



Singapore Healthcare
Management 2015

Safety On Work Site

Chemical Handling



Christine Cayabyab | Chan Mei Ying | Shannon Yeo Kah Lai
Chester Ong Fun Joo | Chew Yen Leng



Introduction

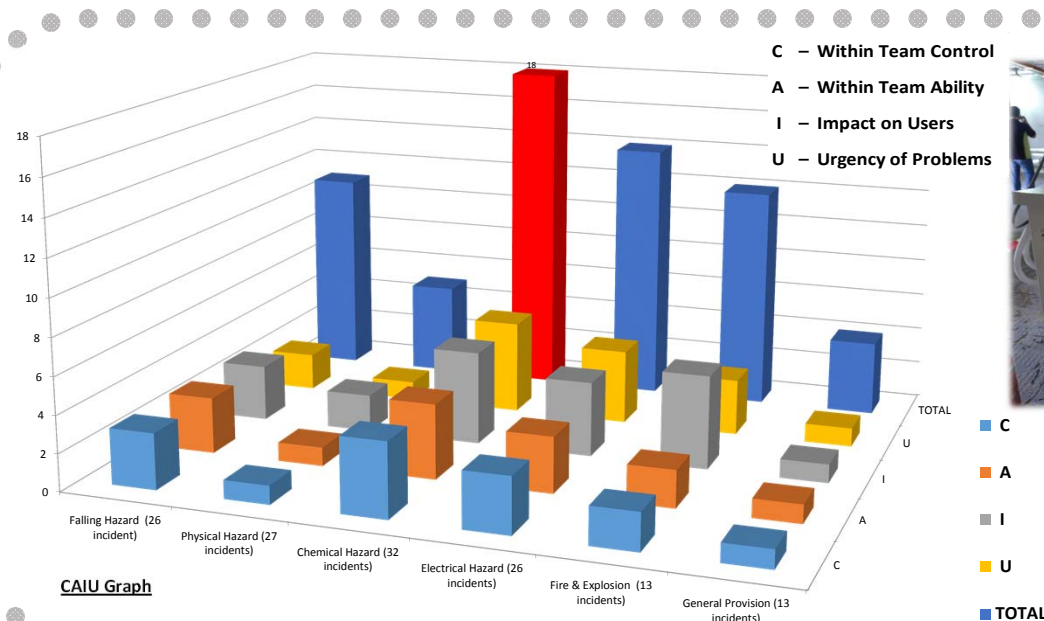
With the increasing numbers of renovation works handled by the department yearly, the numbers of incidents picked up by safety officers increased tremendously over the years.

B.SAFE (Be Smart, Alert, Focused, Educated) was formed to study these incident trend.

Methodology

The process involves compiling all incidents at construction worksites managed by SingHealth FD from past 2 years' safety reports issued by safety officers from various institutions. The results were then compiled and analysed.

The Team used CAIU matrix to narrow down the commonly observed safety hazard and to select areas for improvement. Based on CAIU and reports gathered, chemical hazard ranked the highest in terms of number of incident and rating



Proposed Solution

The team came up with a checklist which will provide a holistic reference for contractors to manage their chemical storage and handling on site.

SN	Work Practices	Y	N	Remarks
A	Chemicals on site			If yes , to submit hazardous material/chemical list weekly (to be updated whenever there are any changes in quantity or additional item on site) and categorized as flammable, corrosive, toxic and oxidized etc. Ensure that *Safety Data Sheet (SDS) for all materials/chemicals is available and displayed on site. Indicate storage method and PPE to be used
B	Chemical Store			If no , to provide a designated place to store chemicals/flammable cabinet. Indicate locations of storage on plan and display layout on site if more than one locations
C	Proper Handling 1. Worker handling this with proper training? 2. Worker handling this has proper PPE?			Provide training records for chemical handling and use of proper PPE.
D	Person in-charge /Checker 1. Project Manager /Supervisor conduct briefing on-site? 2. Project Manager /Supervisor conduct inspection on-site? 3. Safety Officer / Supervisor conduct site inspection?			If yes , please indicate frequency (daily, weekly etc.) _____. If yes , please indicate frequency (daily, weekly etc.) _____.
E	Others			

Implementation

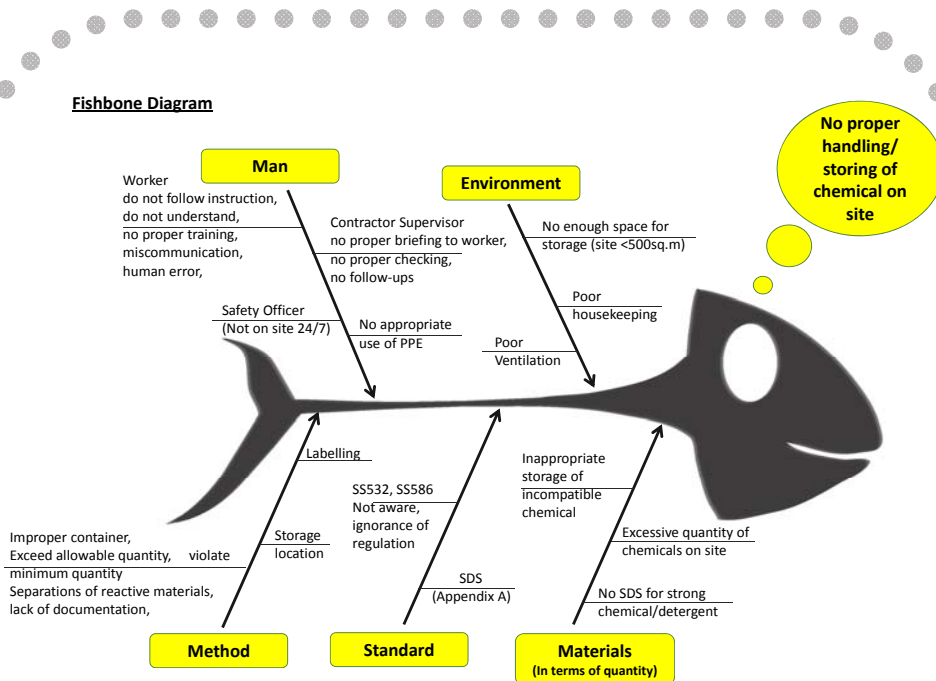
We had implemented the checklists in 2 of our on-going projects. During the safety inspection, all chemicals are observed to be in their proper storage and record showed that workers were briefed.

Conclusion

Checklists are helpful in managing and handling chemicals on site. It also increase the awareness of the project team and minimize the occurrence of chemical hazard incidents. We will standardize and implement this checklist for all renovation projects and to introduce this good practice to other institutions.



Fish Bone Diagram was used to identify the possible root causes and to develop a process that will guide contractors for compliance.



Risk Assessment

INVENTORY OF WORK ACTIVITIES					RISK EVALUATION					Risk Evaluation ²		
No.	Process & Activities	Location of Activity	Equipment & Hazardous Materials Required	Routine / Non-routine Activity ¹	Competency / Qualifications Required	Environmental Aspect / Safety & Health Hazard	Environmental Impact / Safety & Health Risk	Description of Environmental Impact / Safety & Health Risk	Existing Risk Control (if any)	Likelihood Score	Severity Score	Risk Rating
1 Working at Site												
1.1	Project Site	Bottle without proper labelling	R	OJT	Chemical Hazard	Major	Injury due to drinking chemical by accident	Worker's provide own labelling.		4	2	8A
1.2	Project Site	Electrical socket with missing cover and use normal 3-pin plug.	R	OJT	Electrical Hazard	Minor Injury	Power trip, electric shock due to unsafe installation.	Ensure that all temporary supply checked and certified "OK" for use by LEW and inspected regularly.		4	2	8A
1.3	Project Site	electrical wiring was hang onto improper insulator	R	OJT	Electrical Hazard	Minor Injury	Power trip, electric shock due to unsafe installation.	Ensure that all temporary supply checked and certified "OK" for use by LEW and inspected regularly.		3	2	6A
1.4	Project Site	socket outlet adaptor (SOA) set-up of unsound condition	R	OJT	Electrical Hazard	Minor Injury	Power trip, electric shock due to unsafe installation.	Ensure that all temporary supply checked and certified "OK" for use by LEW and inspected regularly.		3	2	6A

Risk Assessment was used to identify the severity of the events.