A model to evaluate indoor air problems in hospital buildings

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Evaluation of good IAQ
A: Factors affecting the indoor environment. If the indoor environment has no deficiencies and quality of indoor air is good.
B: The indoor environment is healthy and perceived indoor environment is good.
C: Multiprofessional approach to prevent, identify and control indoor air problems.

Evaluation tasks
1. Background information of a hospital building - renovation history, earlier reports, floor plans, construction and HVAC drawings.
2. Perceived IAQ questionnaire for employers - complaints and symptoms in working environment, quality and quantity compared with reference data.
3. Construction and HVAC walk-through - condition of a hospital building.
4. Measuring and samples of indoor environment - temperature, moisture, air exchange rates, pressure differences, leakages, material and dust samples, if needed.
5. Questionnaire for the indoor air group of a building - symptoms and complaints, accidents, representatives of employers, employees, maintenance, OS (officer and delegate).
6. Questionnaire for occupational health care - new and old asthmas, occupational diseases and suspicions of them, duvet days and absences.

Evaluation outcome
An overall picture of the building:
- The documentation with photos.

Information on the health of occupants and the perceived indoor environment:
- The medical certificate of a physician.

The research plan for further measurements and samples:

The results of measurements and the analysis of samples:

The perception of the indoor air group with relation to the condition of the building and the health of occupants:

The perception of occupational health care with relation to the health of occupants:

The estimation of health relevance in the evaluated building.

Factors affecting the indoor environment have no deficiencies and quality of indoor air is good. The indoor environment is healthy and perceived indoor environment is good. Multiprofessional approach to prevent, identify and control indoor air problems.

Indoor environment problems may be complex in many cases, and therefore management needs a multiprofessional approach, and during the whole process close cooperation between different parties is essential.

Evaluation process with open communication

Problem-solving model for complex indoor-air problems. (occ = occupational)