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Case Report

Learning from Communication Failures

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Abstract: A "near miss" is an unexpected incident related to system or process failure which could have caused damage, but didn't. Near-miss provides insight into potential failures and weaknesses in the system. It can be a powerful tool to reduce risk and improve system reliability. We present a near-miss case which occurred while dismantling a patient care area without informing others concerned. Communication failure is most common cause of accidents in any organization. Although effective communication is a very simple and cost-effective measure to prevent failures yet it is most commonly neglected measure due to which many adverse and catastrophic events have occurred. This incident will prompt hospitals to document and communicate all necessary information for patient, public, staff and equipment safety.
Keywords: Near Miss, Incident, Safety, communication, failure

INTRODUCTION

Health and safety issues are important in engineering, management and other fields. Most professional engineering associations point out that health and safety are issues of utmost importance in engineering practice. For example, Professional Engineers Ontario states in its code of ethics, a practitioner shall regard the practitioner's duty to public welfare as paramount [1]. The need for appropriate education and training in engineering health and safety is also widely recognized and engineering programs usually must appropriately address health and safety to maintain accreditation. For instance, the Canadian Engineering Accreditation Board includes in its curriculum content criteria, appropriate exposure to public and worker safety and health considerations must be an integral component of the engineering curriculum [2].

Modern hospitals rely heavily upon engineering services for their efficient functioning. Any dislocation of these services, even for a short period, leads to hazardous situations and even loss of life. The planning of engineering services thus has to be based on zero failure concepts [3].

A near miss is any incident that had the potential to cause harm but was prevented, resulting in no harm [4]. Although the label of human error is commonly applied to an initiating event, a faulty process or system invariably permits or compounds the harm, and should be the focus of improvement [5]. A near-miss is an opportunity to improve system stability and reduce risk exposure to potential catastrophe [6]. Researchers in human error suggest that by identifying near misses, safety can be improved by identifying latent failure prior to the occurrence of a catastrophic injury [7].

Reporting of near misses by observers is an established error reduction technique in many industries and organizations. For example, in aviation industry, fire rescue services, medicine and rail services [8-13]. The aim of reporting this near miss event is to identify and correct loopholes in the system to ensure safety of staff, patients, attendants and equipment.

CASE REPORT

While re-engineering a ward in to an operation theatre, a brick wall common with reporting room of imaging department was to be broken. It was early morning time that laborers started breaking this common wall from other side i.e. from proposed OT side without informing Imaging department. Fortunately no one was injured on other side i.e. in reporting room and no damage was done human or equipment. This fact prompted us to report this case.

Initially a preliminary hazard analysis (PAH) was carried out to check the fundamental elements of safety system in the hospital. After preliminary hazard analysis, a team of experts was framed to investigate this near mishap to determine how to prevent recurrence of such events in future [14]. Using James Reason's "Swiss cheese model" to investigate this incident, the team conducted survey of the site to collect data regarding cause of this near miss accident [15]. They interviewed workers regarding the event and safety measures taken. They also checked records regarding documentation and communication, maintenance, training, plans of workplace, and workflow diagrams. Finally the team gave their recommendations.

Preliminary hazard analysis report summarized that although the immediate cause of this near miss accident was a human error but investigating team not only examined immediate events leading up to this incident, it also looked beyond this to larger organization. Through a review of evidentiary records, interviews, and post incident observations, the committee concluded that each layer of safety management within the hospital had deficiencies that contributed to this incident. Although there is a management supervision of various levels to supervise work but there is no any safety committee or safety management system in place.

The formal documentation and communication system is lacking. To increase the likelihood that all parties are knowledgeable and aware of the risks, safety information should be provided in writing and additional steps should be taken to verify that the recipients understand the material. The department where this incident occurred had no written protocols or SOPs for doing any work in the hospital so far as safety requirements are concerned, and no written mandatory safety requirements pertaining to any construction or dismantling work were available. As such, at the time of the incident, there was no documented communication telling the other parties to take precautionary measures and remove any costly equipment from other side so that damage can be minimal in this activity.

DISCUSSION

Unsafe working conditions, unsafe employee work habits or improper use of equipment have the potential to cause work related injuries. James Reason's "Swiss cheese model" was used to investigate this incident within the context of a hospital organization. This model depicts a series of safety layers or system defenses capable of preventing an incident. The holes represent gaps within each system where failure could occur. If a number of failures align, an incident results [15].

Modern accident causation theory recognizes that incidents are not the result of a single malfunctioning piece of equipment or the erroneous actions of one person, but instead are the result of a number of failures and deficiencies at many levels within an organization. Focusing on safety improvements at the immediate level of accident causation has limited impact because doing so misses the underlying organizational factors that influence and contribute to an incident. Examining higher level system deficiencies within an organization and making safety changes at those levels have a much greater preventative impact [16].

In the case under discussion, although the immediate cause of near miss accident was a human error but there was not any safety system in place or any documented safety policy displayed in the department which would guide workers to take safety precautions. There is no any safety committee or safety management system in place. To increase the likelihood that all parties are knowledgeable and aware of the risks, safety information should be provided in writing and additional steps should be taken to verify that the recipients understand the material.

Communication failure is a widely accepted cause of accidents and errors in industry and health care organizations. For example the communication efforts used to communicate the tragedy on December 2, 1984 in Bhopal, India when in Union Carbide Corporation plant there leaked Liquefied Methyl Isocyanides which led to the death of about 4,000 people. In 1984 UCC which produced Liquefied Methyl Isocyanides had a leak in their plant in Bhopal, India. The company was pressured by the Indian government to sell off a large part of their ownership to the same government to

provide jobs for their citizens. The plant was run by managers and workers from India and information concerning the plant was reported to the corporate headquarters in the US. There were many aspects of the crisis management plan which failed however the communication aspect deserves the most scrutiny [17].

Communication failures include issues such as insufficient information, faulty exchanges of existing information, ambiguous and unclear information and lack of timely and effective exchange of pertinent information and result from individual, interpersonal and systemic factors [18].

To conclude failure of communication led to this near miss incident. More research needs to be conducted into effective ways of improving written and verbal communication, within a hospital organization, if such failures are to be avoided in the future.

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