

Applying Risk Management to Fire Safety in NCCS

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Introduction

During NCCS JCI accreditation in 2013, the surveyor had identified presence of fire penetration within a particular area in NCCS building. According to the National Fire Protection Association (2014), most fire deaths are due to smoke inhalation and not by burns. Occupants within a building tends to become disorientated by the fast developing smoke that makes it hard for them escape. Besides smoke, heat from the fire is also a respiratory hazard, as the superheated gases could burn the respiratory tract. As Fire safety is critical to patients, members of the public and staff in NCCS, a suggestion was put forth to re-assess the adequacy of fire safety measurers in NCCS. A consultant/QP was subsequently engaged to carry out this health assessment together with a cross-functional team comprising of representatives from Operations. Management, Maintenance Department, Risk Management and Fire Safety Manager. The aim of this project was to integrate risk management to the existing fire safety measures in NCCS.

Methodology

Risk management of fire safety of NCCS building was performed using the risk mitigation tool template. It was organised into the following steps:

Potential risk events were identified through focused group discussion and inspection by external fire safety consultant These risk events were assessed based on their likelihood and impact of risk occurrence

The risk events were evaluated by prioritizing and top risk events were selected for treatment. Monitor and review of the risk treatment plans were carried to assess and ensure effectiveness of the risk treatment plans.

lo	Identify Risks Analyze Risks				Risks	Evaluate Risks Treat R		lisks
	Risks	Potential Consequences of Control Failure	Impact	Likelihood	Current Management and Mitigation	Risk Rating	Additional Control	Risk Rating after Changes to Controls
R	Risk of presence of penetration which allow spreading of fire and smoke	Spreading of fire and death due to inhaling of smoke by patients and staff due to spreading of smoke	Major	Rare	Inspection of renovated areas/routes where new pipe work were laid to ensure all penetration are sealed up using fire rated fire stopper	Potentially under-controlled	Conduction of regular building inspections in identifying penetrations	Adequately controlled
R	Risk of inability to contain fire at fire source due to inadequate coverage of hose reels	Spreading of fire and lack of escape time for patients and staff thus leading to death or injuries	Major	Rare	Arrangement of building inspections by QP/Architects or advise from FSM	Potentially under-controlled	Install additional hose reel (as advised by QP/Architects/FRM) to ensure adequate coverage as per regulations	Adequately controlled
R	Risk of inability to contain fire at fire source due to lack of provision if fire rated doors at critical areas	Spreading of fire and lack of escape time for patients and staff thus leading to death or injuries	Major	Rare	Provision of fire rated doors for critical areas as per regulations Arrangement of building inspections by QP/Architects or advise from FSM	Potentially under-controlled	Install additional fire rated doors (as advised by QP/Architects/FSM) for critical areas as per regulations	Adequately controlled

Results

A total of 12 risks pertaining to fire safety had been identified. 3 of them were potentially under-controlled. Additional control measures for Risks R1 & R2 had been implemented and work-in-progress for Risk R3.





Risk R1: Sealing of presence of penetration using fire rated fire stopper after building inspections.

Basement two R2 L



Risk mitigation tool template allows us to have a systematic way of identifying, assessing, evaluating and treating the identified risks. This further illustrates that risk management methodology can be used in daily activities. With the help of this structured methodology, we have identified and managed the risks related to risk management methodology fire safety in NCCS effectively.

Risk R2: Addition of hose reel at Basement two

Reference: National Fire Protection Association (2014), The Consequences of Fire, Accessed from http://www.nfpa.org/press-room/reporters-guide-to-

fire-and-nfpa/consequences-of-fire