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THE DISJUNCTION BETWEEN PREVENTION AND COMPENSATION OF HIP FRACTURES AMONG ELDERLY CITIZENS: THE LAW'S ROLE IN CREATING EX ANTE INCENTIVES

Janis Sarra*

Hip fractures due to falls are a significant contributor to mortality and morbidity among the elderly in Canada. Lord and Clark have reported that falls pose a major threat to the well-being and quality of life of older people, with approximately one third of all people aged sixty-five and over suffering at least one fall per year.¹ Braun estimates eleven percent of these falls result in significant injury to elderly people, including a sizable number of hip fractures.² Kannus reports that worldwide over eight million low-trauma fractures occur annually among individuals that are aged sixty years and older, and twenty percent or 1.6 million of those fractures are hip fractures.³ In addition to demographic changes that are likely to result in a huge increase in hip fractures in the next two decades, medical scholars suggest that the age-standardized incidence (individual risk of fracture) is increasing.⁴ It is estimated that annual cost implications of hip fractures in Canada are $650 million, and by 2041 the annual cost implications are expected to rise to $2.4 billion.⁵

¹ Janis Sarra is Assistant Dean and Associate Professor, Faculty of Law, at the University of British Columbia Vancouver, Canada. Sarra thanks UBC Law students Danielle Park and Sarah Jones for assisting with literature search and footnote assistance.

2. Julie A. Braun & Elizabeth A. Capezuti, The Legal and Medical Aspects of Physical Restraints and Bed Siderails and their Relationship to Falls and Fall-Related Injuries in Nursing Homes, 4 DEPAUL J. HEALTH CARE L. 1, 5 (2000).
4. Id.
5. See generally Mary Wiktorowicz et al, Economic Cost Implications of Hip
Hip fractures are primarily attributed to falls, and the falls are due to a complex myriad of factors including impaired cognition, unsafe housing and institutional practices, unsafe footwear practices, impairments of posture, compromised bone strength, nutrition, lifestyle and environmental factors, as well as additional factors that have not been identified or documented empirically.\(^6\) Julie Braun and Elizabeth Capezuti have reported that most elderly falls are due to what they call intrinsic factors such as health problems, frailty and sensory deficits. There are also extrinsic factors such as environmental factors and new demands on health and social services that play a part in elderly falls. Therefore, an individualized multifactorial intervention is the best strategy to reduce falls.\(^7\) Pekka Kannus and Karim Kahn have observed that low-trauma fractures of older adults are major public health burdens that involve economic costs, diminished health and well-being of elderly people, and social and psychological effects from reduced autonomy and quality of life.\(^8\) Prevention programs identify the risks associated with the individual, and then they create strategies that focus on prevention based on the particular risks. McIntyre and Freeman have suggested that patient-focus-care is the best strategy to enhance the quality of life of nursing home residents. Patient-focus-care can also prevent harm to nursing home residents through accommodations of medical and social needs instead of restraints or mandatory program participation that reduce autonomy and restrain the individual’s behaviour.\(^9\) In order to best design prevention strategies, there is a need for more research on the complex factors contributing to the increased risk of hip fractures.

One aspect of this discussion of risk factors in hip fractures is whether the legal system creates particular \textit{ex ante} incentive effects that contribute to or mitigate the incidence of falls and/or hip fractures. This article begins an exploration of whether there are incentives within the legal system that can be tailored to

\begin{itemize}
\item \(^{6}\) Lord & Clark, \textit{supra} note 1; Kannus \textit{et al}, \textit{supra} note 3.
\item \(^{8}\) Kannus \textit{et al}, \textit{supra} note 3, at 1364.
\item \(^{9}\) Moira McIntyre & Peter Freeman, Workshop Presentation on Aging and Nursing Homes (June 2, 2003), Halifax, Nova Scotia.
\end{itemize}
increase the implementation of measures designed to prevent hip fractures. The first part of this inquiry discusses the extent to which the legal system currently creates ex ante incentives to prevent hip fractures, including any factors currently unrecognized by the legal regime. It explores the limits of the current liability regime and its disjunction with prevention goals. The second part raises some very preliminary questions regarding a future research agenda to explore how to create new legal incentives for prevention of hip fractures, which may complement preventive strategies in the health, socio-economic, and public policy spheres.

When one begins to consider the relationship between the legal system and hip fractures, the obvious incentive effects appear to arise from the statutory liability and tort regimes. Statutes extend liability for individuals in hospitals, nursing homes and other assisted living facilities. One question is whether the statutory framework of protection, as currently constructed, provides sufficient incentive to prevent hip fractures. Does the liability regime really just encourage narrowly constructed risk management strategies, physical restraints and other strategies, instead of looking at longer term and more systemic solutions? In this respect, the issues differ in Canada and the United States where civil liability is much more pronounced and tort liability chill is a driving factor in many legal prevention strategies. The more private and litigious nature of the U.S. health care regime has caused most legal literature regarding health outcomes, prevention, and legal liability to emanate from the United States. One issue is whether there are different liability effects and different incentive effects in the Canadian system, where health care is a greater mix of public and private services.

For elderly individuals living on their own, a further issue is what incentives the legal system creates, if any, for home care professionals, public health officials, store owners, and others to identify and eliminate hazards. In this respect, occupiers’ liability legislation and professional licensing standards have been aimed at defining the nature and scope of the duty of care. One question is whether codification of these relationships creates particular incentives to prevent falls and hip fractures, or whether they have an opposite effect. Does the legal system need to create incentives for individuals, in terms of prevention, or is this a function of better education and support measures?
Most of these questions require further empirical study, and this article is a starting point in the discussion. It is premised on the fact that many of the incentives to reduce hip fractures are non-legal. Therefore, the development of any prevention strategy within the legal system need to be aligned with health care, home care and multiple other strategies for the elderly, including addressing the more serious systemic problem of poverty among elderly individuals.

**FALLS AND HIP FRACTURES: LEGAL RISKS IN PUBLIC AND PRIVATE SETTINGS**

In Canada, provincial and federal government support for health care and other services for elderly individuals implicate legislative and regulatory standards, public funding and budget allocations at the macro-political level and at the operational level. Legislative standards also reflect somewhat the dominant normative views about society's obligation to create safe and healthy living conditions for older citizens. Public policies interact with legally imposed constraints on conduct and these affect the quality of life of older people, including, arguably, their safety, well being and risk of falls in the particular settings in which they live. Health policies aimed at de-institutionalization, devolution of caregiving to private enterprises or cost cutting measures in terms of the ratio of health care professionals to patients/clients may result in savings to the tax base in the short-term, but will likely increase the risk of falls and hip fractures.

The long-term costs of health care from failing to set legal standards that reduce the risk of falls and the social costs of the resulting morbidity and mortality from falls are inadequately accounted for in setting legal and regulatory standards. Rather, these long-term costs are frequently treated as externalities in the health care system. The costs exist, but they are borne by the older individuals who suffer from the health, social, and other effects associated with falls and hip fractures. In other cases, legislative decisions regarding funding the costs of health care are accounted for in the costing of hip fractures. However, the loss of an individual's independence, mobility, and dignity are not accounted for in public costing, rather they are costs borne by the individual, individual's family, and sometimes community members.
In Ontario, British Columbia and other Canadian provinces, the shift towards de-institutionalization arguably creates a particular incentive effect in respect to hip fractures. Ironically, since the mid-1960's, advocates for increased public health and adverse health outcome prevention have argued for increased emphasis on public health, home care supports, and reform to the health care system based on community based services. In principle, such programs are aimed at helping foster or preserve independence for the elderly and at allowing the community voice in the provision of services. For governments, the appeal was that preventive and community-based approaches were less costly and more patient focused.¹⁰

Yet the closure of hospital beds, the under-funding of chronic care facilities and the move to more profit-based services in the long-term care area were not accompanied by adequate funding of home care and other initiatives genuinely aimed at real support to the elderly in their homes. As a consequence, legislative choices aimed at prevention and patient-focused care may have increased the risk of falls in the elderly population. It is also estimated that a considerable percentage of those with hip fractures have a repeat fall and are re-institutionalized.¹¹

CANADA AND THE "LIABILITY CHILL"

It is difficult to disentangle liability fear, safety concern and injury risk for older people. In any setting where others are responsible for the daily care or living standards of the elderly, there is a duty of care, and consequently, the potential for liability arising from breach of that duty. Legal scholars have observed that many policy discussions regarding health care reform and notions of the public interest are tempered by professionals' self-interest, whether it is the cost of the reforms or promotion of best practices.¹²

Flood has suggested that what is ostensibly in the public interest is not necessarily in the patient's interest, given that professionals may be co-opted by government initiatives that

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¹². Colleen Flood, Conflicts between Professional Interests, the Public Interest and Patient's Interests in an Era of Reform, 5 Health L.J. 27 (1997).
shift the burden of health care from the health care providers to individuals in order to bring provincial budgets under control.\(^\text{13}\)

More recently, Canadian health law scholars have expressed concern that one outcome of NAFTA and other free trade initiatives is that Canadians may have increased the risk of creating a two-tier health care system based on ability to pay for services and supports.\(^\text{14}\) Even with enshrined protections for health services maintained for a public purpose in NAFTA, Epps and Flood have suggested that the liberalization of trade may create pressures on the Canadian health system that could shift the balance away from a comprehensively funded health care system.\(^\text{15}\) Canada is also experiencing some shift to U.S. style managed care, raising new issues of contractual risk allocation for elderly caregiving. Because more comprehensive health care is not available, trade liberalization, growing privatization, and shifts away from comprehensive health programs may create new incentives to pursue litigation, including claims for compensation from falls.

Nursing home residents are increasingly older, causing individuals entering nursing homes to have more health problems. In turn, this poses new challenges for patient-centred care. Choices by private health care providers to contain costs and maximize profit, such as enrolling lower risk individuals (leaving those at higher risk without care), or other cost control measures that are current practices, also have incentive affects.\(^\text{16}\) Thus, the standards required of publicly regulated but privately operated health care, assisted living, and other facilities have an impact on the quality of the elderly person’s life, and on the risk of falls and injury.

The impact is a shift in the liability risk of falls from the public to private domain. Thus, there is a growing societal wish to remain in the home or in living situations in which autonomy is preserved, and yet the risk factors associated with this increased autonomy have not been adequately explored. There is also a connection to the incentive effect of living alone. The decreased availability of long-term care coupled with a growing

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\(^{13}\) Id.

\(^{14}\) Tracy Epps & Colleen Flood, Have We Traded Away the Opportunity for Innovative Health Care Reform? The Implications of the NAFTA for Medicare, 47 MCGILL L.J. 747, 747 (2002).

\(^{15}\) Id. at 762, 766.

\(^{16}\) Flood, supra note 12, at 40.
elderly population has resulted in increasing numbers of elderly individuals who are living with little or no assistance. Statistics Canada estimates that more than fifty percent of women over age sixty-five live in a low-income situation. Low income frequently means that eye care goes unchecked or that individuals do not seek health care assistance for problems of balance or diet, contributing to falls and fractures. Shifting demographics suggests that older people are living longer in their homes, yet there is decreasing availability of traditional family support structures. There are inadequate home care services in place that would identify risks in the home or the elderly person’s daily life routine that could reduce risk and prevent falls. Poverty means that the elderly will have to take public transit or walk instead of using taxicabs during icy winter days, which increases the risk of falls.

Poverty among the elderly is a legal as well as a political public policy choice. These legal and policy constraints determine the extent to which pay equity, employment equity, human rights, public pensions and other laws influence the ability of individuals to earn incomes during their working lives and/or the public assistance available during their retirement. These legislative choices determine individuals’ living and health choices when they are older. The strength of pension law and protections, and the extent to which bankruptcy laws allow the elderly to keep their retirement savings, all contribute to the conditions under which older individuals will live, and it indirectly affects the risk factors they may face. The shift, for example, from defined benefit pension plans to defined contribution pension plans is shifting the risk of ensuring an adequate retirement income from the employers to individuals in terms of the outcomes of investment strategies of fund managers. Combined with stock losses from fluctuating securities markets and inadequate securities law protection for smaller investors, this will contribute to longer-term poverty for older persons and perhaps exacerbate the risks discussed here.


18. An example would be the scandal involving the Enron Corporation in the United States, where older employees lost not only their jobs but all their pension saving because these were invested almost entirely in Enron stock.
Thus, the choice of laws, budget allocations, determinations of responsibility and liability, all influence the extent to which we as a society are prepared to truly prevent hip fractures.

Similarly, preventive and public health programs have resulted in increasingly longer life expectancy, but may have created additional risks of falls given that individuals are living longer and thus are more likely to be in the highest risk categories for falls and hip fractures. It is the linkages between many of these factors and the legal system that is underexplored and which should be the subject of future study.

**Occupiers' Liability and Incentive Effects to Prevent Injury to the Elderly**

A number of falls and hip fractures among the elderly occur in stores, parking lots and public sidewalks. A canvass of recent judicial decisions on liability indicates that many of these cases involve falls on ice and wet floors in retail shopping facilities. Canada has codified how liability is to be attributed in such circumstances, providing at least some legal incentives to make premises safer and to prevent falls through codified standards of liability. In most Canadian provinces, the duty of care in respect of these types of falls is defined under the various *Occupiers' Liability Acts*, which set standards for safe premises and impose duties on those occupying stores, residential facilities and other businesses. An "occupier" includes a person in physical possession of premises who has responsibility for or control over the condition of the premises or activities carried on the premises.

Sections 2 and 3(1) of the Ontario *Occupiers' Liability Act* specify:

2. Subject to section 9, this Act applies in place of the rules of the common law that determine the care that the occupier of premises at common law is required to show for the purpose of determining the occupier's liability in law in respect of dangers to persons entering

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19. See, e.g., Occupiers' Liability Act, Revised Statutes of Ontario, c. O.2 (Ontario 1990); Occupiers' Liability Act, Revised Statutes of British Columbia, c. 337 (British Columbia 1996); The Occupiers Liability Act, C.C.S.M., c. 08 (Manitoba).

on the premises or the property brought on the premises by those persons.

3(1) An occupier of premises owes a duty to take such care as in all the circumstances of the case is reasonable to see that persons entering on the premises, and the property brought on the premises by those persons are reasonably safe while on the premises.

The statute then tempers that liability by specifying that liability does not apply in respect of risks willingly assumed by the person entering the premises. Section 4(1) specifies that even where an individual willingly assumes the risk, the occupier still owes a duty to the person to not create a danger with the deliberate intent of doing harm and a duty to not act with reckless disregard. There are two aspects to legal incentives under occupiers' liability legislation (1) the duty to take care and to make premises reasonably safe; and (2) the defense to liability from those who "willingly assume" risk. How the courts have interpreted these provisions delimits the scope of liability and also creates structural incentives to create safe premises aimed at preventing the risk of falls.

The Supreme Court of Canada has held that under the Occupiers' Liability Act, the occupiers have an affirmative duty to make the premises reasonably safe for persons entering by taking reasonable care to protect such persons from foreseeable harm. The duty is not absolute and occupiers are not always liable for any damages suffered by persons entering their premises. Their responsibility is to take such care as in all the circumstances of the case is reasonable. The Supreme Court held that the Occupiers' Liability Act was enacted to replace, refine, and harmonize the common law duty of care owed by occupiers of premises to visitors on those premises. However, the court held that this statutory codification was not intended to effect a wholesale displacement of common law defenses to

21. Id. § 4(1). Section 9(3) specifies that the Negligence Act still applies.
24. Waldick, supra note 22, at ¶ 40.
liability. In examining the nature and extent of the duty of care under occupiers' liability legislation in Canada, the court held that while the standard of reasonableness does not change, the factors that are relevant to an assessment of what constitutes reasonable care will be specific to each fact situation. The Supreme Court also held that the existence of customary local practices which are unreasonable in themselves or which are not otherwise acceptable to the courts, does not oust the duty of care owed by occupiers under the statute.

In terms of a defense under the statute, the Supreme Court of Canada has held that the statute carves out only a very narrow exception to the class of visitors to whom the occupiers' statutory duty of care is owed, similar to the doctrine of volenti, that the individual assumes the risk and absolves the occupier of all responsibility. It found that the standard is greater than sciens (mere knowing) and requires the application of the maxim volenti non fit injuria (knowledge of the risk and consent or waiver of legal rights that may arise from harm that is being risked). The Court held that the premise underlying the volenti doctrine is "that no wrong is done to one who consents." The requirement that the defense requires a positive agreement to waive the right of action has been subsequently endorsed by courts across Canada, including a requirement to establish that the individual assumed both the physical and legal risk involved.

Recent judicial decisions under occupiers' liability statutes indicate several trends. At times, it is difficult to establish that the occupier breached its duty of care with older plaintiffs. For example, in a recent Manitoba Court of Appeal case, an eighty-four year old woman had slipped entering a grocery store and fractured her hip. The court dismissed her appeal that the store had breached its duty of care owed to her by failing to

25. Id.
26. Id. ¶ 33. See also Warren v. Cadith Entertainments Ltd., Ontario No. 885 (Can. Ont. C.J. (Gen. Div.) 1994), where a Bingo Hall was found liable for failure to see that a seventy-six year old woman who fell on a ridge of the defendant's floor and fractured her hip was reasonably safe while on its premises.
28. Waldick, supra note 22, at ¶ 38.
29. Id. ¶ 48.
reasonably maintain the condition of its store to ensure her safety. The court found that the store had placed a small sign that gave notice of danger from slipperiness. The plaintiff fell taking a first step off of a carpet onto the tile floor of the store. A second carpet had been placed there but at a distance beyond which the plaintiff would be able to reach on her first step. In dismissing the claim, the trial court held that (1) the warning sign was sufficient; (2) the plaintiff had contributed to the slush on the floor when she entered; (3) the amount of water on the floor was not excessive; and (4) it was unreasonable to expect the store to either vacuum up the water more regularly, provide additional floor mats when floors were slippery or utilize a dryer to supplement the mopping. The Court of Appeal upheld the trial judgment, finding that the store had discharged its duty of care. There is no discussion about the costs of additional mats or staff as opposed to the social costs of loss of quality of her life after the fall and fracture. This highlights the discounting effect that occurs in regard to the elderly. Falls and hip fractures in grocery stores appear from the number of court decisions on such claims to be one of the more common cases where claims are brought under occupiers' liability legislation. By setting a low standard for "reasonable care," one outcome may be an increase in falls from slippery premises because occupiers will not fear liability challenges for unsafe premises.

THE "ELDERLY COMPENSATION DISCOUNT" AND ITS INCENTIVE EFFECTS

Cases of alleged breach of duty under occupiers' liability legislation involving falls of elderly individuals and resulting hip fractures indicate that the court engages in a two-part inquiry. First, did the defendant take reasonable care to see that the parking lot or other venue of the fall was reasonably safe? Second, did the plaintiff willingly accept the risk? The British

32. Id., ¶ 4.
Columbia statute uses the language "willingly accept" the risk, and the Ontario statute uses the language "willingly assume" the risk. In both jurisdictions the courts have found that this requires some sort of affirmative acceptance, not just proceeding in the face of the knowledge of the risks. This does assist in ensuring that claims for damages from hip fractures are not dismissed on the outset on the basis that the individual assumed the risk by entering the store or parking lot.

Where issues of occupiers' liability are litigious, there is sometimes a further challenge by defendant that pre-existing disease or health of the complainant was a precondition to a future fall or had already diminished quality of life such that the plaintiff should receive fewer damages. Courts have observed that it is difficult to separate pain, suffering, and loss of enjoyment that is due to a fall from that which comes from aging. While the duty of care is cast fairly highly, the measure of social and economic costs of the fracture from the fall are discounted for the elderly.

A number of the reported court decisions involve falls in icy parking lots, perhaps a quintessentially Canadian risk. While not all of these cases involved elderly individuals, a sizable number do, and the long-term effects of such falls and hip fractures are now well established. For the store, hospital or commercial enterprise, the cost considerations are the cost of employing individuals, equipment and supplies to de-ice, versus the probability of a fall, that the customer or client will complain, the risk that they will pursue legal remedies, and that the defendant will be unable to establish a defense of reasonable care. Moreover, insurance coverage can be purchased, and absent an increase in premium costs from successful actions,

35. Id. at 10, citing also Waldick v. Malcolm, 61 O.R. (2d) 624 (Can. Ont. S.C. 1987) at the trial level (see references to S.C.C. judgment in this case).
36. Id., see discussion at 11-13.
decision makers responsible for prevention of falls in their operations can be insulated from suffering the full impact of their cost benefit decisions on de-icing and other prevention measures. These circumstances inescapably raise the question of how do we begin to approach more systemic preventive strategies.

Several court judgments involve hip fractures and elderly individuals falling from deteriorating sidewalks because municipal authorities failed to maintain public sidewalks and paths.\textsuperscript{40} It may be that there are different considerations in creating incentives for prevention of falls among public authorities as the costs of compensation from liability are not borne by the individuals making the decisions not to repair or de-ice the sidewalks, and they will likely be implementing policy choices driven by budget decisions of elected officials.

Cases that analyze damages also provide evidence of the reduced quality of life and of independence of the person who fell and suffered a hip fracture. There is also some indication of the complications that occur from original hip injuries and consequent reduced economic security. Claims under the Family Law Act, where family members seek compensation for time and care provided, also indicate how the burden of these falls and fractures are also borne by family members.\textsuperscript{41} Other scholars have observed that one of the main hurdles to effective prevention and compensation for elderly people is the existence of inadequate legal remedies that would create some positive incentive effects in reducing harm.\textsuperscript{42}

Since most complaints of injuries are never acted on, when official complaints are filed, only about one percent ever make it through the court system to trial and disposition. Thus the true effects of falls and fractures and implications of the legal system


\textsuperscript{41} Id \paragraph{1}; see also, e.g., Warren v. Cadith Entertainments Ltd., O.J. No. 885 (Can. Ont. C.J. (Gen. Div.) 1994). Family law legislation in some provinces allows claims for services in assisting a family member recover from a hip fracture or other injury; see, e.g., Family Law Reform Act, Revised Statutes of Ontario, c. 152, s.60 (Ontario 1980).

\textsuperscript{42} Suzanne Levitt & Rebecca O'Neill, A Call for a Functional Multidisciplinary Approach to Intervention in Cases of Elder Abuse, Neglect and Exploitation: One Legal Clinic's Experience 5 ELDER L.J. 195, 195 (1997). They suggest that in the U.S. there are three main hurdles to effective intervention by legal advocates on behalf of elderly clients: access to essential services, inadequate legal remedies and procedural barriers to prevent elder abuse, including the use of restraints unrelated to medical conditions.
are unknown. However, it is clear that precedent in assigning legal responsibility has some influence on the behaviour of those in a position to ameliorate some of the risk factors that create falls. Current legislated standards create incentive effects for occupiers. They weigh the costs of maintenance of anti-fall strategies such as adequate staff to ensure slippery areas are cleaned up and the cost of sanding icy parking lots, against the risk that an elderly person who falls will understand that they may have a remedy, that they can establish both a duty of care and breach of that duty, and that they have the information, resources and stamina to pursue a claim. The extent of these incentive effects and whether they create the wrong incentives requires further study and consideration.

**INCENTIVE EFFECTS OF INSTITUTIONAL CARE MANAGEMENT DECISIONS**

Institutional care settings include a range of facilities from homes for the aged, nursing homes, and hospital wards. Lord and Clark report that the incidence of falls for the elderly in institutional care settings, including nursing homes and intermediate care facilities, are even higher than in the community, over fifty percent of all people aged sixty-five and older fall at least one time per year.\(^{43}\) Falls also generally increase the risk of older people being admitted to nursing homes.\(^{44}\) Moreover, there is some evidence that staff shortages in institutional settings may contribute to falls from lack of staff to properly lift patients, inadequate staffing to properly detect malnutrition and dehydration, and inability to monitor at-risk patients.\(^{45}\)

In the nursing home setting, falls and fall-related injuries are the leading cause of lawsuits launched against nursing homes in the United States.\(^{46}\) Julie Braun and Elizabeth Capezuti have observed that, historically, introduction of bed siderails and physical restraints were a risk-management strategy, aimed at reducing or preventing falls and also aimed at preventing fall-related litigation.\(^{47}\) The prevention of falls is cited as one of the

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43. Lord & Clark, *supra* note 1, at 199.
44. *Id.* at 199, 202.
45. Braun & Capezuti, *supra* note 7, at 239.
47. *Id.* at 1. They define physical restraints as any manual method or any
principal reasons for using restraints in nursing home settings, with a strong reference to liability control. Yet they argue that such strategies do not accomplish the objective of either preventing falls or litigation and that studies indicate that the rates of injury from falls are higher at institutions using restraints. One half of all fall-related injuries are by those who are restrained. Braun and Capezuti suggest that one can design risk-management strategies that reduce liability exposure, utilizing individualized assessment of fall risk of nursing home clients.

The issue of restraints has been the subject of considerable scholarly commentary involving both medical and legal considerations. At the heart of these debates is whether restraint measures prevent falls and subsequent hip and other fractures and injuries. Braun and Capezuti report that in countries such as Sweden and Scotland, restraints are rarely used, yet the incidence of fall injuries in nursing home settings is no higher than those countries where such restraints are regularly utilized. They cite a series of studies that indicate that use of restraints does not reduce the overall incidence of injurious falls, and suggest that this is a key to developing new prevention policies.

THE EFFECTS OF LIABILITY REGIMES ON INSTITUTIONAL CARE DECISIONS

Doctors and other front line health care practitioners are influenced by liability chill and public policy choices about health care. More prevalent in the United States, tort scholars argue that there is a connection between prevention of future injuries and compensation of injured individuals. The classical law and economics argument is that the tort system reflects a trade off between the costs of prevention of harm and costs of avoidable harm in the form of compensation for hip fractures. Where the costs of compensation for avoidable hip fractures

48. Id. at 7.
50. Id. at 11.
exceed the costs of prevention, decision makers will shift their strategy towards a risk prevention one in order to save costs. However, this assumes that the costs are fully recognized and accounted for in the tort system, an assumption that does not appear to have been established. As noted above, the incidence of hip fractures may be documented but the costs to the economic, social, and well-being of individuals are externalities that are often not accounted for in the tort liability regime. Thus, incentives to reduce the risk of hip fractures are not created by the tort or statutory liability regime, although the regime does appear to have some small incentive effect.

Scholars have argued that the risk of lawsuits has incentive effects on medical practice, but the effects are less than ideal. Therefore, they argue, it may be that there should be greater focus on the institution creating the incentives for reduced risk, with the institutional caregiver rather than the individual health caregiver bearing the tort costs as one means of creating incentives to reduce health risks. Furrow observes that the more colleague-dependent the medical or health practice becomes the greater likelihood for self-imposed peer review and higher quality care. Furrow suggests that tort law is generally an economic and behavioural mechanism, whereby the rule of liability substitutes for regulation of the quality of health care. He suggests that it provides health care practitioners with incentives to reduce injury and medical error, since patients lack the information to monitor the quality of care themselves. In turn, the economic model of liability seeks an optimal prevention policy, one that minimizes the total cost associated with injuries, including resource costs of injuries, costs of prevention, administrative costs of compensation, and the cost of insurance. While Furrow believes that the tort system does create some incentive effects, threats of tort suits are only one factor of many that create incentives in medical practice and that the link between medical error and tort culpability is complex and imperfect. Furrow also observes that the tort regime filters out the poor who do not have the information or resources to

52. Id. at 989.
54. Id. at 1003.
pursue claims. He argues for an institutional liability regime, where hospitals and other facilities acquire direct liability as opposed to the current vicarious liability, creating greater structural and centralized incentives to change practices to reduce risks.  

**LEGAL STRATEGIES FOR PREVENTION OF HIP FRACTURES: A RESEARCH AGENDA**

Many prevention strategies for falls are available, for example, physical aids such as grab bars and non-skid mats. Some strategies enhance prevention and protection but raise issues of self-dignity or independence. One example is hip pads, which raise the question of prevention versus self-image. Another is implants, raising a host of new issues regarding prevention, the scope of medical intrusion and loss of self-dignity. Prevention options are driven in part by costs, including legal liability issues, and the autonomy and dignity of those at risk. Health care professionals can (should) educate family members about all prevention strategies, including lighting, cluttered rooms and passageways, wet or polished floors, nutrition, ongoing preventive health care, and a host of other factors that can prevent falls. As noted in the introduction, this brief article does not propose new legal strategies for prevention of hip fractures. Considerably more empirical study is required, particularly in terms of assessing other systems internationally to explore different kinds of models and the potential for truly creating *ex ante* incentives to reduce hip fractures. However, some initial questions can be raised, that may set the stage for identifying further collaborative research possibilities. Any future research agenda regarding legal incentives must be undertaken in conjunction with health care strategies, given that they are integrally inter-related.

**WHAT ROLE OUGHT LEGAL SYSTEMS TO PLAY IN PROMOTING MORE SYSTEMIC APPROACHES TO PREVENTION OF HIP FRACTURES?**

Numerous scholars have explored issues of liability,

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55. *Id.* at 1013-14.
insurance and compensation in health care.\textsuperscript{57} While successful medical injury and malpractice suits are considerably fewer in Canada, they do pose many of the challenges described above and may act to chill more creative thinking on prevention of hip fractures and other health outcomes. The issue is whether the tort system really has a deterrent effect on medical and health practice. In particular, scholars have questioned whether it does encourage optimal or appropriate levels of health care, and have argued that there is an absence of evidence that tort law has a positive impact on the quality of care.\textsuperscript{58} Similarly, one can speculate on whether tort law and statutory liability for the elderly has either deterrent effects in the sense of removing physical and other risks of falls or particular incentive effects in not encouraging a system focused on prevention.

In the context of medical malpractice, Weiler has suggested that tort law rests on the notion that imposing liability on those at fault in prior accidents will induce similarly situated individuals to avoid such culpably risky behaviour in the future, but that it is difficult to establish how much of an incentive effect is created and whether it materially reduces injuries to potential victims.\textsuperscript{59} Elgie \textit{et al} suggest that it may be more effective just to offer lower but adequate levels of compensation to a broad group of those harmed than to provide a small minority of people access to a generous award.\textsuperscript{60} They use the Swedish no fault medical misadventure system as an illustration of how this could be accomplished, arguing that there may be increased efficiencies because establishing causation is easier than establishing fault. There may be savings resulting from a reduction in practicing defensive medicine, and their may be reduced rates of injury because of improved quality assurance.

\begin{thebibliography}{99}

\bibitem{58} Robert Elgie, Timothy Caulfield & Michael Christie, \textit{Medical Injuries and Malpractice: Is It Time for No-Fault?}, 1 HEALTH L.J. 97, 98 (1993), discuss this in the context of medical malpractice and iatrogenic injuries (adverse condition of a patient occurring as a result of treatment by a physician).


\bibitem{60} Elgie \textit{et al}, supra note 58, at 102.
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Further comparative study is required in order to determine the role that legal systems should play in promoting systemic approaches to prevention of hip fractures.

**SHOULD WE MOVE TO A SYSTEM OF NO FAULT COMPENSATION FOR HIP FRACTURES?**

Scholars examining tort liability in the medical malpractice area have suggested that perhaps it is timely to consider a no-fault system for medical injuries. In the context of hip fractures, perhaps it is time to think about more systemic prevention strategies. This entails future thinking about two aspects. First, do we need to attribute personal or institutional liability to individuals so that decisions about standards of facilities, staffing ratios and other caregiving choices really do work to prevent hip fractures? The argument in favour is that individuals make choices, particularly about the amount of resources to be expended on making places safe or caring for older people and that absent some incentive system, individuals will externalize the costs of falls and hip fractures to the elderly. Intuitively, there is some merit to this argument, although as Weiler noted above, it is premised somewhat on the idea that others will note and take into account the liability findings against other individuals.

Another approach is to maintain liability, but attribute it to the institution, with some sort of experience rating in the premium costs of compensation coverage. This is not unlike the workers’ compensation system in Canada. That system ostensibly provides global insurance for workers, and while they are required to establish a causal link between their injury and the employer, the compensation comes from pooled resources drawn from industries, pegged to the amount of prevention or injury that the industry has experienced. Workers arguably have an easier ability to establish claims and receive compensation, and employers avoid the risk of the full liability regime and its attendant costs. A similar system for the elderly and hip fractures is possible, but unlike workers’ compensation, the sources of the falls are complex and diverse. It is unclear

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61. *Id.* at 103, 114-115.
62. *Supra* note 59 and accompanying text.
63. This assertion could be highly contestable with recent changes to workers’ compensation regimes that disadvantage worker claimants.
that an appropriate liability regime could be easily fashioned. Establishing fault or a breach of duty of care is a major barrier to compensation under the tort regime.

It may be more realistic to simply adjust the tax base to ensure that there are sufficient resources to support elderly individuals, to provide comprehensive income support systems, proper home care and health care supports, and funding of other preventive strategies, and move away from the liability regime entirely. Egregious cases of creating risks of falls could still be dealt with by the criminal justice system, but the costly and ineffective tort regime would not be utilized as a prevention strategy. If the costs to the system from falls and hip fractures were the same, the costs of this harm would be redistributed, with those injured bearing a smaller percentage of the costs. There also may be fewer losses to elderly individuals in terms of the quality of their lives and their morbidity and mortality rates. If the actual harms from falls and hip fractures were reduced because adequate structural funding and incentives were in place at the front end of the process, then the cost saving could be enormous, and more importantly, the quality of life for those at risk of these falls would be considerably enhanced. These are questions that require further study.

Neil Komesar, Larry Palmer and others have observed that modifying the tort liability system will not actively promote safety as the principal public policy objective. Rather, the goal of safety and prevention of injury must first be established as a primary public policy objective and then multiple legal and non-legal vehicles such as the tort liability system, regulation of standards, and market pressures used to achieve these goals. Public health measures, which are optimally aimed at the prevention aspect of health care, are funded through legislative and regulatory initiatives, and it is here that the law directly influences prevention of injury.

65. Id. at 1626.
Does the concept of autonomy and negotiated risk present a possibility for reduced hip fractures?

Although beyond the scope of this article, another possibility, which was suggested by Marshall Kapp and other scholars, is the notion of "negotiated risk." Earlier work by Kapp and Karen Brown Wilson tracks the evolution of assisted living and important questions of autonomy for individuals, liability fear on the part of health and daily care providers, and the tension between safety and independent decision making for older individuals.\textsuperscript{66} Kapp and Brown Wilson observe that the shift in types of living and care arrangements necessitates a more fulsome consideration of how to reconcile these tensions. They suggest that the negotiated risk concept builds on the informed consent doctrine, by using the individual's autonomous right to make decisions about his or her own care plan to clarify and reallocate the risks and responsibilities associated with the choices made.\textsuperscript{67} Kapp and Brown Wilson make an important observation that there needs to be a paradigm shift away from liability considerations and risk avoidance at the cost of client autonomy.\textsuperscript{68} It would appear that a discussion of prevention of fall and hip fractures falls squarely within this issue, particularly given some of the factors identified at the outset as risk factors for fractures.

The issue of negotiated risk does require careful consideration. A key issue is how one defines assumption of risk and how one creates incentives in the system that would obviate the need for threat of tort liability. While negotiated risk presumably reallocates responsibility between the parties rather than removing responsibility from caregivers, there is a question of how one can ensure that new incentives are not created to shift all of the risks onto the individual. The same factors that create barriers for the elderly in tort and statutory claims for injury, lack of information, resources, difficulty in establishing the duty of care was breached, and willing assumption of risk, are all factors that come into play in a discussion of a negotiated risk paradigm. Kapp and Brown Wilson note the imbalance in


\textsuperscript{67} \textit{id.} at 9.

\textsuperscript{68} Kapp & Brown Wilson, \textit{supra} note 66, at 8.
bargaining power given the vulnerability of older individuals and the need for advocacy to redress any imbalance. Jocelyn Downie has observed that even where individuals appear to be engaged in contractual or consensus decisions, there are powerful underlying notions of deferring to doctors and other health care professionals that should be addressed. Furrow has cautioned that the use of informed consent in a cost-containment health environment poses the risk of converting medical decisions into economic decision-making, and that this may be a variation on the "blaming the victim". There are numerous questions for future exploration arising from this model of fall prevention.

**POSSIBLE QUESTIONS FOR FUTURE RESEARCH ON CREATING INCENTIVES IN THE LEGAL SYSTEM TO REDUCE THE INCIDENCE OF HIP FRACTURES**

What kind of further empirical research is needed to determine legal incentives to prevent falls and hip fractures and other injuries? A starting list might include the following:

- How can we shift the legal system to proactively promote safety and falls prevention as opposed to creating only deterrent effects from *ex post* compensation for injury?
- To what extent does liability chill differ in Canada from the United States, and how does this affect risk of falls in institutional care and assisted living settings?
- How can the legislative system ameliorate the financial position of the elderly, such that it moves from a harm/compensation paradigm to one that promotes risk reduction, economic security and prevention of injury from falls?
- What is the interaction of the legal system with market incentives to prevent falls?
- What are the downside risks of the concept of negotiated risk and how can the legal system reduce the inequality of bargaining power and information in

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69. Jocelyn Downie, Rescuing Research Through Regulation, presentation to Canadian Association of Law Teachers, (June 1, 2003), Halifax, Nova Scotia.
70. Furrow, *supra* note 51, at 1017.
trying to optimize outcomes?
• Are there dispute resolution techniques that may have a natural application in resolving disputes about safety prior to falls or disputes about cause after injuries occur?
• How can legal resources be redirected to provide more structural support to the elderly, including acting in an advocacy capacity to promote public health initiatives, education and to monitor the regulatory standards that do exist for prevention of falls?

As noted in the introduction, there are 1.6 million hip fractures among citizens aged sixty or older each year. This article has explored the extent to which the legal system currently creates ex ante incentives that both contribute to and prevent the incidence of falls and hip fractures. It has also highlighted the limits of the current liability regime. The current system's disjunction with prevention goals means that considerably more empirical research and public policy development is required before we are to truly devise a regime aimed at minimizing harms to elderly citizens as a result of falls. Any further design of legal incentives for prevention of hip fractures must complement health and socio-economic policy instruments aimed at preventive strategies.