

Defining KPIs to Maximize Business Performance

Operating a high-performance EMS organization can be challenging to say the least. Management needs timely, relevant, actionable information to achieve the highest level of performance. They need to track every operating area of the organization, so information must be presented in a compact, user-friendly, easy-to-process format. Some organizations have even created management data systems called 'digital dashboards'. A dashboard is known as a set of key performance indicators or KPIs. The question becomes how to take an organization from zero to performance-oriented. Let's start by defining the elements of performance measurement and then look at people, purpose and process as it applies to KPIs.

What is a KPI and why should you care?

Just to clarify, let's look at a KPI and its 'sister' measurement elements below:

Metrics: refers to a direct numerical measure that represents a piece of business data.

KPI: a metric that is tied to a target. Most often a KPI represents how far a metric is above or below a pre-determined target.

Dashboard: presents a wide number of different metrics in a single consolidated view.

A key performance indicator (KPI) is a specific measure of an organization's performance in some area of its business. They're pre-determined, quantifiable factors that help an organization to define and measure its progress toward efficiency and quality goals. In the EMS industry, organizations using KPIs generally focus on distinct operational and clinical goals related to response times, such as successful completion of invasive skills or other quality-improvement measures linked to the delivery of patient care. KPIs will differ for each organization because they must reflect a specific organization's goals and mission, and be quantifiable for that entity.

KPIs allow for long-term monitoring of operational efficiencies and patient care. They ensure consistency in the type of information being tracked and in how it's measured. KPIs are used for ongoing processes or for project-based work, and they offer an excellent opportunity for businesses to target specific areas of desired growth and achieve maximum business performance.

Does the EMS industry use KPIs? The industry currently lacks a standardized set of KPIs for management. Few services have a baseline for measuring the performance criteria that's vital for ensuring success or preventing failure. Some organizations have tracked KPIs for years to ensure that their emergent and non-emergent divisions consistently meet or exceed customer service expectations.

How can you get started and monitor success?

Identifying the most important KPIs is the first step towards realizing increased profitability and efficiency for most businesses. For KPIs to be useful, they must be consistently quantifiable, have an established correlation to the area of the business in need of improvement, and not give false readings. KPIs must be quantifiable, but not everything that can be measured should be used as an indicator. Tracking only

a small number of KPIs per goal will ensure that everyone focuses on the same data. The data must be reliable, rapidly accessible, standardized, timely, and automated when possible.

Once you define which KPIs will be tracked and have established benchmarks, you must identify targets. What results will indicate you're moving toward your organization's goals? Do you want to see a 5% decrease in crew turnover in the next six months or 8% in 12 months? Set easy-to-recognize benchmarks and share the results with your team. Make updates on KPI progress a regular part of your staff meetings to keep everyone focused on success.

People, purpose and process

The first element of a successful KPI system is having the right people involved. Management should be able to intelligently discuss matters with all different perspectives represented. What may sound good to the penny-pinching accountant may spell disaster to an operations manager. A typical leadership team may include the chief executive as well as managers of operations, communications, finance, and human resources. It may also be helpful to include key support people. In general, this group is your core management team and is probably the easiest of the key elements to identify.



The second element is having a purpose. Your organization's strategic purpose is broken down into practical goals. These goals should be divided into functional areas and will normally bear a certain resemblance to the members of the leadership team. We refer to these goals segregated by function as Key Result Areas, or KRAs. These KRAs include operations, communications, finance, administrative, education, and community partnering. Some of the KRA goals will be ongoing, such as maintaining performance results. Other goals will be project based, as with implementing a new technology.

The third element is the process. The process that allows people to achieve the purpose begins with KRA goal setting. These goals need to be established through a process that is accepted by the members of the leadership team. Members who feel that their goals have been forced upon them will not, as a rule, take ownership of their goals. It is also important that each goal must be specific and measurable. You should not say, for example, that you are going to improve your response time performance, but that you are going to meet a performance standard 95% of the time. Then everyone is using the same gauge to measure this goal.

As you establish these goals, you must also be identifying the relevant KPIs that need to be monitored. While many of these measures are universal, industry benchmarks are not. Organizational structure, geographical concerns, and economic environment are just a few examples of the items that make each organization and its operating environment unique. For organizations jumping into a process like this, past historical data is usually the best place to start in developing your own organizational benchmarks.

These Key Result Areas and their Key Performance Indicators are then organized in a standardized reporting format called the 'business scorecard'. The business scorecard becomes a roadmap for staff meetings. Like a roadmap, this tool is meant to keep you headed in the right direction or to get you back on track should the discussion stray off course. This management tool also ensures that the members of

the leadership team all have access to a shared data set. By having this group meet on a regular basis, you also ensure that the data is timely.

Let's look at some actual KPI measurements. While most EMS managers are operations people, we will start by looking at several non-operational areas and demonstrating how each of these areas is vital to the overall organization. In the administrative area, you can look at compliance measures including chart auditing and the medical necessity arbiter function. Also monitored can be your affirmative action efforts in the human resources area. You can include a few non-quantitative measures in this area, including a free-form discussion of 'best things' and 'worst things'. Discuss your best things and how to maximize them, and discuss how to improve upon your worst things. Often what is a worst thing at some point, with attention and effort becomes a best thing. And on occasion, a past best thing returns as a worst thing.

Attempts	Success	% Successful	% Unsuccessful
442	430	97.29%	2.71%
37	34	91.89%	8.11%
21	21	100.00%	0.00%
199	185	92.96%	7.04%
76	76	100.00%	0.00%
1,538	1,510	98.18%	1.82%
1	1	100.00%	0.00%
14	13	92.86%	7.14%
27	27	100.00%	0.00%
416	407	97.84%	2.16%

The measurement of clinical procedures in the field can be used as a KPI.

Community partnering is an area that doesn't always get the respect of operations-minded people. However, it's important for operations people that while they were busy last year performing 24,000 ambulance transports, our community partnering efforts included events with a combined attendance of more than 500,000. While your core services will make or break you, it is your community partnering efforts that will most greatly influence your corporate image in the community. Therefore, you could track your standbys, community prevention programs, and community support. You can also track your media recognition yourself or by using a clipping service. While you may be seen by 5,000 people at a community event, a television news story or a newspaper article covering that event can leverage our community presence many times over. If you are not tracking these efforts, you probably aren't as in touch with the community's perception of your organization as you should be.

The educational area in a particular organization focuses in two directions—the continuing education of our current workforce and EMT pre-certification training at the basic, intermediate, and paramedic levels. Continuing education tracking centers on topics covered and employee attendance. EMT classes can give you a better chance to get to know potential employees, as well as control the quality of the education. The tracking of these classes could include reviewing student levels as well as completion and commencement dates. And you can set it up to get qualitative feedback about the students as well.



Response Time

Operations KPIs start with the mother of all KPIs—response times. Other measures include lost unit hours and extra unit hours, how many of each and why. You can also track performance exceptions and highlight all exceptions exceeding performance standards by more than two minutes. Review your fleet management for adherence to maintenance standards. Or track employee performance evaluations to ensure timely completion and feedback to your personnel. Review accidents and injuries and compare

them against unit-hour measures. You can also track customer feedback with post-transport survey cards or emails you can send out.

While operations people focus on response times, customer feedback tells the other side of the story, the perception of the customer. While they are pleased with your timely arrival and excellent use of clinical skills, the only things the patient may remember was being cold between their residence and the ambulance or how bumpy the ride to the hospital was. It is good to have some measurable questions on your survey, such as 'rate our service' as well as an area for comments. These survey cards can be so useful that you can issue special incentives for employees who receive compliments, such as gift cards, which can improve performance.



Somewhere along the way, as operations starts to spend money, the KPIs of operations blur with those of finance. While volume and unit-hour measures are major tracking items for operations people, they also mark the cornerstone of financial KPIs. So where operations people are computing unit-hour utilizations, the accounting department is computing unit-hour costs and costs per call or transport. The key is having both groups, as well as any other members of the management team, understand not only the measures themselves, but the interplay between these measures.

While more unit hours may increase response statistics and may actually decrease your fully absorbed unit-hour cost, it will definitely increase your cost per call. Performance always costs money. The questions are: How much can you spend on resources, and how effectively are you using those resources that you can afford?

It is a good practice to look at monthly unit-hour costs by cost center. Have the unit hours listed with each month so that you can see how changes in the unit hours themselves affect your unit-hour costs. Calculate your revenue per unit hour. This is an economic expression of your unit-hour utilization. Cost centers or departments are reasonable measures for your unit-hour KPIs with one exception, operations payroll. As operations payroll is the largest line item for any EMS service, this line should be tracked separately or in addition to the cost centers. Also, as operations payroll creates your unit hours, this should be a very linear relationship over time.

This particular relationship is so significant that you should develop a completely separate tool to measure the relationship between payroll hours and unit hours. This tool can pick up other key measures and include data points representing call and transport activity, unit hours, payroll hours, and payroll costs. From these data points, you can start looking at relationships including utilization, cost per hour, and our payroll efficiency measure.

The payroll efficiency measure starts by separating hours into different direct and indirect classifications. Direct hours, including regular pay and overtime pay, are the hours you expect to create unit hours. Indirect

Clinical/Documentation Compliance		
PROFESSIONAL AMBULANCE (8,611)	Count	% Successful
Not Compliant		
CASE REVIEWED	5,981	30.54
CLINICAL: ALS CARE REQUESTED / INITIATED WHEN INDICATED	29	99.66
CLINICAL: DESTINATION DECISION APPROPRIATE	2	99.98
CLINICAL: TREATMENT/PROCEDURES APPROPRIATE	186	97.84
CLINICAL: VITAL SIGNS AT APPROPRIATE TIMES	78	99.09
DOC: (IF APPLICABLE) EKG FORM COMPLETED	128	98.51
DOC: (IF APPLICABLE) INTUBATION APPROPRIATELY DOCUMENTED	1	99.99
DOC: ALL SIGNATURES OBTAINED (BENEFITS/AMAs/PCSs)	130	98.49
DOC: ALL TIMES DOCUMENTED (RUNMEDS/PROCEDURE/VITALS)	2,006	76.70
DOC: HISTORY / TREATMENT / ASSESSMENT / COMPLETE DOCUMENTATION	186	97.84
DOC: HOW WAS PATIENT FOUND AND MOVED	10	99.88
DOC: ON SCENE CANCELLATION DOC/TIMES	3	99.97
DOC: PATIENT ID AND DEMOGRAPHICS	80	99.07

Create a KPI about your clinical and documentation to ensure compliance.

hours include paid time off, continuing education, extra holiday pay and any other hours you did not expect to turn into unit hours. For a model, you can segregate out the costs and hours associated with operations management. How the process really works is that after you have identified all of the items that should not create unit hours, everything else is your pool of direct hours. Once you have your direct payroll hours, you can compare them to the unit hours that they created. While you may be excited upon initially computing 95% efficiency, it won't take long until you start computing the annual value of that 5% that you don't understand. On a million-dollar payroll, that 5% equals \$50,000. Once you can see unexplainable costs like that, the 5% that you don't understand becomes much more important than the 95% that you do. Upon closer examination, you may find many things: people punching in early or punching out late; people doing paperwork; hours resulting from critical failures. You may find flaws in your unit-hour collection process. Remember, the process is not about the 95%, but the 5%.

These measures become the gauges on the dashboard of your organization. With a combination of people, purpose, and process, you can turn the data in your organization into information, which in turn becomes increased knowledge for the management team.

Examples of EMS Organization KPIs':

Functional Areas of Business	KPI
Billing	DSO; clean claims
Finance	Total cost/call or transport
Human Resources	FTE turnover (field)
Operations	Actual UHU; out-of-chute time
Communications	Emergency call processing time
Clinical Care	Clinical sophistication; on-scene time (trauma, medical)
Asset Management	Critical Failures/total patients transported
Training & Education	Training hours per field provider (quarterly)/training hours per communications provider
Safety	Any vehicle contacts/fleet miles

Sources: *Prehospital Care Administration, second edition, Joseph J. Fitch, PhD; ZOLL Data Systems' users conference roundtable session.*

About ZOLL Data Systems

ZOLL Data Systems of Broomfield, Colorado, develops, markets, and sells the RescueNet suite-computer-aided dispatch, billing, field data collection, and mobile data software for the emergency medical services (EMS) market. RescueNet is the only fully integrated EMS information management system that allows EMS organizations to manage critical information for maximum performance.

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