

ARTICLES

STRATEGIES FOR IMPLEMENTING WORKPLACE REPRODUCTIVE AND HEALTH PROGRAMS

*Christine Neylon O'Brien**

and

*Margo E. K. Reder***

The Supreme Court's general prohibition of sex-specific employer fetal protection policies as a method of protection against toxic work environment liability has increased concern about reproductive and developmental hazards present in our workplaces. Rather than allowing negative health and economic outcomes to result from continued inattention to these important issues, businesses and employees must now work cooperatively to institute Reproductive and Health Programs that will improve the health of all workers and their potential offspring. This may be accomplished through both private and public initiatives that comprehensively address the significant issue of toxic work environments. Occupational safety and health research must be conducted so as to assess all risks in a gender neutral fashion. This research must be integrated into workplace policies and implemented by safety and health committees as part of an overall program. Reproductive and Health Programs should now be identified as a workplace priority.

I. WORK ENVIRONMENTS CONTAIN REPRODUCTIVE AND DEVELOPMENTAL HAZARDS: AN ENDURING DILEMMA

The numbers of occupational injuries and illnesses are daunting. The costs are simply staggering and the suffering is incomprehensible. Protecting the reproductive health and procreative capacity of all workers, and consequently the health of their offspring, has received far too little attention in relation to its vital importance.

It is estimated that up to 20 million jobs in the United States expose workers to chemicals, metals and other products suspected of causing reproductive injury.¹ Moreover, the National Institute for Occupational Safety and Health (NIOSH) ranks reproductive impairment as the sixth leading work-related disease or injury.²

* Professor of Law, Bentley College; B.A. Boston College, 1975; J.D. Boston College Law School, 1978.

** Adjunct Assistant Professor of Law and Research Associate, Bentley College; B.A. University of Massachusetts, Amherst, 1980; Dipl. Business Studies, London School of Economics and Political Science, 1982; J.D. Suffolk University Law School, 1988.

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1. BUREAU OF NATIONAL AFFAIRS, PREGNANCY AND EMPLOYMENT: THE COMPLETE HANDBOOK ON DISCRIMINATION, MATERNITY LEAVE AND HEALTH AND SAFETY 57 (1987) [hereinafter BNA HANDBOOK].

2. OFFICE OF TECH. ASSESSMENT, REPRODUCTIVE HEALTH HAZARDS IN THE WORKPLACE 5 (1985) [hereinafter OTA REPRODUCTIVE HEALTH REPORT].

The cost of these injuries to the nation is estimated to be \$83 billion for medical expenses and lost work-time costs.³ These statistics cannot help but look grim when it is apparent that such occupational disease and injury is "almost entirely preventable."⁴

Employers have historically failed to tackle the issue of reproductive and developmental hazards in the workplace. Negative reproductive outcomes generally have been attributed only to female employees, who were channeled into non-industrial jobs. Male employees traditionally have been considered reproductively invulnerable and thus worked in the more hazardous industrial jobs. Strides have recently been made both at eradicating this gender segregation in the workplace, and in focusing attention on toxins in the workplace. This is due in part to the Supreme Court decision, *International Union v. Johnson Controls, Inc. (JCI)*.⁵ In prohibiting employers from relying on fetal protection policies (FPPs) which exclude women from jobs "just because of their ability to become pregnant," the Court criticized policies that do not "seek to protect the unconceived children of all its employees."⁶

JCI may be the first significant judicial decision to give employers the incentive to address reproductive and developmental risks arising in the workplace. The Court moved the issue of reproductive toxins in the workplace "to a central position in the public consciousness" and "portended critical issues" of exposure to reproductive hazards, how best to avoid such injury, and how to compensate for it.⁷

What *JCI* fails to accomplish is a clear, cogent reconciliation of the many complex issues beyond the sex discrimination claim, issues that encompass the reproductive safety and health of all workers and their offspring.⁸ *JCI* in many ways reflects onto, and affirms the status quo of today's workplaces. The decision does not affirmatively protect equality and safety, but rather attempts to prohibit unequal treatment.⁹ The Court protects women's rights to decide whether to

3. RAND INSTITUTE FOR CIVIL JUSTICE, COMPENSATION FOR ACCIDENTAL INJURIES IN THE UNITED STATES 52 (1991) (\$32 billion relates to health care with the balance attributed to work loss). See also Matthew P. Weinstock, *OSHA Reform: The Push for Worker Involvement*, OCCUPATIONAL HAZARDS, Dec. 1991, at 37; *Comprehensive Occupational Safety and Health Reform Act, 1991: Hearings on S.1622 Before the Comm. on Labor and Human Resources and the Subcomm. on Labor*, 102d Cong., 1st Sess. 71 (1991) [hereinafter *COSHR Senate Hearings*] (statement of Dr. Eula Bingham, Professor of Environmental Health, Univ. of Cincinnati College of Medicine). See generally Clinton Signs Legislation Extending Jobless Benefits, Daily Lab. Rep. (BNA) No. 42, at A-A (Mar. 5, 1993) (citing Representative Ford's statement that COSHRA is aimed at reducing an estimated 10,000 job-related deaths, 1.7 million injuries and 390,000 cases of occupational disease each year).

4. See *COSHR Senate Hearings*, *supra* note 3, at 92 (statement of Dr. Philip Landrigan, Director of Division of Environmental and Occupational Medicine, Mt. Sinai School of Medicine).

5. 111 S. Ct. 1196 (1991).

6. *Id.* at 1202, 1203.

7. Jean Macchiaroli Eggen, *Toxic Reproductive and Genetic Hazards in the Workplace: Challenging the Myths of the Tort and Workers' Compensation Systems*, 60 FORDHAM L. REVIEW 843, 845-46 (1992).

8. See *JCI*, 111 S. Ct. at 1196. The *JCI* Court responded as only a court has jurisdiction to, and resolved the Title VII claim. To respond to the larger challenge presented requires leadership from both government and employers.

9. *Id.* at 1210. See Robin West, Note, *Reconstructing Liberty*, 59 TENN. L. REV. 441 (1992);

choose a job involving exposure to toxins but still forces both women and men to choose between their economic health and reproductive health in many instances.¹⁰ JCI has value, though, in that it exposed the problem of reproductive and developmental toxicants in the workplace and the fact that *all* workers, their offspring, and third parties continue to risk their health to the extent that the problem is ignored.

The costs of this collective problem of occupational reproductive injuries and disease have been largely externalized, passed on and forgotten; it is viewed as the employee's problem alone. It has become recognized, however, that these are no longer invisible costs of doing business. An enormous challenge is here - to address and consequently improve the reproductive and developmental health of all workers and their potential offspring. The response must equal the challenge.

Even though there are laws to protect workers' safety and health, they have not efficiently addressed problems relating to reproductive health.¹¹ There are unprecedented numbers of toxic chemicals and processes used in all workplaces, including offices.¹² Indeed, the safety of many of the chemicals used is not even yet known. And given the current legal climate, there is almost an incentive not to change this.¹³ In our increasingly competitive economy, safety and health issues have lagged as a priority. The Occupational Safety and Health Administration (OSHA), the agency primarily responsible for workplace safety, has had "limited effectiveness."¹⁴ How can we then address and resolve the compelling problems of occupational exposure to reproductive and developmental hazards?

The authors assert two primary avenues for responding to workplace reproductive risks: first, one that incorporates a private prospectus for Reproductive and Health Programs (RHPs)¹⁵ and secondly, a public mandate for comprehensive analysis and action regarding reproductive risks in employment. The integration of these two schemes, private and public, would represent a substantive solution to the pretermitted problem of reproductive and developmental harm engendered in the workplace.

Jennifer Morton, Comment, *Pregnancy in the Workplace - Sex-Specific Fetal Protection Policies - UAW v. Johnson Controls, Inc. - A Victory for Women?*, 59 TENN. L. REV. 617 (1992). Cf. EEOC Policy Guide on Supreme Court's Johnson Controls Decision (June 28, 1991), 8 Lab. Rel. Rep. (BNA) 405:6941 (Aug. 1991) (EEOC rescinded prior policy guides pursuant to JCI decision).

10. See generally Sherry F. Colb, *Words That Deny, Devalue, and Punish: Judicial Responses to Fetus-Envy*, 72 B.U. L. REV. 101, 128-39 (1992).

11. See GENERAL ACCOUNTING OFFICE, REPRODUCTIVE AND DEVELOPMENTAL TOXICANTS: REGULATORY ACTIONS PROVIDE UNCERTAIN PROTECTION 65-68 (1992) [hereinafter GAO REPRODUCTIVE HAZARD REPORT]; REPRODUCTIVE HAZARDS IN THE WORKPLACE, SYLLABUS FOR CLINICIANS, OCCUPATIONAL AND ENVIRONMENTAL REPRODUCTIVE HAZARDS CENTER 42 (Maureen Paul ed., 1990). While our workplaces are full of toxins, few have been studied, especially with respect to reproductive outcomes. Where reproductive outcomes have been considered, there has been a disproportionate focus on maternal mediation of harm.

12. See generally Christine Neylon O'Brien et al., *Employer Fetal Protection Policies at Work: Balancing Reproductive Hazards with Title VII Rights*, 74 MARQ. L. REV. 147 (1991).

13. See generally Eggen, *supra* note 7, at 911.

14. See S. REP. NO. 453, 102d Cong., 2d Sess. 5 (1992).

15. See Christine Neylon O'Brien & Margo E. K. Reder, *Modeling an Employment Policy to Unify Workers' Rights with Fetal Protection*, 24 ARIZ. ST. L.J. 1149 (1992) (introducing the concept of a reproductive health program as a means to address this unresolved problem, while supplanting traditional fetal protection policies).

II. REPRODUCTIVE AND HEALTH PROGRAMS: A PRIVATE RESPONSE

Reproductive and Health Programs are designed to improve the reproductive health of all workers within the context of broader safety and health programs (SHPs). RHPs, as outlined herein are, at least initially,¹⁶ private voluntary cooperative programs that highlight worker involvement in assessing and decreasing reproductive impairment or injury that is exacerbated by workplace exposures. A new emphasis is placed upon reproductive risks impacting on men and women alike. These programs monitor the existing practices in the work environment while supporting gender-balanced research of suspected hazards and known toxins.

RHPs incorporate readily into existing SHPs or provide an impetus for adopting a safety and health framework with an RHP as its centerpiece. Such programs need not displace the traditional function of unions as advocates for worker safety and health where unions serve as collective bargaining representatives. Rather, collective bargaining representatives that have experience with joint labor-management safety and health committees (SHCs) are a valuable resource, even a foundation for RHPs.

RHPs can be structured so as not to interfere with the policies and purposes of the National Labor Relations Act. In particular, employers must be sensitive to the strictures of Section 8(a)(2), which prohibits employer domination or assistance of a labor organization.¹⁷ Establishing employer-employee action committees in the area of safety and health need not conflict with employees' Section 7 right to freely form or join a labor organization.¹⁸ In the event of the onset of an organizational campaign by a union, an employer who is aware of such

16. See *infra* notes 55-72 and accompanying text (discussing pending legislative proposals). Eventually, and perhaps ideally, the RHP model may be mandated pursuant to OSH Act Amendments or through administrative rulemaking.

17. National Labor Relations Act, 29 U.S.C.A. §§ 151-87 (West Supp. 1992). [hereinafter NLRB]; 29 U.S.C.A. §158(a)(2) provides in relevant part:

It shall be an unfair labor practice for an employer to dominate or interfere with the formation or administration of any labor organization or contribute financial or other support to it: *Provided*, That subject to rules and regulations made and published by the Board pursuant to section 156, of this title, an employer shall not be prohibited from permitting employees to confer with him during working hours without loss of time or pay.

29 U.S.C.A. § 152(5) (West. Supp. 1992) defines a labor organization as "any organization of any kind, or any agency or employee representation committee or plan, in which employees participate and which exists for this purpose, in whole or in part, of dealing with employers concerning grievances, labor disputes, wages, rates of pay, hours of employment, or conditions of work." This section has been broadly interpreted to include employee committees that "deal with" employers. *NLRB v. Cabot Carbon*, 360 U.S. 203, 205 (1959).

18. 29 U.S.C.A. §157 provides:

Employees shall have the right to self-organization, to form, join, or assist labor organizations, to bargain collectively through representatives of their own choosing, and to engage in other concerted activities for the purpose of collective bargaining or other mutual aid or protection, and shall also have the right to refrain from any or all of such activities except to the extent that such right may be affected by an agreement requiring membership in a labor organization as a condition of employment as authorized in section 8(a)(3).

See generally David F. Girard-diCarlo et al., *Legal Traps in Employee Committees*, 43 LAB. L. J. 671 (1992).

activity should be cautious about illegally interfering with employee choice or appearing to offer an RHP with joint membership of employees and management as a substitute for a union.¹⁹ If a union is the exclusive representative for a bargaining unit at a company, the employer may not bypass the union on safety issues.²⁰ Thus, the formation and administration of RHPs in a union setting legally necessitates the cooperation and/or participation of the employees' collective bargaining representative. In the fairly common situation where a company recognizes several different unions for various bargaining units, each union should have a representative on a joint SHC.

Certainly the most successful and cooperative joint labor-management SHCs serve as a prototype for privately adopted RHPs. Similar joint SHCs have also been instituted pursuant to OSHA settlements in its egregious litigation program,²¹ which stands as testimony to the OSH Agency's perception that committees with worker involvement are a necessary vehicle to improved health and safety in the workplace. As will be discussed in Part III, a blueprint for joint SHCs is mandated under recent proposals to amend the Occupational Safety and Health Act (OSH Act).²²

The basic structure of an RHP will depend in part upon the size and nature of the business. Because worker involvement is critical to the success of RHPs, there should be an equal number of management and employee representatives on a joint SHC. These committees generally would be charged with oversight, inspection and improvement of work conditions that may lead to reproductive harm. The model RHP is flexible, yet it promises guidance for employers and employees alike. This guidance would be updated by the information derived from the interactive efforts of the participants in these programs.

By design, the RHP coordinates data collection, both on site and from research literature, and ensures that data regarding reproductive outcomes are recorded and maintained for epidemiologic study with a minimum invasion of the workers' privacy. Many companies may not be able to merely rely upon passive collection of research regarding the effects of toxins on reproductive health because of the lack of gender-comparative studies and because of the previous exclusion of fertile women from more hazardous occupations.

Because some enterprises may view the cost of research as exceeding the benefits to be derived from such, it may be difficult for RHPs/SHCs to conduct new research within the individual enterprises that generate or utilize toxins.²³

19. See *Electromation, Inc.*, 309 N.L.R.B. No. 163 (1992).

20. See *E.I. DuPont*, 4-CA-18737. (NLRB General Counsel alleges § 8(a)(5) failure to bargain in good faith as well as § 8(a)(2) domination and assistance where employer instituted seven employer-employee committees in the context of a collective bargaining relationship). See generally Clyde Summers, *Effective Remedies For Employment Rights: Preliminary Guidelines and Proposals*, 141 U. PA. L. REV. 457, 545 (1992).

21. Remarks of Sue Ann Wolf, Address Before the Twenty-first Annual Joint Labor Law Conference (Oct. 22, 1992) (regarding outcome of egregious litigation program). See also Summers, *supra* note 20, at 506 n.308.

22. See *infra* notes 55-72 and accompanying text (discussing Comprehensive Occupational Safety and Health Reform Act). What is missing from these proposals is any mention of reproductive health problems.

23. See generally Eggen, *supra* note 7, at 911-12. Professor Eggen recommends legislative imposition of information gathering and judicial encouragement of employer accountability for workplace injuries in light of her perception that industry currently has few economic incentives to institute health and safety improvements or information gathering. *Id.*

Nonetheless, the function of SHCs must be to ensure that scientific research about the effects of reproductive hazards in the workplace is prioritized and contributed to both internally and externally.

An excellent example of privately funded research is a recent study sponsored by the Semiconductor Industry Association, a manufacturer's trade group. The study was undertaken by the University of California at Davis "to test the hypothesis that fabrication work in the silicon-based semiconductor industry was associated with increased risk of miscarriage or spontaneous abortion."²⁴ Completed in 1992, the study concluded that exposures to chemicals in this work are "likely causal agents" of negative reproductive outcomes.²⁵ The study concluded by offering a host of recommendations for companies as well as agencies.²⁶

RHPs also require educating workers about self-protection. All workers should be educated about reproductive and health risks before entering hazardous work environments. The focus of training must include awareness of the possibilities of males and females sustaining harm and mediating harm to offspring. This holistic approach to reproductive health as well as general safety and health harmonizes with the growing trend toward adopting ethical codes as corporate policy. Rather than defiling the health prospects of current and future generations, RHPs make reproductive health a corporate goal, one that coincides with ethical theory and practice.

RHPs, within the vehicle of SHCs, instigate ongoing improvements in the area of reproductive and general health. A schedule of worksite inspections and medical monitoring for variables that impact upon reproductive health is readily achievable and a vital step toward mitigating hazards and understanding their consequences.

Employers can gain useful knowledge from the experience of SHCs in the United States and in other countries. For example, in the former German Democratic Republic (GDR), every enterprise had an occupational safety subcommittee to carry out inspections, investigate accidents, diseases and work-related illnesses, and submit proposals for improving workplace safety and health.²⁷ Management was required to respond to these proposals within two weeks of receipt and to outline how they would be implemented.²⁸ Of the 200,000 proposals submitted in 1986, about half were reportedly accepted and used.²⁹ The former GDR credited the active role of workers and their trade unions for their success

24. FINAL REPORT TO THE SEMICONDUCTOR INDUSTRY ASSOCIATION, EPIDEMIOLOGIC STUDY OF REPRODUCTIVE AND OTHER HEALTH EFFECTS AMONG WORKERS EMPLOYED IN THE MANUFACTURE OF SEMICONDUCTORS V (1992). The study also peripherally examined related male infertility. *Id.* at 6, 80-84.

25. *Id.* at X, 373-91.

26. *Id.* at 393-96. See generally John Markoff, *Miscarriage Risk for Chip Workers*, N.Y. TIMES, Dec. 4, 1992, at A29. See *infra* notes 65-67 and accompanying text (discussing IBM study of female microchip workers).

27. Horst Willim, *Trade Unions and Occupational Safety in the German Democratic Republic*, 126 INT'L LAB. REV. 329, 332 (May - June 1987). See *infra* notes 153-85 and accompanying text (discussing international comparisons).

28. Willim, *supra* note 27, at 332.

29. *Id.* at 333.

in improving occupational safety and health.³⁰ Economists estimated that ten to fifteen percent of total investment funds were used for workplace safety and health.³¹

A comparative analysis of the resources devoted to improving overall occupational safety and health in other countries might provide a response to the argument that implementing RHPs and SHCs is economically inefficient. The cost of instituting and maintaining a proactive effort to improve health and safety need not damage the international competitiveness of U.S. businesses. The benefits of RHPs, assessed from both a concrete, balance-sheet approach and from a broader perspective, indicate that the gains derived from RHPs should outweigh the cost incurred. As businesses in the United States retool their plants to remain competitive with other countries, an ideal opportunity exists to build in improved health and safety.³²

One key to successful RHPs is the written distribution of the program's purposes, policies, and structure.³³ Employers display the seriousness of their commitment to an RHP by putting this information in writing with the endorsement of the highest level officer in the company. The importance of the RHP is thus clearly reinforced; adherence to its requirements will appear to be rewarded, but the gravity of nonconformance should be perceived as well. In addition, the informational value of this written form of communication is underscored because of its enduring nature. While a training session is valuable to capture the employees' attention regarding RHP issues, their retention of this important knowledge is unfortunately subject to the learning curve phenomenon. Maintaining an explanatory publication helps to overcome such learning loss.

A written format has of course long been in use in unionized environments. Collective bargaining agreements often refer to and provide guidance on health and safety issues, including notice of the responsibilities of the parties and/or reference to cooperative labor management safety and health programs.³⁴ Historically, unions have served as a watchdog for employee safety. The lack of bargaining power that individual employees experience in conjunction with their employer is altered by the presence of a collective bargaining representative. A union's strength shifts the ordinary power differential between employer and employee by reducing the individual employee's fear of raising safety and health

30. *Id.* at 329-30.

31. *Id.* at 330.

32. See William J. Maakestad & Charles Helm, *Promoting Workplace Safety and Health in the Post-Regulatory Era: A Primer on Non-OSHA Legal Incentives That Influence Employer Decisions to Control Occupational Hazards*, 17 N. Ky. L. Rev. 9, 49 (1989). In addition, the European Community appears to be setting a high priority on worker safety and health via its Social Charter, which is a solemn declaration, rather than law, yet the Charter's status has been strengthened by the Maastricht Agreement, and the impact of this Charter has been deemed significant in many respects. Terence P. Stewart & Delphine A. Abellard, *Labor Laws and Social Policies in the European Community After 1992*, 23 LAW & POL'Y INT'L BUS. 507, 542-43, 566-67 (1992).

33. In multilingual environments, translations should be made available to employees who are not fluent in English. See generally Weinstock, *supra* note 3, at 38 (discussing danger where instructions relating to the operation and maintenance of factory equipment were printed only in English while Spanish was the first language of most employees).

34. See BNA Policy and Practice Series; Labor Relations, Collective Bargaining Agreements No. 1074, 70:651, 70:660 (1991). See generally, Maakestad & Helm, *supra* note 32, at 50 (safety and health issues more central in collective bargaining agreements).

issues. Thus the presence of a union often results in increased attention to these issues.

But, with the well-documented decline in union membership,³⁵ will employers voluntarily assume a more responsible role in this regard? If the immediate past is any indication, businesses have not adopted appropriate programs and policies for managing and reducing reproductive harms. Perhaps blinded by concern for their bottom line, businesses opted for sex-specific exclusionary policies that were discriminatory and largely ineffectual rather than dealing with the full problem.³⁶ Even though there appear to be numerous nonregulatory incentives that encourage businesses to identify and reduce reproductive hazards in the workplace, this pervasive and significant problem is far from solved.³⁷ Thus, the authors recommend that employers adopt RHPs as an immediate stride toward the goal of reducing reproductive hazards in the workplace, even in the absence of a legislative requirement. RHPs have much to recommend them. An RHP is designed to meet the needs of each workplace and reacts to the unique needs of its stakeholders through a cooperative framework. In addition, the SHC provides an on-site mechanism that overcomes some of the inefficiencies for which OSHA's regulatory enforcement scheme has been criticized.³⁸

The record speaks for itself; while a private resolution of the workplace reproductive health problem may be desirable to employers, a public mandate is necessary to gain universal implementation of RHPs. The interests of the many vital stakeholders in this controversy, employers, employees and their unions, and potential offspring are best served by the synergy created by invoking both private and public remedial means. This will maximize human resources while protecting workers of both genders, their offspring, and the environment from reproductive hazards.

III. REPRODUCTIVE AND HEALTH PROGRAMS: THE PUBLIC RESPONSE

Worker safety and health will continue to erode unless a clear commitment exists to ameliorate these serious yet overlooked dangers. No significant and meaningful improvement to worker safety and health will take place until three

35. *Union Leaders Tie Recent Losses in Membership to Weak Economy*, Daily Lab. Rep. (BNA) No. 157, at A-8 (Aug. 13, 1992). Total union membership in the United States has declined to 16.1% of employed wage and salary workers based upon 1991 Bureau of Labor Statistics. *But cf.* Peter T. Kilborn, *Secretary Sees a Vital Role for Labor in U.S. Growth*, N.Y. TIMES, Feb. 17, 1993, at A13 (Secretary asserted when workers have voice, the yield is higher productivity).

36. *See generally* O'Brien & Reder, *supra* note 15, at 1153-59 (discussing fetal protection policies as inadequate response to problem of workplace reproductive hazards).

37. *See* Maakestad & Helm, *supra* note 32, at 13 (discussing an analysis of incentives for controlling overall workplace hazards outside the traditional mandate of legal requirements in which the Office of Technology Assessment identified six factors that motivate business to improve their programs for workplace health and safety (1) the employer's enlightened self-interest; (2) information on workplace hazards and controls; (3) financial and tax incentives; (4) workers' compensation and insurance; (5) tort liability; and (6) collective bargaining and individual rights). OFFICE OF TECH. ASSESSMENT, PREVENTING ILLNESS AND INJURY IN THE WORKPLACE, SUMMARY 99TH CONG. 19 (April 1985) [hereinafter OTA ILLNESS AND INJURY REPORT].

38. *See* Maakestad & Helm, *supra* note 32, at 15 (noting that OSHA is ineffective because, *inter alia*, its "regulations cannot be written with enough specificity for five million workplaces . . . [and] . . . even a larger staff of good inspectors could not observe more than a small percentage of workplaces").

events occur. Appropriate federal legislation must be passed; agencies must coherently formulate policies and guidance in an effort to enforce these legislative mandates; and to a lesser extent, the judicial system must interpret these laws in a manner which encourages compliance and promotes effective workplace safety and health practices. For there to be optimal worker safety and health, in essence, there must be leadership, incentives, and enforcement.

Private employer-sponsored programs discussed previously are the most ideal form of protection for worker safety and health, but such programs regrettably are not the norm. Of the estimated 3,500,000 private workplaces,³⁹ just seventy-one have chosen to participate in OSHA's Voluntary Protection Program which requires employers to implement comprehensive safety and health practices.⁴⁰ The problem is obvious and it is large. Safety and health concerns along with reproductive diseases impact our society in profound ways and must be addressed in both the public and private sector. The Centers for Disease Control's Occupational Injury Panel concluded that "occupational injury is a public health crisis that demands immediate attention."⁴¹

The following section discusses federal legislation first, followed by a discussion of agency and then judicial responses to the issues raised in protecting worker safety and health. Particular emphasis is placed on the challenge of environmental chemicals that are or may be, reproductive and developmental toxicants.

A. Legislation: Federal Initiatives

The Occupational Safety and Health Act of 1970 (OSH Act) represents Congress's first and most comprehensive effort to address workplace safety and health issues.⁴² Other legislation, as well, addresses these workplace issues to a lesser extent. These are: the Toxic Substances Control Act,⁴³ Hazardous Substances Act,⁴⁴ Clean Air Act,⁴⁵ Consumer Product Safety Act,⁴⁶ Solid Waste

39. S. REP. NO. 453, *supra* note 14, at 4.

40. *COSHA Senate Hearings*, *supra* note 3, at 195 (statement of Franklin Frazer, Director of Education and Employment Issues, GAO). See also 54 Fed. Reg. 3904 (1989) (OSHA issued safety and health program management guidelines for use by employers to prevent occupational injuries and illnesses). There are, of course, many employers that have incorporated some safety and health practices.

41. See S. REP. NO. 435, *supra* note 14, at 4 & n.15. The Panel comprised of "health professionals, federal officials, and representatives from management and labor." *Id.* at 4.

42. 29 U.S.C. §§ 651-78 (1988 & Supp. 1992). The act is meant "to provide for the general welfare, to assure so far as possible every working man and woman safe and healthful working conditions." *Id.* at § 651(b).

The workplace environments relevant to chemical exposure include air, water, consumer and office products and other work machinery, and toxics including pesticides.

43. 15 U.S.C. §§ 2601-29 (1988 & Supp. 1992). This act states that chemical manufacturers and processors "should" have the responsibility to develop "adequate data" with "respect to the effect of chemical substances and mixtures on health and the environment." *Id.* at § 2601(b)(1).

44. 15 U.S.C. §§ 1261-77 (1988 & Supp. 1992) (prohibiting the use of misbranded or branded hazardous substances).

45. 42 U.S.C. §§ 7401-7671 (1988 & Supp. 1992) (protecting and enhancing the quality of air and conducting studies on *inter alia*, toxicological, teratogenic, and mutagenic effects of air pollutants).

46. 15 U.S.C. §§ 2051-84 (1988 & Supp. 1992) (protecting public against unreasonable risks of injury including illness, associated with consumer products).

Disposal Act,⁴⁷ and the Comprehensive Environmental Response Compensation and Liability Act (CERCLA).⁴⁸

How Congress has historically addressed reproductive and developmental toxicants, and what is necessary to properly address this issue follows. Generally, Congress has made somewhat of an effort to provide for some protection from adverse reproductive and developmental effects. Even though it has not declared any overriding goal to this effect, some protection is available through piecemeal legislative enactments. In a General Accounting Office Report to the Senate Governmental Affairs Committee, it found that of the twelve pertinent legislative enactments, just five of these acts mention a consideration for reproductive and developmental health.⁴⁹ It is no wonder, then, that the various agencies which administer these laws have shown a pattern of indifference and neglect of reproductive and developmental hazards. Thus, Congress must specifically assign responsibility to agencies to generate and consider such safety and health data, and then to incorporate it when making regulatory decisions. Our collective increased awareness of how toxins destroy environments - workplace, global and human - demands a more comprehensive response from the legislative branch. Instead of allowing such an important issue as reproductive and developmental toxicants to be included in legislation by happenstance, it should automatically be written into the "Congressional statement of findings and declaration of purpose and policy" of every law affecting exposure to chemicals. It is interesting to note at this point that reproductive and developmental toxicity is not mentioned once in the OSH Act.⁵⁰

Enacted twenty-three years ago, the OSH Act represented Congress's first attempt at regulating workplace health and safety, stating that "[e]ach employer . . . shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees"⁵¹ OSHA's authority extends to nearly all private employers. OSHA is supposed to issue standards and guidelines, conduct inspections, provide training, education, and consulting services. It places primary responsibility for safety and health with employers.⁵²

The OSH Act has not, however, fulfilled its mission, and to some extent it is a mission that needs re-evaluation.⁵³ In a sense, the OSH Act legislation is only as effective as the OSHA agency that administers it. While many features

47. 42 U.S.C. §§ 6901-92 (1988 & Supp. 1992) (regulating the treatment, storage, transportation and disposal of hazardous wastes).

48. 42 U.S.C. §§ 9601-60 (1988 & Supp. 1992) (providing for liability, compensation, clean-up, and emergency response of hazardous substances released into the environment and includes chemicals associated with teratogenic and mutagenic effects).

49. See GAO REPRODUCTIVE HAZARD REPORT, *supra* note 11, at app. V, 94-104. The GAO further found that those agencies administering laws specifically mentioning reproductive health were no more likely to assess appropriate data when making regulations. *Id.* at 51.

50. See 29 U.S.C. §§ 651-78 (1988 & Supp. 1992). See generally GAO REPRODUCTIVE HEALTH REPORT, *supra* note 11, at app. V, 102.

51. 29 U.S.C. § 654(a)(1) (1988 & Supp. 1992).

52. See 29 U.S.C. §§ 651-78 (1988 & Supp. 1992). See generally *Government Regulation of Reproductive Hazards: Hearing Before the Comm. on Governmental Affairs*, 102d Cong., 1st Sess. 105-13 (1991) (statement of Cynthia Douglass, Deputy Assistant Secretary of Labor).

53. See generally *COSHR Senate Hearings*, *supra* note 3, at 1-2 (statement of Senator Kennedy, Committee on Labor and Human Resources).

of the OSH Act are commendable, its potential was never realized because as one expert has noted, "OSHA has stumbled throughout most of its history from program to inconsistent program"⁵⁴

In response to the shortcomings in both the OSH Act and OSHA, both the Senate and the House of Representatives have sponsored bills to amend the OSH Act. Both are known as the "Comprehensive Occupational Safety and Health Reform Act" (COSHRA). The Senate bill will be discussed herein, with attention to how it affects reproductive and developmental toxicants.⁵⁵

Divided into twelve titles, the present COSHRA bill has a number of goals. The most controversial of these is the mandatory creation of safety and health programs, and the establishment of safety and health committees composed of employers and employees.⁵⁶ Each employer, regardless of size, or the nature of the business would be required to establish a written program, and the bill further lists nine requirements.⁵⁷ Criticized repeatedly as costly "straightjacket,"⁵⁸ and as "one-size-fits-all"⁵⁹ approaches, these measures represent an ambitious attempt to address issues that for too long have been neglected. It is, of course, natural for employers to reject further regulation and its costs as eroding global competitiveness, wages, productivity and prices.⁶⁰ However, there are potential off-

54. See *COSHRA Senate Hearings*, *supra* note 3, at 115 (statement of Sidney A. Shapiro, Professor, Univ. of Kansas Law School). Agency administration is, of course, very politically sensitive and as changeable as the Executive Branch.

55. S. 1622, 102d Cong., 2d Sess. §§101-1301 (1991) (sponsored by Senator Edward Kennedy, Chairman, Comm. on Labor and Human Resources); H.R. 3160, 102d Cong., 2d Sess. (1991) (sponsored by Representative William Ford, Chairman, Comm. on Educ. and Labor). See *COSHRA Senate Hearings*, *supra* note 3; S. REP. NO. 453, *supra* note 14; cf. *Clinton's Mandate For Change Likely to Mean New Approaches to Old Safety and Health Issues*, Daily Lab. Rep. (BNA) No. 9, at C-1 (Jan. 14, 1993) (U.S. Chamber of Commerce is drafting its own legislation in consultation with employer organizations).

56. S. 1622, 102d Cong., 2d Sess. §§ 101-201 (1991). The Safety and Health Committee requirement is applicable only to employers of eleven or more employees. *Id.* at § 201. Professor Clyde Summers approves of COSHRA's mandatory election of employee safety representatives, finding such health and safety committees "especially appropriate for implementing OSHA, for unsafe or unhealthy conditions endanger all employees, even if only random individuals suffer actual injury." Summers, *supra* note 20, at 543. Professor Summers also recommends using workplace committees for advising employees regarding workers' compensation claims. *Id.*

57. S. 1622, 102d Cong., 2d Sess. § 101 (1991). See generally Steve Early, *Committees Key to OSHA Reform*, BOSTON GLOBE, Mar. 23, 1993, at 40.

58. See S. REP. NO. 453, *supra* note 14, at 129 (minority views of Senators Hatch, Thurmond, Kassebaum, Coats, and Cochran).

59. See S. REP. NO. 453, *supra* note 14, at 122 (additional views of Senator Durenberger) *Compare OSHA Reform: Fulfilling the Promise of a Safe and Healthy Workplace: Hearing on S. 1622 Before the Senate Comm. on Labor and Human Resources*, 102d Cong., 2d Sess. § 4 (1992) (statement of Gerald F. Scannell, Vice President, Corporate Safety Affairs, Johnson & Johnson, faulting the Safety and Health Programs and Committees as too rigid a prescription) and *id.* at 5 (statement of Horace A. Thompson III, on behalf of the National Association of Manufacturers opposing the particular requirement of Programs and Committees) with *id.* at 1 (statement of Grover A. Vos, Director of Safety, Environmental Health and Assessment Programs, Occidental Petroleum Corp. discussing its mandatory programs) and *id.* at 8 (statement of Howard Frumkin, M.D., M.P.H., Director of Emory Univ. Division of Environmental and Occupational Health that provisions of COSHRA "will markedly improve workplace safety and health").

60. S. REP. NO. 453, *supra* note 14, at 129-30 (referring to the report of Dr. James S. Holt, Senior Economist, Employment Policy Foundation and Thomas M. Bruening computing the projected costs of the present COSHRA bill to be \$51 billion, sixty percent of that attributable to safety and health programs and committees); cf. *Clinton Should Convene Work Group to Draft New OSHA Legislation*, Kinney Tells NAM Meeting, Daily Lab. Rep. (BNA) No. 232, at A-4 (Dec. 2, 1992) (National Safe Workplace Institute asserted COSHRA bill product of an exclusive process which needs to be opened up).

setting benefits to this legislation. It is highly probable that workers' compensation premiums would decrease, as would health insurance premiums, sick days, the length of hospitalization and illnesses. Many employers are simultaneously complaining of workers' compensation and health care costs, while criticizing the COSHRA bill that shows promise of helping cure just those ills.

The value of the present COSHRA bill on safety and health programs and committees is undeniable. This is so even for workplaces that are seemingly free from chemicals, because no workplace is. One of the main values of the COSHRA bill is to simply increase awareness of the pervasive existence of chemicals in work environments, and to attempt to act on this at the actual workplaces instead of through the issuance of rules from Washington, D.C. The authors endorse the provisions relating to both Safety and Health Programs, as well as Committees.

The present COSHRA bill section on setting standards is more problematic, however.⁶¹ Section 408 of the bill would set a timetable for final standards on eighteen specific workplace exposures, many of which negatively affect reproductive and developmental outcomes.⁶² Stronger still, section 407 is entirely devoted to setting a final standard for ergonomic hazards.⁶³ How the Senate arrived at this exclusive list is not clear. While the intentions are to improve safety and health, this goal must be pursued with a cogent and systematic plan. Legislators have again neglected to include a general principle for consideration of reproductive and developmental hazards in amending the OSH Act. This is not to overlook the importance of regulating the hazards just mentioned in this section of the COSHRA bill. However, any such specific setting of standards should be done in conjunction with research so that standards would be set for the most common and severe work-related injuries and illnesses first, and then other standards would be set in order of decreasing occurrence and severity. Such a policy, providing for linkage between promulgation of standards and the degree of risk, is a more rational approach to the abatement and control of environmental and other hazards in the workplace. To develop such a system based upon priority requires the co-operation of the Bureau of Labor Statistics - to report on injuries and classify them; the Office of Technology Assessment - to develop such lists; and the National Institute for Occupational Safety and Health (NIOSH) - to conduct research into environmental hazards in conjunction with private employers. As among the top ten work-related injuries, reproductive impairment is an issue that has not been adequately addressed by the present COSHRA bill.

Related to this linkage model is a section of the present COSHRA bill on Record Keeping and Reporting.⁶⁴ The bill expands on the illness and injury data

61. See S. 1622, 102d Cong., 2d Sess. §§ 401-09 (1991). These sections would be an enormous challenge for OSHA, and setting these standards under such deadlines would be unattainable unless the agency was infused with personnel and a larger budget.

62. See *id.* at § 408. Final standards are anticipated for logging operations; face, head, eye, foot protection, walking and working surfaces; motor vehicle inspection, maintenance, safety; cadmium; confined space entry; asbestos; hazardous waste operations training; scaffolds; fall protection; permissible exposure limits updates for construction, maritime, agriculture; electric power generator; methylene chloride; respiratory protection; butadiene; glycol ethers; indoor air quality; and long-shoring.

63. *Id.* at § 407.

64. *Id.* at §§ 801-03. But cf. *US Underestimated Injury-Linked Missed Workdays*, BOSTON GLOBE,

to be gathered by employers, but often an injury or illness is not found because no one is looking for it. For example, IBM recently reported on the results of a study of miscarriage rates for female microchip workers.⁶⁵ It found that there was an elevated risk of miscarriage for such workers.⁶⁶ But what IBM neglected to study, and therefore has no data on, is the miscarriage rate for spouses of male microchip workers.⁶⁷ Such a problem will never be discovered unless it is included in the research from the start. Record keeping and reporting requirements must be structured in such a fashion to avoid gender-stereotyping and other biases regarding such characteristics as race or age.

A further question on record keeping and reporting requirements relates to the magnitude of the negative outcome being reported. Serious injuries and death are well covered in these requirements. However, subtle or latent injuries, illnesses and diseases are valid endpoints to study, but employers or employees tend to overlook them as not work-related. This is especially true with negative reproductive and developmental outcomes such as menstrual irregularity, sexual or reproductive dysfunction, miscarriages, birth defects or sterility. These are especially private issues, often enveloped in pain, and are not as likely to be reported as other injuries, illnesses or diseases, but which are just as likely to be work-related.

The last section in the present COSHRA bill to be addressed relates to NIOSH and is found in sections 901-905. Under these sections, NIOSH would be given full agency status within the Department of Health and Human Services rather than within the Department of Labor.⁶⁸ In the section, known as "Safety Research," NIOSH would be charged with identifying "[m]ajor factors contributing to occupational injuries and deaths through accident investigations and epidemiological research."⁶⁹ The drafters of this bill left the word "health" out of this section title. While health issues often are not as apparent as safety issues, they are as important and deserving of attention. Also, the drafters limited the type of research generated to epidemiological research,⁷⁰ to the exclusion of experimental research, including data derived from animal and laboratory experimentation. Epidemiological studies, which evaluate the "distribution and determinants of health and disease in human populations . . . provide some of the best information available to assess human . . . risk."⁷¹ Such data, though, is "often unavailable."⁷² Employers, and health care providers, therefore, must use

Feb. 1, 1993, at 20 (study contends actual number of missed workdays five to nine times higher than is currently being reported).

65. See John Markoff, *Miscarriages Tied To Chip Factories*, N.Y. TIMES, Oct. 12, 1992, at A1 (IBM commissioned study by Johns Hopkins University).

66. *Id.* The article also discusses other studies in this area. *Id.* at D3.

67. The study's limited scope is a start, but a biased one. It was reported that subsequently IBM issued warnings to its workers and other companies. *Id.* at A1. This echoes back to the era of FPPs where companies relied upon selected science both to externalize real costs of their operations and to exclude women from such jobs. See generally O'Brien & Reder, *supra* note 15, at 1153-59.

68. S. 1622, 102d Cong., 2d Sess. § 905 (1991). There is no apparent rationale for aligning NIOSH with HHS, and this proposal seems to only dissipate strength from the Department of Labor and OSHA specifically.

69. *Id.* at § 902.

70. *Id.*

71. See REPRODUCTIVE HAZARDS IN THE WORKPLACE, *supra* note 11, at 40. Designing a sound epidemiological study is, however, a difficult task. *Id.* at 15.

72. *Id.* at 12.

their best judgment based upon nonepidemiological data. To limit research NIOSH conducts and relies upon only human studies as this bill unduly prejudices the reporting and resolution of subtle, latent illnesses, injuries, and diseases for which no substantial human data yet exists, such as reproductive and developmental hazards.

The National Surveillance Program in the present COSHRA bill appears to be a very comprehensive and expensive approach to record keeping and reporting which was discussed previously. If the Bureau of Labor Statistics correctly receives information on occupational illnesses, deaths and serious injuries, and then properly classifies such data, then it would be redundant for NIOSH to do the same. Moreover, state labor and workers' compensation agencies collect such data. To create a new program is an ill-advised attempt at collecting data; it would be much more productive to focus on the correct and accurate compilation of data. It is, moreover, important that the most complete questions be asked initially so that the data is accurate. For example, if a question or study had as its endpoint for outcomes fetal death, then it would be missing other equally critical though not so obvious endpoints, such as impaired fertility, impotence, timing of fetal death, congenital malformations, chromosomal abnormalities, etc. Reproductive and developmental hazards are manifest in wide-ranging, subtle, yet little-studied ways.

The present COSHRA bill, discussed partially above as it relates to reproductive and developmental hazards, is generally a solid attempt at improving workplace safety and health. However, there are other legislative incentives that could be used that would complement this bill. First, a user tax could be passed for manufacturers, buyers, and sellers of the many thousands of chemicals in commercial use.⁷³ This money could be earmarked for much needed research in the area of occupational exposure to these chemicals. Research ideally would be conducted by both private employers and trade groups with agency supervision and oversight. Second, part of this tax to fund research might also be used to pursue both new product and alternative product development. For example, where there is no disincentive to the manufacturer of lead-based batteries, lead will continue to be used. If, however, new or alternative technologies are developed, this may be an incentive needed to eradicate lead from the workplace. If there is insufficient support for a direct tax, Congress could consider incentives in the form of tax deductions or tax credits for such research and product development. The present COSHRA bill is an important, but partial solution to the problem of worker safety and health. Tax legislation in the form of user taxes, deductions, or credits, should be considered as a means of reducing the enormous costs of the COSHRA bill, and as a strategy to more completely research and reduce reproductive and developmental hazards.

B. Agency Action: Oversight of Reproductive and Developmental Toxicants

Public implementation of RHPs would be virtually impossible without agency leadership and facilitation. With their ability to quickly issue standards and

73. See Maakestad & Helm, *supra* note 32, at 16 & n.31; See also OTA ILLNESS AND INJURY REPORT, *supra* note 37, at 20.

enforcement capability through penalties, agency action would seem to be the fool-proof incentive towards creating safer and healthier workplaces. This has not proven to be the case, however.

The federal regulatory agencies with primary responsibility over exposures to environmental chemicals are OSHA, the Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), and the Consumer Product Safety Commission (CPSC).⁷⁴ The domains relevant to exposures are air, water, food, toxics, consumer products, and the workplace which includes the previous five domains.⁷⁵ The extent and sufficiency of federal regulation of exposure to environmental chemicals that cause adverse reproductive and developmental outcomes "is uncertain at best."⁷⁶ Senator John Glenn, Chairman of the Committee on Governmental Affairs, who requested the GAO Report, reiterated the conclusion that the pattern of regulatory gaps and the lack of rigor in risk assessment decisions leaves little doubt that the public is insufficiently protected against reproductive and developmental toxicants.⁷⁷

Of the 104,000 substances listed in the NIOSH Registry of Toxic Effects of Chemical Substances, there is reproductive toxicity data for only five percent of these.⁷⁸ Clearly there is a dearth of information on reproductive and developmental toxicity.⁷⁹ But this does not relieve agencies of their responsibility. Even among the agencies which are charged with, *inter alia*, protecting reproductive health, "there was no greater likelihood of . . . basing their regulations on these diseases"⁸⁰ The GAO Report further found the "[o]ffices reported *examining* reproductive and developmental data only 44 percent of the time when they made the 138 major regulatory decisions. This falls short of our expectations and the agencies own policies, which call for looking at all relevant disease endpoints."⁸¹

The focus of our remaining discussion on the role of agencies in implementing RHPs will be on OSHA. Although it is charged with providing a safe and healthful workplace for every man and woman, OSHA promulgated only seven standards regarding reproductive hazards out of twenty-one standards issued during the period covered by the GAO Report.⁸²

74. GAO REPRODUCTIVE HAZARD REPORT, *supra* note 11, at 14.

75. *Id.* at 3 n.1.

76. *Id.* at 3. See generally, COSHRA Senate Hearings, *supra* note 3, at 3 (testimony of Cynthia Douglass, Deputy Ass't Secretary of Labor for Occupational Safety and Health agreeing with GAO assessment). But cf. *id.* at 14 (testimony of Eric C. Peterson, Executive Director, CPSC disagreeing with GAO report stating that reproductive and developmental hazards are always evaluated); *id.* at 18 (testimony of Linda J. Fisher, Ass't Administrator, EPA criticizing the GAO report as a "poor basis on which to evaluate EPA's efforts"); *id.* at 20 (testimony of Fred R. Shank, Director, Center for Food Safety and Applied Nutrition, FDA, concluding that contrary to the GAO Report, the FDA's program protects against reproductive and developmental toxicants).

77. See generally COSHRA Senate Hearings, *supra* note 3, at 2 (opening statement of Senator Glenn).

78. See *Federal Government Efforts to Protect Public, Worker Health Criticized at Hearing*, 19 O. S. & H. Rep. 524 (BNA) (Current Rep.) (Oct. 9, 1991) (statement of Lynn R. Goldman, Acting Chief of California Dep't of Health Services' Office of Environmental and Occupational Epidemiology). Ms. Goldman further noted that even when such data is available, it is rarely considered. *Id.*

79. See GAO REPRODUCTIVE HEALTH REPORT, *supra* note 11, at 14 (reporting that the field of reproductive and developmental toxicology is just forty years old, and as such, test information is not readily available).

80. *Id.* at 55.

81. *Id.* at 59 (emphasis in original).

82. *Id.* at 57.

It becomes apparent, then, that OSHA's mission has historically been a self-guided exercise operating in relative independence from the legislation which created it. The mission has, of course, become politicized to an extent due to changes in Presidential administrations and priorities.⁸³ With OSHA's record of regulatory decision making regarding reproductive and developmental toxicants, it is clear that the agency has its own interpretation of enforcement under the OSH Act. One scholar has recently written "[b]ecause enforcement is so completely controlled by the agency, employees' rights and remedies depend heavily on the effectiveness of OSHA's enforcement - its resources, its aggressiveness in correcting violations, and its willingness to impose penalties to deter willful and persistent violations. OSHA's protection . . . is flawed both in structure and administration."⁸⁴

A prime example of what may go awry due to the politization of the regulatory process, and how an agency might stray from its mission follows herein. OSHA, as required by Presidential order, circulated proposed rules on air contaminants standards in 1992 to the Office of Management and Budget (OMB).⁸⁵ The OMB's Acting Administrator suspended review of OSHA's draft pending OSHA's analysis of how the regulatory cost of such health and safety rules would impact workers' health since OMB assumed wages would be cut to pay for the rules.⁸⁶ In other words, OMB asserted in a risk-risk analysis that the rules could be so expensive that companies would be forced to cut wages and jobs, and therefore make workers' health worse.⁸⁷ Senator Edward M. Kennedy (D. Mass.), Chairman of the Labor and Human Resources Committee, noted that, "O.M.B. should stop kowtowing to business, and the Labor Department should get on with its statutory responsibility of issuing these important health standards."⁸⁸ Easier said than done. This may change, though, during the Clinton Administration.⁸⁹

What OSHA currently faces are the challenges of enforcing its current legislative mandate and regulatory agenda, as well as the prospect of passage of a reform bill.⁹⁰ If the present reform bill fails to pass, the current law will remain

83. See Martin Tolchin, *Reich Charts a Path to Return the Labor Dept. to Center Stage*, N.Y. TIMES, Jan. 8, 1993, at A12.

84. Summers, *supra* note 20, at 504. Prof. Summers attributes a great deal of this to lack of inspections and an unwillingness to exact appropriately-sized fines. *Id.* at 507-08.

85. See Robert D. Hershey, Jr., *Citing Cost, Budget Office Blocks Workplace Health Proposal*, N.Y. TIMES, Mar. 16, 1992, at A13.

86. Letter from James B. MacRae, Jr., Acting Administrator, OMB, to Nancy Risque-Rohrbach, Ass't Sec'y for Policy, Dep't of Labor (Mar. 10, 1992).

87. See Hershey, *supra* note 85, at A-13. See generally Robert E. Sheriff, *OMB And Risk-Risk Analysis*, OCCUPATIONAL HAZARDS, May 1992, at 138 (American Industrial Hygiene Association President criticized OMB actions).

88. Hershey, *supra* note 85, at A-13. After working out a compromise, the OMB agreed to lift the suspension. See Bruce D. Butterfield, *OMB agrees to lift suspension on workers' health proposal*, BOSTON GLOBE, Mar. 25, 1992, at 35.

89. See Steven Greenhouse, *Clinton's Choice of Reich Hints at a Stepped-Up Role for Labor Department*, N.Y. TIMES, Dec. 12, 1992, at 10. See generally Daily Lab. Rep. No. 9, *supra* note 55 (citing Secretary Reich's pledge to improve worker safety and health protection and his approval of COSHRA as a "step in the right direction." Secretary Reich also stated that the safety and health committee proposal "intrigues" him).

90. There are obstacles here, as well. For example, OSHA proposed sharp reductions in permissible exposure limits for glycol ethers. For the first time, then, a chemical would be regulated

in place. In this scenario, it is imperative that OSHA more seriously consider and act upon the threat from environmental hazards, particularly reproductive and developmental toxicants. Standard-setting, leadership in research, and rigorous enforcement procedures, along with inspections as they are possible, may be pursued with much more success, even under the present act, if the commitment exists from OSHA administrators.

Also in place at OSHA is a Voluntary Protection Program (VPP) which represents a "distillation of applied safety and health management practices . . . strongly endorsed by individuals, corporations, professional associations, and labor representatives."⁹¹ Begun in 1982, OSHA's approach has been to focus on 'sound management practices' in the operation of safety and health programs, instead of a model encompassing more input from workers.⁹² In fact, there is no reference to meaningful employee participation. OSHA's policy is that employers have responsibility for decision making, but that employees be "included in the process on decision making on matters which affect their health and safety."⁹³

It is a wonder why even these "management guidelines" lacking any employee involvement are voluntary rather than mandatory. This is so in spite of OSHA's own statement that there exists "a strong correlation between the application of sound management practices in the operation of safety and health programs and a low incidence of injuries and illnesses. . . . VPP worksites generally have lost-workday case rates that range from one-fifth to one-third the rates experienced by average worksites."⁹⁴ OSHA's alignment with employer interests in this capacity has clearly skewed the agency's judgment. By assuming that the regulatory process requires choosing *between* business and labor interests, rather than viewing the varied interests as shared and complementary, OSHA has prioritized interests furthering the adversarial nature of business and labor concerns. In OSHA's words, more attention to safety and health issues led to reduced costs, yet OSHA has refused to institutionalize a safety and health program even when it is demonstrated that both business and labor interests are served.

It is no surprise that OSHA has been less than enthusiastic about the present OSHA reform bill.⁹⁵ The bill's many features propose to radically alter the

primarily for reproductive hazards. See *Clinton Administration Orders Pullback of More Than 50 Last-Minute Regulations*, Daily Lab. Rep. (BNA) No. 14, at A-13 (Jan. 25, 1993). These regulations, holdovers from the time of the Bush Administration, are now on hold pending review. *Id.* Also, a federal appeals court recently struck down an OSHA regulation which attempted to set generic standards for many chemicals. See *AFL-CIO v. OSHA*, 965 F.2d 962 (11th Cir. 1992); *U.S. Declines to Appeal Voiding of OSHA Air Rules*, BOSTON GLOBE, Mar. 24, 1993, at 10; Michael deCourcy Hinds, *Judge Deals OSHA Setback on Repetitive Stress Rules*, N.Y. TIMES, Mar. 27, 1993, at 7 (OSHA fine invalidated since agency lacked standard on repetitive stress); see also Marshall J. Breger, *Recent Developments in OSHA Litigation*, 43 Lab. L.J. (No. 11) 687 (1992).

91. 54 Fed. Reg. 3904, 3909 (1989) (issuance of voluntary guidelines for safety and health management). The authors view even the name, VPP, as problematic, harking back to FPPs and notions of how employers are "protecting" employees rather than the parties working together to effect improvements.

92. See *id.* at 3904, 3906. See also Julie E. Korostoff et al., Comment, *Rethinking the OSHA Approach to Workplace Safety: A Look at Worker Participation in the Enforcement of Safety Regulations in Sweden, France, and Great Britain*, 13 COMP. LAB. L.J. 45, 47-48 (1991).

93. See 54 Fed. Reg. 3904, 3907 (1989).

94. *Id.* at 3904.

95. See *OSHA Said to be Seeking Information As Step Toward Possible Rule For Job Safety Programs*, Daily Lab. Rep. (BNA) No. 237, at A-8 (Dec. 9, 1992) (OSHA offered "qualified"

centralized, entrenched agency by changing its nature and functions. The agency currently formulates policy, guidelines and standards from its central office and promulgates these to the millions of worksites throughout the nation. The current reform bill, however, through the creation of individual worksite safety and health programs as well as committees, decentralizes the core of decision-making power and places it within the worksite. Under this scheme, employers and employees assume a significant amount of responsibility for workplace safety and health. This would presumably lessen OSHA's overall influence. OSHA's functions, under this bill, change in form as well as in substance.

OSHA's current model for enforcing the OSH Act has for the most part become discredited.⁹⁶ The goals of the OSH Act are unattainable through its present policies of standard-setting, inspections, and insignificant civil fines. Achieving the ends of workplace safety and health for all requires the commitment of employers and employees to actively and cooperatively identify all workplace hazards and abate them. It would behoove OSHA, the principal agency for workplace health and safety, to demonstrate a more genuine commitment for safer and healthier workplaces, instead of following the winds of partisan politics.

OSHA's role, following the passage of such legislation as the current reform bill, would be changed yet not diminished. For example, OSHA is clearly unable to meaningfully inspect or visit each worksite on a regular basis anyway. Instead of continuing with such an inefficient practice, under the reform bill scenario, OSHA could receive reports from each program and committee, and conduct audits of their completeness and efficacy. Moreover, OSHA could still be responsible for identifying hazards and setting exposure and use limits for them. To a limited extent, OSHA has done this in the past. A particularly vivid example of how an agency regulation can lead to both a safer workplace and lower costs exists with the ethylene oxide standard. The 1984 OSHA regulation reducing employee exposure had the unforeseen consequence of creating a market incentive for manufacturers to develop new technology which was less expensive than the old technology and cost half as much as OSHA predicted.⁹⁷ OSHA could also develop a more integrated relationship with NIOSH by better positioning itself to disseminate NIOSH research and studies to worksites. This would further foster a cooperative relationship between the agency and businesses. OSHA ought not to feel threatened by a change in its job description if reform legislation passes. Rather it should be viewed as a challenge for the future, one that could repair the agency's image as well as its efficiency. Even if reform legislation fails, OSHA still has not even met the goals of the present OSH Act, and as is apparent, there is quite a bit of room for improvement.

support of safety and health programs); *Democrats' Proposed Job Safety Bill Should Include Funding House Panel Told*, Daily Lab. Rep. (BNA) No. 158, at A-8 (Aug. 14, 1992) (Acting OSHA head opposed for the third time the present COSHRA bill).

96. See Marsha Katz, *Criminal Liability For Health and Safety: Executives at Risk*, 43 LAB. L.J.(No.10) 679, 680 (1992); see also Joleane Dutzman, Note, *State Criminal Prosecutions: Putting Teeth in the Occupational Safety and Health Act*, 12 GEO. MASON U.L. REV. 737 (1990).

97. See *OSHA's Ethylene Oxide Rule Reduced Exposures, Spurred Development of Technology*, Study Says, Daily Lab. Rep. (BNA) No. 143, at A-3 (July 24, 1992); see also 49 Fed. Reg. 25,734 (1984).

IV. RECOVERY FOR INJURIES FROM WORK-RELATED EXPOSURE TO TOXIC SUBSTANCES: REPRODUCTIVE AND HEALTH PROGRAMS MUST STILL RESPOND

Environmental exposures at the workplace through chemicals, processes and products will continue at low levels even if highly protective reform legislation passes and agencies enforce such laws. Employers and employees are still left to struggle with the issue of injuries to those at the workplace as well as their spouses and potential offspring due to workplace hazards. Since OSHA currently has only regulatory authority and is not empowered to compensate victims for OSH Act violations, the injured parties must generally pursue claims through state workers' compensation systems designed as no-fault insurance programs to compensate workers injured during the course of employment.⁹⁸ Alternatively, injured victims may be able to pursue a private civil action in tort if they are not pre-empted from doing so by the workers' compensation statute.⁹⁹ Finally, a criminal prosecution by the state may lie pursuant to the states' general police powers to protect public safety and welfare. These cases are tried to the extent the injuries are so severe or the recklessness so extreme as to warrant criminal punishment. A brief discussion of each follows as it relates to recovery for work-related injuries - particularly due to the presence of reproductive and developmental toxicants in the workplace.

A. Workers' Compensation

By 1949, every state had adopted a workers' compensation system.¹⁰⁰ The purpose of the law is to compensate workers injured during the course of their employment with a timely award, regardless of employer fault.¹⁰¹ Goals of workers' compensation include deterrence of accidents and the promotion of safety, yet these are unattainable under the current system, especially with respect to reproductive and developmental toxicants.¹⁰²

Historically, workers' compensation statutes refused coverage for workers who contracted occupational diseases.¹⁰³ Eventually coverage expanded to include occupational diseases as compensable injuries. However, proof is still problematic, even as occupational diseases "have replaced accidents as the main cause of injuries in the workplace."¹⁰⁴ Claimants are required to prove that occupational exposure triggered their disease.¹⁰⁵ Yet this is especially difficult for reproductive and developmental diseases because there exists an inherent background risk for such injury in the whole population. This dual causation problem is exacerbated by the current lack of understanding in the etiology of many reproductive and

98. See Eggen, *supra* note 7, at 859-60.

99. See *id.* at 867-68; see also Maakestad & Helm, *supra* note 32, at 29.

100. See Maakestad & Helm, *supra* note 32, at 18 n.42.

101. See Eggen, *supra* note 7, at 860.

102. See *id.*

103. See Ellen R. Peirce & Terry Morehead Dworkin, *Workers' Compensation and Occupational Disease: A Return to Original Intent*, 67 OR. L. REV. 649, 655-59 (1988). The system was biased in favor of awarding remuneration only for those suffering accidental injuries. See Eggen, *supra* note 7, at 859-60.

104. Peirce & Dworkin, *supra* note 103, at 687.

105. See *id.* at 661-62.

developmental diseases. Furthermore, many such diseases have a long latency period (such as the drug DES which did not manifest its harm until the next generation) and proof of workplace exposure as the primary cause becomes nearly impossible. Lastly, as discussed above, there is a lack of urgency in addressing this problem. "At least 80 percent of the 48,000 chemical substances in industrial use have no toxicity information available."¹⁰⁶ It becomes clear how difficult a claimant's burden of proof is.

Even if the claimant prevails, recovery is limited to economic loss and disability.¹⁰⁷ Occupational diseases can occur under such a system, and not even be compensable. A case of infertility caused by a toxic work environment may result in no disability under current workers' compensation laws because the worker is still able to perform the functions of the job. Since payments are for the most part based on disability, the worker may be denied compensation for all of the losses due to this reproductive injury.¹⁰⁸ Workers' compensation is also limited in who it covers. Only the worker may proceed with a claim, even though, because of a reproductive or developmental disease, the injury is to a spouse and/or their offspring.¹⁰⁹ These injured third parties have no recourse under workers' compensation statutes even though their injuries occurred as a result of the worker's exposure.

This no-fault compensation system for workplace injuries as yet offers no significant incentives for employers to reduce toxic exposures. Under a no-fault system, employers avoid responsibility and instead offer payments. The payments, although timely, often are paltry and do not realistically reflect the true cost of the injury, especially those involving reproductive and developmental hazards.¹¹⁰ When workers' compensation reform translates into benefit cuts and coverage restrictions, whereby workers receive on average sixty percent of their weekly wage, major changes are in order.¹¹¹

First, all insurers could better track worksites that have higher than average workers' compensation claims and analyze them by class of injury, including negative reproductive and developmental health consequences. This information could be used to identify high-risk job functions, and consequently insurers could charge more in premiums to insure all these risks. Employers would thereby be directly penalized in the form of a premium for engaging in high-risk job functions. This would be a deterrent to some extent. Additionally, compensation for such injuries might be indexed above that for payments arising out of so-called typical injuries. Insurers might also consider more workplace inspections and evaluations in an effort to reduce their own losses, as well as to prod employers to reconsider their present processes.

Finally, the proof of case for occupational diseases must be reworked. It has been suggested that since claimants have very limited access to information regarding causation and work-relatedness, it might be more appropriate to realign

106. See Maakestad & Helm, *supra* note 32, at 27.

107. See Eggen, *supra* note 7, at 865. Under a tort-based recovery, relief is available additionally in the form of damages for pain and suffering. *Id.*

108. See Eggen, *supra* note 7, at 865.

109. See *id.* at 863, 865.

110. See Kimberly Blanton, *Plugging the Dike*, BOSTON GLOBE, Jan. 26, 1993, at 35.

111. See *id.* at 35, 39.

the parties' responsibilities and shift the burden to employers to demonstrate that the illness is not work-related.¹¹² And to the extent that the disease may be caused by other hereditary, environmental, or risk factors, the claimant would then have the burden of demonstrating what percentage of the disease is work-related.¹¹³ Realigning the burdens of proof in workers' compensation claims addresses many of the barriers claimants encounter in their proof of case. Such changes would, moreover, force employers to develop research on workplace processes, and would possibly act as an incentive for employers to seek safer alternative work processes.

B. Tort Liability

A tort-based theory of liability for work-related injuries is as problematic as a claimant's proof of case under workers' compensation. Moreover, under the exclusivity doctrine, "workers' compensation is the exclusive remedy for an injured worker suffering from a covered, although not necessarily compensable, occupational disease or injury."¹¹⁴ If workers are able to demonstrate an exception exists, they may seek civil liability in tort. Furthermore, spouses and offspring, injured as a result of the worker's exposure may bring suit under this theory. All victims, though, still face the hurdle of proving that the exposure directly caused their injuries.

As discussed previously, proof of this causation is difficult given the nature of reproductive and developmental injuries, and the current technological limits of scientific inquiry. Traditional legal doctrine requires a level of certainty in causation, and so is unsuited to analysis of many of the cases involving reproductive and developmental injuries.

Although victims seeking redress in the tort system have a wider range of recovery possibilities, including recovery for pain and suffering, they must first prove causation. Consider a pre-natal injury to a fetus caused by the female worker's exposure to lead in her job as a battery-maker. Consider also that the woman may live in a rented apartment in which lead-based paint is starting to chip off the walls. The later born child is found to be, perhaps, a few points below average on an I.Q. test. Was this due to the mother's exposure at work, or at home, or because of the lead the mother was exposed to when she was a child? Would the child have had this score regardless of the lead exposure? "Causal indeterminacy is a consistent characteristic of reproductive and genetic injury claims, even where the claimants can demonstrate a general, or statistical, probability of causation. Strict adherence to traditional notions of proof of causation, therefore, would necessitate the dismissal of virtually all such claims."¹¹⁵

112. See Peirce & Dworkin, *supra* note 103, at 681-83.

113. See *id.* at 681-83.

114. See Eggen, *supra* note 7, at 867-68; Maakestad & Helm, *supra* note 32, at 30 (exceptions exist to the exclusivity rule if (1) disability not compensable under workers' compensation; (2) federal law allows for dual recovery under workers' compensation and tort systems; (3) employer occupies 'dual capacity status'; or (4) employer committed intentional rather than negligent tort).

115. Eggen, *supra* note 7, at 889. See generally Dan L. Burk, *When Scientific Norms are Abandoned in the Courtroom*, CHRON. HIGHER EDUC., Mar. 17, 1993, at B1 (discussing difficulty in ascertaining what constitutes legally admissible objective scientific evidence); Stephen Burd, *High Court to Rule on Peer Reviews of Scientific Evidence*, CHRON. HIGHER EDUC., Feb. 17, 1993, at A19 (discussing controversy regarding admissibility of different types of scientific testimony).

Under the present system, unless it can be shown that exposure at work was the proximate, direct cause of the injuries, all recovery is barred, even though the exposure contributed in part to the injuries. Employers have no incentive to address and prevent injuries under such a strict system of proof.

Alternative theories of liability must be explored with relation to cases involving this class of torts. Plaintiffs have a nearly insurmountable task in proving their case. The impossibility is apparent because many toxicants in use have not yet even been studied by the scientific community. This lack of knowledge in aspects of occupational medicine, especially as it relates to toxicology, necessarily favors defendant/employers since the toxic tort case will rarely be proven under such circumstances. The current limits of scientific inquiry work against employees, spouses and offspring who have been injured because of toxic work environments. Consequently, plaintiffs are undercompensated for injuries. Moreover, there is no loss to defendants; and so their behavior is undeterred, if not reinforced, under the current system.

For there to be a more equitable allocation of the risks associated with being exposed to toxic work environments, the burden of proof should be reallocated.¹¹⁶ Moreover, it has also been suggested that it may be appropriate in such cases to lower the standard of expertise required as to studies and scientific knowledge.¹¹⁷ Epidemiological studies are ideal, but often unavailable. Until sounder studies are available, covering all classes of reproductive and developmental toxicants, it would be appropriate to compromise and allow into evidence studies of a less certain, but still acceptable quality, such as statistical studies.

Employers will continue undeterred, with little incentive to respond to this problem, until changes are imposed from Congress, agency action, or judicial innovation. Courts have power, too, to encourage accountability for work-related injuries.

C. Criminal Liability For Workplace Injuries

In recognition of the seriousness of injuries sustained while at work, an increasing number of states recognize the criminal liability of corporations for acts of their agents.¹¹⁸ This is perhaps symptomatic of the extent to which current laws and agency actions have been unable to generate and maintain a commitment to workplace safety and health.

Criminal prosecution for workplace injuries and deaths gained momentum in the 1980s when states began pursuing criminal law remedies to protect worker safety and health.¹¹⁹ The validity of these tactics was confirmed when a federal appeals court ruled that federal safety and health laws do not pre-empt state prosecutions.¹²⁰ The practical effect of this ruling is that employers may be held to meet state safety and health laws as well as federal laws. Such criminal

116. For an excellent discussion on alternative theories of liability see Professor Eggen's article, *supra* note 7, at 887-912. Professor Eggen calls for a new jurisprudence with regard to toxic reproductive and genetic injuries in the workplace. *Id.*

117. *Id.* at 900-01.

118. See Katz, *supra* note 96, at 680-81; Maakestad & Helm, *supra* note 32, at 37-46.

119. See Katz, *supra* note 96, at 680-81.

120. *Illinois v. Chicago Magnet Wire Corp.*, 534 N.E.2d 962 (Ill. 1989), *cert. denied*, 493 U.S. 809 (1989).

prosecutions have had mixed success, primarily attributable to the states' lack of resources to devote to such cases, as well as to their burden of proving that the employers foresaw, or knew the risk of danger, and that the employers possessed *mens rea*, criminal intent.¹²¹

Criminal prosecution of employers has received heightened attention in states, and recently California passed such a bill. Under its state law, corporations or managers will be found guilty if they possess actual knowledge of a serious concealed danger and knowingly fail to inform authorities or warn employees.¹²² Reproductive and developmental hazards are clearly serious concealed dangers, and such injuries would be recoverable under this law. The present COSHRA reform bill seems to implicitly approve of these state efforts. In section 512, the bill states that "[n]othing in this Act shall preclude State and local law enforcement agencies from conducting criminal prosecutions. . . ."¹²³ This rise in criminal prosecutions cannot be seen as unanticipated where there is "an erosion of legal barriers protecting corporations from criminal charges, increasing public concern about industry's responsibility for employee health, and looser enforcement by OSHA."¹²⁴

V. HEALTH AND SAFETY PROGRAMS: STATE INITIATIVES

It is instructive to compare the present COSHRA bill to several state efforts to implement joint health and safety committees. For example, the state of Oregon has provisions requiring employers to create safety committees¹²⁵ but these appear to be remedial rather than preventative in nature and also do not emphasize the deeper, long-range health issues, including the reproductive health questions as discussed in this article.

Nonetheless, COSHRA was partly modeled after the Oregon occupational safety and health program, according to John Pompei, Oregon's program director, who testified before the House regarding the impact of the proposed COSHRA bill on small businesses.¹²⁶ The Oregon rules took effect in March, 1991 and were part of a workers' compensation reform bill enacted in 1990.¹²⁷ Mr. Pompei provided data indicating a decrease in lost workday rates that marked an improvement after the 1989 reform bill.¹²⁸ Because of this decrease, employers within the state saved more than \$1 billion in costs.¹²⁹ While Oregon law previously provided that the state Director of the Department of Insurance and Finance had authority to require "public or private employers of 10 or more employees [sic] to establish and administer a safety committee if the employer has a lost workday

121. See Katz, *supra* note 96, at 681-82; see also *New York Appellate Court Overturns Convictions in Pym Thermometer Case*, Daily Lab. Rep. (BNA) No. 245, at A-7 (Dec. 21, 1992) (appellate court ordered a new trial for the "controversial" workplace prosecution of business owners for their role in the mercury poisoning of an employee).

122. CAL. PENAL CODE § 387 (West Supp. 1993).

123. See S. 1622, 102d Cong., 2d Sess. § 512 (1991).

124. Katz, *supra* note 96, at 682.

125. OR. REV. STAT. § 654.176 (1989 & Supp. 1992).

126. Daily Lab. Rep. No. 158, *supra* note 95, at A-8 (discussing H.R. 3160 version of COSHRA bill).

127. *Id.* at A-8.

128. *Id.*

129. *Id.*

cases incidence rate greater than the rate the director determines is consistent with reasonable workplace health and safety . . . ,”¹³⁰ the amended statute specifies that such safety committees shall be established and administered where “the employer has a lost workday case incidence rate in the top 10 percent of all rates for employers in the same industry; or (B) the workers’ compensation premium classification assigned to the greatest portion of the payroll for the employer has a premium rate in the top 25 percent of premium rates”¹³¹ These state provisions contrast sharply with the proposed federal bill. The federal legislation requires joint health and safety programs across the board and mandates SHCs for all employers with eleven or more employees. The Oregon model, however, requires safety and health programs only upon evidence of high rates of injuries or illnesses.¹³² The Oregon statute ties the requirement of safety committees into a high lost workday rate because it was part of a workers’ compensation reform bill. This is certainly no coincidence. The absence of a pro-active safety and health program should logically lend itself to a higher rate of lost workdays. The fact that employer funds can be saved by instituting SHPs may convince employers that SHPs that incorporate RHPs represent one cure for what is a vast employer crisis - cost containment of workers’ compensation insurance.¹³³

The proponents of the present federal OSHA reform bill should note that this feature of a successful state statute might make sense on the federal level as well. In other words, the resistance of the business community might be lessened if the mandatory SHPs and SHCs for employers with eleven or more employees were triggered by the poor safety and health record of a company. Additionally, the ability of OSHA to monitor and enforce such a reform bill would be vastly increased over the current COSHRA provisions precisely because only those employers with poor records would be subject to the mandatory SHP/SHC.¹³⁴ This also would provide an incentive for employers to independently improve their SHPs, thereby avoiding mandatory oversight. Unfortunately, it might also encourage some companies to underreport the incidence of accident/injuries or lost workday rates.

It should also be noted that the Oregon committees are to be composed of equal numbers of employees (who volunteer or are elected by peers) and employer representatives.¹³⁵ This is similar to provisions in the present COSHRA bill.¹³⁶ Training and meeting time in Oregon committees is compensated at the employees’

130. OR. REV. STAT. § 654.176 (1989).

131. *Id.* at § 654.176(1)(b)(A)&(B) (1989 & Supp. 1992).

132. S. 1622, 102d Cong., 2d Sess. § 101 (1991) requires that each employer must have an SHP. There is no threshold in the present COSHRA bill linking injuries to programs, although the Secretary is supposed to track high injury and illness rates under S. 1622, § 801. Only employers with 11 or more employees must have an SHC under the federal bill. S. 1622, § 201.

133. Blanton, *supra* note 110, at 39.

134. S. 1622, 102d Cong., 2d Sess. §§ 101, 201 (1991). It should be noted that Oregon increased its joint safety staffing by 73 positions with enactment of its workers’ compensation reform bill. *See* Daily Lab. Rep. No. 158, *supra* note 95. Absent a vast increase in appropriations, OSHA could hardly be effective in enforcing mandatory SHCs unless these were limited to the most egregious situations.

135. OR. REV. STAT. § 654.182(1)(a) (1992).

136. S. 1622, 102d Cong., 2d Sess. § 201 (1991).

regular hourly rate.¹³⁷ The present COSHRA bill also provides for paid time for committee activities.¹³⁸ This is vital for worker participation. Management representatives on these committees are generally paid for this time or it is considered part of their job, and thus such a monetary investment in the work of *all* committee members reflects the seriousness of the employer's commitment to safety and health.

Finally, under the Oregon statute, employers in multi-employer groups may satisfy the committee requirement via equivalent committees instituted pursuant to collective bargaining agreements.¹³⁹ Additionally, a grant program funds education and training in Oregon.¹⁴⁰ The present COSHRA bill provides for training and grants in more detail than the Oregon statute.¹⁴¹

The State of Washington's Washington Industrial Safety and Health Act (WISHA) provides that workplaces with eleven or more employees must designate a safety and health committee with employer-selected and employee-elected representatives.¹⁴² These committees review health inspection and accident investigation reports and are responsible for illness/injury prevention programs.¹⁴³ Washington state's information efforts in the area of workplace hazards affecting reproductive health are comprehensive and commendable. The Hazard Communication Standards set out requirements for information and training in the workplace and require that all employers ascertain chemical-related hazards.¹⁴⁴ Though not a legal requirement, the guidelines for employers recommend that employees sign a form verifying that they have attended hazard communication training.¹⁴⁵ The State of Washington's emphasis on reproductive health hazards demonstrates to proponents of the federal COSHRA reform bill that specific reference to reproductive health issues can and should be high on the list of priorities.¹⁴⁶

One question that comes to mind when reviewing state safety and health programs at a time when there exists a commitment to legislative reform on a national level is whether states should continue to provide separate safety and health programs. Under the present COSHRA bill, state plans can be retained as long as they conform to minimum requirements at the federal level.¹⁴⁷ Just as in other areas of labor law, federal standards would serve as a floor of protection, beneath which state law may not fall, but above which states are free to legislate

137. OR. REV. STAT. § 654.182(1)(c) (1992).

138. S. 1622, 102d Cong., 2d Sess. § 201 (1991).

139. OR. REV. STAT. § 654.182 (2) (1992).

140. *Id.* at § 654.191(1).

141. See S. 1622, 102d Cong., 2d Sess. § 701 (1991).

142. WASH. ADMIN. CODE § 296-24-045 (1992).

143. See STATE OF WASHINGTON, DEPARTMENT OF LABOR AND INDUSTRIES, WORKPLACE HAZARDS TO REPRODUCTIVE HEALTH, A RESOURCE FOR HEALTH CARE PROVIDERS, HEALTH AND SAFETY PERSONNEL AND EMPLOYERS 31 (Nov. 1991).

144. WASH. ADMIN. CODE § 296-62-054 (1984); see STATE OF WASHINGTON, DEPARTMENT OF LABOR AND INDUSTRIES, UNDERSTANDING "RIGHT TO KNOW," CHEMICAL HAZARD COMMUNICATION GUIDELINES FOR WASHINGTON EMPLOYERS 3 (Dec. 1988) [hereinafter UNDERSTANDING RIGHT TO KNOW].

145. UNDERSTANDING RIGHT TO KNOW, *supra* note 144, at 16.

146. Cf. *supra* notes 62-63 and accompanying text (discussing proposed changes to Title IV in S. 1622, 102d Cong., 2d Sess. §§ 406-08 (1991)).

147. S. 1622, 102d Cong., 2d Sess. §§ 1001-06 (1991). Cf. *Gade v. National Solid Wastes Mgmt. Ass'n*, 112 S. Ct. 2374 (1992) (ruling that state laws were pre-empted by federal OSH laws where OSHA had already issued standards).

more comprehensive protection.¹⁴⁸ Because the policy behind OSHA is worker protection, that policy is generally furthered by higher standards regarding worker safety and health.¹⁴⁹ Nonetheless, the serious drawback that is endemic to state regulation is its lack of uniformity, a problem that is particularly relevant to standards set for work environments provided by multi-state employers.

Proponents of federal legislative reform should incorporate the best ideas from existing state statutes and plans into COSHRA. This is a time for innovation on a federal level, and instituting improvements regarding safety and health in the workplace should not be left to sporadic state developments. For example, Michigan reserves a portion of its state OSHA fines from employers to fund education programs. This is a valuable idea, and putting *federal* fines to work on education and training rather than allowing these fines to be sent to the general U.S. Treasury would be useful.¹⁵⁰ Another suggested alternate use of OSHA fines is to compensate victims of work-related accidents or injuries as well as their families.¹⁵¹ COSHRA does not presently contain the latter funding scheme in its section on victim's rights,¹⁵² perhaps because such a plan at this time appears to be too ambitious in its integration of claims deemed more appropriately brought through the workers' compensation system.

Yet, in the context of the legal environment in which businesses currently make decisions regarding allocation of their resources, including choices about investment in safer, healthier workplaces (where costs of workers' compensation insurance, and potential for fines and other legal liability are carefully evaluated), it is not too soon to coordinate OSHA and workers' compensation in a manner that rewards employers who act responsibly. If the present COSHRA bill is to live up to its name, it must contain a comprehensive reform of the existing regulatory system. There may be lessons that COSHRA's proponents could learn from examining state efforts and their OSH laws, as well as practices in other countries.

148. A prime example of this federal-state relationship is the federal minimum wage law which does not pre-empt the higher wages set by states. See Fair Labor Standards Act, 29 U.S.C.A. §§ 201-19 (West Supp. 1992). Similarly, in the area of pregnancy discrimination, states have been permitted to provide more by way of maternity/paternity leave than was required by the federal Pregnancy Discrimination Act. 42 U.S.C. § 2000e(k) (1988). And, under the recently passed Family and Medical Leave Act of 1993, Congress specifically preserved state and local laws that would provide for greater leave rights than this new federal law. *The Family and Medical Leave Act of 1993*, Daily Lab. Rep. (BNA) No. 24, at S-3 (Feb. 8, 1993) (discussing the Family and Medical Leave Act's (P.L. 103-3) effect on other laws).

149. S. 1622, 102d Cong., 2d Sess. § 1001 (9) (1991) permits state safety and health programs and SHCs and training programs "that are *at least as effective as* . . . [federal law]" and § 1001(10) permits reporting requirements, that are *at least as effective as* . . . [federal law].

150. See Patrick R. Tyson, *OSHA's Standards of Fairness*, SAFETY & HEALTH 15 (Feb. 1992); cf. S. 1622, 102d Cong., 2d Sess. § 701 (1991) (proposed OSHA and NIOSH training provisions have no correlating provision for funding).

151. Tyson, *supra* note 150. Mr. Tyson portends that if the workers' compensation system barrier that protects employers from large potential awards for work-related injuries were removed, there would be no need for OSHA, as employers would provide very safe workplaces to protect themselves from tort liability. *Id.* at 15-16.

152. See S. 1622, 102d Cong., 2d Sess., § 1101 (1991) (regarding rights of victims and their families to information from inspections and investigations relating to work-related injuries, illnesses, or death of an employee); see also Early, *supra* note 57 (discussing how current COSHRA bill model resembles enforcement systems found in Scandinavian countries, and some Canadian provinces); Summers, *supra* note 20, at 504, n.296 (discussing a few states that increase workers' compensation awards if the employer has violated safety laws).

VI. HEALTH AND SAFETY PROGRAMS: INTERNATIONAL COMPARISONS

The present COSHRA bill's emphasis on employees taking an active role in workplace safety would place the United States more in line with other western industrialized nations.¹⁵³ For example, in Sweden, safety committees for larger companies have been required by law since 1949.¹⁵⁴ Statutory reforms in the 1970s further encouraged worker participation and labor-management cooperation, as well as established funds for research development and education.¹⁵⁵ Collective agreements also provided for employer funded OSH training.¹⁵⁶ Because of the success of collective agreements in the area of safety and health, agreements which cover eighty percent of Swedish workers, some have questioned the need for national legislation there since the government could merely check that the individual safety systems are working and that management and labor are cooperating.¹⁵⁷ However, a Work Environment Commission concluded that this structure protects employees' interests and creates a necessary framework.¹⁵⁸ Additionally, the argument that businesses will self-regulate absent a legislative structure or other economic incentive (such as United States employers' fear of tort liability or increase in workers' compensation costs) is, at its essence, a weak one.

Interestingly, Sweden's central collective agreement (SAF-LO-PTK) permits the number of employee representatives on the committee to exceed employer representatives by one.¹⁵⁹ Employee representatives are paid for time spent on these OSH duties.¹⁶⁰ The duties of the safety committee under the SAF-LO-PTK agreement include gathering statistics and information, initiating investigations and studies, and primary responsibility for company health services.¹⁶¹ These health services have a technical section containing safety engineers and industrial hygienists, and a medical section with doctors and nurses specializing in occupational medicine.¹⁶² This Swedish model may be worth emulating since it integrates a number of valuable functions on site and serves as a common ground upon which labor and management meet to address safety and health issues in the workplace. However, this model has been criticized for its tendency to place work environment issues outside the "corporate chain of command," and legislative amendments have sought to reemphasize the employer's responsibility, with the safety committee merely participating in planning the safety program, rather than having exclusive responsibility.¹⁶³

153. Korostoff et al., *supra* note 92, at 49.

154. *Id.* at 50. Safety delegates in smaller companies serve a similar function to committees.

155. *Id.* at 51.

156. *Id.*

157. *Id.* at 52.

158. *Id.*

159. *Id.* at 53.

160. *Id.* at 54. In contrast, employee representatives in the U.S. are not compensated for an OSHA walk-around. See Summers, *supra* note 20, at 502, n. 286. The COSHRA bill provides for paid time for committee duties. See *supra* note 136 and accompanying text. The Swedish safety delegates are by law paid for time spent on their duties. Korostoff et al., *supra* note 92, at 58.

161. Korostoff et al., *supra* note 92, at 55.

162. *Id.* at 56.

163. *Id.*

Unlike the United States' past efforts to improve OSHA's effectiveness via increasing the punitiveness of the enforcement process, Sweden has emphasized employer-funded safety delegate training.¹⁶⁴ The role of the safety delegate includes the right to information and protection against harassment and discrimination.¹⁶⁵ In addition, the safety delegate has the right to stop hazardous work when "there is an immediate and serious danger to the employees' life or health" and the employees are paid during such stoppages.¹⁶⁶ This is somewhat similar to standards currently recognized judicially in the United States.¹⁶⁷

In France, employees have long participated in the enforcement of safety and health regulations through management-labor committees that police the work environment.¹⁶⁸ These health and safety committees (CHSs) were mandated by industry and also by size, but were not very well-defined or effective, which led to further legislation in the 1980s.¹⁶⁹ Now, despite a legal mandate, not all businesses have established Health, Safety and Working Conditions Committees (CHSCTs), although almost all industrial enterprises have functioning CHSCTs.¹⁷⁰ In France, as in Sweden, nonmanagement employees comprise a majority on the committee.¹⁷¹

Compensation for committee duties in France varies from the rate of pay for two to twenty hours per month, but this may be changed by collective agreements.¹⁷² Training is only mandated for committee members in larger establishments, unlike Sweden where training is required for *all* employees regardless of committee membership.¹⁷³ The Swedish approach is more sensible in that training workers is vital to preservation of health and safety in the workplace. The French CHSCTs have been criticized for being inadequately funded, lacking in organization and effectiveness, failing to include high level managers as committee members, and ignoring suggestions from the committee unless they conform to the employers' preexisting plans.¹⁷⁴ Despite these shortcomings, the

164. *Id.* at 58 (citing STEVEN KELMAN, REGULATING AMERICA, REGULATING SWEDEN: A COMPARATIVE STUDY OF OCCUPATIONAL SAFETY AND HEALTH POLICY 200-01(1981)). The SAF-LO-PTK agreement provides for 40 hours of basic training and more when necessary.

165. Korostoff et al., *supra* note 92, at 59.

166. *Id.* at 59-60.

167. See *Whirlpool Corp. v. Marshall*, 445 U.S. 1 (1980). OSHA confers upon employees a limited right to refuse to obey a directive of an employer where such "could reasonably be expected to cause death or serious physical harm immediately or before the imminence of such danger can be eliminated through the enforcement procedures otherwise provided by . . . [the Act]." *Id.* at 9. This right to stop work does not include a guarantee of compensation. *Id.* at 18-19. The proposed COSHRA bill provides for a statutorily prescribed right to retreat from hazards. See Korostoff et al., *supra* note 92, at 79, 81.

168. Korostoff et al., *supra* note 92, at 63-64. This practice goes back more than one hundred years, and safety and health committees (CHSs) were mandated in the most dangerous industries and these CHSs were expanded in the middle of this century to encompass all industries with fifty or more employees. *Id.* at 64. Later changes included large nonindustrial facilities and agricultural employers. *Id.*

169. *Id.* at 64-65. Now generally any enterprise with fifty workers must establish a Health, Safety and Working Conditions Committee (CHSCT) unless no employee is willing to serve. *Id.* at 65-66.

170. *Id.* at 66. In smaller and/or less risky work environments, it is apparently more difficult to peak employer-employee interest in these CHSCTs. *Id.* at 67.

171. *Id.* at 68.

172. *Id.* at 70.

173. *Id.* at 72. Training is paid for by the employer in France. *Id.*

174. *Id.* at 74.

French system still provides for more employee participation in health and safety matters than the current United States' system.¹⁷⁵

In Great Britain, a Health and Safety Commission's Executive branch enforces the Health and Safety at Work Act (HSWA) through ten inspectorates.¹⁷⁶ Beyond the employer's general duty with respect to ensuring a safe workplace, employers are required to prepare a written policy for implementing workplace safety.¹⁷⁷ Where applicable, unions represent employees in creating and putting these plans into action and provide more leverage for ensuring compliance with regulations.¹⁷⁸

The British integrate paid time off of up to twenty-six weeks for medical reasons into their HSWA, but like the French model, paid time for safety training is limited to safety representatives.¹⁷⁹ Nonunion workplaces may have informal safety representatives but the HSWA specifies that trade unions may appoint safety representatives from among employees and these are the representatives who enjoy statutory rights to time off and recourse for enforcing the HSWA.¹⁸⁰

The safety representatives in Great Britain proceed first to the collective bargaining process for enforcement, and later may resort to the inspectorate.¹⁸¹ In a unionized workplace in the United States, the health and safety committee's avenue of recourse is generally set out in the collective bargaining agreement and the grievance/arbitration process is frequently the outlet for resolution of differences prior to or in conjunction with OSHA intervention.

Safety committees in Great Britain are only instituted if safety representatives request them in writing. Thus, the representatives are the primary actors, but if formed, these committees are comprised of equal numbers from management and labor.¹⁸² Legislative activity in 1988 has increased the attention paid to worker exposure to hazardous substances, and it is predicted that the European Community laws will generate further attention to and improvement of the health and safety culture within Great Britain's workplaces.¹⁸³

Perhaps the most significant unifying principle derived from reviewing OSH programs and the regulatory environment in the three countries examined above is that the present COSHRA bill's focus on worker participation is not a new and untried element.¹⁸⁴ Will worker participation on health and safety committees

175. *Id.* at 81.

176. *Id.* at 82-83. The inspectorates are classified by industries, *i.e.*, agriculture, factory, aviation, rail, mining and quarries, etc. *Id.*

177. *Id.* at 84.

178. *Id.* at 82, 84. The role of union as safety advocate and watchdog in the United States appears somewhat analogous to that adopted by unions in Great Britain. *Id.*

179. *Id.* at 84. In Great Britain, unions usually provide the training for the safety representatives. *Id.* at 86.

180. *Id.* at 85, 86 (discussing the functions of the safety representatives).

181. *Id.* at 87.

182. *Id.* at 87-88.

183. *Id.* at 93. See generally Terence P. Stewart & Delphine A. Abellard, *Labor Laws and Social Policies in the European Community After 1992*, 23 LAW & POL'Y INT'L BUS. 507, 566-68 (1992) (discussing EC's policy principles regarding health and safety conditions in work environments and EC Commission's plans for a Council directive that will define a system for information and maximum worker exposure levels to risks and the establishment of a safety, hygiene, and health agency).

184. See generally Korostoff et al., *supra* note 92, at 95 (discussing that OSH Reform Act borrows

be effective in the United States, where there has not always been a placid history of labor-management cooperation? A partial answer to this question may be that union membership has declined in the United States, so fewer workers enjoy the safety and health representation and advocacy that unions have traditionally provided. Simultaneously, OSHA's ineffectiveness has led to a movement to institute better internal review of our work environments. While employers remain primarily responsible for the integrity of these environments, workers have an equivalent stake in the matter in that their physical well-being depends upon vigilance with respect to health and safety matters.¹⁸⁵ Special attention should be paid to improving this cooperative relationship. The long overlooked effects of occupational hazards on the reproductive province must be addressed now so that workers and their offspring are no longer the canaries in the twenty-first century.

VII. CONCLUSION

Reproductive and developmental health hazards are a significant problem in terms of the number of people affected and the pervasiveness of toxins across all work environments. Moreover, there exists a heightened concern about the many environmental issues, especially those that negatively impact fragile human systems. With the advent of worker right to know laws and hazards communication standards, more information is becoming available. Because of these trends, an awareness has developed that will inevitably lead to demands for safer, cleaner, healthier workplaces.

For this problem to be effectively addressed, both private worksite-based programs should be implemented, and a comprehensive public initiative should be passed and enforced. Presently there are few private programs in place. In the public sector, the present COSHRA bill begins a process, but the level of attention to the critical issue of reproductive and developmental hazards remains woefully inadequate.

Against this backdrop of increased concern, proposed legislation and possibly more attentive agency oversight, it behooves employees and employers to begin crafting RHPs now within the context of broader safety and health programs. This strategy takes the important step of safeguarding employers' economic well-being, the safety and health of all workers, and their offspring.

the elements of worker participation from these systems). Japanese firms also follow company policies of joint consultation between management and workers via joint committees. The existence of joint committees and their discussion of matters such as occupational safety and health is mandated by law. Ronald C. Brown, *Labor Law Issues Facing Multinational and Japanese Companies Operating in the United States and United States Companies Using Japanese-Style Labor Relations: Agenda Items Under the "New Labor Relations,"* 8 U. HAW. L. REV. 261, 269 & n.29 (1986) (citing Masahiro Ken Kuwahara, *Worker Participation in Decisions Within Undertakings in Japan*, 5 COMP. LAB. L. 51, 54 (1982)).

185. See Amy B. Blumenberg, Note, *Medical Monitoring Funds: The Periodic Payment of Future Medical Surveillance Expenses in Toxic Exposure Litigation*, 43 HASTINGS L.J. 661, 677 (1992) (discussing need for workplace medical surveillance and limiting worker exposure to hazardous chemicals); OFFICE OF OCCUPATIONAL HEALTH, WORLD HEALTH ORGANIZATION, *EFFECTS OF OCCUPATIONAL HEALTH HAZARDS ON REPRODUCTIVE FUNCTIONS*, 4 (1987) (reporting on epidemiological information, identifying areas requiring further research and recommending development of a register of reproductive health effects of occupational hazards).