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Applying metrics to 21st century healthcare security

Anthony J. Luizzo, PhD, CFE, CST, PI (Ret. NYPD) and Bernard J. Scaglione, CPP, CHPA, CHSP

In their third article for this journal on the subject, the authors spell out why and how metrics will have to be used in in the years ahead to demonstrate the financial value and program effectiveness of healthcare security.

(Anthony J. Luizzo, PhD, CFE, CST, PI (Ret. NYPD) is a member of the board of advisors of Vault Verify, and Stage One Screening, LLC. He is president emeritus of the New York Chapter: Certified Fraud Examiners, past president of the Society of Professional Investigators (SPI), and is the former Director of Loss Prevention and Corporate Security for the New York City Health and Hospitals Corporation. He is a member of IAHSS and a frequent contributor to this journal.)

(Bernard J. Scaglione, CPP, CHPA, CHSP is the director of Healthcare and Security Business Development for Lowers Risk Group. He has 30 years of experience in the security profession; including a Master's Degree from Rutgers University School of Criminal Justice. He is a past Board member of IAHSS, past Chairman of the ASIS International Healthcare Council, and past President of the NYC Metropolitan Healthcare Safety and Security Directors Association. He is a frequent contributor to this journal.)

Healthcare security professionals have the awesome task of trying to justify the value of the protective services they provide. The primary goal of every healthcare security executive is to keep hospital staff and visitors safe. The evaluative tool used to do this job is the security survey. In professional hands the security-survey functions like a diagnostic CT scanner seeking protection deficiencies and other abnormalities requiring adjustment and or repair. In today's budget conscious times, all security executives face the stark reality of trying to adequately deal with these budget shortfalls and ever shrinking protection dollars whilst offering optimum protective services within their respective institutions.

Many more informed security executives have begun moving into the 21st century and are using metrics to justify protection-related expenditures. They have fi-

nally learned that the key to obtaining needed dollars for security related expenditures is to learn the language that CFOs know and understand when pursuing their wish list. Two recent articles[1,2] written by the undersigned authors for this publication help to cast an eye on both the benefits of metric utilization and its immense value in substantiating programmatic costs to management.

DEVELOPING METRICS TO DEMONSTRATE VALUE

The key to obtaining needed dollars for security related expenditures is developing metrics that are relevant to the operations being performed by the security department. When metrics are applied over time, they show fluctuation in service delivery, enhancement options and/or deteriorations in service levels. A galaxy of different metrics is employed in the healthcare sector to determine the value of security services. Unraveling which metric applications are the most effective has been exhaustively debated for many years by numerous organizations and individuals. We believe that the following metric applications should be added to the list of options:

- Officer response time to emergent situations
- The number of security department generated incident reports presented monthly or weekly
- The amount of reported crime presented within a specific period (monthly, weekly, annually)
- The number of calls for security service over a given period
- The institution's square footage

As a matter of course, some institutions compare security specific metrics to hospital based metrics so that senior management can better relate to the security program at hand. For example:

- Conjoining the security incident rate to patient length of stay or bed census
- Conjoining incident rate, crime rate, service call and officer response durations

An alternative metric that demonstrates value to the security program can be determined by

how security officers perform their duties compared to the costs associated with the program and how patients, visitors and staff perceive the security program and how safe the feel. These metrics are often not utilized in the evaluation of value and should be considered when demonstrating the true worth of the security program and its effectiveness in providing a safe and secure environment.

DEMONSTRATING FINANCIAL VALUE OF SECURITY SERVICES

What does it cost the hospital to provide security services and how effective are the services compared to their cost? By attaching a cost to security services and evaluating the effectiveness of these services, value to the hospital for those services can be determined. Individual programs like patrol, visitor screening, employee escort or patient restraints, can be reviewed to determine the individual cost to furnish said services. Then individual metrics related to that service can be developed to help measure the program's effectiveness. Together, both metrics demonstrate the value of said security programs to the hospital. Using a cost-metric equation allows for an evaluation based on a quantifiable number that the C-Suite can understand.

Determining program financial value must include: adequately defining the scope of the initiative to be undertaken, appraising services, collecting/cataloguing property, evaluating patrol and visitor screening. Once this is competed then the labor and operational costs can be established. Further, costs can be determined by the average salary of the officers assigned to the particular task or program--if the same officer holds a specific job regularly, then their actual salary can be used. With respect to service calls--the average time the officer is assigned to the call can be used.

DETERMINING PROGRAM EFFECTIVENESS WITH METRICS

A set of metrics must be developed to evaluate the program effectiveness. This starts with establishing the purpose, scope or any goals associated with the program and a breakdown of the program functions. For example,

when evaluating visitor screening services, effective metrics may be the average length of time a person waits for a pass, the number of passes issued in a specific time frame, the results of a security audit on how many visitors surveyed were wearing their pass as opposed to the number that were not. The number of passes issued each day, week or month, or the number of persons that enter each post broken down by time period. The time it takes to produce a pass for each visitor. These are all metrics that can help in determining program effectiveness. Once all the metrics are gathered, they need to be compared to the program's expense. This comparison will determine service value to the hospital.

CALCULATING COSTS

If an entrance is staffed with two (2) officers from noon to 8 PM at an average expense of $50 per hour, and from 12 PM to 4 PM only 20 visitors are screened, then the total expense to screen visitors is $200 or $10 per visitor. From 4 PM to 8 PM 100 visitors are screened, then the expense per visitor is $2 per visitor. However, if the wait time for a pass from 4 PM to 8 PM is 5 minutes, but at 12 PM to 4 PM it is 1 minute, then the value of the service changes. From 4 PM to 8 PM the expenses are lower; but the service metrics are higher, resulting in a lower value service.

From this example, it can be determined that visitor screening has a lower customer value from 4 PM to 8 PM when lines are longer as compared to 12 PM to 4 PM when lines are shorter.

This example shows how financial evaluation can demonstrate value as well as help to identify potential service issues. For this program, it might be better to even out the costs by reducing staff to one officer from 12 to 4 PM and having three officers from 4 PM to 8 PM. With respect to this example, the expense from noon to 4 PM would now be $25 dollars an hour or $100 for the four hours, or $5 per visitor. From 4 PM to 8 PM the expense for the officers would be $75 an hour or $300 for the four hours, or $3 per visitor. Screening time increased to about 1 minute from noon to 4 PM and reduced to 2 minutes from 4 PM to 8 PM. Thus, the cost of the screening program from 12 PM to 8 PM is $400 with

an average cost per visitor of $3.50. Screening time now averages 1.5 minutes.

It is important to note that the true value of developing and monitoring services by expense as compared to service is when budget reduction or program evaluation is needed. For example: If security is asked to decrease their budget by a specific amount of money, than service changes can be evaluated from a financial perspective. The security department can save $700 a week by eliminating the third screening officer from 4 PM to 8 PM daily. This will decrease the cost per visitor from $3 a visitor to $2 per visitor but increase waiting time from 2 minutes to 5 minutes. It's all in the numbers!

MONITORING AND MEASURING THE PERCEPTION OF SECURITY

It is well known in the security industry that the perception of security can be different from the actual amount of security available. Oftentimes however perception dictates security availability. The perception of poor security, insecurity or fear often takes precedent over a strategically placed security initiative. Perception of security tends to be reactive; as opposed to planned or evaluated service execution. Seeing that perception can be such a strong driver of service placement --it is important to monitor perception so that service changes are anticipated and not a knee jerk reactive exercise. Monitoring the feelings or perception of patients, visitors, and staff only helps to improve overall security.

How can perception be measured? It can be measured several different ways, but mainly it should be accomplished by simply asking patients, visitors and staff, on a regular basis, how safe they feel both at their work location and within the hospital setting overall. Surveys should be short and to the point; asking only a few questions at a time like: How safe do you feel in the hospital? How safe do you feel in your work place or patient room? How safe do you feel visiting at night or after 8 PM? Do you feel safe walking to your car at night? The survey should be limited to two or three questions at a time and should use a rating scale or Yes/No answer format. A com-

ment area should be made available so that patients, visitors or staff can give examples of why they feel or do not feel safe. Surveys can be conducted by e-mail, mail or in person. For patients and visitors, it is best to conduct surveys in person while they are on site so that information is obtained in a timely fashion and response rates are higher. Perception can also be determined by the number of service calls for a specific hospital location, department or nursing unit. High rates of specific types of calls may indicate a perception of poor security or a higher feeling of insecurity by patients, visitors or staff. For example, a high number of calls for disruptive patients or visitors to a nursing unit may indicate the perception of insecurity or visitors and staff may have a higher rate of fear compared to units that do not have a high rate of disruptive patients or visitors.

ADDITIONAL METRIC CONSIDERATIONS

Perception can also be determined by the number of incident reports generated for specific departments or nursing units. The use of specific metric applications such as unearthing the number of exterior lights in disrepair in a specific location at night, the number of broken door locks found, the length of time a reported broken door is discovered and then repaired, the number of escorts provided to parked cars or bus stops during evening hours all play a role in the overall exercise. Perception is another metric that can be compared to security services like escorts or physical security installations of CCTV. Perception can also be compared to the overall crime rate, incident report rate or any other metric that helps to determine the value of security services.

LOOKING TO THE FUTURE: WHAT ROLE CAN ROBOTICS PLAY IN SECURITY/SAFETY PLANNING

Robert J. Gordon a professor in social sciences at Northwestern University[3], speaks of the possible use of robots in a wide variety of applications outside of the manufacturing and warehousing sectors including: supermarkets, restaurants, doctor and dentist offices and hospitals. The sixty-four billion dollar question that

healthcare security executives should be pondering is whether robotics has a role to play in the healthcare security and safety environment and how it might be utilized.

CONCLUSION

The use of metrics in security planning and programming allows the hospital security administrator to find that unique balance between furnishing optimum security at a modest and acceptable cost. Everyone wins!

Resources

[1]Anthony Luizzo, and Bernard Scaglione: *An Alternative View in the Development of Healthcare Security Metrics* (Vol. 31 No. 2 2014-2015- Journal of Healthcare Protection Management)

[2]Luizzo, *Resources Available for Applying Metrics in Security and Safety Programming* (Vol. 32 No. 1: 2015-2016 - Journal of Healthcare Protection Management)

[3]Robert Gordon, *Rise and fall of American Growth: U.S. Standard of Living Since the Civil War*: The Princeton University Press, 2016.

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Anthony J. Luizzo, PhD, CFE