design, the type of EMS system serving your community is mostly determined by the action or inaction of local government — more specifically, local elected officials. Public accountability is necessary both to protect the public from a bad EMS system, and to protect a good EMS system from unfair criticism and possible misguided intervention by semiinformed public officials or even representatives of the press.

"The rates are exorbitant.... Response time was terrible.... The crew was rude to the Mayor's mother-in-law.... The private provider makes excessive profit.... The city subsidy is outrageous.... The fire department could do it cheaper.... A private company could do it cheaper.... A fired employee exposes the truth.... Consultant blasts EMS system...." and so forth. The public must know the truth, and the system itself, especially if it is a good one, needs the protection of fully informed, expert, and independent oversight.

Again, evaluating a system's mechanisms for achieving public accountability requires experience and judgment. Score your system zero through 4 points depending upon which of the descriptions below *most nearly* describes your situation.

A. In our system, the agency of local government responsible for all EMS activities is itself a provider of EMS services. (For example, a city wherein EMS is operated by a fire department or third city department, and no other agency is funded or staffed to oversee operations.) (Score O points)

SCORE: 10A

B. In our state, ambulance providers are licensed by a Department of State Government, and our community relies heavily upon the state agency, regularly referring inquiries and complaints to the state agency, and the state agency normally conducts a prompt and complete inquiry into the matter and issues an official statement of findings. (Score 1 point)

SCORE: 10B

C. Our system is monitored by one or more part or fulltime employees of local government who work in a department which is *not* also a provider of ambulance services. These officials regularly inspect ambulance equipment, assist in the performance of physiciansupervised medical audits, and with the help of qualified accounting personnel or hired accounting firms, make recommendations concerning subsidy requests, rate reviews and approval, and billing and collection practices of provider organizations. (*Score 2 points*)

D. Our community has an EMS council (regional or local) made up of provider representatives, hospital representatives, and other interested individuals who meet regularly in meetings open to the public to discuss issues effecting the EMS system. When a problem is reported, this group looks into the matter and makes a recommendation. (*Score 2 points*)

E. In our system, all quesitons related to clinical performance are handled by a legally authorized, funded, staffed, and provider-independent physician-controlled organization charged with the authority and responsibility to prescribe medical standards, oversee compliance, and institute mandatory corrective action when necessary. Physicians expert in and knowledgeable of emergency medicine and of care being rendered by our system control this organization. In addition, the financial management of our system is overseen by a separate group of individuals who are also informed and expert, as well as provider-independent, as regards matters of organization and finance. This group is controlled by representatives of the local business community who possess the kind of expertise necessary to make sound financial judgments in a complex financial environment, and who have no personal financial interests in the EMS system. This financial oversight organization has the power to: require certified audits and financial statements of provider organizations; establish or review and approve all billing and collection policies; perform reviews and make recommendations to local government concerning the proper balance among quality of service, fees, and local tax subsidies; and where appropriate, reviews and approves the qualifications of potential provider organizations based upon the findings related to organizational reputation, integrity, character of owners and key personnel, and financial stability. Furthermore, the data system used to evaluate response time performance is provider-independent, except for collection of primary data, and is subjected to periodic spot checks for accuracy and truthfulness. Finally, our system imposes severe financial penalties upon individuals or organizations found guilty of wilful falsification of information for the purpose of enhancing the apparent performance of the system or organization, and our monitoring systems are so designed to eventually uncover any repeated fraud of that type. In short, system performance is assessed and documented, both medically and financially, by qualified individuals and organizations other than the providers themselves or their employees. Elected officials, the press, and the general public can rest assured that the system is continuously monitored by qualified and effective people, and that complaints are dealt with promptly and fairly, and that the findings from complaint inquireis can be trusted, even if the issues involved are too complex for easy interpretation by the public at large. Similarly, providers and field personnel are almost never required to defend themselves against unfair criticism, as these independent and objective oversight organizations serve to insulate this complex and somewhat delicate industry from unfair attack. (Score 4 points)

SCORE: 10C

SCORE: 10D

SCORE: 10E