

# P&W Epidemiology Study: Exposure Reconstruction

Progress Report  
2006



# Research Team

## Full Time

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# Research Team

## Research Assistants

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# Outline

- General Study Approach
- Study Components and Progress
- Projected Study Timeline

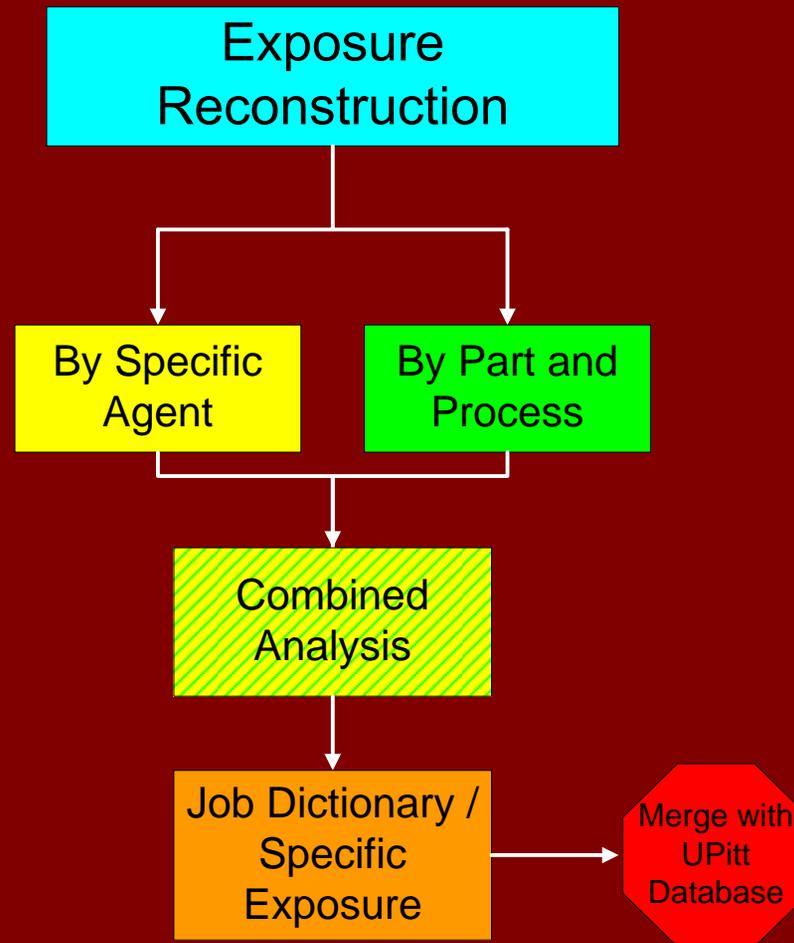
# General Study Approach

- Exposure Reconstruction
  - Characterization of occupational exposures in space and time
  - For P&W Study
    - Exposures: parts, processes, specific agents
    - Where: P&W's Connecticut plants
    - When: 1952-2001

# General Study Approach

- Exposure Reconstruction
  - Used to inform epidemiology studies
  - For P&W Study
    - Linking UIC's exposure data with UPitt's mortality data

# General Study Approach



# Study Components: Job Dictionary

- Job Dictionary
  - Composed of categories which contain all possible hourly and salary job titles recorded for employees over the study period
  - These categories of employees are being assigned exposures to parts, processes, and specific agents
  - Examination underway on over 320,000 unique job title combinations from UPitt's work history records

# Study Components: Exposure by Part

- Part families determined for manufacturing and refurbishment from 1952-2001
  - Examples: gears, blades, tubes, etc.
- Exposure to part families are being assigned in the job dictionary

# Study Components: Exposure by Process

- Processes performed on part families abstracted from current and historic P&W manufacturing documents
  - Examples: turning, EDM, degreasing, etc.
- Exposure to processes are being assigned in the job dictionary

# Study Components: Exposure by Specific Agent

- Ionizing radiation related
  - 1) Direct
  - 2) Thoriated nickel / Thoriated tungsten
  - 3) Radioactive particles
- Metalworking fluid
  - 4) Low speed operations
  - 5) High speed operations
- Other
  - 6) Hexavalent chromium
  - 7) Nickel
  - 8) Electromagnetic fields
- Exposure to specific agents are being calculated

# Study Components: Worker Interviews

- Questionnaire completed
- Finalizing submission to UIC's Institutional Review Board (IRB) for approval
- Once IRB approval is received, interviews may begin
- Approx. 100 interviews will be conducted with hourly and salary employees

# Study Components: Geographic Information System (GIS) Spatial Database

- Programming being finalized
- Population of database to commence

# Projected Timeline

## UIC – Exposure Reconstruction

Task	Record Discovery & Location	Part / Process Meetings	Data Collection & Entry	Integrated GIS Database Construction	Job Dictionary Reduction	Worker Interviews	Exposure Assignment	Statistical Analyses
Year 1 [OU] (2002-2003)								
Year 2 [UIC] (2003-2004)								
Year 3 (2004-2005)								
Year 4 (2005-2006)								
Year 5 (2006-2007)								
Year 6 (2007-2008)								
Year 7 (2008-2009)								

# Acknowledgement

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