

Corrective Action Plans

Developing and managing the process

By John W. Sterritt and Steven E. NyBlom

IN A LARGE AND DIVERSE ORGANIZATION, the challenge of managing the various aspects of a risk management corrective action plan (CAP) process can be tremendous. For example, management teams in the County of Los Angeles face multiple challenges, ranging from cultural issues within the 39 departments to the complexity of the types of losses that the 100,000 employees, 12 million residents and tens of millions of annual visitors experience.

In an organization whose exposures include road construction, HazMat response, firefighting, jail operations, medical care, transportation, children's services, recreation, beach safety, facility construction and maintenance, general administration and law enforcement, the types of losses that can occur are far-reaching and potentially substantial. The spectrum of job types—from clerk to truck driver, mechanic to neurosurgeon, sanitation to psychiatrist, scientist to scuba diver, attorney to helicopter pilot, jailer to firefighter—encompasses nearly every trade and profession, and reflects the complexity of county government.

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Scope of the Corrective Action Plan Process

To understand the scope and depth of the CAP process, one must understand that root-cause analysis and incident investigation in a large, diverse organization can yield a large magnitude of data. Competent staff must be available to interpret data and evaluate trends and causal factors in order to initiate the process.

The process begins once an event occurs, is reported and is determined to have significant risk potential. The primary difference between corrective actions developed related to loss prevention issues and the CAP process is that in loss pre-

vention, near-hits and incidents are evaluated and corrective action steps are developed to reduce or minimize the specific causal factors that resulted in the exposure. In the risk management CAP process, significant events and trends with potential for substantial liability or cost are the triggering mechanisms used to start the process. In the CAP process, events are analyzed based on organizational exposure, actual or potential cost (e.g., forecasted claim judgment or settlement cost), and probability of recurrence.

In the County of Los Angeles, one resource available to help departments develop, implement and management the CAP process is the Chief Administrative Office (CAO) Risk Management Inspector General (RMIG). The RMIG function was created to work with CAO loss control and prevention staff, departmental managers, county attorneys, other public agencies within the county and the public to analyze exposures; help draft and review departmental CAPs; monitor selected CAPs for closure and effectiveness; and report progress to executive management. The risk management loss types that affect the county range from workers' compensation through general liability, vehicle liability and medical malpractice losses (Table 1). Each loss has a unique set of causes and requires event-specific corrective actions to prevent recurrence.

The financial impact of these types of losses and the volume of claims are significant. Total loss-related expenses for the county in FY 2005-06 were \$329 million (14% lower than in FY 2003-04); 14,791 claims were filed during the same period (8% lower than in FY 2003-04). These factors, coupled with the public concern for fiscal responsibility, emphasize the importance of the CAP process.

The Corrective Action Plan Process

The county's approach was based on the concept that a CAP process has an established life cycle and effective management of that process involves understanding and measuring performance in all aspects of this life cycle. The county CAP life cycle involves four distinct phases:

- 1) the event that resulted in a loss;

Table 1

Types of Losses Experienced within the County

Type of claim	Description
Workers' compensation	<ul style="list-style-type: none"> • All injuries and illnesses involving county employees • Fatalities involving county employees
General liability	<ul style="list-style-type: none"> • Slips and falls • Dangerous conditions • Employment practices • Civil rights • Wrongful deaths • Small claims • Property damage • Breach of contract • Professional liability • Errors and omissions • Inverse condemnation • Hospital liability • Child/elder abuse
Vehicle liability	<ul style="list-style-type: none"> • Third-party claims • Permit driver claims • First party claims
Medical malpractice	<ul style="list-style-type: none"> • All medical malpractice (health services, sheriff, fire, mental health and coroner)

Abstract: *The corrective action plan (CAP) process can be used in various settings to manage deficiencies. This article presents the concepts behind the CAP process that was developed by the County of Los Angeles to minimize large-dollar liability settlements. In addition to describing the range of exposures faced by the county, the authors detail the process, including what triggers development of a CAP, the investigation phase, and the actual development and implementation steps, as well as follow-up activities to evaluate the implementation and effectiveness of the corrective action.*

- 2) the investigation phase;
- 3) the development of the CAP;
- 4) the management of the CAP.

According to Robitaille (2001), a CAP is a collection of corrective actions that will eliminate the causes of the process nonconformance. The plan identifies the corrective actions, who is responsible for the entire plan and criteria to measure plan effectiveness. Many managers are confused about the differences between a CAP, a corrective action step and the corrective action process. These definitions must be understood by all affected personnel. Most people understand the relationship between cause and consequence. When a loss event occurs, management expects the situation to be evaluated and abated. Most managers and supervisors have conducted incident investigations or evaluations of processes to determine whether they can be done more efficiently.

As a concept, corrective action sounds like a good idea. All managers want to fix the things that go wrong in their departments. However, the CAP process is more than just fixing things. It involves researching the cause of a problem, developing a plan (corrective action steps), deploying that plan and implementing a process to ensure that the fix worked (Robitaille, 2001). It is a methodology for addressing problems throughout a department and for realizing improvement. It is not a complicated process, but it is a process.

The CAP process extends from event root-cause analysis through final problem closure verification and monitoring. Departmental personnel know their jobs. They know their departmental culture, its equipment and procedures. They also understand existing pitfalls, limitations and constraints. What they need is an easy-to-understand plan that combines their knowledge and resources into a process they can use to solve problems, mitigate hazards and address the root causes of loss (Parker, 2005).

They also want assurance that this activity has a

purpose. A well-developed CAP will provide a roadmap to success and assure department personnel that their efforts will provide a tangible contribution to the organization's success. In the County of Los Angeles, the risk management CAP process involves the following stages:

- notification of a problem;
- identifying the problem;
- researching/analyzing its root causes;
- developing a plan to correct the problem and prevent recurrence;
- executing the plan;
- verifying that the plan worked;
- communicating lessons learned.

To establish a comprehensive corrective action process, the principles behind the process must be understood and communicated to all affected employees. To succeed, the process must be well-defined, uniform and documented. Like all quality programs, a CAP process must have structure and the same conditioning factors inherent in other quality control processes, such as documentation, consistent implementation, control, verification and record retention (Robitaille, 2001). Like any other process, the CAP process is most effective when it is well-defined. According to Robitaille (2001), the elements of the process that must be standardized include:

- criteria for initiating a CAP;
- root-cause analysis techniques;
- methods for obtaining input from key sources;
- methods of effective CAP communication;
- techniques for developing a thorough plan;
- criteria for a timely response;
- criteria for CAP implementation;
- criteria for CAP documentation/record retention;
- criteria for CAP verification and follow-up.

The amount of detail and the resources dedicated need to be appropriate for the department and the complexity of the CAP generated. Keep in mind that effectiveness does not necessitate complexity or undue

Table 2

Potential Participants in an Investigation

Investigator	Reasons for their involvement
Supervisor	<ul style="list-style-type: none"> • Incident reporting and notification (workers' compensation, etc.) • Initial hazard abatement • Policy/procedure requires initial review of facts
Department safety officer	<ul style="list-style-type: none"> • Regulatory agency investigation/notification • Insurance reporting • Hazard abatement and abatement follow-up/closure • Establish loss cost estimate • Senior management reporting
Senior management	<ul style="list-style-type: none"> • CAP development • Lessons learned reporting and communication • Determination of the future of affected process (catastrophic loss) • Communication with the public (catastrophic loss) • Determine board response
Claim adjuster	<ul style="list-style-type: none"> • Determine liability and exposure • Determine third-party responsibility and subrogation potential • Establish claim cost reserves and build claim file
Legal counsel	<ul style="list-style-type: none"> • Determine liability and exposure • Build litigation defense • Establish confidentiality protection (if applicable)
Risk management inspector general	<ul style="list-style-type: none"> • CAP development • Lessons learned reporting and communication • Impartial and independent review of circumstances leading to event
Law enforcement/fire department	<ul style="list-style-type: none"> • Criminal/civil investigation • Determination of code violations
Representatives from the press	<ul style="list-style-type: none"> • Fact determination for reporting purposes
Third-party insurance carrier	<ul style="list-style-type: none"> • Determine liability and exposure for involved third party • Establish claim cost reserves and build claim file • Litigation preparation • Subrogation potential

expense. As a general rule, the intent of a corrective action is to eliminate the cause of nonconformities to avoid recurrence (Robitaille, 2001). A corrective action is a well-researched intervention to a process to prevent recurrence of an event that resulted in loss.

Events that Trigger Development of a CAP

The initial phase of the county CAP life cycle involves activity that leads to the creation of a CAP. Within the county, many situations may warrant creation of a CAP. These include:

- Board of Supervisors' mandate (Board-CAPs) as a result of tort liability claim settlements in excess of \$100,000;
- work-related injury or illness;
- substantial property damage events;
- third-party (audit, consultant or grand jury report) or management direction;
- customer and constituent complaints, poor quality and/or process nonconformance.

Although many reasons may prompt drafting of a CAP, this article focuses on the county's requirement to develop comprehensive Board-CAPs for tort liability settlements in excess of \$100,000. This requirement was established as a means to place the ownership for the development of management plans to prevent event recurrence with the departments where the initial loss occurred.

As noted, many situations necessitate the devel-

opment of a CAP. Managers must understand and accept the rationale behind its development. To have a successful process, the intent of the CAP must be effectively communicated and fully understood by all affected personnel, contractors and vendors. Let's now focus on programs designed to manage the Board-CAP program.

The Investigation Phase

The second phase of the CAP life cycle involves investigating what factors led to the need to develop a CAP. Once an event or an incident occurs and the initial response (situation abatement activity) is complete, the process moves into one of the least understood areas of CAP development—the incident/event investigation.

One can cite many different reasons to investigate a quality problem, nonconformance, incident or event. However, the primary reason is to gain an understanding of the root causes that led to the event (Bird & Germain, 1996). The first question to ask once a problem is detected is "What happened?" The answer will help determine the nature of the nonconformance or problem. It may even provide enough information to execute a remedial action plan.

However, that is only the first step in gaining an understanding of the causes and events that led to the nonconformance, problem or loss event. Too often, the investigative process stops once those

involved know what happened. However, the concept of what happened may mean different things to different people. Depending on the reasons for conducting the investigation and the timing of it, quite different explanations of what happened may arise.

To understand this phenomenon, it is important to know what people are involved in an investigation and why they are conducting the investigation. Table 2 outlines individuals who may conduct an investigation and the reasons for their involvement.

Knowing what happened is an important piece of information. It will dictate the initial response, initial hazard abatement activity and initial reporting of the situation. But answering this question normally only reveals the immediate cause of the incident. Once immediate causes are known, the next question should be "Why did it happen?"

Determining the root causes of nonconformance and loss is the second phase of the investigative process. This phase is an often misunderstood part of the investigation process (Okes, 2005). Many managers and supervisors consider an investigation concluded once immediate causes of loss are understood and expend no effort to understand the underlying causes of the loss. Unfortunately, if the root causes are not understood and abated, the probability of recurrence is high (Bird & Germain, 1996).

To complete a comprehensive investigation and root-cause determination, additional resources or analytical approaches may be needed. Depending on the severity and complexity of the loss occurrence, numerous technical professionals and/or technical analyses may be needed in hazard recognition. These include:

- accident reconstruction;
- engineering design review;
- industrial hygiene assessments;
- ergonomic/human factors assessments;
- medical evaluations;
- legal analysis;
- task, job or process analysis;
- inspections (property, process or procedures);
- accident imaging;
- new equipment/process reviews;
- accident deconstruction;
- loss control and prevention evaluations.

Development of the CAP

Once the event or loss has occurred and the investigation has determined the root causes, the next step is to develop the actual CAP. Many methods can be used to gather the required information and generate the CAP for review and approval.

Once the items to fix have been identified, sustainable action must be implemented to address the root causes and underlying management systems. The CAP is the tool used to accomplish the task of resolving the underlying problems on a permanent basis (Robitaille, 2001). Like the investigative process, the CAP development process may involve many resources, be complex and time-consuming. Often, the more catastrophic the loss, the more complex the solution.

The intent of the CAP is hazard control, mitigation

or abatement. Controls—such as administrative, engineering, work methods or PPE options—are used to address the root causes identified during the investigation (Bird & Germain, 1996). Thus, the focus shifts to implementing corrective actions that will control, mitigate or abate the causes of the loss.

Loss control involves the review of the situation and the understanding of the engineering, mechanics, procedures and processes involved. In many cases, the CAP process breaks down at this point. Time and energy are expended trying to understand what happened, and a potential corrective opportunity is missed because the fix specified in the corrective action either cannot be done or is incorrect. Often, however, this realization does not occur until the event recurs, returning the corrective process to square one. Hazard control options should never be developed in a vacuum; they should be reviewed with affected managers and supervisors, affected employees, and loss control and prevention staff. All corrective action steps must be evaluated for effectiveness and sustainability.

Generation of the CAP Document

Once the CAP research has been conducted, all relevant facts are understood and loss control options have been validated, the CAP is generated. Its size and scope depend on many factors, including significance of the loss/event, complexity of the root causes, political ramifications, impact on the department/community and similar factors.

Many issues affect the scope of the CAP, so the affected department's management team must determine how lengthy and complex the CAP needs to be. The investigation and CAP development activity can be complicated and time-consuming. Therefore, the CAP author needs to ensure that the activity which goes into developing the CAP is warranted and reflects a thorough analysis of all involved factors. Unfortunately, no rules of thumb are available for guidance. This is a complex management decision that must be researched and understood before the effort required is determined. The County of Los Angeles uses a standardized question set to facilitate development of the CAP document. Standard questions include elements to help the CAP author categorize the information to be used to develop the final draft (Robitaille, 2001). The sidebar on p. 39 lists some of the standard questions asked.

These development questions should not be mistaken for the actual CAP document. The questions are a tool to help the department gather the appropriate information and conduct the necessary impact analysis to ensure that the final CAP draft is written in a manner that will facilitate its successful implementation and the eventual correction or elimination of the causes of the loss. In addition, the final CAP should be written using a uniform departmental format. Use of a standard form with standard terminology has several positive benefits:

- The executive management team can focus on the criteria of the CAP, not the form and terms for each CAP submitted for approval.

A corrective action is a well-researched intervention to a process to prevent recurrence of an event that resulted in loss.

- Affected managers and supervisors will need less training on how to complete the CAP.
- If confidentiality is necessary, counsel will be familiar with the document, which will speed the review process.
- During the CAP evaluation and follow-up process, a standard approach is easier to consistently evaluate.
- A standard form and terminology help employees understand the CAP and its impact on them.

CAP Implementation

The implementation scope and schedule for an approved CAP is another critical element in this process. The scope of the CAP has a considerable effect on its rollout and success. The scope needs to be clearly defined and understood by both the CAP author and the approver (Robitaille, 2001). The scope and schedule cover issues such as:

- population affected on a macro level (e.g., employees, vendors, other county departments, the public) and a micro level (e.g., specific employee classifications, departments, units);
- processes, procedures and standards affected;
- training requirements affected;
- operational and quality programs impacted;
- equipment and facilities affected;
- budget and resources needed;
- union or contractual issues affected;
- time frames for implementation of specific tasks, actions and/or milestones;
- approvals (e.g., board funding and staffing), possible code changes/legal implications and budget demands;
- risk and severity concerns related to possible implementation schedule;
- hazard mitigation and remedial action effects;
- liability and litigation impacts.

This is only a partial list and it illustrates the importance of understanding the CAP scope before implementation. The scope and the implementation schedule must be drafted, analyzed and thoroughly reviewed before implementation.

Once the scope is understood, the implementation must be conducted as outlined. Each action step must be implemented as planned and a quality control process must be established to make sure the steps are implemented on time and within the affected scope. Implementation starts with the initial CAP rollout and ends with closure verification. Many managers consider the CAP implemented once one or two of the action steps are started. This is an incorrect assumption. According to Robitaille (2001), all CAP action steps must be in place in order to have an effective implementation.

CAP Confidentiality

If the CAP is deemed confidential, the draft must be forwarded to counsel for review. All documentation and related material may need to be protected. Therefore, counsel should be involved in the initial developmental phase to ensure that confidentiality

is protected. If any questions related to confidentiality (e.g., should this document or CAP be protected) arise, counsel should be consulted immediately. In addition, if a CAP is deemed to be confidential, all affected employees participating in its development must be trained on the organization's confidentiality processes. The potential downside to losing confidentiality protection during litigation may be catastrophic. The protection provided by the attorney-client relationship is critical and should be stressed throughout the CAP development and implementation process.

CAP Process Management

The final phase of the county's CAP life cycle involves the comprehensive plan developed to manage the countywide CAP process. To provide oversight, RMIG has developed a comprehensive process management methodology that encompasses several key elements:

- Development of a comprehensive risk management CAP policy that is approved and supported by executive management. The policy must be communicated and affected management must be held accountable for adhering to it. In the County of Los Angeles, for every liability claim-related settlement that exceeds \$100,000 a completed CAP must be submitted to the board in order to receive approval for payment. In addition, county claim adjusters must notify the CAO Loss Control and Prevention Section and affected departments when a tort liability claim indemnity reserve exceeds \$100,000 in order to start the CAP process.
- Development of a CAP strategic plan to establish a uniform system to manage events from cradle to grave starting at incident occurrence/analysis through CAP development and communication to closure and the effectiveness review.
- Development of management processes, procedures and policies outlining the operation and responsibilities of the RMIG related to organizational responsibilities associated with the management of the risk management CAP process.

CAP Strategic Plan

The strategic plan developed by RMIG consists of the development of the following critical elements:

- Establish a baseline database of existing CAPs and determine current status of historic CAPs.
- Develop and establish a single, centralized and uniform tracking system for all CAPs.
- Establish a procedure to ensure departmental management or delegated departmental loss prevention staff is directly involved in the development and implementation of department-specific CAPs.
- Establish a process to provide quality control support to departments to ensure that appropriate root causes are reviewed and action steps are adequate and prioritized to help the department concentrate on the most important exposure causes and areas.
- Establish a process to provide necessary risk management and loss control and prevention training to support and provide consistency for the CAP

Standard CAP Development Questions

What is the incident/event and what is the overview of the plan?

The first part of the model provides a summary of what the CAP will address. It should be a brief statement that demonstrates how to address the root causes and any other benefits that will be realized by the implementation of the CAP.

What are critical time factors required to implement?

It is important to list both the time required to complete individual tasks or actions steps, as well as a completion time for the CAP, and a time frame for evaluation and verification. In addition to outlining the time requirements, the time requirements for implementation should be estimated so that cost can be accurately factored into the decision-making process (e.g., cost to train staff, cost to rewrite or develop processes, cost of technical experts' time, and/or cost to conduct design or engineering reviews).

What training is required?

A thorough analysis of the training needs is needed in order to develop a comprehensive CAP. Items to consider include who will be trained, who will conduct the training, where it will be conducted, what training material will be needed and the cost of the training.

What personnel are required for implementation?

A list of personnel involved with the development and implementation of the CAP should be created by function and name. Roles and responsibilities also should be explained (who is responsible for what aspects of the CAP).

What equipment is needed?

An analysis must be conducted to determine what equipment will be needed to implement the approved CAP. Equipment can range from ergonomic chairs to new vehicles and aircraft. The equipment needs can be simple and inexpensive or complex and costly depending on the scope of the CAP. Issues to consider are: "Does the equipment cost affect the budget?"; "Are we going to have to train people to use it?"; and, "Can the CAP be implemented without it?"

What documents will need to be revised?

A thorough document analysis is needed to ensure that applicable work instructions, flowcharts, engineering drawings, contracts, customer documents, and policies and procedures are updated and that those changes are communicated. This is probably the most overlooked aspect of CAP development. Processes are improved, corrections are made and new equipment is acquired, but the related documents (policies, procedures, training manuals, etc.) are not updated.

What is the impact on business process or project plans?

A review of how the CAP will impact existing processes must be conducted. Consider the following activities that may affect the production or work schedule: rework of defective product/activity; sending critical personnel to training; and effect to the process while installing or maintaining equipment. If the CAP affects projects in the planning stage, impact on engineering designs and processes must be reviewed.

What customer, staff or departmental input or approval is needed?

In the county, many department activities are interrelated. A review of the necessary approval or input from customers, business partners and support departments (e.g., budget and finance, engineering) must be considered.

Who is needed to authorize the actions/CAP?

Often, the individual assigned responsibility for development of the CAP does not have the authority to implement every aspect of the CAP. Authorization becomes an issue when the resources needed exceed the process owner's (or CAP author's) scope of responsibility. Examples include training that involves individuals from other departments; capital expenditures; changes to processes or procedures that fall under regulatory scrutiny; and production modifications that will affect quality and timeliness of services delivered.

Will it be necessary to communicate with board representatives?

In the county, as with many public entities, communication with elected officials and their staff is a critical component in the review process. An analysis will need to be conducted to determine board involvement and interest in the CAP.

When will the plan be implemented and how will implementation effectiveness be measured?

Articulating the completion date is essential. In addition, it is important to illustrate what the situation will look like once the CAP is fully implemented. Questions related to success and failure of the CAP must be understood before rolling it out, so the process can be monitored and necessary changes can be incorporated into the plan to ensure success.

program, to include root-cause analysis and plan development.

- Establish an RMIG review and approval process to ensure that departmental CAPs address root causes.
- Establish an audit process to ensure that departmental CAPs are implemented and have addressed the issues outlined in the initial root-cause analysis.
- Establish a process to ensure that lessons learned, best practices used and noteworthy accomplishments are communicated to all affected departments and the public.

RMIG CAP Responsibilities

The board of supervisors included the responsibility and scope of work for RMIG in the county code. This code provides authorization and establishes the performance expectations for the function. The CAO Risk Management Branch is responsible for drafting the management processes, procedures and policies outlining the operation and responsibilities of RMIG. The RMIG scope of responsibility includes the following functions:

- Establish procedures to outline the steps involved

Potential Roles of Groups in the CAP Process

Groups to consider	Potential role in process
Senior management	<ul style="list-style-type: none"> •Need to understand and approve the process it expects others to employ on its behalf •Some corrective actions may involve or be initiated by members of the leadership team •Owns and is responsible for the corrective action process •Approves resources and funding for CAPs
Managers	<ul style="list-style-type: none"> •Must be aware that root-cause analysis may involve looking at multiple processes and procedures within their department •May be conducting or participating in the development of the root-cause analysis and the CAP •Will be required to implement the corrective actions within their departments •CAPs may affect resources, scheduling, staffing and services
Financial and legal personnel	<ul style="list-style-type: none"> •Accounting and legal records may be confidential. Staff developing the CAP may need authorization to review records •CAPs may require a financial analysis or cost justification •Outside attorney liability analysis or investigations may be used in the root-cause analysis and will have to be provided by counsel •Completed CAPs may be confidential and need to be drafted under the direction of counsel in order to be protected
Human resources staff	<ul style="list-style-type: none"> •May maintain records of employee training and qualifications •If employee discipline is a part of the CAP, HR staff must be involved to ensure that the process is in accordance with county policy •Coordinate training activity •Update job descriptions and other relevant documentation •Maintain employee performance records
Supervisors	<ul style="list-style-type: none"> •Have a wealth of information related to specific processes and procedures and can be valuable in the root-cause analysis and development of CAPs •Have institutional knowledge or a historical perspective on the problems, past solutions and outcomes of those solutions •Will need to understand the process because they will be tasked with all or part of the corrective actions
Risk management personnel	<ul style="list-style-type: none"> •Have a technical understanding of the CAP process and root-cause analysis methods •May have addressed similar problems in the past or have a network of technical professionals that they can use •Possess an understanding of county policy, governmental regulations and industry best practices related to loss prevention, claims management and insurance services
Customers and suppliers	<ul style="list-style-type: none"> •It is important to understand the perspective of external stakeholders •Some corrective actions may affect suppliers or the public and you may need their perspective to effectively implement the CAP

in providing departments with guidance and assistance in loss analysis and CAP development.

- Establish a process to review countywide data and identify issues of potential liability that should be evaluated for the development of corrective actions (e.g., RMIG staff review all lawsuits filed against the county for potential exposure and liability).

- Evaluate issues that could escalate due to department or regulatory significance (e.g., review all fatalities caused by county personnel, deaths involving children in foster care, substantial property loss).

- Establish a process to disseminate lessons learned, best practices and noteworthy events to county departments.

- Facilitate the change control process for CAP modification.

- Facilitate assignment of CAP owners to unassigned issues and resolve ownership disputes.

- Facilitate department CAP closure verification and effectiveness reviews.

- Establish a process to periodically evaluate the countywide CAP process.

- Provide periodic reports to management of CAP status.

- Establish a process to obtain feedback from CAP program users to drive continuous improvement.

Individuals Involved in the Development of a CAP

Many individuals have a role in the corrective action process. However, some may be excluded because their value is not apparent to management or those writing the CAP (Robitaille, 2001). In many county departments, a line manager is responsible for generating the required CAP. This manager ends up owning the root-cause analysis and the corrective action. In many departments, these individuals carry more than one title. They are limited by time constraints and by their own perception of the problem. In many cases, they do not enlist subordinates, delegate parts of the process or request help from other areas. These managers are so focused on "fighting fires" that they focus only on completing the CAP; in some cases, they may not consider its quality nor verify that it addresses the original problem.

In addition, managers may exclude stakeholders such as safety representatives, engineering, or the finance and legal departments. Instead, these stake-

holders should be viewed as resources who can provide needed information; understand the process related to their jobs; generate the necessary records and process documentation; and interface with external customers, vendors and the public.

Another reason to identify critical stakeholders is to remove the perception that they are part of the problem (Robitaille, 2001). When stakeholders participate in the CAP process and agree with the improvements, they become champions of the change and will be instrumental in supporting it once the CAP has been implemented.

The CAP author should view the stakeholders as assets and potential problem solvers. Table 3 lists groups to consider when drafting CAPs and their potential role. In small departments, these should be categorized as functions, since one person may have multiple responsibilities.

The county has established processes to mitigate concerns related to involvement of critical stakeholders by requiring various levels of management to review and sign off on required CAPs. It is believed that additional trained reviewers will create an environment where CAP authors are compelled to exercise sound judgment and solicit all available resources.

CAP Follow-Up & Closure Verification

In many cases, follow-up activities are limited to a simple review that the CAP has been implemented. In other cases, follow-up activities do not venture beyond checking to see whether the course of action has been formulated.

Corrective action follow-up requires the same vigilance, uniformity, verification, evidence and record maintenance as the other functions described. It is another process, complete with requirements, plans, documentation and deliverables (Robitaille, 2001). It is essential to verify that the CAP has been implemented and was effective in eliminating the root causes of the event/loss. Records of corrective action provide valuable information about the status of problems, resource requirements and training issues. At the very least, these records prevent the repetition of failed projects by providing historical records of action plans that did not work.

In the county, this follow-up must verify that:

- root-cause analysis has been conducted and a viable plan has been formulated;
- the plan has been implemented, as outlined in the actual CAP document;
- documentation exists to support activity conducted;
- the plan is effective and has prevented the possibility of root-cause recurrence.

Follow-up need not be complicated or cumbersome. It simply requires a review of the evidence that substantiates the plan's implementation and success. The reviewer must be diligent when conducting follow-up evaluation. The review must be based on facts, evidence and documentation. Each corrective action step must be evaluated for implementation and effectiveness.

The individual chosen to evaluate CAP effectiveness must review both implementation and effectiveness. One evaluation is to verify that a specific action has been completed; another evaluation is to determine whether the action was effective. The impulse to prematurely close out a CAP may be the result of the reviewer's attempt to acknowledge the supervisor's or manager's efforts and good intentions. In addition, the CAP author should not conduct the follow-up evaluation. The reviewer must be objective and impartial.

Benefits of the CAP Process

The immediate benefit of the corrective action process is fixing a known problem, including provisions to prevent recurrence. The CAP's scope should be proportionate to the risk (or magnitude of potential or realized loss). It is still reasonable to expect that the benefit of a corrective action will exceed its original objective.

This can be achieved through the ripple effect of catching a potential problem farther upstream or before an event occurs in another area of the department, through benchmarking or the simple transfer of a good practice between departments. The corrective action process reinforces awareness of the links inherent in a good quality process. If successfully implemented, a CAP process can alter the internal culture of a department so that individuals are committed to the idea that everyone is accountable for quality, cost avoidance and liability minimization (Robitaille, 2001).

Conclusion

CAP management is a fundamental risk management tool, one vital to continuous improvement efforts. Effective resolution of issues requires a formal process to ensure that concerns are identified and captured, then evaluated for scope and significance, and that CAPs are developed, tracked and implemented to prevent recurrence.

A well-established CAP process incorporates many aspects of traditional risk management, such as loss control and prevention, use of risk management information systems, and an understanding of the various exposures and loss types. In addition, a well-developed CAP process incorporates many traditional quality control philosophies, such as problem/nonconformance identification, root-cause analysis, nonconformance communication and nonconformance resolution tracking. ■

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