

Case #8a. Managing Reproductive Risks in the Workplace

Synopsis: Case #8a invites you to apply the power analysis framework of Module 8 in analyzing the long-standing challenge manufacturing companies face in dealing with reproductive risks in the workplace.

Knowledge of reproductive risks in the workplace is over 200 years old, dating to the discovery of the high incidence of sterility among chimney sweeps in London in the late 18th century. While many chemicals were discovered to have carcinogenic and mutagenic properties in the two centuries that followed, it was not until the 1970s when three social movements converged in the U.S. and catalyzed interest in reproductive risks in the workplace:

1. the growing number of women entering the workforce, especially those in blue collar industrial jobs
2. the growing concern about worker safety and health for all workers
3. the women's movement.

The first of the most widely-publicized responses was a chemical company in the US removing women from a workplace with a high concentration of air-borne lead. Then Dow Chemical Company had to remove men from a workplace when it was learned that a chemical known as DBCP was causing sterility among male employees. Other examples followed.

Because the *US Occupational and Safety Act of 1970* required companies to provide a "safe and healthy environment for their employees," its research arm, the **National Institute of Occupational Safety and Health (NIOSH)** began to look specifically at the workplace safety of women of child-bearing age. The result of a NIOSH contract was the **American College of Obstetricians and Gynecologists** published a document, "Guidelines on Pregnancy and Work."

As companies began to consider removal of women of child-bearing age from hazardous work environments, they encountered an obstacle. The **Equal Employment Opportunity Commission**, formed in 1970, began to receive complaints about discrimination against women. Industrial unions became involved first in insisting "No women should have to choose between her well-paying job and the health of her baby," but also when companies removed women from high-paying industrial jobs to lower-paying but safer jobs were forced to maintain the women's previous high wages and men in this lower-paying work environment objected.

Reproductive Workplace Issues in Europe

Europe followed the U.S. lead and began to explore reproductive risk in the workplace on its own in the 1980s. In 1983, the association between infertility and a number of occupations and occupational exposures was examined in a case-control study utilizing data collected from medical records and mailed questionnaires. The results suggest that male exposure to heat and female exposure to noise, textile dyes and lead, mercury, and cadmium are associated with infertility. The study concluded that further research was needed to examine the entire spectrum of abnormal reproductive and developmental outcomes of exposure to these agents and to identify their full effects.

A more detailed study was conducted in 2006 under EU sponsorship. This in-depth review summarizes and interprets the available recent epidemiologic evidence on the relationship between occupational exposures and negative reproductive outcome among women workers. From the examination of studies dealing with exposures of women to chemical agents, pesticides, physical agents, ergonomic factors and stress, it appears that at present the evidence is sufficient to warrant the maximum protection of pregnant women to several well-documented occupational risk factors. These include exposures to anaesthetic gases, antineoplastic drugs, heavy metals, solvents, heavy physical work and irregular work schedules. For other work risks, such as exposure to non-ionizing radiation and psychosocial work stress, the evidence was often suggestive but not conclusive.

The conclusion was policy makers and health professionals should advise women and employers to avoid exposure to the well-known occupational risk factors, while epidemiologic research should pursue methodological improvements and provide more insight into the magnitude of exposures responsible for detrimental effects.

In 2014, a workshop entitled, 'Workplace risks affecting reproduction: from knowledge to action,' was organised by The **European Agency for Safety and Health at Work (EU OSHA)** in cooperation with the **French Agency for Food, Environmental and Occupational Health & Safety ANSES**. The workshop concluded that various reproductive hazards continue to be found at the workplace, not only from chemicals, but also from physical, biological, ergonomic or other factors. While the issue of reproductive risks has largely been focused on women, and mostly pregnant women, reprotoxic risks can in fact affect both women's and men's reproductive health, and even have effect on future generations. However, knowledge is limited and awareness is low. The workshop aims were to provide to stimulate debate on workplace risks to reproductivity and to support a constructive dialogue between stakeholders, as well as providing preliminary results of EU-OSHA research.

Case 8a Questions:

- 1. (7) Draw a power diagram for the case, following the model shown in Exhibits 8.1 and 8.2, with the following actors:**
 - a. Chemical Company X.**
 - b. EU OSHA**
 - c. Health care professionals**
 - d. Women of child-bearing age**
 - e. Men**
- 2. (3) Summarize your power diagram in less than 150 words (Summary means summary! Do not simply repeat what is in your diagram. Summarize**

key elements. Your summary should conclude with a statement about Uber's position, positive or negative.)

3. (3) What should Company X if it learns that a synthetic chemical in a high-wage industrial workplace with women workers has reproductive risks [explain your reasoning in social contract and property rights terms] :

a. remove and maintain the women's previous high wages

b. the women from the high-paying industrial jobs to lower-paying but safer jobs

c. inform the women of the risks and let them decide if they want to remain in the hazardous area.

4. (2) Identify one significant environmental signal (explain why it is "significant" on the three-dimensional framework of Module 7-- strength, timing, and potential impact) that could emerge to threaten your decision in Q3.