APRIL 2021

Warmer weather is on the way! OSHA Offers Safety Tips for Hot Weather Work

Article by Laura Walter, www.ehstoday.com

The hot, hazy days of summer can spell trouble for those who work outdoors in direct sunlight or in hot environments, making them susceptible to heat-induced illnesses such as heat stress, heat exhaustion or the more serious heat stroke.

"Working in extreme temperatures is not only uncomfortable, it can be life-threatening," said acting Assistant Secretary of Labor for OSHA Jordan Barab. "As we move into the summer months, it is important for workers and their employers to minimize the chances of heat-induced illnesses, and imperative that they recognize the signs of heat stress and take proper precautions to reduce the chances of illness or death." High temperature and humidity, physical exertion and lack of sufficient water intake can lead to heat– related stress. Symptoms of heat exhaustion or heat stroke include confusion, irrational behavior, loss of consciousness, abnormally high body temperature and hot, dry skin.

OSHA advises workers to take preventive measures such as reducing physical exertion and wearing light, loose-fitting clothing. The agency advises employers to provide workers with water and regular rest periods in a cool recovery area.

"<u>Protecting Workers from the Effects of Heat</u>" and "<u>Working Outdoors in Warm Climates</u>" are OSHA fact sheets that explain heat stress and provide recommendations to protect workers from exposure to ultraviolet radiation.

Employers and workers will find more practical tips for guarding against UV radiation in "<u>Protecting</u> <u>Yourself in the Sun</u>," *a* pocket-sized card addressing various forms of skin cancer.

These publications are free and can be downloaded from OSHA's Publications page.



from the desk of **DR. CHARLES H. BAKER**

Chief Operations Officer



I want to welcome everyone to the World Safety Organization April Newsletter. As in each newsletter, we hope you find and interesting information about our colleagues and current safety issues. In some cases, breaking news that everyone needs to know.

This month we are announcing World Safety plans for the annual symposium. After skipping last year because of the Corona virus, we are hoping to again have this year's symposium, in person, September 27-29th, in Las Vegas, Nevada. We think this is a good location and time for our come back symposium. The decision to have the symposium in person was made after consulting with several people and noting that many travel type meetings are being opened for attending and participation. In some cases, the United States may be ahead of the rest of the world in opening back up and some locations may still have travel restrictions in place. We will watch this closely and take that into account as planning goes forward. I would encourage each of you to keep us informed on the happenings in your individual countries, so we have the best information possible as these decisions are made. Emails the WMC are always helpful with contributing information. Otherwise. we will see you in Las Vegas!! It is important that we get as good of attendance as possible for this symposium. If we can do anything to facilitate this attendance, please let us know. Again, we hope to see you there.

Thank you for your help and enjoy the rest of the newsletter. CHB



Do you blog?

Do you write articles for your company's newsletter?

Do you have relevant information to share?

Did your company or agency sponsor a special safetyfocused event?

Does your company or agency have an upcoming safety-focused event you wish to promote?

If so, we would love to feature your content in a future WSO NewsLetter or TechLetter!

Just email your article/ blog, author(s) byline, brief bio, and photo to us: editorialstaff@worldsafety.org

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Safety Data & Analytics Deciding How to Decide

Chris Miranda, President / Owner MAC Safety - Kevin Miranda COO, Owner MAC Safety



The average adult makes 35,000 decisions per day, 2,000 decisions per hour, or 1 decision every two seconds. For example, included in those 35,000 decisions, a person is choosing their outfit for the day, or maybe their choice of breakfast. The outcomes of these decisions will most likely not have a large impact on that day, month, or year. However, for a safety professional, sprinkled into those 35,000 daily decisions comes potentially impactful decisions that will not only effect themselves, but others with outcomes that could have life-altering effects.

Safety professionals lean heavily on experience and heuristics to make decisions with the goal being mitigating risk for employees and a company as a whole. However, experience and heuristics, can fool the decision maker. In the world of safety, outcomes are highly visible — Safe or Unsafe. The details (data) typically are not observed, reported, measured, or tracked in what lead to the outcome. Making "experience" a distorted view of our past that safety professionals are viewing through numerous filters which can lead to misguided judgement.

Data Driven Decision Making

Data & Analytics in safety has received a bad rap because over 96% of data collected and utilized today in the safety industry is historical frequency data. Historical Data is similar in many senses to the last 20 spins of roulette that the casino shows you, this data may make you feel like you have an advantage but unfortunately, you do not. The probability of Red or Black is still the exact same, even if there has been 12 black spins in a row. In similar fashion, if observations exist on an angle grinder with the only tracked measure being the outcome — safe, 80 times, the safety professional has no data to leverage when a decision needs made. The key becomes what data needs tracked and measure to create insights that safety professionals can deploy in real time.

Before a safety professional is able to make a decision, they must answer two questions:

- 1. Do I know what it will take to succeed?
- 2. Can I predict the probability of outcome?

Developing Safety Metrics

The goal of safety data and analytics should not be to abandon core safety management tactics that have been developed, but to enhance them. Through technology, today, risk intelligence tools exist for this exact purpose. Transforming historical frequency data into risk intelligence that safety professionals can leverage in their decision making process.

In order for safety professionals to make data driven decisions, data needs to speak to the two questions above.

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Deciding How to Decide

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Question 1 - In order to answer the first question, safety professionals will lean on Training, Operating procedures, Job Hazard Analysis, Job Safety Analysis, Job Safety Plan, etc. Safety professionals assume from mentioned documents, that employees understand how to succeed. However, instead of assuming comprehension, what if safety professionals measured the execution of training, pre-job hazard analysis, etc. with the goal being to develop new safety metrics which would lead to advance data that could actually impact decision making.

Leading With Data Example 1:

A working from Heights Training has just taken place.

Safety Professional can pull all observations previously recorded on "Working from Heights" and see the amount of Risk that has been mitigated, along with the amount of risk absorbed and what key additional risks and mitigators were impacting these measures. The company now has a benchmark to see what the return on the training is.

Result: 3 Months after the training, the company has found *3% increase in risk mitigation* in observations recorded on "Working from Heights". The main impact of the training was a thorough explanation of transitioning anchorage points which has decreased as a correction 82%.

Question 2 - Safety professionals are tasked to make decisions as if they have a crystal ball. Usually, that decision will be based on experience, "have we completed this task, in the same manner, previously, and the result safe?". Depending on any human to quantify an infinite amount of data in real time and then make a reasonable decision is difficult, however, with data this decision can now be made with evidence rather than intuition.



Leading With Data Example 2:

A crew of 4 employees will be removing a piece of a pipe that is in a pipe rack. To remove the pipe, they will be cutting the pipe with an angle grinder. Because of the pipe rack, the crew will need to remove the handle from the angle grinder. The safety professional reviews current incident probability at the current location for "Cutting Material with Angle Grinder" the probability of incident is 19.3%. Removing the handle increases the incident probability by 7% removing the handle and not using 2 hand operation increases the probability 24%. As the safety professional dives deeper into the data, *Removed Handle* and *Not using 2 hand operation* have been combined 87% of the time.

Result: The safety professional has identified the incident probability could have a potentially dramatic increase due to the working conditions. Prior to work beginning, safety professional meets with each person of the crew to personally discuss the need for 2 hand operation with the handle being removed. The handle being removed is inherently more dangerous, but because of the safety professionals pre task intervention, 12 observations were logged all of which returning 2 hand operation presents in the crews mitigation. The crew is able to accomplish the task safely.

Safety professionals experience will *always* be important. Safety management techniques will *always* be important. Risk intelligence is the tool to OPTIMIZE safety performance and make safety professionals better equipped to make decisions in real time.

Chris Miranda, President / Owner MAC Safety - Kevin Miranda COO, Owner MAC Safety - we have designed a risk measuring SaAs platform that allows for risk / data to be analyzed in real time. Chris, grad from Penn State / Univ of Alabama; Kevin, grad from Geneva College, MBA from Cornell.

APRIL 2021

ASSESSMENT OF HEALTH AND SAFETY PRACTICES ON JOB PERFORMANCE IN NIGERIAN HOSPITALS

EDWIN ANYIM, WORLD SAFETY ORGANIZATION NIGERIA

LAGOS, NIGERIA

Various accidents occurring in most hospitals in Nigeria is a source of worry to everyone. Many employers fail to put the right things in place to safeguard the employees, management, clients, and stakeholders who are connected to the hospital. Hospitals that have no ineffective policy have been victims of serious accidents in their work environment. These leads to damage of materials or equipment, loss of production time as a result of accident, disability, and damage to reputation. The aim of this research is to vet the effect of health and safety in job performance. The medicals doctors, radiographers, technicians. laboratory scientist, pharmacist, administrators, nurses in the department formed the population of the study. Fifty respondents formed the sample size of the study. Data was collected through questionnaire, interviews, and review of literature from books, articles and websites etc. The data gathered were analyzed using CHI-SQUARE METHOD. The hypothesis tested found that the current health and safety practices at the hospital were inappropriate. Staff commitment and compliance to safety rules were low. It was recommended that the management should establish a safety committee and maintain regular inspection, monitoring and evaluation and carry out reviews for improvement.

In times past, employers were not bothered about the health and safety of their employees at work. Employees were not provided with personal protective equipment, and she/he risked getting hurt at work anytime she/he goes about his/her duties. Safety hazards are those aspects of the work environment that have the potential of immediate and sometimes violent harm to an employee; for example, loss of hearing, eyesight or body parts, bruises, broken bones, burns and electric shock. In organizations, occupational accidents may occur from three ways: the job to be done, for instance default machines, inadequate protective equipment like working conditions which arise



from inadequate lighting, fatigue that comes out of excessive working hours and the employee himself/herself. Typical health hazards to health professionals in their quest to provide healthcare services include toxic chemicals and dust, often in combination with noise, heat and other forms of stress. The interaction of health hazards and the human organisms can occur either through the senses, by absorption through the skin, by intake into the digestive tract via the mouth or by inhalation into the lungs.

Therefore, every effort should be made by management and employees in order to avoid them from happening at the workplace. As a hospital the employees are exposed to varied kinds of hazards. Therefore, failure to institute adequate health and safety measures in place by management to protect employees from these hazards and risks will lead to avoidable deaths and ultimately lead to loss of staff.

What is Occupational Health and Safety?

Occupational health and safety can generally defined as the science of anticipation, recognition, evaluation and control of hazards arising in or from the workplace that could impair the health and wellbeing of workers, taking into account the possible impact on the surrounding communities and the general environment

(ILO,2009). Also occupational health may be defined as development, promotion, and maintenance of workplace policies and programs that ensure the physical, mental, and social well-being of employees (Industrial Accident Prevention Association (IAPA), 2007). These policies and programs strive to prevent harmful health effects because of the work environment, protect employees from health hazards while on the job, place employees in work environments that are suitable to their physical and mental capacities and other characteristics, and address other factors that may affect an employee's health and

(cont. on pg. 6)

ASSESSMENT OF HEALTH AND SAFETY PRACTICES ON JOB PERFORMANCE IN NIGERIAN HOSPITALS continued

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well-being (Djik, Varekamp, Radon and Parra, 2011).

Occupational safety is the maintenance of a work environment that is relatively free from actual or potential hazards that can injure employees (IAPA, 2007).

Also, according to ILO (1998) Occupational safety and health is defined as the discipline dealing with the prevention of work-related injuries and diseases as well as the protection and promotion of the health of workers. It aims at the improvement of working conditions and environment.

Members of many different professions (e.g. Engineers, physicians, hygienists, psychologists, nurses) contribute to "occupational safety, occupational health, occupational hygiene, well-being at work and improvement of the working environment" (Djik et al, 2011).

Health hazards are those aspects of the work environment that slowly and cumulatively (and often irreversibly) lead to the deterioration of an employee's health for example, cancer, poisoning and respiratory diseases.

Typical causes include physical and biological hazards, toxic and carcinogenic dusts and chemicals and stressful working conditions (Francis, 2011). Occupational illness is any abnormal condition or disorder caused by exposure to environmental factors associated with employment. This includes acute and chronic illness caused by inhalation, absorption, ingestion or direct contact with toxic substances or harmful agents (Dessler, 2005).

According to Armstrong (2009) health and safety policies are required to demonstrate that top management is concerned about the protection of the organization's employees from hazards at work and to indicate how this protection will be provided. They are, therefore, first a declaration of intent; second, a definition of the means by which that intent will be realized, and third, a statement of the guidelines that should be followed by everyone concerned which means all employees in implementing the policy. (Armstrong, 2009) observed that importance of healthy and safe policies and practices is, sadly, often underestimated by those concerned with managing businesses and by individual managers within those businesses. Armstrong identified three important parts that should be covered by the policy statement which are; the general policy statement, the description of the organization for health and safety and details of arrangements for implementing the policy.

The General Policy statement

The general policy statement should be a declaration of the intention of the employer to safeguard the health and safety of employees. It should emphasize these fundamental points: that the safety of employees and the public are of paramount importance; that safety takes precedence over expediency; that every effort will be made to involve all managers, team leaders and employees in the development and implementation of health and safety procedures and health and safety legislation will be complied with in the spirit as well as the letter of the law.

Organization

This section of the policy statement should describe the health and safety organization of the business through which high standards are set and achieved by people at all levels in the organization. This statement should underline the ultimate responsibility of top management for the health and safety performance of the organization. It should then indicate how key management personnel are held accountable for performance in their areas. The role of safety representatives and safety committees should be defined, and the duties of specialists such as the safety adviser and the medical officer should be summarized.

Details of arrangement for implementing policy

The Canadian Centre for OHS (2012), provided guidance on how exactly implementation can be drafted in the organizations" policy in order to ensure perfect

ASSESSMENT OF HEALTH AND SAFETY PRACTICES ON JOB PERFORMANCE IN NIGERIAN HOSPITALS continued

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compliance implement a policy, health and safety activities must be identified and assigned. While each workplace will do this in its own way, there are some general issues which should be addressed:

(a)The policy should state that the workplace has clear rules for healthy and safe work behavior. It should clarify who is responsible for developing, observing, and enforcing the rules.

(b)There should be clear guidelines for maintaining and operating equipment and machinery. Again, individual responsibilities must be clarified.

(c)The policy should state what type of training program will be provided by the company to ensure that employees can meet their responsibilities. This could include first day orientation, on the job training, and "refresher" courses.

(d)The means for providing employees with information about basic or specific workplace hazards, and detailed written procedures for hazardous jobs should be outlined.

(e)Regular worksite health and safety meetings at all levels of the organization are an essential part of a good safety program. The policy could identify what issues will be discussed at these meetings, what can be communicated verbally, and what should be in writing.

Training and Supervision to the Workers on Matters of Occupational Health and Safety.

Alli (2008), was of the view that, Education and training are vital components of safe, healthy working environments. Workers and employers must be made aware of the importance of establishing safe working procedures and about how to do so.

Trainers must be trained in areas of special relevance to particular industries, so that they can address the specific occupational safety and health concerns.

Dessler, (2005), stated that, safety training is another way of reducing unsafe acts, especially for new employees. You should instruct them in safe practices and procedures, warn them of potential hazards, and work on developing a safety conscious attitude. For example, in America OSHA has published two useful booklets, "Training Requirements

under OSHA" and "Teaching Safety and Health in the Workplace. The author explained further that you can't just provide training and assume it will be successful. OSHA standards require demonstrated proficiency in numerous areas. For example, OSHA's respiratory protection standard requires that each employee be able to demonstrate how to inspect, put on, remove, use and check respirator seals.

Availability of Enough Protective Equipment at Workplaces

Alli (2008), suggested that employers should consult workers or their representatives on suitable personal protective equipment and clothing, having regard to the type of work and the type and level of risks. Furthermore, when hazards cannot be otherwise prevented or controlled, employers should provide and maintain such equipment and clothing as are reasonably necessary, without cost to the workers. The employer should provide the workers with the appropriate means to enable them to use the individual protective equipment. Indeed, the employer has a duty to ensure its proper use. Protective equipment and clothing should comply with the standards set by the competent authority and take ergonomic principles into account. Workers have the obligation to make proper use of and take good care of the personal protective equipment and protective clothing provided for their use.

The Roles and Rights of Employers and Employees in the Execution of Occupational Health and Safety Program

Alli (2008), provided that workers, employers and competent authorities have certain responsibilities, duties and obligations. For example, workers must follow established safety procedures; employers must provide safe workplaces and ensure access to first aid; and the competent authorities must devise, communicate and periodically review and update occupational safety and health policies. Because occupational hazards arise in the workplace, it is the responsibility of employers to ensure that the working environment is safe and healthy.

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ASSESSMENT OF HEALTH AND SAFETY PRACTICES ON JOB PERFORMANCE IN NIGERIAN HOSPITALS

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This means that they must prevent, and protect workers from, occupational risks. But employers" responsibility goes further, entailing knowledge of occupational hazards and a commitment to ensure that management processes promote safety and health at work. For example, an awareness of safety and health implications should guide decisions about the choice of technology and on how work is organized.

RESEARCH METHODOLOGY The study focuses on the assessment and safety practices on job performance in Nigerian hospitals. The sample size comprises of fifty (50) personnel of various hospitals in Nigeria. The medical doctors, radiographers, technicians, laboratory scientist, pharmacist, administrators, nurses they will form a sample frame for the study. Primary and secondary data will be used. The primary source includes the administration of questionnaires and interview, and the secondary source is through books and journals.

DATA ANALYSIS AND DISCUSSION, The following tables represent the analysis of development data of the respondents.

				Total	50	100
				Hospital current		
				occupational health and		
IADLE I				safety policies is adequate		
	Personal data	Number	Score (%)	Response variables	Number	Score (%)
		25	70	Strongly agreed	15	30
1	GENDER: Male	35	70	Agreed	10	20
•	Female	15	30	Undecided	4	8
2	Age: 25 – 39 years	30	60	Disagreed	11	22
•	40 – 49 years	15	30	Strongly disagreed	10	20
	50 years above	5	10	Total	50	100
3	Marital Status: Single	28	56	There is a record book that		
•	Married	22	44	keeps and mentions all		
4	Length of service: 0 – 10 years	13	26	accidents that have		
•	11 – 25 years	17	34	accurred at the beenited		
	21 years	20	40	occurred at the hospital		
	above			Deserve veriekles	Numerican	See 10()
				Response variables	Number	Score (%)
				Strongly agreed	13	20
TABLE 2			Agreea	10	20	
5.	Hospital administrators and			disagroad	12	12
	supervisor are concerned			alsagreed Strongly disagrood	12	24
	about health and safety			Total	50	12
					50	100
	Variables	Number	Score (%)	The hospital have proper and		
				enough protective		
	Strongly agreed	12	24	equipment		
	Agreed	10	20	Response variables	Number	Score (%)
	Undecided	15	30	Strongly agreed	10	20
	Disagreed	6	12	Agreed	16	32
	Strongly disagreed	7	14	Undecided	5	10
				Disagreed	13	26
SOURCE: FIELD SURVEY 2021				Strongly disagreed	6	12

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ASSESSMENT OF HEALTH AND SAFETY PRACTICES ON JOB PERFORMANCE IN NIGERIAN HOSPITALS continued from page 8

From the table above, a total score of 50 respondents, 35(70%) were recorded for male while a total score of 15(30%) were recorded for female. This shows that male dominate the activities in Nigerian hospitals. The table also shows that people between ages 25 - 29years were 30(60%), while those between the ages 40 - 49 years were 15(30%)., also those between 50years and above were 5(10%). This is an indication that their information is reliable and dependable. More also, 28(56%) of the respondents are single while 22(44%) were married, 13(26%) of the people have spent between 0 - 10years in the hospital while 17(34%) have spent between 11 - 20years; only 20(40%) of the people spent 21years and upwards.

As the issue of if Hospital administrators and supervisor are concerned about health and safety, about 12(24%)strongly agreed, 10(20%) agreed, 15(30%) of the respondents were undecided and 6(12%) disagreed, while 7(14%) of the respondents strongly disagreed. With respect to whether Hospital current occupational health and safety policies is adequate, about 15(30%)strongly agreed, 10(20%) agreed, 4(8%) of the respondents were undecided, 11(12%) disagreed and 10(20%) strongly disagreed. As regards if there is a record book that keeps and mentions all accidents that have occurred at the hospital, 13(26%), strongly agreed, 10(20%) agreed, 6(12%) were undecided, 12(24%) disagreed, while 6(12%) strongly disagreed. With respect to if the hospital have proper and enough protective equipment, about 10(20%) strongly agreed, 16(32%) of the respondents agreed, 5(10%) were undecided, 13(26%) disagreed and 6(12%) of the respondents strongly disagree.

There cannot be any effective occupational health and safety policies if both employers and employees fail to perform their respective responsibilities. The employer is supposed to file government accident reports, maintain records on health and safety issues, posting safety notices and legislative information, providing education and training on health and safety. The employer is required to institute a safety committee to be in charge of all health and safety related issues.

The safety committee is responsible for studying trends in accidents with the view to making suggestions for corrective actions, examining safety reports and making proposals for avoiding accidents, examining and discussing reports from safety representatives, making proposals for new or revised safety procedures. It also acts as a link between the organization and the enforcement agency (the health and safety inspectorate), monitoring and evaluating the organization's safety policies, and making proposals for changes, if necessary. The employee on the other hand is required to comply with all health and safety rules, knowing that the person ultimately responsible for his/her health and safety is himself/herself. Staffs are required to wear protective clothing, use equipment and tools provided for their work, and report any contravention of the law by management. Also, the employee has the right to refuse unsafe work. Accidents are costly both to the affected worker and the organization. Therefore, every effort should be made in order to avoid them from happening at the workplace.

The following recommendations were made based on the findings of the study:

Management of the hospital should organize regular training, workshops, seminars on health and safety for staff, publish materials on safety and many other steps to inculcate safety consciousness in the minds of workers. Employees should be made to understand that safety and health practices are the responsibility of both management and staffs, and this will go a long way to make the work area safe. Management should provide and maintain at the workplace, adequate plant and system of work that are safe and without risk to health. There should be regular servicing of machines, plants and equipment to make them safe for use at the workplace.

(cont. on pg. 10)

Management should display warning notices on faulty machines and equipment or other potential hazard places to make workers aware of potential danger. Provide the necessary information, instruction, training and supervision having regard to the age literacy level and other circumstances of the worker to ensure, so far as reasonably practicable, the health and safety at work of those other workers engaged on the particular work. Some industrial accidents that happen could have been avoided if effective supervision were carried out during the execution of duties at the workplace.

Management must share hazard and risk information with other employers including those on adjoining premises, other site occupiers and all sub-contractors coming on to the premises. Proper dissemination of risk information is important in ensuring safe and healthy working environment. Visitors who come to the hospital must be made aware of the precautionary measures in order to prevent accidents and injuries. Ensure correct storage procedures of flammable liquids and other dangerous materials. Management should endeavor to provide safe and proper means of storing dangerous gases at the workplace in order to protect the safety and health of employees. Correct procedures should be adhered to strictly. The off loading of petroleum products for example should not be compromised in order to avoid cases of fire outbreak.

The provision of fire extinguishers in itself is good but not enough. It is recommended that management should take it a point to train staff in the effective and efficient use of fire extinguishers. This may call in the regular conduction of fire drills to ensure that employees are ready to deal with any fire outbreak. This is more important in areas where highly inflammable gases are used like the filling stations. Workers should be given enough insight of the risk and dangers inherent in their work at the workplaces. Through education some of these accidents could be minimized if not eradicated entirely. Jobs can also be designed in such a way as to remove all inherent potential dangers to make the work area safe for employees. The provision of protective clothing and putting in place safety and health measures is not enough. Management should put in place a regular monitoring team who will go round to check whether the employees really do put on their protective materials given to them before doing their duties and also observe in strict terms safety measures put in place in order to avoid any mishaps and accidents. The government should also institute monitoring teams that will go round periodically to check whether employers go by the regulations as provided in the Labor Act.

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NFPA 704 STANDARDS An Overview, by Domingo E. Rodriguez S.

The NFPA 704: Standard System for the Identification of the Hazards of Materials for Emergency Response, was created to help identify hazards by the severity of the hazard in three principal categories (health, flammability, and instability), to alert emergency personnel of the type and degree of hazards.

It is called the colloquial **"Hazmat Safety Diamond**", which is used for emergency personnel to quickly and easily identify the risks posed by hazardous materials.

The NFPA Committee of Fire Hazards of Materials, has been working on the material in this standard since early 1957. Initially was developed as a manual by the Sectional Committee on Classification, Labeling and Properties of Flammable Liquids of the NFPA Committee on Flammable Liquids, which started 1952. That rule was tentatively adopted as a guide in 1960, adopted in 1961, and further amended in 1964, 1966 and 1969.

The NFPA 704, is intended to provide information to emergency responders about the general hazards of materials that may be inside of store, warehouse, a Flammable Liquids tank, or special occupancy building with substances or products classified by hazardous materials

The NFPA 704 standard intends through a diamond sectioned into four parts of different colors, indicate the degrees of danger of the substance to be classified. The hazards, they are also color-coded as follows: blue for health, red for flammability, and yellow for instability.

Color Symbol description:

The four smaller diamond quadrants have specific meanings as follows:

- Blue quadrant (left) indicates Health Hazard.
- Red quadrant (top) indicates FIRE HAZARD (Flammability).

Yellow quadrant (right) indicates REACTIVITY HAZARD.

White quadrant (Lower), SPECIAL HAZARDS in this



section is only used for cases of substances that have special conditions, and contains symbols or letters for example: SA signifies asphyxiate gas; other indicating, such as OXY for oxidizers, W for water reactive materials

BLUE quadrant **HEALTH HAZARDS** are ranked according to the level of toxicity and effects of exposure to response personnel.

RED quadrant **FLAMMABILITY HAZARDS** are based upon a material's susceptibility to burning. Conditions present need to be considered as well as the combustibility characteristics of the fuel.

YELLOW quadrant REACTIVITY HAZARDS is limited to water reactive and materials with oxidizing properties that require special firefighting techniques.

White quadrant (in the six o'clock position) SPECIAL HAZARDS are limited to water reactive and materials with oxidizing properties that require special firefighting techniques. Materials that react violently or explosively with water are identified by the letter "\" with a line through the center. As some Materials that possess oxidizing properties are identified by the letters "OX", symbols such as "CORR" for corrosive or "ACID" for acids, and with "ALK", base.

Degree of Hazard:

Within diamond each quadrants have the levels of danger will be indicated, which are identified with a scale numerical, the numeric values using Arabic numbers. (0, 1, 2, 3, 4) indicating the relative degree of hazard of the material stored in the container or area. It identifies the hazards of a material and the degree of severity of the health, flammability, and instability hazards.

(cont. on pg. 12)

NFPA 704 STANDARDS

An Overview, by Domingo E. Rodriguez S. Continued from page 11

Hazard severity is indicated by a numerical rating that Other Hazardous Materials Identification and Rating ranges from zero (0) indicating a minimal hazard, to four (4) indicating a severe hazard.

The severity of each type of hazard is graded by the system of numbers, with 0 (zero) standing for the Lowest Severity and a rating of 4 the highest.

As examples we have the following:

Level 4 Fire Risk, are All Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air, and which will burn readily.

Level 4 Health Hazard: Any Materials that, under emergency conditions, can be lethal.

Level 4 Reactivity Hazard: All Materials that in themselves readily capable of detonation or are explosive decomposition or explosive reaction at normal temperatures and pressures.

For **Special Hazards**, it is the white guadrants are including all substances that are sensitive readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures. This includes materials that are sensitive to localized thermal or mechanical shock at normal temperatures and pressures.

Criteria to Establish the Degrees of Danger

The ratings can be determined by using the information found on a Materials Safety Data Sheet (MSDS) and comparing it to the criteria with the information provided by the manufacturers of each substance. The following sections of the MSDS should be reviewed when determining the ratings:

Health – Sections. Flammability – Sections.

Instability – Sections.

Special Hazards – Sections.

Systems

The Hazardous Materials Identification System of American Coatings Association (ACA), it is categorizing a chemical substance, from Low Hazard 0 (zero) to High Hazard 4. Four areas are categorized based on health, flammability and physical hazards, as well as personal protection.

The U.S. Department of Transportation (DOT) have placard and label system for transportation of hazardous materials.

The U.S. Occupational Safety & Health Administration (OSHA) has also adopted the DOT system and requires hazardous materials placarded in transportation to continue to be placarded during storage and use.

As conclusion, NFPA 704 Diamond identifies the Health, Flammability, Reactivity and Special Hazards of a The colors, numbers, and letters on the material. diamond signify severity of the degree of hazard and types of action expected from the material.



Scott's Safety share SEVEN COMMON ACCIDENT CAUSES

Submitted by Scott Masters, WSO-CSM; Contract Employee, Construction Lead Safety Specialist, Alliant Corporation; Tennessee and South Carolina USA

- Taking Shortcuts: Every day we make decisions we hope will make the job faster and more efficient. But do time savers ever risk your own safety, or that of other crew members? Short cuts that reduce your safety on the job are not shortcuts but an increased chance for injury.
- Being Over-Confident: Confidence is a good thing.
 Overconfidence is too much of a good thing.
 "It'll never happen to me" is an attitude that can lead to improper procedures, tools, or methods in your work. Any of these can lead to an injury.
- Starting a Task with Incomplete Instructions: To do the job safely and right the first time you need complete information. Have you ever seen a worker sent to do a job, having been given only a part of the job's instructions? Don't be shy about asking for explanations about work procedures and safety precautions. It isn't dumb to ask questions; it's dumb not to.
- Poor Housekeeping: When clients, managers or safety professionals walk through your work site, housekeeping is an accurate indicator of everyone's attitude about quality, production and safety. Poor housekeeping creates hazards of all types.

A well-maintained area sets a standard for others to follow. Good housekeeping involves both pride and safety.

- Ignoring Safety Procedures: Purposely failing to observe safety procedures can endanger you and your co-workers. You are being paid to follow the company safety policies-not to make your own rules. Being "casual" about safety can lead to a casualty!
- Mental Distractions from Work: Having a bad day at home and worrying about it at work is a hazardous combination. Dropping your 'mental' guard can pull your focus away from safe work procedures. You can also be distracted when you're busy working and a friend comes by to talk while you are trying to work. Don't become a statistic because you took your eyes off the machine "just for a minute."
- Failure to Pre-Plan the Work: There is a lot of talk today about Job Hazard Analysis. JHA's are an effective way to figure out the smartest ways to work safely and effectively. Being hasty in starting a task, or not thinking through the process can put you in harms way. Instead, Plan Your Work and then Work Your Plan.





All information regarding our Annual Symposium, including booking, speakers, etc. may be found on our website at <u>www.worldsafety.org</u> or you may call our National Office in Warrensburg, Missouri at 660-747-3132

WSO Board of Directors



WSO Offers a Professional Membership Level

Being acknowledged as a Professional Member of a safety organization based upon one's education, years of knowledge, and experience in the Safety field is a goal for many to achieve. Not everyone has the college or university degree that is sometimes required to compete for an advanced level Occupational Safety Certification. Not everyone enjoys the Classroom environment of classroom training and potentially taking the computer-type exam, which does not always show one's true abilities in safety management and/or practice. There are many Safety Directors, Safety Coordinators, and Safety Specialists in the safety arena who have many years of experience but lack the mathematical expertise to pass a specific safety certification exam. However, by a submission of one's work/career credentials, résumé, professional references, safety seminar certificates, safety education, and

several testimonies from peers showing his/ her elite level, safety practitioners and professionals can become a WSO Professional Member upon verification and approval. This membership level gives one a great opportunity to continue to gain knowledge as a member of the WSO, network with and learn from other members, and attend our annual Symposium featuring world-class safety professionals from around the world presenting various types of safety modules. The minimum requirements can be found on Page 6 or in the WSO Membership and Certification Program booklet. To request a WSO Membership and Certification Program booklet or for more information to apply for or upgrade to the WSO Professional membership, please contact the WSO WMC by telephone or email, or submit the ONLINE REQUEST, and we will email the information to you.

"Making Safety a Way of Life...Worldwide" since 1975

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