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AT RISK

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A risk management publication written by the members of the North Carolina Chapter of the American Society for Healthcare Risk Management

President's Letter


Richard Thompson

To all NC ASHRM members and friends of the Chapter – This letter brings thanks to all who have worked on the Chapter Newsletter, Spring Meeting, Chapter committees, and Board. It has been a busy and productive Summer, and we could not have accomplished so much without the hard work, dedication, and creative talents of involved members.

I would especially like to highlight the results of the member survey that was distributed in follow up to the discussion at the Chapter Business Meeting in May about our Chapter's re-evaluation of the best ways in which to structure our educational offerings. We all recognize that two of the foundation keystones of our Chapter have been education and networking. However, in these times of serious financial and time constraints for travel and education, we wanted to be sure that we remain responsive to member needs. The Program Committee received 66 responses from members. The survey found that there was strong preference to retain Wednesday as the starting day of the meetings. In addition, about 25% of the respondents wanted to rotate the site of the meetings around the state, while 75% favored a meeting in a beach location. Therefore, in the next two years (2002 and 2003), there will be three meetings at the Beach and one meeting at a site in the central part of the state. In response to information received regarding social activities, the Chapter will continue to host a dinner on one night of the meeting, usually Thursday evening. Beginning with the Spring 2002 Meeting, the Program Committee will try to obtain hotel dates that will not lead into graduation weekend or Mother's Day. The Program Committee and the Board thank all members that participated in the survey. If you have any additional suggestions or comments regarding the Spring and Fall Meetings, please contact any Program Committee or Board Member.

—Richard Thompson

The Future of Risk Management

The future will bring more demands on risk managers and many more challenges

Insurance market, medical advances will cause change

Health care risk managers will see a number of significant changes in the near future, and the common thread, the experts say is that risk managers will have to adapt and improve their skills to stay on top.

Risk managers have long known that their profession is constantly changing, with the risk manager's job description rushing to catch up with changes in the health care industry as a whole, and particularly in the fields for which they are most responsible. There are plenty of changes going on right now, and leaders in health care risk management say their job is not likely to be the same five or 10 years from now as it is today.

Keep your skills sharp

The good news, they say, is that risk managers will continue to be valuable players in the organization, and their roles may become even more prominent.

The downside, though it should come as no surprise, is that risk managers will have to update their skills and education to keep up with the coming changes. Updating your skills has become a mantra of risk management, but risk management leaders say the coming years may put more of a priority on updated skills than ever before. Yesterday's risk manager may not have a place in tomorrow's heath care system.

But as long as skills and education are updated a risk manager is likely to face good job prospects, says **Steve Johnson**, director of risk management for Wellstar Health System in Marietta, GA.

" I think I have job security because I think the health care industry is in a crisis situation, Johnson says. " Risk managers are going to be challenged like every other department in the hospital to do more with less. Our challenge will be to do our jobs lean and mean, to do the best

Continued on page 2

IN MEMORY AND HONOR – SEPTEMBER 11, 2001

We are less than one month from the day that changed all of our lives. Some of us lost family, friends, or colleagues in New York, Washington, or Pennsylvania. All of us have shared unspeakable grief for the fallen, sorrow for the wounded, and heartbreak for the shattered lives of those left to carry on. And yet even in the midst of that day of destruction, individual and collective acts of heroism, courage, and selfless love for others gave us renewed hope in the essential goodness of everyday men and women as a light to hold in our hearts and memories.

The N.C. Chapter of ASHRM expresses its deepest sympathy to all of our colleagues, in this Chapter and across the nation, for the losses that have been suffered.

North Carolina Chapter, American Society for Healthcare Risk Management
Richard Thompson

Editorial Comment

Disasters whether man-made or of natural origin have become more of a possibility in this 20th century environment. There are some things that risk managers can do that lessen or mitigate the results of an untoward event. Education and preparation, both on a personal and professional level on an ongoing basis go a long way in providing a basis for recovery. The events in New York have been so severe. Only time will tell how the recovery effort, on so many levels fares.

I predict that the indomitable character and greatness of America will be displayed, despite the tremendous suffering and injury that has been inflicted.

In this issue, we will share the predictions for the future, demands, and challenges for risk managers. I extend my gratitude to the American Health Care Consultants for allowing us to reprint this timely information. We also have an article on human error, written by a British professor who specializes in safety and human error. This issue will be totally e-mail, a first for NCASHM. This will, over time, prove to be a most positive and cost effective way of delivering the newsletter. The entire issue will also be available for down load from the nc-ashrm website.

The spring NCASHRM meeting was full of great information and networking, with the Fall conference program holding the promise of being just as illuminating. I will not be able to attend, but, as always, would appreciate it greatly if you would forward any articles, publications, comments or information for inclusion in your newsletter to me. I can be reached at sbutler@pcmh.com, or by phone @ 252-816-7468.
— Sandrea Butler

The Future... Continued from page 1

we can to keep a hold of this monster. There will be a lot for us to adapt to, but that means we have job security."

Industry's problems could mean opportunities

Johnson's assessment of the health care industry at the moment is less than rosy, but he sees that as an opportunity for the diligent risk manager. To prepare for the future, Johnson says you should look to the problems of today and see what they may lead to in the future.

"Health care is in crisis, no question. It's a very difficult industry to be in, and that's going to get worse," he says. "The question is what we can learn from today's troubles instead of just waiting to see what happens later. For instance, we are going to continue to see shortages in skilled professional services. The average age of a registered nurse in our system is 45 years. What does that tell you about where we're going to be in 10 years? That's only going to get worse, and it definitely impacts us from a risk management standpoint."

Jane Bryant, MHSA, FASHRM, director of risk management at Oconee Memorial Hospital in Seneca, SC, agrees with Johnson that a savvy risk manager will look beyond what's happening right now and see how those issues may evolve. The recent emphasis on reducing errors and improving patient care should lead to some significant changes in risk management, she says.

"We're going to see, more and more, a bringing together of the things that have an an impact on patient safety," she says. "I'm thinking about things like employee health, safety and security, infection control, peer review, and credentialing. All of these things can have an impact on patient safety, and I think that we're going to see some of these areas melding together or at least working more closely together."

The movement to increase patient safety has all the hallmarks of an issue that will be around for a long time, Bryant says. The impetus to reduce errors, not to mention any related regulations, will make the risk manager a more important player in the health care community, she says.

"I would expect that risk managers will be higher in the organization than they are now, particularly the ones that have taken responsibility for a number of divisions or departments under them" Bryant says. "We're not seeing anything that would diminish the importance of having a good, skilled risk manager with the right education. We're seeing plenty of reasons that an organization would want that person in a prominent place within the organization."

Insurance market and clinical advances

Not all of the changes that will affect risk managers are strictly risk management issues. Some are closely related, and some will require a new way of thinking to fold them into the risk management process. One significant issue that will affect a risk manager's future is the hardening of the insurance market, says **R. Stephen Trosty**, JD, MA, director of risk management at American Physicians Assurance Corp. in East Lansing, MI. The traditional method of acquiring insurance coverage will be less useful in the future, Trosty says. "The average risk manager is not familiar with alternative methods of risk transfer and financing mechanisms, but we'll have to be in the future. "We'll have to learn."

Clinical advances also will affect how risk management evolves, says **Fay Rozovsky**, JD, MPH, DFASHRM, a risk management consultant in Richmond, VA. Some of the most exciting and promising developments in medicine could open up new risks for the future, she says.

"Genetic testing is well on its way to becoming a common way to diagnose and predict problems that people might have later on, for instance." She says. "What does that mean in terms of what a provider is responsible for? Must you administer that test? Must you treat that person differently when the test says a disease is likely in that person's future? A lot of these questions are unanswered right now, but you can be sure that risk managers will be right in the middle when the answers become clear.

More regulations, rules are coming

Nearly everyone agrees that risk managers can expect a number of new government regulations and other means of oversight in the near future. Trends in the past years have suggested that risk managers will see more rules that fall under their purview, and that is a little discouraging, according to both Johnson and Bryant. They both say the rules themselves may serve a useful purpose, but they're dismayed to see risk managers saddled with more and more rules instead of being allowed to act on their own.

"I hate that it's gotten to where we have to be told to do the right thing instead of doing the right thing on our own." Bryant says. "Most of the regulations that have hit already have some justification for existing, but by the time they get to print, they make doing the right thing extremely cumbersome. I'm afraid we're in a pattern, and we're going to see more of that."

Johnson agrees with that assessment, noting that the increasing regulation can lead risk managers to focus too much on simply complying rather that the real goal of the rule. Unfortunately, Johnson expects that to be the case increasingly in the future.

"What suffers is the proactive side," he says. "It's only going to get worse with us putting out fires, which is the only thing we have time for sometimes. I'm afraid that could become a predominant way of operating in the future if something doesn't change."

More emphasis on privacy, deep pockets

The Health Insurance Portability and Accountability Act (HIPPA) of 1996 will continue to influence health care risk management unless the rule is derailed by ongoing protest. Trosty notes that many of the existing and anticipated regulations will create risks for providers that are difficult, if not impossible, to insure.

"HIPAA [and] the fraud and compliance rules, these are all presenting some very real risks that are not covered by insurance," he says. "So we will need to be able to identify potential new liabilities and see if there is anything out there to insure it. "If not, should you develop an alternative risk financing?"

If the HIPAA rule is fully enacted, Johnson predicts that health care providers will see significantly more litigation related to patient privacy.

"Protecting patient's privacy is going to be an area of new litigation as our stands and responsibilities become more clear," he says. "There will be increased emphasis on privacy and protecting patient information, and that can only mean more exposure for health care providers. We're also going to see an expansion of enterprise liability, where health care organizations are held more and more accountable for physicians not even employed by us. We'll see more of people using any means possible to tie us into a claim because of our deep pockets.

Good outlook overall, most predict

Risk management leaders point to an array of new risks and liabilities that might be faced in the future-confidentiality, growing use of computers and the Internet, error reporting-but they say the future generally looks good. Challenging maybe. A lot of work, certainly. But not a bad time to be a risk manager.

Trosty says he expects a trend in which the position of the risk manager is continuosly upgraded in the organization, becoming more prominent, and more directly involved in key decision-making processes.

"There are going to be far more demands and a broader array of demands." Trosty says. "We'll have to have a broader array of skills and knowledge, but that can make it a more exciting time. We've been asking for more involvement in the driving aspects of the organization for years now, and I think we're going to see more of that now."

Tougher market means more education is needed

Insurance and risk financing always have been an important part of risk management, but up to now, many risk managers have been able to dabble in it from afar, leaving it to your broker to set you up with the proper insurance products for your needs. There is nothing wrong with that for the moment, but that approach might not work in the future, says **R. Stephen Trosty**, JD, MA, director of risk management at American Physicians Assurance Corp, in East Lansing, MI.

The insurance market for the health care industry is hardening in a dramatic way. Trosty says. Capacity is going down and pricing is going up. That means risk managers will find it much more difficult to acquire coverage for even the most common, mundane liability risks, not to mention the more exotic ones that may emerge in the future.

Jeannie Sedwick, ARM, risk manager with the Medical Protective Co. in Cary, NC, says the hardening insurance market is going to make the risk manager's job even more important. The risk manager will be responsible for showing the carrier that the provider is a good risk.

"If your're going to continue to place your insurance with a reputable carrier, the carrier will want to know what kind of programs you have in place and who is managing it," she says. "That's where the risk manager comes in. You'll need to make a good case for showing that your programs are up to date, that you've assessed all the old and new types of exposures and taken the right steps to lower your risk."

Draw on your financing background

Trosty says the insurance industry is becoming more of a seller's market, which means that you may have to work harder to acquire coverage.

"The hardening of the market is going to make the risk-financing part of risk management more important," he explains. "Risk managers will have to look at other methods of financing risk besides the traditional insurance market. The traditional market isn't going to be so interested in providing that coverage any more. We'll see a move away from the traditional method of buying insurance and toward alternative risk financing."

The alternatives could be captives, rent-a-captives, self-insureds, retentions, trusts, and other options. Many risk managers currently don't have a sufficient understanding to develop and work with those alternatives, so Trosty says it would be wise to acquire that background now.

"Your knowledge of these alternatives needs to be such that you can play an active part." He says. "Brokers will be there to help you, but I don't think most risk managers have the knowledge or background. Your going to have to acquire it through educational programs and seminars. If you learned it in a course years ago and never had to apply it, you may have to go back and brush up on it

Sedwick agrees, saying risk managers will do well to consider what the insurance broker is looking for. When the market was soft, that wasn't so important because the broker was willing to do whatever it took to get your business. But now, she says, you have to play to their concerns.

"They're going to look at what they need in place to be able to underwrite this account and what kind of things can help discount the pricing," she says. "You're better off if you go in with an understanding of that so you can show them and meet their needs.

Risk managers don't have to become as adept as brokers when it comes to insurance alternatives, but Trosty says you do have to be familiar enough with the options to fully discuss them and determine what suits your needs. The difference is that, now and increasingly in the future, insurers are not so eager to seek out your business. It's more of a seller's market, and you will have to go after the coverage instead of waiting for it to come to you.

And when your are working with insurers in the future, don't be surprised when they demand more of you. With the hardening market, insurers are going to be more picky in every way, Trosty says. That means they will expect to see evidence that you have your risks under control.

Insurers and reinsurers are looking for new approaches that will have an effect," he says. "If all you say is you'll do more of the same, you won't get the insurance. Insurers will look to the entity to take some action, and the assumption is the risk manager will come up with some solutions or partner with someone who has a new and creative approach."

Genetics will change risk management

Health care is all about health, of course, so changes in

“Genetics are a big issue, and genetic testing-the use of genetic identifiers-is going to get bigger,” she says. “Patients will have a better idea in the not-too-distant future where drugs will have more potent impact on them, whereas doctors used to take a stab in the dark to

a security officer; 47% assigned a formal HIPAA committee; 12% have a HIPAA implementation plan; 10% have ranked HIPAA as a low priority for 2001; 24% have ranked HIPAA as a moderate priority for 2001; 39% have ranked HIPAA as a high priority for 2001; 45% will look for outside assistance on HIPAA; 27% will not look for outside assistance on HIPAA; and 18% have done a cost impact analysis on HIPAA.

Although the AHA is unhappy with much of other HIPAA rules, the organization says about half of U.S. hospitals already are taking significant steps to comply. The AHA called on the Bush administration to change the medical records privacy rule to make it less of a burden on patients, hospitals, physicians, and nurses, but ultimately failed in its efforts to block implementation of the rule. The AHA sent its request to HHS Secretary Tommy Thompson, who reopened the rule for further comment and review, but then cleared the way for full implementation.

Among other problems, the AHA complained to Thompson that patients wold have to fill out a 10-page consent form to give hospitals permission to use their medical information. It would be better to allow hospitals more leeway in determining how to obtain consent, the AHA says. The AHA also wanted Thompson to eliminate restrictions on the uses of patient information within the hospital.

After the 60-day delay, Thompson said the administration would address some of the concerns that surfaced through guidelines or modifications. A timetable for making those changes has yet to be determined, but Thompson announce the department would make clear that physicians and hospitals could consult with other doctors and specialists about a patient's care, pharmacists would be able to fill prescriptions over the phone, and parents could have access to information about the health of their children.

"The president considers this a tremendous victory for American consumers, who will continue to receive high-quality health care without sacrificing the confidentiality of their private health matters," Thompson said.

Many areas of the rule need strengthening

Donald J. Palmisano, MD, a trustee of the American Medical Association (AMA), says he will be eager to see how Thompson's pledge works out.

"Although Secretary Thompson has indicated that the privacy rule will be implemented with no delay, the AMAappreciates the secretary's commitment to consider the comments received in response to the final rule, make necessary modifications to the rule, and issue guidelines to assist in its implementation, "Palmisanso says. "The AMA urges the secretary to quickly address those modifications and safeguards we called for in our earlier comments on the privacy rule. At a minimum, physicians need the full two-year compliance period to modify their practices in order to comply with the rule. It is imperative that any changes to the rule or implementation guidelines are provided as expeditiously as possible."

Palmisano says many areas of the rule still need strengthening. For example, he says law enforcement officials will have virtually unfettered access to protected health information without patient authorization and a court order. Also, in many instances, health plans are not required to obtain consent to use or disclose patient health records.

"Ironically, the rule does substantially increase the administrative burden for the physicians, the one sector of the health care system already ethically bound to safeguard patient privacy." He says. "The rule prescribes burdensome documentation and record-keeping provisions on physician that are unlikely to provide any real added privacy protections for patients."

Similar concerns come form the American Association of Health Plans (AAHP), the largest national trade organization representing more than 1,000 health maintenance organizations (HMOs). And preferred provider organizations. AAHP president and CEO **Karen Ignagni** says the rule threatens quality health care.

"When the proposed medical privacy rule was issued in the final days of the Clinton administration, we joined consumers, physicians, hospital, and other providers and employers in calling for a more balanced approach that promotes quality while enforcing privacy." Ignagni said in a statement. "The proposed rule failed this principle by imposing new regulations that, in many cases, would inhibit the ability of health plans and providers to get patient the care they need when they need it. We hope the administration will continue to look at ways to improve this rule. ◆

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HUMAN ERROR:
Models and Management

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Professor Reason, a graduate of the Univ.of Manchester, Phd-Univ. of Leicester. Research psychologist at the RAF Institute of Aviation Medicine, and later at the US Naval Aerospace Medical Institute, Pensacola, FL.64-76 assistant lecturer, full professor since 1997. He received the Distinguished Foreign Colleague Award from the US Human Factors and Ergonomics Society in 1995. His principal research area has been human error and the way people and organisational process contribute to the breakdown of complex, well-defended technologies such as commercial aviation, nuclear power generation, process plants, railways, marine operations, financial services and healthcare institutions… Current work focuses on how people maintain the safety of complex systems by timely adjustments to unexpected and potentially threatening events.

The human error problem can be viewed in two ways: the person approach and the system approach. Each has its model of error causation and each model gives rise to quite different philosophies of error management. Understanding these differences has important practical implications for coping with the ever present risk of mishaps in clinical practice.

Summary points

- Two approaches to the problem of human fallibility exist; the person and the system approaches.
  - *The person approach* focuses on the errors of individuals, blaming them for forgetfulness, inattention, or moral weakness.
  - *The system approach* concentrates on the conditions under which individuals work and tries to build defences to avert errors or mitigate their effects.
- High reliability organisations-which have less than their fair share of accidents-recognize that human variability is a force to harness in averting errors, but they work hard to focus that variability and are constantly preoccupied with the possibility of failure

Person approach

The longstanding and widespread tradition of the person approach focuses on the unsafe acts-errors and procedural violations-of people at the sharp end: nurses, physicians , surgeons, anaesthetists, pharmacists, and the like. It views these unsafe acts as arising primarily from aberrant mental processes such as forgetulness, inattention, poor motivation, carelessness, negligence, and recklessness. Naturally enough, the associated countermeasures are directed mainly at reducing unwanted variability in human behavior. These methods include poster campaigns that appeal to people's sense of fear, writing another procedure (or adding to existing ones), disciplinary measures, errors as moral issues, assuming that bad things happen to bad people-what psychologists have called the just world hypothesis.

System approach

The basic premise in the system approach is that humans are fallible and errors are to be expected, even in the best organisations. Errors are seen as consequences rather than causes, having their origins not so much in the perversity of human nature as in "upstream" systemic factors. These include recurrent error traps in the workplace and the organisational processes that give rise to them. Countermeasures are based on the assumption that though we cannot change the human condition, we can change the conditions under which humans work. A central idea is that of system defences. All hazardous technologies possess barriers and safeguards. When an adverse event occurs, the important issue is not who blundered, but how and why the defences failed.

Evaluating the person approach

The person approach remains the dominant tradition in medicine, as elsewhere. From some perspectives it has much to commend it. Blaming individuals is emotionally more satisfying than targeting institutions. People are viewed as free agents capable of choosing between safe and unsafe modes of behaviour. If something goes wrong, it seems obvious that an individual (or group of individuals) must have been responsible. Seeking as far as possible to uncouple a person's unsafe acts from any institutional responsibility is clearly in the interest of managers. It is also legally more convenient, at least in Britain.

Nevertheless, the person approach has serious shortcomings and is ill suited to the medical domain. Indeed, continued adherence to this approach is likely to thwart the development of safer healthcare institutions.
Although some unsafe acts in any sphere are egregious, the vast majority are not. In aviation maintenance -a hands-on activity similar to medical practice in many respects-some 90% of quality lapses were judged as blameless. Effective risk management depends crucially on establishing a reporting culture.

Without a detailed analysis of mishaps, incidents, near misses, and "free lessons," we have no way of uncovering recurrent error traps or of knowing where the "edge" is until we fall over it. The complete absence of such a reporting culture within the Soviet Union contributed crucially to

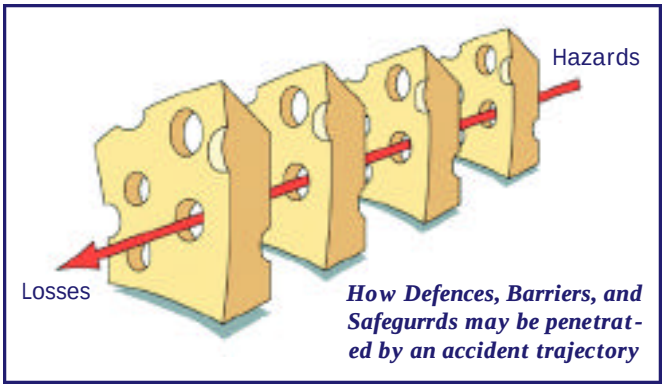
the Chernobyl disaster. Trust is a key element of a reporting culture and this, in turn, requires the existence of a just culture-one possessing a collective understanding of where the line should be drawn between blameless and blameworthy actions. Engineering a just culture is an essential early step in crating a safe culture.

Another serious weakness of the person approach is that by focusing on the individual origins of error it isolates unsafe acts from their system context. As a result, two important features of human error tend to be overlooked. Firstly, it is often the best people who make the worst mistakes-error is not the monopoly of an unfortunate few. Secondly, far from being random, mishaps tend to fall into recurrent patterns. The same set of circumstances can provoke similar errors, regardless of the people involved. The pursuit of greater safety is seriously impeded by an approach that does not seek out and remove the error provoking properties within the system at large.

The Swiss Cheese model of system accidents

Defences, barriers, and safeguards occupy a key position in the system approach. High technology systems have many defensive layers: some are engineered (alarms, physical barriers, automatic shutdowns, etc), others rely on people (surgeons, anaesthetists, pilots, control room operators, etc), and yet others depend on procedures and administrative controls. Their function is to protect potential victims and assets from local hazards. Mostly they do this very effectively, but there are always weaknesses.

In an ideal world each defensive layer would be intact. In reality, however, they are more like slices of Swiss cheese, having many holes-though unlike in the cheese, these holes are continually opening, shutting, and shifting their location. The presence of holes in any one "slice" does not normally cause a bad outcome. Usually, this can happen only when the holes in many layers momentarily line up to permit a trajectory of accident opportunity-bringing hazards into damaging contact with victims.



How Defences, Barriers, and Safegurrds may be penetrated by an accident trajectory

The Swiss Cheese model of system accidents

The holes in the defences arise for two reasons: active failures and latent conditions. Nearly all adverse events involve a combination of these two sets of factors.

Active failures are the unsafe acts committed by people who are in direct contact with the patient or system. They take a variety of forms: slips, lapses, fumbles, mistakes, and procedural violations. Active failures have a direct and usually short lived impact on the integrity of the defences. At Chernobyl, for example, the operators wrongly violated plant procedures and switched off successive safety systems, thus creating the immediate trigger for the catastrophic explosion in the core. Followers of the person approach often look no further for the causes of an adverse event once they have identified these proximal unsafe acts. But, as discussed below, virtually all such acts have a causal history that extends back in time and up through the levels of the system.

Latent conditions are the inevitable "resident pathogens" within the system. They arise from decisions made by designers, builders, procedure writers, and top level management. Such decisions may be mistaken, but they need not be. All such strategic decisions have the potential for introducing pathogens into the system. Latent conditions have two kinds of adverse effect: they can translate into error provoking conditions within the local workplace (for example, time pressure, understaffing, inadequate equipment, fatigue, and inexperience) and they can create long lasting holes or weaknesses in the defences (untrustworthy alarms and indicators, unworkable procedures, design and construction deficiencies, etc). Latent conditions-as the term suggests-may lie dormant within the system for many years before they combine with active failures and local triggers to create an accident opportunity. Unlike active failures, whose specific forms are often hard to foresee, latent conditions can be identified and remedied before an adverse event occurs. Understanding this leads to proactive rather than reactive risk management.

We cannot change the human condition, but we can change the conditions under which humans work.

To use another analogy: active failures are like mosquitoes. They can be swatted one by one, but they still keep coming. The best remedies re to create more effective defences and to drain the swamps in which they breed. The swamps, in this case, are the ever present latent conditions.

Error management

Over the past decade research into human factors have been increasingly concerned with developing the tools for managing unsafe acts. Error management has two components: limiting the incidence of dangerous errors and -since this will never be wholly effective-creating systems that are better able to tolerate the occurrence of errors and contain their damaging effects. Whereas followers of the person approach direct most of their management resources are trying to make individuals less fallible or wayward, adherents of the system approach strive for a comprehensive management programme aimed at several different targets: the person, the team, the task, the workplace, and the institution as a whole.

Some paradoxes of high reliability

Just as medicine understands more about disease than health, so the safety sciences know more about what causes adverse events than about how they can best be avoided. Over the past 15 years of so, a group of social scientists based mainly at Berkeley and the University of Michigan has sought to redress this imbalance by studying safety success in organisations rather than their infrequent but more conspicuous failures. These success stories involved nuclear aircraft carriers, air traffic control systems, and nuclear power plants. Although such high reliability organisations may seem remote from clinical practice, some of their defining characteristics could be imported into the medical domain.

Most managers of traditional systems attribute human unreliability to unwanted variability and strive to eliminate it as far as possible. In high reliability organisations, on the other hand, it is recognised that human variability in the shape of compensations and adaptations to changing events represents one of the system's most important safeguards. Reliability is "a dynamic non-event." It is dynamic because safety is preserved by timely human adjustments; it is a non-event because successful outcomes rarely call attention to themselves.

High reliability organisations can reconfigure themselves to suit local circumstances. In their routine mode they are controlled in the conventional hierarchical manner. But in high tempo or emergency situations, control shifts to the experts on the spot-as it often does in the medical domain. The organization reverts seamlessly to the routine control mode once the crisis has passed. Paradoxically, this flexibility arises in part from a military tradition-even civilian high reliability organisations have a large proportion of ex-military staff. Military organisations tend to define their goals in an unambiguous way and, for these bursts of semiautonomous activity to be successful, it is essential that all the participants clearly understand and share these aspirations. Although high reliability organisations expect and encourage variability of human action, they also work very hard to maintain a consistent mindset of intelligent wariness.

Blaming individuals is more emotionally satisfying than targeting institutions

Perhaps the most important distinguishing feature of high reliability organisations is their collective preoccupation with the possibility of failure. They expect to make errors and train their workforce to recognise and recover them. They continually rehearse familiar scenarios of failure and strive hard to imagine novel ones. Instead of isolating failures, they generalise them. Instead of making local repairs, they look for system reforms.

High reliability organisations

So far, three types of high reliability organisations have been investigated: US Navy nuclear aircraft carriers, nuclear power plants, and air traffic control centres. The challenges facing these organisations are twofold:

- Managing complex, demanding technologies so as to avoid major failures that could cripple or even destroy the organisation concerned.
- Maintaining the capacity for meeting periods of very high peak demand, whenever these occur.

The organisations studied had these defining characteristics:

- They were complex, internally dynamic, and intermittently, intensely interactive
- They performed exacting tasks under considerable time pressure
- They had carried out these demanding activities with low incident rates and an almost complete absence of catastrophic failures over several years.

TIMELINE OF EVENTS FOR 2001-2002

NCASHRM MEETING

The Fall NCASRM meeting will be at the Shell Island Resort at Wrightsville Beach, NC

October 3-5, 2001

SEE YOU THERE!

Date	Location	Event
October 3-5, 2001	**Wrightsville Beach, NC**	**NC ASHRM Fall Meeting**
Oct. 29-Nov.1, 2001	**Hynes Conference Center, Boston, MA**	**ASHRM Annual Conference**
April 14-19, 2002	**New Orleans, LA**	**RIMS Conference**

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