The Challenges of an Error Reporting System

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On first mention, many of the managers and supervisors I speak with are supportive of the idea of an error reporting system (ERS) in their organization. The benefit of an ERS is fairly obvious; if errors are reported then fixes can be implemented and errors can be diminished or in some cases even eliminated. This in turn creates a safer working environment as well as reduced vulnerability to litigation. Yet, in light of all these benefits, many organizations have failed to adopt and support a formal ERS.

Up until this point there has not been a regulatory requirement for an ERS. However, a paradigm shift has begun to occur with both the introduction of soon-to-be mandated FAA human factors (HF) training programs and safety management systems (SMS) in the United States. Both of these programs call for an ERS and suggestions for implementation are spelled out accordingly: On the HF side, one should reference the Operator's Manual for Human Factors in Aviation Maintenance published by the FAA. On the SMS side, information can be found by accessing FAA Advisory Circular 120-92. But why the major push for ERS's these days?

The well known Heinrich Ratio states that, for every fatal accident, there will be three to five nonfatal accidents and 10 to15 incidents; but there will also be *hundreds* of unreported occurrences. Unreported occurrences are extremely problematic since no defenses can be employed if nobody knows these occurrences exist. This makes sense. However, the resistance encountered in employing an ERS generally stems from peoples' natural propensity to deny they make mistakes in the first place as well as their fear of retribution or punishment for disclosing such mistakes. This can create a "darned if you do, darned if you don't" mindset. From a personal standpoint, employees may feel that while there are clear advantages to error reporting, at the same time they might also feel that the embarrassment and potential punitive implications far outweigh the advantages.

A good and effective safety culture must include an ERS. And the key to a successful ERS is a *Just Culture*. A Just Culture is a culture that acknowledges that well-intentioned people still make mistakes and should not be punished for slips, lapses, mistakes, and other common everyday errors. Yet, a line is still drawn where willful violations and purposeful unsafe acts will be dealt with in punitive form. The general indications are that only around 10 percent of actions contributing to bad events are judged as culpable (Reason, 2004, as cited in Global Aviation Information Network, 2004, p. vi). The bottom line of a Just Culture is *trust.* Employees must know that they can report errors without sanction. Once this trust is established then an organization can have a reporting culture, something that provides the system with an accessible memory, which, in turn, is the essential underpinning to a learning culture (p. vi). Along the same lines, Eiff (1999) suggests that, "An effective and systematic reporting system is the keystone to identifying the weakness and vulnerability of safety management before an accident occurs. The willingness and ability of an organization to proactively learn and adapt its operations based on incidents and near misses before an accident occurs is critical to improving safety."

So are you ready to start your ERS? If so, there are a number of steps that you

will need to take in order to get your basic ERS up and running.

First, you will need to announce that an ERS is going to be established within your organization. Upper-level buy-in is a must. In fact, those within the highest positions of the company should make it clear that the ERS is a non-punitive reporting system and that the system has the complete support of management.

Second, depending on the size of your organization, you may need to create an ERS department. This department can fit very nicely within the HF or SMS departments, if one or both of these exist. Larger organizations might want to create a dedicated position for the ERS but smaller organizations may do well by delegating the ERS functions to a safety manager or someone else in a safety position.

Third, you will need to determine what type of data collection instrument will be used. An example of a popular error reporting instrument is the Maintenance Error Decision Aid (MEDA) developed and distributed by Boeing. MEDA was developed to capture a large amount of data to describe the conditions that not only existed at the time of the error but also the conditions that existed before the error was committed. While its focus is on airline maintenance operations, MEDA is a tool that can also be modified and adapted to other types of operations. In some cases you may want, or need, to develop your own error reporting instrument based on your organization's specific requirements. Once the error form has been developed, you will need to determine and convey your error reporting thresholds to employees. In other words, what is reportable? You probably don't want to hear about someone breaking a latch on their lunchbox but you most certainly would want to hear about a string of similar errors that employees are making while operating a drill press.

Fourth, you will need to develop an ERS database. For smaller organizations the database can be fairly simple and created with simple programs such as Microsoft Excel. However, larger organizations may require more powerful stand-alone software that can be custom designed for your specific needs. The importance of a good database cannot be overemphasized since this will provide you with search ability, trending analysis, and graphics that will help tremendously with your data analysis. Keep in mind that your database will need to be kept up to date for maximum effectiveness.

Fifth, in addition to maintaining the ERS database, the person in charge of the ERS will also be responsible for error investigations, which may be delegated to other *trained* individuals. It should be mentioned that error investigations in this context are conducted not to assign blame or punish employees, but rather to try to determine why an error occurred so that the same type of error does not happen again in the future. Remember, this is all part of the previously mentioned Just Culture.

Sixth, provide feedback to employees. This is one of the most important parts of the ERS and yet many organizations stop short at this stage. The concept is very simple; take all of the information that is obtained through the collection and investigation of error reports and then let your employees know what has been happening and what is being done to reduce workplace errors. For certain reasons many organizations seem to overlook and/or omit this important part of the ERS. However, in order to gain credibility, buy-in, and show genuine concern, the safety team must offer feedback to employees on a consistent basis. This feedback can come in many forms and creativity can certainly catch more attention. Some methods for presenting feedback include safety meetings, bulletin board announcements, emails,

monthly newsletters, or a combination of these. The main point is that feedback lets employees know that the errors they are taking time to report are actually being addressed and acted upon. This goes a long way in the preservation of an effective ERS.

In summary, ERS will become a reality very soon. For those organizations that have an interest in developing an effective ERS it is hoped that this article, while very fundamental, provides some useful guidelines. Keep in mind that a healthy safety culture includes a formal ERS. The purpose of an ERS is not to punish, but instead promote a culture of learning and continuous improvement by surfacing the errors that could precipitate a very expensive safety lesson.

References

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