

Faktablad

MSB Forskning

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From the frontlines: studying hospital evacuation through the staff's experience

Hospitals are key to the resilience of a society. However, there is limited guidance for their design with respect to evacuation. The challenges of conducting evacuation drills or field experiments reduce the availability of data to evaluate the evacuation procedures. Moreover, it can be difficult to train the staff often enough to ensure the correct application of the procedure in an emergency. This project aims at surveying the state of the art of hospital evacuation design and training in Sweden and abroad, and learn about hospitals' past experiences with evacuation. With the sum of experiences, a set of recommendations can be offered to learn from the past, train in the present, and build in the future.

Boverket's building regulations (BBR) classify hospitals as buildings with the highest requirements for fire safety design (Br0). This means there is no prescriptive recommendations for hospitals to design their evacuation strategy or the training of their staff, and each case should be considered individually.

Analytical design is the core of fire safety engineering, but it relies heavily in data for the assessment to be valid. With the limited options for collecting data on hospital evacuation, it can be difficult to tailor the analytical design to the evacuation needs in an efficient way.

The nature of hospital buildings, i.e., their fundamental function of taking care of the sick and injured, makes them a particularly challenging object of study. Running experiments or drills is extremely complicated, reducing the opportunities for data to be collected. However, there is an alternative solution: investigating and learning from past events. The experiences from other hospitals' evacuations can help to study the procedures under a new light.

Kontakta oss:
Tel: 0771-240 240
registrator@msb.se
www.msb.se

Project title

Optimization of hospital evacuation procedures and training

Project period

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Researcher

Dr. Silvia Arias

Avdelningen för Brandteknik
Lunds tekniska högskola (LTH)
Tel. +46462227366
silvia.arias@brand.lth.se

Contact MSB

Sabine Hedlund

Enheten för brand och räddning
Sabine.Hedlund@msb.se



Myndigheten för
samhällsskydd
och beredskap

Hospital evacuation: learning from the past

This study will pool both evacuation procedures and experiences from hospitals in Sweden and abroad, to identify evacuation protocols that have been proven successful. The concept is to learn from the staff's experience. It is unlikely that a single hospital has had enough opportunities to test their training in real events. However, it is possible to collect information about real events that occurred in different hospitals, and contrast them with the procedures followed in an individual hospital. It is likely that a given evacuation event introduced changes to the hospital's evacuation procedures, and possibly their training procedures as well. The purpose of this project is to gather experiences, learn from them, and offer recommendations on procedures and training.

Hospitals will be contacted with the purpose of collecting information about their evacuation procedures, available data from past evacuations, and their current training methods. The data obtained through questionnaires or interviews with staff members of hospitals in Sweden and abroad. The data will be then contrasted to the evacuation procedures used in real events, even if the events did not occur where the procedure originated from. This way, it will be possible to identify emergency scenarios not contemplated in the evacuation procedures, or propose changes in the procedures based on what lessons other hospitals have learned.