Injury Prevention 2002;8:170–171

Inj Prev: first published as 10.1136/ip.8.2.171 on 1 June 2002. Downloaded from http://injuryprevention.bmj.com/ on October 28, 2020 by guest. Protected by copyright.

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## LETTER

### Safe hot tap water and the risk of scalds and legionella infection

The recent paper in *Injury Prevention* by Jaye *et al* on the barriers to safe hot tap highlights the problem I raised last year regarding the perception of plumbers of the risk of legionella infection from hot water systems compared with that of scalds.[1] The paper reports that half the respondents thought it more important to control for legionella than to prevent hot tap water burns. Much of the blame for this perception can be attributed to the Australian and New Zealand Standard (AS/NZS 3500.4.2:1997) which sets a minimum temperature of 60°C for hot water storage systems to protect against legionella.[2]

In 1994 the standard was amended to require that the delivery temperature be a maximum of 50°C in personal hygiene areas in domestic installations through the installation of tempering devices. Several years ago the NSW Heath Department tried, as part of its "Burns like fire" campaign, to have this minimum revised down to 50°C and presented compelling evidence supporting the view that there would be no increased risk from legionella at this temperature.[3]

This view is also reinforced by the situation in the US where the *maximum* storage temperature is set at 50°C, a measure that has resulted in a reduction in scalds without any discernible increase in legionella infections.[4 5] Unfortunately the Joint Technical Committee for Plumbing Standards, which not unexpectedly is dominated by plumbers, dismissed this evidence and we are left with a confusing, contradictory, and expensive standard when a simple solution exists. Setting the storage temperature at 50°C, which is also easily implemented in most existing homes, would also protect children and more particularly elderly persons from hot water burns in the kitchen and laundry (a not insignificant problem).

I would also contend that in a warm country like Australia, where during the summer months cold water is often delivered at temperatures exceeding 30°C, it is likely that cold water is a more significant source of legionella infection (the ideal temperature for the growth of legionella is 20–43°C).[6]

The other issue that was touched on in the paper was the reliability of tempering valves, something which plumbers I have spoken to have alluded to and needs further investigation.

Both scalds and legionella are important public health problems, however, very little is known about the contribution of a domestic hot water supply to legionella. No one would deny that hot water systems are a source of infection, with up to 30% of systems testing positive to the organism, but the one study published examining domestically acquired legionella failed to show a relationship between hot water heater temperature and the disease.[7] On the other hand the evidence of the association between hot water temperature and scalds is compelling.

I hope other countries can learn from Australia's experience.

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## BOOK REVIEWS

### It's No Accident: How Corporations Sell Dangerous Baby Products

By E Marla Felcher. (Pp 302; US$17.95.) Common Courage Press (PO Box 702 Monroe, Maine 04951), 2001. ISBN 1-56751-204-6.

This is a passionate, powerful, and well informed book written by an academic and journalist trying to show why the cherished child of well informed and safety conscious professionals died in a nursery product that had been declared dangerous and withdrawn years before the child died.

Seventeen month old Danny strangled in the "V"-shaped wedge formed when the portable cot he was in partially collapsed. This was not an isolated incident. The cot had been ordered from the market five years before because of child deaths. Danny is thought to be the 12th child who died because of a similar faulty design. Three months later a 13th child died.

Dr Felcher makes the case in the introduction "the issue is how a regulatory system allowed more than a dozen children to be killed by a .. cradle (chapter 1), 66 children to die in bath seats (chapter 2), and six children to die in a .. portable crib (chapter 3). . . . Manufacturers who failed to adequately test their products and a government agency that has been stripped of the authority and budget it needs were responsible for these deaths. The deaths were not accidents. And . . .(without action) these tragedies will occur again and again and again".

The chapter headings outline the argument: (1) The Graco Converta-Cradle: A Deadly New Product Disaster; (2) Inadequately Tested Baby Products Hit the Market; (3) A Recall Process That Fails to Alert Consumers About Infant Product Dangers; (4) Corporations That Are Fined by the CPSC for Concealing Product Hazards; (5) Regulatory and Legal Systems That Allow Companies to Keep Consumers in the Dark About Dangerous Children's Products; (6) What Parents Can Do to Keep Their Infants Safe; (7) What the US Government Must Do to Improve the Safety of Baby Products, and How Parents Can Help. There are hundreds of references and sources in the endnotes and a full index.

The case histories of the deaths of named children confront the reader with the real cost of systemic failure. For example, details are given of a 1991 case in which police charged a single mother with negligence in the death of her child—she had left the 2 month old in a brand new motorised cradle in care of her 13 year old son while she went to the store. While this is something child safety organizations strongly advise against Felcher shows the contribution of system failure. She reports that three months before the baby died, the US Consumer Product Safety Commission (CPSC) had written to the manufacturer instituting a product review over two serious incidents (one death). The company stopped production but did nothing about the product in the shops and in the next four months, as the product was investigated, four more children died. By the time the product was recalled, 13 months after this child's death, the recall notice mentioned two deaths and two "near deaths" but the book reports that reporters found 12 deaths and 21 incidents of injury or near misses (p 16). The final horror of the story is that the process of legal discovery showed that the company engineers had identified the "fatal flaw" in design seven months before the product went to market and had suggested a solution.

It should be noted that some change is occurring. For example the Kids in Danger (KIDS) organization is monitoring and championing the Children's Product Safety Act, which prohibits the sale or lease of any unsafe products and requires childcare providers to certify they have checked and removed recalled products—to date the Act has been passed in five states.

Of necessity this is an American-centric book but there are strong lessons for other jurisdictions. For example, in Australia the power of regulators to mandate standards, to institute recalls, and require paid advertisements are different to those in America but there are major difficulties in knowing when problems occur and the US experience helpful. Australian product safety specialists have been arguing for over a decade that industry should be legally required to report problems to authorities as they become aware of them, similar to the system in the US.

If the system can fail so badly in a rich and well organised society then the rest of us, in a world in which US standards and preferences have such a significant role, need to seriously examine the situation in our areas of control.

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## National Strategy for Suicide Prevention: Goals and Objectives for Action.

US Department of Health and Human Services, Public Health Services. (Pp 204, free: 1-800-789-2647: reference document # SMA 3517), 2001. 02NLM:HV 6548.A1 2001 or see: http://www.surgeongeneral.gov/library.

In 1999, the publication of Kay Redfield Jamison's *Night Falls Fast* (see *Injury Prevention*, December 2000;**6**:312) catalyzed national reassessment of suicide causes, prevention, and control in the USA. The book encouraged researchers to help find more and effective ways to prevent suicides and provided a base for institutionalization on suicide prevention.

A *National Strategy for Suicide Prevention: Goals and Objectives for Action* is the result of a process led by the US Surgeon General. Establishing a National Council for Suicide Prevention made up of not-for-profit organizations and linking a half dozen federal agencies already concerned with suicide. A central part of the process was community involvement which was assisted by public hearings with testimony (including my own). The key elements of a planned national strategy offer a model for the on going dialectic of injury prevention and control planning, development, organizing, initiation, and evaluation.

A mild criticism of *Night Falls Fast* was that it could have had a more extensive chapter on public heath, this is overcome in the National Strategy. A comprehensive public health approach to prevention is tied to essential mental health principles and practices. Goals and objectives are outlined within the framework of UN/WHO guidelines, with short examples of initiatives in other countries.

The goals focus on awareness, intervention, and methodology. From promoting awareness that suicides are a public health problem that is preventable to improving surveillance systems, the goals and objectives offer a tapestry of ideas and approaches. The historical review is, unfortunately, too short an analysis for guidance on real life leadership dynamics. The final goals and objectives of the report are linked to national senior citizens groups, firearm safety design, but, not as yet, to national poison control systems just being enhanced in the USA. The appendices on evaluation of programs, on promising research efforts, of special populations at risk, and on a resource "bookshelf" are exceptional.

The new and promising venture represents a cross section of the national leadership expertise and institutional experiences in the USA. The report's hope is for some greater fiscal investments in programming and, all in all, comprehensively and effectively covers the full spectrum of an important National Strategy.

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## Les accidents de l'enfant en France. Quelle prévention, quelle évaluation?

By Anne Tursz and Pascale Gerbouin-Rérolle. (Pp 204; price not listed.) INSERM, Institut national de la santé et de la recherche médicale, 2001. ISBN 2-85598-791-1.

This book deals with a standard public health topic. For the last 20 years or so, numerous countries have pondered over what strategies they should adopt to reduce childhood injuries. This recent French publication offers a distinctive viewpoint. One question some readers, especially those who may have to struggle with their high school French, may ask is: How useful is this book outside its country of origin? The answer is given in what follows, but in two words, it is potentially "very useful".

The authors' stated aims are to identify possible gaps in childhood injury prevention in France, to investigate their causes, and to make recommendations to improve prevention. The book is essentially concerned with children younger than 10 years of age. It emphasises primary prevention of non-intentional injuries and excludes intentional abuse.

This work is intended mainly for professionals already familiar with the topic: public health professionals, education professionals, researchers, and health authorities. Hence, the brief opening chapter focuses immediately on the progress that could be made to bring France's rates of mortality and morbidity in line with those of other countries of northern Europe.

The book outlines tools for professionals working in injury prevention. Following a few short chapters examining the main principles of injury prevention (chapter 2), sources of data (chapter 3), and the extent of mortality and morbidity due to childhood injuries in France (chapter 4), two main chapters explore the organisation of prevention in France (structures) (chapter 5), and prevention methods (activities) (chapter 6).

The authors use a creative approach to introduce the structures. They describe the many organisations whose duties include childhood injury prevention in a broad sense, at the national, regional, subregional, or local level: their nature, goals, and types of action. The chapter ends with three *highly* original flowcharts that establish both the official and collaborative relationships among these organisations:

- Organisation of childhood injury prevention on the national level.
- Organisation of childhood injury prevention in France: road accidents.
- Organisation of childhood injury prevention in France: everyday accidents.

Another section intended to assist public health professionals in their work is a list of the names and titles of people with whom the authors met to collect the material required to write this chapter. Newcomers to the field in France can use this information as a reference tool.

The second main chapter (chapter 6), which deals with methods of prevention, is divided into two sections: the first on the laws, regulations, and standards, and the second on education and information. The text of the principal laws and regulations cited in the chapter are included in an Appendix, adding to the practical appeal of this book for French professionals.

The last chapter presents a critical analysis of the situation in France; it resolutely lists the gaps, and highlights the real possibilities for action. The book is clearly written, and reveals the authors' acute understanding of current scientific knowledge.

Although the book is essentially designed for readers interested in the situation in France, several sections can be useful to any professional working in the field of injury prevention. For example, chapter 2 presents a summary of the main principles of injury prevention, and the section entitled *Problèmes méthodologiques: fiabilité et limites des statistiques de mortalité* exposes the limits of data on mortality, no matter which population is under study.

Finally, this book can serve as an example for other countries that have set childhood injury reduction targets.

Note. The word "*accident*" in the book's title and as it used in the book itself does not translate the idea of "unforeseeable event" that had led to the word being proscribed in English.

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A French language version of this review will be posted on the journal web site at http://www.injuryprevention.com

Inj Prev: first published as 10.1136/ip.8.2.171 on 1 June 2002. Downloaded from http://injuryprevention.bmj.com/ on October 28, 2020 by guest. Protected by copyright.