

Occupational Health Gradients in Hospital Workers (GROW Study)

Work, Stress and Health:
New Challenges in a Changing Workplace
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GROW Study

- Funded by the National Institutes of Health
- Conducted by the University of California – San Francisco Department of Medicine (UCSF) – Division of Occupational and Environmental Medicine
- Study aim is to determine how risk exposures relate to differences in health outcomes across various job categories in the hospital workforce. The health outcomes studied will be:
 - Occupational injury of the strain and sprain sort
 - Health-related quality of life and physical and mental functioning
 - Blood pressure and salivary cortisol levels (as an indicator of potentially unhealthy “stress” responses in the body)
 - Overall absence from work due to sickness or injury of any type

Principal Study Personnel

- Paul Blanc, MD, MSPH – Department of Medicine – UCSF: Principal Investigator
- Genevieve Ames, PhD - School of Public Health - UC Berkeley
- Robin Baker, MPH - School of Public Health - UC Berkeley
- Rajiv Bhatia, MD - Department of Medicine - UCSF
- Jeffrey Braff, DrPH - Department of Medicine - UCSF
- John Frank, MD - University of Toronto
- Marion Gillen, RN, PhD - School of Nursing – UCSF
- Deborah Gordon, PhD - Department of Anthropology, History and Social Medicine - UCSF
- Robert Harrison, MD - Department of Medicine - UCSF
- Bradley Jacobs, MD - Department of Medicine - UCSF
- Ira Janowitz, BSIE, MPS, PT, CPE – Department of Medicine – UCSF
- Umesh Masharani, MD - Department of Medicine - UCSF
- Raymond Meister, MD - Department of Medicine - UCSF
- Douglas Oman, PhD - School of Public Health - UC Berkeley
- Reiner Rugulies, PhD, MPH - National Institute of Occupational Health - Copenhagen, Denmark
- Irene Yen, PhD - Department of Medicine - UCSF

GROW Study Highlights

- Conducted at:
 - San Francisco General Hospital (SFGH)
 - UCSF Medical Center (Parnassus and Mt. Zion Campuses)
- 5-Year Timeframe:
 - 2002 – 2007
- 4 Arms to the Study:
 - Epidemiologic Investigation
 - Ethnographic/Qualitative Investigation
 - Ergonomics Investigation
 - Labor Occupational Health Program Activity
- Labor-Management Liaison Committees:
 - UCSF Medical Center
 - SFGH

Epidemiologic Investigation

- Cases: N = 150 injured workers [WRMSDs] (75 at each institution) enrolled over 2 years
- Controls: N = 450 uninjured workers (225 at each institution) matched to cases by:
 - Job Category
 - Shift
 - Institution
- Telephone interview (~45 minutes) of cases and controls
- Ergonomics observations (~1 hour) of cases and controls
- Blood Pressure and salivary cortisol measurements taken
- Interview/observation conducted at initial enrollment and again 2 years later to investigate changes

Ergonomics Investigation

- Based on the Hignett's Rapid Ergonomics Body Assessment (REBA) and Prunett's Posture, Activities, Tools and Handling (PATH), as well as input from Study co-investigators, we developed 2 ergonomic evaluation instruments, the first to be used when evaluating clerical/sedentary workers, the second when evaluating all other positions.
- We designed a program to record observational data on a hand-held Hewlett-Packard Personal Digital Assistant (PDA).
- Alpha testing the ergonomics instruments took place off site, to assess their stability and user-friendliness, as well as to determine inter-rater reliability.
- Beta testing the programs took place at the same pilot site where we tested the administration of the Epidemiological Study Instrument.

Labor Occupational Health Program Activity

- LOHP is a component of the Center for Occupational and Environmental Health (COEH) of the University of California at Berkeley, Davis and San Francisco. LOHP is located at UC Berkeley. It has:
 - Worked with the existing joint labor/management health and safety committee at SFGH to facilitate their input in the study.
 - Assisted in the realization of the UCSF union-management Liaison Committee.
 - Developed a training plan for a sequenced approach to union education regarding health and safety relevant to both sites. The first training session for UCSF union members will be held in May 2003.

GROW Study Operational Challenges

- Enrollment thresholds and procedures for Study controls, who are enrolled through a combination of Study staff-initiated procedures. (Cases are enrolled through Employee Health services at each institution.)
- Potential lack of participant confidentiality.
- Maintaining an observational study posture throughout 4+ years in the workplace.

GROW Study Benefits

- Generally no direct benefit to individual participants.
- Unbiased look at work-related musculoskeletal injuries.
- Potential to address issues surrounding workers' compensation.
- Outreach and Education Program (under the Labor Occupational Health Program at UC Berkeley) explicitly seeks to improve health and safety infrastructure and processes.

The Ethnographic/Qualitative Investigation

STUDY AIMS:

1. Explore how social and cultural and organizational CONTEXTS—
 - on the macro level (e.g., hospital-wide)
 - on the micro level (e.g., unit, occupations)
 - on the event level (e.g., JHACO survey, budget cuts)
 - on the individual level (socio-cultural background)

may modify risks, health and safety among the hospital workers;
2. Describe dominant and variant 'cultures' of work, health and safety, injury, and 'risk' and 'stress' within and between the hospitals;

The Ethnographic/Qualitative Investigation (Continued)

3. Parallel and complement the quantitative study of 'psycho-social' risks and buffers and essential elements of the social and cultural work environment related to health and injury;
4. Describe social/cultural processes that help or hinder the effectiveness of health and safety policies and practices, particularly related to WRMSD.

Study Methods: A Multi-Method Ethnographic Approach

1. 'Entry' into the hospital 'communities' and adoption of role of 'participant observer' in many different contexts
2. Individual Semi-Structured Interviews with opinion leaders and key informants (25/hospital)
3. Informal Interviews with people at all levels (many!!)
4. Small Group Interviews (Focus Groups) with occupational sub-groups: 5-6 groups/hospital, 4-8 participants/group
 - (Particular attention will be given to employees in the less-studied occupations, such as housekeeping, materials management and food service)
5. Archival Study (injuries, policies, procedures re health and safety)
6. Two Critical Case Studies/Hospital

