Healthy Homes Grantees in Region VII, Great Plains

Name of Grantee: Saint Louis University School of Public Health
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Project Partners: Institute of Inspection, Cleaning and Restoration (IICRC) and EPA

Summary of Project Activities:
Moisture intrusion or wetting of structural materials and furnishings often leads to fungal (mold) contamination indoors. Excessive moisture/wetness may occur due to rain, flood, or seepage etc., possibly due to inadequate preventive measures and inferior housing stock or building practices. High interior humidity/wetness and the resultant mold growth have been documented to be hazardous to the health of the inhabitants, particularly the children. The Institute of Medicine has recently related the mold exposure in damp homes to asthma and other respiratory diseases¹. Therefore, a critical examination of the scientific basis of current guidelines and practices for managing moldy indoor materials is essential.

Presently, some standards and guidelines from organizations like the Institute of Inspection, Cleaning and Restoration (IICRC) and EPA are available, but the strategies employed commercially for indoor fungal remediation (control and prevention) vary widely. Also, it is not clear whether the physical and chemical methods currently in practice follow the existing guidelines and are effective, based on sound scientific evidence, and most economical. Their long-term hazard reduction effectiveness through the prevention of the reoccurrence of fungi remains uncertain. Often the mold-affected individuals, especially those with limited means, do not have easy access to reliable information regarding fungal control and hazard reduction measures. Even if the pertinent information is available, the suggested steps (like discarding items remaining wet for greater than 24 hours) may be too expensive, controversial, or not feasible, and therefore may not always be implemented.

In view of the above, we propose a systematic and scientific evidence-based review of the current mold remediation practices. This project will involve:

Collection and cataloging of the current mold remediation practices that are being used in the country. We will utilize elicitation interview and field survey based approach

¹ “Damp Indoor Spaces and Health”, Institute of Medicine of the National Academies, 2004
to gather this information. Conducting a systematic and critical review of the scientific evidence behind suggested guidance and current field practices of mold remediation.

This approach will allow the researchers to determine: most frequently used mold remediation methods prevalent in the field, scientific merit of suggested guidance and field practices in mold remediation, evidence-based validation and ranking of the current field practices and guidance to identify “Best Practices”, identification of gaps or areas of uncertainty regarding available scientific information and current field practices, identification of recommendations and field practices that may require further validation.

The strategies outlined above will enable the researchers to identify reliable and practical solutions for mold remediation in residential settings. Following documents will be developed:

A draft manuscript of the results of critical review of scientific evidence behind suggested guidance and current field practices for mold remediation. A user-friendly “White Paper” document to include science-based information regarding “Best Practices” for the management of moldy indoor materials. The target audience for the white paper will be occupants/owners of moldy buildings, public health sector, and general mold remediation industry.

We envision that with a better understanding of the fundamental questions regarding mold growth, control, and prevention, the proposed research will bridge the gap between the scientific knowledge and the current field practices for mold remediation. Translation and dissemination of the scientific evidence-based “Best Practices” for mold reduction measures are expected to help in preventing, minimizing, and controlling a prominent housing based hazard. Information generated through this research will be relevant for the reduction of indoor mold contamination due to excessive moisture-intrusion under both normal household and catastrophic situations.

Additional Support: Gift certificates worth $14,000 for field survey participants from Indoor Air Quality Association, Inc.

**Product Outcomes/Outputs:**
- The researchers will determine:
  - Most frequently used mold remediation methods prevalent in the field
  - Scientific merit of suggested guidance
  - Field practices in mold remediation, evidence-based validation and ranking of the current field practices and guidance to identify “Best Practices”
  - Identification of gaps or areas of uncertainty regarding available scientific information and current field practices
  - Identification of recommendations and field practices that may require further validation