Invisible Toxins in Child Care and Education Centers

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Background:
- There are up to 8.3 million children in daycares, preschools, and other early care and education centers in the US.
- It is estimated that 1 in 8 children have been exposed to harmful chemicals in care centers without being aware of the situation they were in.
- Many child care facilities are found in buildings that have been used prior, such as, old factories, gas stations, dry cleaners and even nail salons.
- Chemicals found to be putting children at risk are such as Mercury, Lead, Radon, and formaldehydes.
- As of this moment there are no Federal laws or regulations on how far a child care center must be from such sites.

Question:
What measurements would a system need in order to accurately gauge a safe proximity of child care centers to chemical outputs?

Methods:
- Given constraints during my internship period I worked from home the majority of the time and had little access to CDC documents.
- That said, my primary resources for information were sites such as PubMed, EndNote, and Google Scholar using key search terms in order to narrow my results.
- Analysis of Graphs and statistics was necessary to accurately gauge measurements.

Results:
- Pre-Defined systems were sparse. However, representation on the subject was abundant.
- On the subject of nail salon, dry cleaner, and gas station, chemical outputs were found in great abundance. However, the notion of studying effects via proximity were few and far between.

Implications:
- The implications of my research call for immediate study into the proper measurements to be use in a baseline measurement system, that can be successfully used across all needed locations.
- As a result, this information will be the foundation of future laws and regulations to protect kids in child care centers in the future.

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