

TALK TI



BENCHMARKING YOUR COMM CENTER

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Regardless of your role in EMS, the communications center affects the whole system's success: Wrong address? Poor telephone assessment? Call processing delay? Responding units sent "hot" when it's not required? There has been a lot of talk, but little action taken to benchmark performance among EMS and public safety communications centers. Questions often asked include: How are we doing? Are the right measures being tracked? How does our comm center compare with others? Are we using best practices?

At a minimum, comm centers need to be evaluated for efficiency and effectiveness, technology planning and integration, financial performance and accountability, and organizational leadership. If the center is involved in dispatching medical requests for service, then the additional category of clinical effectiveness and integration should be rated.

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THE TALK



Communications centers can be divided into four basic categories. They are: 1) single jurisdiction, specialized function (e.g., Anytown, U.S.A.'s separate fire dispatch.); 2) single jurisdiction with multiple functions (e.g., the single community that has a consolidated 9-1-1, police, fire, EMS center); 3) multi-jurisdiction single function center (e.g., a private ambulance service communications center that serves multiple communities); and 4) multi-jurisdiction and multi-function (e.g., regional communications centers that provide more than one function, such as 9-1-1, police, fire and/or EMS).

The following tool provides a mechanism to benchmark characteristics of your communications center regardless of its functional category. The tool favors those centers that provide superior customer service, are accountable for performance and provide meaningful data to support improved management of the individual agencies served.

To use the tool, read each question carefully and then record the approximate score on the line provided after each question. Some questions ask you to award your center with a specific number of points associated with the description provided. Other questions require that you subtract points or score zero if an element is not present or is deficient. Once you've scored your comm center on all questions, tally your category totals on the scorecard provided (p. 112).

CATEGORY 1: Center Efficiency & Effectiveness

50 POINTS POSSIBLE

An effective communications center performs its responsibilities in a manner that supports the achievement of mission-specific objectives of the parent organization. The scale favors centers that are operated by a single agency or multi-agency center with defined service level/performance agreements in place that specify both governance and performance accountabilities. The functions and operations of the center are aligned with strategic plans. Performance is planned, measured and published at least monthly by primary function and by component. Staffing in the center reflects the demand for service. Business improvement and quality processes are well defined. Deployment analysis occurs at least monthly.

1A: Select the option that most closely describes your comm center.

- Specific performance criteria (e.g., call processing times, interrogation accuracy, unit selection, etc.) are in writing. Performance is measured monthly and posted for the center overall, and by shift. Center performance is reported monthly to the leadership of the agency(s) it serves. **SCORE 10**
- The basic performance criteria are known but inconsistently reported. **SCORE 4**
- The job gets done, but nobody really looks at performance unless something goes radically wrong on an assignment. **SCORE 0**

SCORE 1A _____

1B: Select the option that most closely describes your comm center.

- The center's call processing times and dispatch times are measured at least monthly by time component (e.g., call answer, initial assignment, etc.), by the center as a whole, by shift and by individual staff member. The component performances are discussed at employee meetings, and individual performance is discussed privately. **SCORE 8**
- One of the two components—dispatch time or call processing time—is systematically evaluated and posted with the objective of monitoring and improving performance. **SCORE 4**
- Call processing and component times are either not measured or not reported. **SCORE 0**

SCORE 1B _____

1C: Select the option that most closely describes your comm center.

- Staffing is variable and matched to demand. Shifts and schedules are designed according to a scientifically recognized formula (e.g., Erlang C or other scientifically accepted modeling approach). **SCORE 9**
- Staffing is variable and loosely matched to demand. Shifts and schedules are developed according to a trade association or other formula (e.g., the APCO tool, RETAINS, Responsive Efforts to Address Integral Needs in Staffing). **SCORE 4**
- Staffing is variable depending on management's estimate. **SCORE 2**
- Staffing is constant 24/7/365 and does not reflect demand. **SCORE 0**

SCORE 1C _____

1D: Select the option that most closely describes your comm center.

- Business processes are improved on an ongoing basis. A variety of analytical techniques, including advanced performance management concepts (e.g., Six Sigma), is used to support process improvement. Results are benchmarked with other centers. **SCORE 8**
- Key processes have QI or process improvement initiatives underway that are well understood by the frontline staff in the center and other divisions. **SCORE 5**
- Some quality efforts are ongoing. **SCORE 2**
- Quality efforts are best described as cleaning up after an incident occurs. **SCORE 0**

SCORE 1D _____

1E: Select the option that most closely describes your comm center.

- Geographic and temporal analysis is conducted at least monthly (large service) or quarterly (small

service) to determine when and where calls occur. Performance exceptions are plotted; reasons for exceptions are described, and mitigation efforts are well documented. **SCORE 9**

- Data are provided monthly to participating agencies in a format that facilitates analysis and includes determining response time exceptions and mitigation factors. **SCORE 7**
- Geographic call demand patterns are analyzed on a limited basis or only as requested by participating agencies. **SCORE 0**
- The center does not provide any data used for analysis other than basic response time data to its participating entities. Its primary function is processing calls. **SCORE Negative 4**

SCORE 1E _____

1F: Operational key performance indicators (KPI) are routinely analyzed and integrated into the decision-making processes of the center or agency. Score one point if your center routinely documents any of the following areas; score zero points if it does not.

- 1F1: System's call demand to capacity ratio is regularly reviewed. **SCORE 1 or 0**
- 1F2: Percentage of correct unit selection is measured. **SCORE 1 or 0**
- 1F3: Queue and hold times are measured. **SCORE 1 or 0**
- 1F4: Percentage of total staffed time that individual communicators are available to answer calls/dispatch is measured. **SCORE 1 or 0**
- 1F5: Communicator error that causes or contributes to an exception or incident is measured. **SCORE 1 or 0**
- 1F6: Call component times are measured by individual communicator. **SCORE 1 or 0**

SCORE 1F _____

TOTAL FOR CATEGORY 1 _____

CATEGORY 2: Technology Planning & Integration

50 POINTS POSSIBLE

The scale favors centers that have sufficient technological capabilities to accomplish their primary mission. It also favors systems that appropriately manage risk, have significant levels of interoperability, partner with other agencies for infrastructure investment and have adequate support available to reduce service interruption.

2A: Score one point if your center shows strength in any of the following areas; score zero points if it appears weak.

- 2A1: Automatic number identification (ANI) and automatic location identification (ALI) capabilities exist, and the quality and consistency of location data from wireless users are adequate. **SCORE 1 or 0**

2A2: Alternate routing capacity of 9-1-1 calls to a designated alternate center exists if 9-1-1 trunks are busy or out of service. This may be activated upon request or automatically, if detectable, when the 9-1-1 equipment fails or the center itself is disabled. **SCORE 1 or 0**

2A3: The primary CAD is reliable and has few incidents of locking up, or other maintenance "glitches." **SCORE 1 or 0**

2A4: The CAD has an integrated geographic information system (GIS). Addresses are validated through technology at 97% or higher. GIS provides the dispatcher with searchable area mapping. (AVL is a separate question.) **SCORE 1 or 0**

2A5: The CAD supports and makes MDT access available to agencies served to provide non-verbal data exchange. **SCORE 1 or 0**

2A6: The CAD/GIS system is interfaced with an AVL system. **SCORE 1 or 0**

2A7: The center's AVL infrastructure provides "live" in-vehicle (en route) mapping for end users. **SCORE 1 or 0**

2A8: The center's AVL infrastructure supports MDTs or laptops that are used to generate reports (e.g., police reports, patient care reports, etc). **SCORE 1 or 0**

2A9: If your center is responsible for dispatching EMS first responders, score 1. If this function is managed in another location and the two CAD systems "electronically handshake," facilitating dispatch with two-way (non-verbal) data exchanges, score 1. If neither is true or notification involves calling the other center, score 0. **SCORE 1 or 0**

2A10: The center has secure access to state/local emergency management agencies and/or is involved in bio-surveillance. **SCORE 1 or 0**

SCORE 2A _____

2B: Select the option that most closely describes your comm center.

- Risk management is highly integrated into overall program management. Stakeholders are involved in risk assessment and mitigation planning. Effectiveness of mitigation/containment strategies are formally tested and evaluated. Mitigating response time exceptions and deployment plan deviations are part of the routine risk management mitigation review. **SCORE 8**
- Major risks are identified, and plans are developed to contain risks. **SCORE 7**
- General risk policies and guidelines are in place. **SCORE 3**
- The concept of risk management is not well understood. **SCORE 0**

SCORE 2B _____

2C: Select the option that most closely describes your comm center.

- Interoperability and system redundancy are high priorities. Individual units routinely interact with allied agencies and all jurisdictions, both contiguous (border) and coordinate (e.g., state for counties, state and county for cities, etc.), on major incidents. **SCORE 8**
- Interoperability and system redundancy are high priorities. Individual units can routinely interact with allied agencies on scenes of major incidents. **SCORE 6**
- Interoperability is limited to supervisory personnel. **SCORE 4**
- No interoperability capacity exists within the system. **SCORE 0**
- Redundant or back-up communications/data systems do not exist or are not reliable. **SCORE Negative 7**

SCORE 2C _____

2D: Select the option that most closely describes your comm center.

- The organization seeks out partnership opportunities and has routinely worked with other agencies to develop shared infrastructure (e.g., radio/data networks, etc.). **SCORE 8**
- The organization is willing to work collaboratively with other agencies to develop mutually supportive procedures and practices. **SCORE 4**
- The organization resists working collaboratively with other outside agencies to develop shared technical infrastructure. **SCORE Negative 3**

SCORE 2D _____

2E: Select the option that most closely describes your comm center.

- Communications/data system support could be described as superior. Preventive maintenance/software upgrades are planned and well executed. When systems fail, response times to mitigate the issue are outstanding. **SCORE 8**
- Maintenance and support are described as adequate. **SCORE 4**
- Maintenance and support are described as lacking and interfere with operations capabilities. **SCORE Negative 5**

SCORE 2E _____

2F: Select the option that most closely describes your communication center.

- The potential for computer system failure is recognized, and each shift systematically practices manual dispatch methods at least once a month. **SCORE 8**
- The potential for computer system failure is recognized, and each shift systematically practices

manual dispatch methods less frequently than monthly, but at least annually. **SCORE 4**

- The potential for computer system failure is not adequately recognized. **SCORE 0**

SCORE 2F _____

TOTAL FOR CATEGORY 2 _____

**CATEGORY 3:
Accountability & Finance Issues**

50 POINTS POSSIBLE

Whether the center operates on behalf of a single agency or functions for multiple agencies, the scale favors centers that have highly developed accountabilities at all levels and are linked to the overall mission and goals of the organization(s). Comm centers that are accountable perform better operationally and financially than those that do not have defined performance expectations. The way a center conducts itself financially, especially in the management of its operating costs, is also an indication of its level of accountability to the community.

3A: Select the option that most closely describes your comm center.

- The comm center is directly controlled by the single agency it serves and has written performance requirements. **SCORE 8**
- The comm center serves multiple agencies and has written performance-based service level agreements between the center and each agency. **SCORE 8**
- No written performance expectations or agreement exists. **SCORE 0**

SCORE 3A _____

3B: Select the option that most closely describes your comm center.

- The center is independently accredited by an outside entity (e.g., CALEA, CFAI, NAED). **SCORE 7**
- The center is independently reviewed by an independent audit organization or consulting group using objective evaluation criteria. **SCORE 4**
- The center performance is not independently validated. **SCORE Negative 4**

SCORE 3B _____

3C: Administrative key performance indicators (KPI) are routinely reported, analyzed and integrated into decision-making processes. Give your center one point if it documents any of the following areas; zero points if it does not.

- 3C1: The ratio of critical component "failure" to total staffed hours is quantified. **SCORE 1 or 0**
- 3C2: Formal training is scheduled and achieved each year, measured by center, shift and individual. **SCORE 1 or 0**

- 3C3: Straight time equivalent hours scheduled to actual (STE converts all hours including overtime to a standard 40-hour equivalent) to determine effective use of OT and part-time personnel. **SCORE 1 or 0**
- 3C4: Compliments per staffed hour. **SCORE 1 or 0**
- 3C5: Complaints per staffed hour. **SCORE 1 or 0**
- 3C6: Formal problem resolution/grievances per staffed hour. **SCORE 1 or 0**
- 3C7: Turnover is routinely benchmarked and reported. **SCORE 1 or 0**

SCORE 3C _____

3D: Financial key performance indicators (KPI) are routinely reported, analyzed and integrated into decision-making processes. Give your center one point if it uses a KPI in any of the following areas; zero points if it does not.

- 3D1: Expenses per transaction are quantified and reported. If a multi-agency center, costs per transaction by agency are determined. **SCORE 1 or 0**
- 3D2: Time (or cost) per sub-component transaction (e.g., call taking, dispatching, administrative support, etc.). **SCORE 1 or 0**
- 3D3: Budget information includes line items for occupancy costs, employee benefits, insurance or, alternatively, an overhead allocation that has assumptions presented with budget information. **SCORE 1 or 0**
- 3D4: Expense per STE-hour staffed. **SCORE 1 or 0**
- 3D5: Overtime ratio maintenance. **SCORE 1 or 0**
- 3D6: Budget to actual on a monthly basis. **SCORE 1 or 0**

SCORE 3D _____

3E: Select the option that most closely describes your comm center.

- Financial expectations, information and financial performance data are available in a timely and useful format. Managers receive incentives for positive performance and are held accountable for performance. **SCORE 10**
- Financial expectations, information and financial performance data are available in a timely and useful format, and managers are held accountable for performance, but incentives are not utilized. **SCORE 7**
- Financial information is either not prepared in a timely fashion or not provided in a useful format. **SCORE Negative 5**

SCORE 3E _____

3F: Select the option that most closely describes your comm center.

- The center is seen as a leader in the quality of its external performance reporting documents. **SCORE 6**

- Center performance data are included in the par-ent agency's annual report and/or monthly/quarterly reports distributed outside the de-partment. **SCORE 4**
- Center performance data are distributed internal-ly within the department. **SCORE 2**
- Center performance data are not reported. **SCORE Negative 2**

SCORE 3F _____

3G: Select the option that most closely describes your comm center.

- Replacement capital/major infrastructure items are anticipated and procured on a predetermined schedule. **SCORE 6**
- Capital/major infrastructure items are funded an-nually through a budget process that involves sorting out competing priorities. **SCORE 4**
- Capital/major infrastructure items are funded on an as-needed or ad hoc basis. **SCORE 0**
- Capital funding is woefully inadequate. **SCORE Negative 4**

SCORE 3G _____

TOTAL FOR CATEGORY 3 _____

CATEGORY 4: Organizational Leadership

50 POINTS POSSIBLE

Comm centers that are well led encourage staff members at all levels to become meaningfully engaged in the work and mission of the organization. The leaders think and plan strategically and act with tactical precision. They clearly define performance expectations, which are accepted by the staff. The organization is incredibly responsive to its external and internal customers. Its selection practices are objective and successful in recruit-ing talented, high-quality personnel. Staff members are encouraged to be lifelong learners and are recognized for achievements.

4A: Select the option that most closely describes your comm center.

- A compelling vision of the future draws people in a common direction. Employees understand and are personally enrolled in the vision, goals and objectives that support success. **SCORE 6**
- The culture and the center's leaders try to foster participation and listen to ideas but do not un-derstand how to encourage staff. **SCORE 4**
- The culture and center's leaders are not mean-ingly engaged in trying to encourage success. **SCORE 0**
- The culture and the center's leaders are either un-caring or abusive toward staff. **SCORE Negative 6**

SCORE 4A _____

4B: Select the option that most closely describes your comm center.

- Strategic planning is aligned with operational and financial business plans and performance measurement. Employees participate in creating strategic plans. Frontline staff can articulate the organizational vision and operational plans. **SCORE 6**
- A strategic vision is in place. A yearly strategic planning cycle occurs; plans tend to be short term or operationally focused. Frontline staff cannot articulate strategies and/or operational plans. **SCORE 3**
- No formal vision or strategic planning is in place. Planning is centered on major capital needs or done on an ad hoc basis. **SCORE 0**

SCORE 4B _____

4C: Select the option that most closely describes your comm center.

- Labor relationships are direct, productive and lead to reasonable end results. Both management and labor own the outcomes of the process and their behavior in that process. Staff members are considered internal “customers.” **SCORE 7**
- Relationships are often strained. Results occur but at a maddeningly slow pace. **SCORE 2**
- An “us and them” relationship exists between frontline personnel and management when things don’t work out as intended or desired. **SCORE 0**

SCORE 4C _____

4D: Give your center one point if it shows strength in any of the following areas; zero points if it appears weak.

- 4D1: Roles, responsibilities and performance expectations are clearly defined. **SCORE 1 or 0**
- 4D2: Staff selection practices are timely and successful in recruiting high quality personnel. **SCORE 1 or 0**
- 4D3: Mechanisms are in place to statistically measure employee satisfaction at least twice a year. **SCORE 1 or 0**
- 4D4: Performance accountability is evident at all levels of the organization. Three-hundred-sixty-degree personnel appraisal tools are used. **SCORE 1 or 0**
- 4D5: The management/supervisory team has integrated ethics and values into management practices. **SCORE 1 or 0**
- 4D6: Leaders are continually learning new techniques to expand their personal skill set. **SCORE 1 or 0**
- 4D7: The director or manager has completed the requirements of the Communications Center Manager’s Program sponsored by the National Academies of Emergency Dispatch (NAED) or is certified as an Emergency Number Professional by the National Emergency Number Association (NENA). **SCORE 1 or 0**

SCORE 4D _____

4E: Select the option that most closely describes your comm center.

- Customer responsiveness is a high priority. When an inquiry occurs, a pre-planned resolution protocol with defined timeframes is activated. Internal and external customer problems both get appropriate attention, and results are routinely communicated. **SCORE 8**
- External customer complaints are addressed, but it’s uncommon to know the results. **SCORE 4**
- Results are known only when it leads to a procedural change or disciplinary action. **SCORE 0**

SCORE 4E _____

4F: Select the option that most closely describes your comm center.

- Staff members are encouraged to develop and use capabilities by recognizing and/or rewarding achievement beyond minimum competency standards. A significant commitment to staff development exists. **SCORE 6**
- Training is provided to meet the minimum competency requirements. **SCORE 3**
- Training is not provided. **SCORE 0**

SCORE 4F _____

4G: Select the option that most closely describes your comm center.

- Formal and informal mechanisms are used by leaders to ensure dialogue is forthright. In meetings, titles tend to fall away, opening the way to free-flowing dialogue. There is little fear of re-primation among employees who talk straight. Opinions are set aside to understand other perspectives. **SCORE 10**
- Communications tend to be more formal or stiff, but leaders listen to what is said. **SCORE 6**
- Communications are selective and/or based on popularity. Petty games are played, and there is fear of reprisals. **SCORE Negative 3**

SCORE 4G _____

TOTAL FOR CATEGORY 4 _____



PHOTO JEFFREY MAYS

An effective comm center performs its responsibilities in a manner that supports the achievement of mission-specific objectives of the parent organization(s).

CATEGORY 5: Clinical Effectiveness & Integration

50 POINTS POSSIBLE

In addition to 9-1-1 PSAP responsibilities, some centers are also responsible for medical call receipt, interrogation and processing. The scale favors scientifically demonstrable systems that use automated quality improvement processes that are actively supervised by a physician. The scale favors agencies that are accredited.

5A: Select the option that most closely describes your comm center.

- The medical dispatch function is recognized and considered an integral part of the responsibilities of the EMS system's medical director. The physician is deeply involved in local Emergency Medical Dispatch (EMD) protocol development and quality processes in the center. **SCORE 8**
- The physician medical director is involved and supervises quality processes. **SCORE 6**
- The physician medical director is indirectly involved and participates in quality processes as requested. **SCORE 3**
- The physician signs off to ensure regulatory compliance. **SCORE 0**
- No medical director is identified. **SCORE Negative 7**

SCORE 5A _____

5B: Select the option that most closely describes your comm center.

- Each caller to the emergency communication center receives quick, accurate and reproducible triage and pre-arrival instructions from a certified EMD, and all EMD personnel have had previous field experience or training as an EMT. **SCORE 8**
- Each caller to the emergency communication center receives quick, accurate and reproducible triage and pre-arrival instructions from a certified EMD. **SCORE 7**
- At least one person on each shift is trained as an EMD and provides all pre-arrival instructions. **SCORE 2**
- EMD is not provided to callers in this jurisdiction. **SCORE Negative 8**

SCORE 5B _____

5C: Select the option that most closely describes your comm center.

- EMD must follow the protocol as trained and ask the questions exactly as they appear on each screen/page. Success is dependent on objectively applying the protocol based on the caller's responses to the questions and allowing the protocol to solicit information that will enable accurate triage. Questions used are chief-complaint specific. **SCORE 8**

- EMD generally follows the protocol as trained and usually asks required questions. **SCORE 2**
- EMD uses open-ended questions and does not follow protocol, or EMD is not used. **SCORE Negative 7**

SCORE 5C _____

5D: Select the option that most closely describes your comm center.

- EMD processes, including interrogation and pre-arrival instructions, are automated and fully integrated with CAD. **SCORE 8**
- The EMD process is based on a card system and is not automated. **SCORE 4**
- EMD is not used. **SCORE 0**

SCORE 5D _____

5E: Select the option that most closely describes your comm center.

- The quality process is automated to facilitate case review and specific performance compliance indicators, including case entry protocol compliance, chief complaint selection accuracy, key question protocol compliance, pre-arrival instruction compliance and sub-determinant code selection, and response selection compliance. EMD performance data is available by shift and individual. **SCORE 8**
- Quality processes are manual but are faithfully followed to determine compliance, including case entry protocol compliance, chief complaint selection accuracy, key question protocol compliance, pre-arrival instruction compliance and sub-determinant code selection, and response selection compliance. **SCORE 4**
- Quality processes are informal or ad hoc. **SCORE Negative 7**

SCORE 5E _____

5F: Select the option that most closely describes your comm center.

- EMD function is accredited by the National Academies of Emergency Dispatch. **SCORE 6**
- EMD function is not accredited by the National Academies of Emergency Dispatch. **SCORE 0**

SCORE 5F _____

5G: Give your center one point if it shows strength in any of the following areas; zero points if it appears weak.

- 5G1: The center maintains automated hospital bed status to facilitate patient transport to an appropriate facility. **SCORE 1 or 0**
- 5G2: Observation time or cross-training between all field and communications personnel occurs at least twice per year. **SCORE 1 or 0**
- 5G3: Communications tapes are routinely used as part of field QI processes. **SCORE 1 or 0**

