

REPORT ON NURSES' HEALTH AND CHEMICAL EXPOSURES SURVEY

Presented by:

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No Relevant Financial Relationships

NURSES' HEALTH SURVEY

- Collaboration of Health Care Without Harm, American Nurses Association, Environmental Health Education Center of the University of Maryland's School of Nursing & the Environmental Working Group
- Designed an on-line survey of nurses' workplace exposures and health status.
- Recruited nurses to voluntarily take the confidential survey.

STATUS OF THE SURVEY

- 1552 nurses completed the survey from May, 2005 to January, 2006.
- EWG is currently completing the analysis.
- Final survey results will be released in October/November 2007 (www.ewg.org).

SURVEY METHODOLOGY

- The survey was open to all nurses.
- The online survey was designed to assess the relationships between nurses' health and their exposures to 11 different common health care hazards.

SURVEY METHODOLOGY (2)

- The survey examined exposures to 11 chemicals, chemical groups, or hazardous agents:
 - the high level disinfecting and sterilizing chemicals glutaraldehyde and ethylene oxide;
 - medications, including antiretroviral and chemotherapeutic agents;
 - hazards deriving from medical devices, such as mercury and ionizing radiation;
 - anesthetic gases;
 - natural rubber latex;
 - hand and skin disinfection products; and,
 - housekeeping chemicals.

SURVEY METHODOLOGY (3)

- Completed responses were compiled from 1,552 nurses from 50 states who reported detailed information on their nursing position and exposure history, health history, and the health of their 2,498 children.
- A standard statistical analyses of the data was conducted, assessing the incidence of health effects known or suspected to be associated with each category of exposure by comparing rates of these effects from among nurses reporting high exposures (frequent and of long duration) against nurses with lower reported exposures.

SURVEY METHODOLOGY (4)

- The analysis is revealing a striking concordance between survey findings and the health risks expected from a review of the open scientific literature with respect to the exposures assessed.

BIASES AND LIMITATIONS

- The survey was not controlled.
- It was a self-selecting respondent pool.
- Survey analysis did not control for possible confounding factors such as the impact of a nurse's exposure to mixed or combined chemical exposures.
- The survey does not provide definitive answers to all of the health risks and conditions faced by nurses and their children.

WHO TOOK THE SURVEY?

- Total respondents were 1552:
 - 80.4% Registered Nurses
 - 13.5% Advanced Practice Registered Nurses
 - 3.5% Licensed Practical Nurses
 - 1.9 % Other Health Care Practitioners
 - 92.3% currently in practice
 - 44.7% in practice 1 to 20 years
 - 55.3% in practice 20 to 55 years

NURSES' REPORTED EXPOSURE TO HAZARDS

- 90% to: cleaning products, antimicrobials, pharmaceuticals, latex, disinfectants, housekeeping chemicals
- 50% to: sterilizing agents, glutaraldehyde, radiation, mercury
- 20% to: chemotherapy drugs, antiretrovirals, ethylene oxide, waste anesthetic gases

NURSES' EXPOSURES

- Multiple chemicals over many years:
- 10+ years, 10+ chemicals
 - 1 in 5 nurses
- 5+ years, 10+ chemicals
 - 1 in 3 nurses
- There are workplace safety standards in the U.S. for only six of the many hazardous substances to which nurses are exposed to in the workplace; most exposures are considered legal, no matter how high the level of exposure or in what combinations

MOST COMMON HEALTH PROBLEMS

- Reproductive
- Miscarriage
- Immune disorders
- Allergies including latex
- Gastrointestinal
- Heart
- Cancer
- Cerebrovascular
- Migraines
- Infertility
- Asthma
- Hypertension
- Mental illness
- Depression
- Musculoskeletal
- GERD

WHAT THE SURVEY ACCOMPLISHES

- It presents a “snapshot” showing that nurses are routinely exposed to **complex mixtures** of chemicals and other hazardous agents, **year after year** in their clinical practice.
- It demonstrates a need for a comprehensive, national study of nurses’ health and exposures to chemicals and hazardous substances in the health care industry.
- It illustrates a critical need for **standards and controls to limit** nurses’ exposures to hazardous substances.

Resources

- Health Care Without Harm: www.hcwh.org
- American Nurses Association:
www.nursingworld.org
- University of Maryland SON's Center:
www.EnviRN.org
- Environmental Working Group: www.ewg.org