Hotel Accidents

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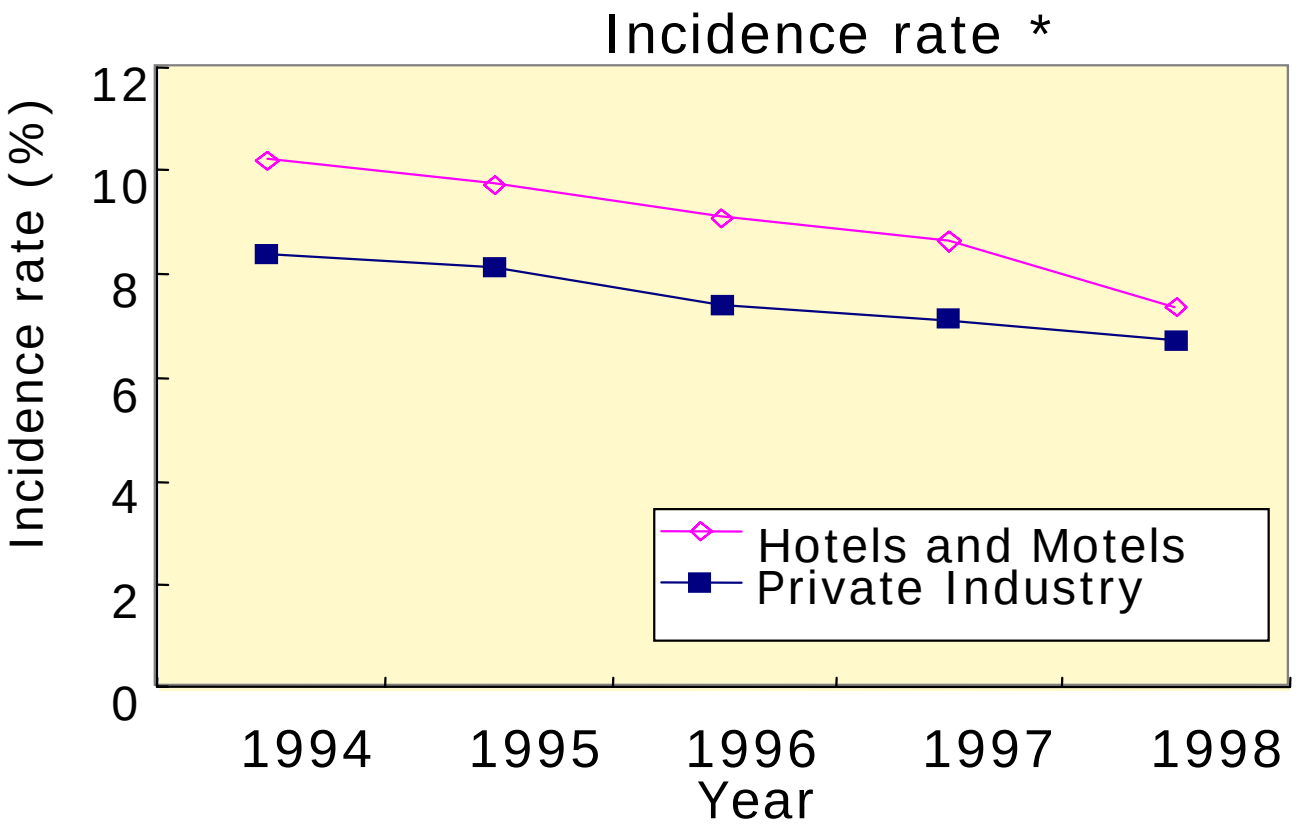
Accident rate

- 102.2 thousands nonfatal accidents of employee in a year were recorded in hotels and motels (1998).

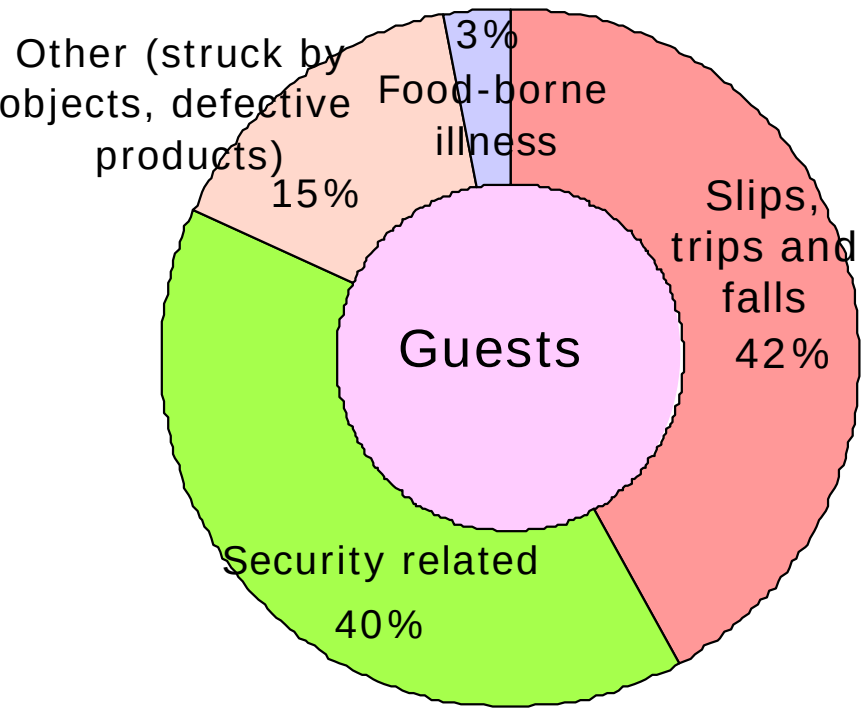


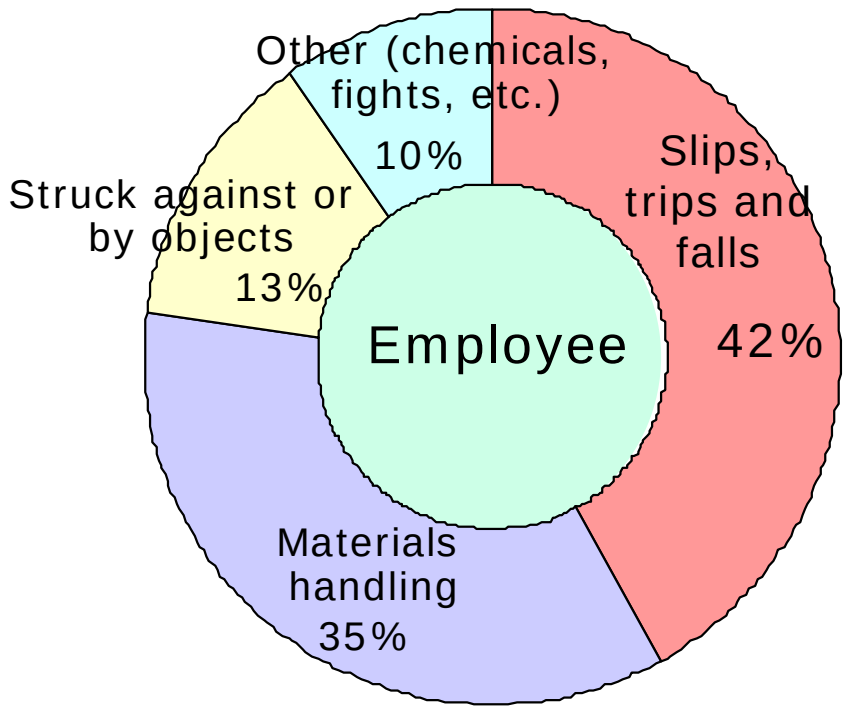
* The incident rates represent the number of injuries and illness per 100 full-time workers

Reference:
Bureau of Labor Statistics(1994-1998)

Accident types

- "Slips and Falls" is the most frequent accident type by cost for both guests and employee





Reference:
Accident Prevention for Hotels, Motels, and Restaurants, Robert L. Kohr, 1991, Van Nostrand Reinhold

Slips and Falls

Locations of accidents

- In a hospitality setting, falls usually happen in one of these areas:
  1) stairways
  2) balconies or landings
  3) ramps
  4) parking lots
  5) bathtubs or showers

- Important factors usually involved in these falls are:
  1) presence of handrails/guardrails
  2) presence of a non-slip surface
  3) adequacy of landing areas
  4) accident victim's field of vision
  5) accident victim's health, behavior
  6) adequacy of lighting
  7) weather conditions (wet, snowy) and maintenance (cleaned, recently polished)

Standards for floor surface

•A static coefficient of friction (COF) benchmark of 0.5 is required for the safety (using leather as the sensor material under dry conditions).

(American Society for Testing & Materials, D2047)

•Minimum Slip resistance should be

0.1 wet and dry ---
bath facilities

0.5 wet and dry ---
guest room baths floor

0.6 wet and dry ---
lobbies, circulation areas, and meeting rooms.

0.7 wet and dry ---
pools, kitchen

Reference:
Accident Prevention for Hotels, Motels, and Restaurants,
Robert L. Kohr, 1991, Van Nostrand Reinhold

Recent Studies on "Slips and Falls" #1

Investigation on relationship among measurements of friction, and actual slip and fall events.

•The number of slip and fall events increased as the difference between the required COF(coefficient of friction) and the actual DCOF(dynamic coefficient of friction) increased.

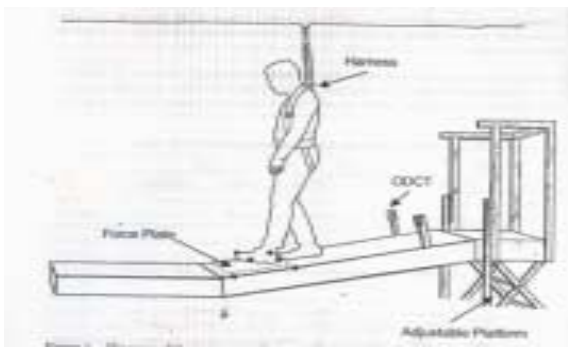
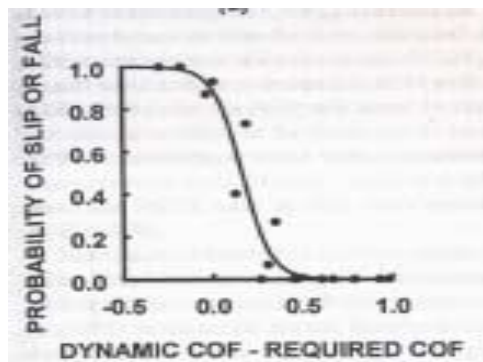


Diagram of the instrumented ramp



Results of the logistic regression model

Predicting slips and falls considering required and available friction, James P. Hanson et al, Ergonomics, 1999, vol.42, no.12, 1619-1633

Recent Studies on "Slips and Falls" #2

Investigation on gait pattern affected by slippery floor and load carrying

•An abnormal gait pattern, short stride length, was seen on oily floors (by 6%) or with heavy load (by 9%) carriage because subjects adjusted their stride length for a better stance.

The effect of load carrying and floor contaminants on slip and fall parameters, Rohae Myung et al, Ergonomics 1997 Vol.40 No.2 235-246

Bedmaking

General strategies

Bedmaking task may be responsible for a high degree of low back pain amongst room attendants.

- Housekeepers should make beds one side at a time, completing one side entirely before proceeding to the other side.

- Housekeepers should position their bodies close to the bed with their back rigid when pulling covers on and off.

- By using NIOSH lifting equation you can calculate injury risks.

National institute for Occupational Safety and Health (NIOSH), 1981, NIOSH Publication

Recent Study on "bedmaking"

A study on physical stress affected by size and height of beds

•Bed Height

The high bed condition is recommended since it resulted in less load on the low back (460 vs 560mm).

•Bed Size

A reduction in bed size would not necessarily result in reduced spinal loading.

•Spinal loading

Spinal loads in bedmaking may place the worker at risk of injury to the lower back.

Spinal loading depends on the way in which the task is performed (In "Pull Bed" task the load is lower).

Lumbosacral loads in bedmaking, P.D. Milburn et al, Applied Ergonomics 30 (1999) 263-273