Published in final edited form as:

JAMA Intern Med. 2013 October 28; 173(19): 1786–1787. doi:10.1001/jamainternmed.2013.8252.

Prognosis for Recovery after Injurious Falls: Clinical and Policy Implications of Varying Definitions of Recovery

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Hip fractures and other serious injuries attributed to falls have dire consequences for increased mortality and decreased function.¹ While prevention is surely the best strategy, substantial resources are justifiably invested in promoting recovery after such events. But who should receive such costly interventions? Clearly, treatment should be aligned with expectation of benefit. Common markers of vulnerability among the aged, such as disability and cognitive impairment are strongly associated with worse survival and functional decline after hip fracture and other adverse health events of aging including hospitalization and malignancy.^{2–4} Ethical decision-making should be driven by the goals and best interests of the patient, so what is the best approach to patient care in the older adult with a serious fall injury?

The article by Gill et al in the current issue provides a unique window into the course of function before and after serious fall injury.⁵ While post-injury function is known to be influenced by pre-injury function, no prior study captured the course of pre-injury function over a period of time in the monthly detail provided by this irreplaceable cohort. We learn that, in this sample of older adults who sustained a fall injury that required hospitalization, most were functionally stable over the year before; some were consistently independent while others lived with various degrees of disablement. The authors found that older persons with multiple dependent functions, chronically or progressively, virtually never experienced rapid or gradual recovery, and were likely to have little or no recovery. They conclude that, “the likelihood of recovery is greatly constrained by the pre-fall trajectory”.

It is critical to understand how the authors are using the term “recovery” in this study. Recovery is not explicitly defined, but is derived from patterns of change in dependence among 13 functions (4 basic activities, 5 community living functions and four mobility activities including driving). The four proposed patterns of recovery are based on analyses of the time to a change in the count of dependent functions after the injurious fall. Since virtually no older person can expect to achieve greater functional independence after a serious injury than they had before it, this approach stacks the cards and creates a self-fulfilling prophecy. Only persons with many pre-injury independent functions can regain them and be designated as recovered, while persons with many pre-injury dependent functions, even if they return to their pre-injury status, will have gained only a few independent functions and would be designated as having experienced little or no recovery. To illustrate more explicitly, to achieve the author’s criteria for rapid recovery, which

requires a large reduction in the number of dependent activities, an individual would have to be independent in virtually all functions before injury and become independent in personal and community living after injury. Virtually no one who was limited in community living functions before injury could be classified by this approach as having a rapid or gradual recovery. Even persons who achieve independence in personal care and some community living or mobility functions would be categorized as having little recovery. Individuals who return to their pre-injury level of independence in personal care would likely be categorized as having no recovery.

But in clinical practice and common use, recovery means “a getting back or regaining, recuperation”.⁶ In this study, the rate of “getting back to where you were before you got hurt” for persons with no pre-injury disability was 56.3%, while for persons with severe pre-injury disability, the rate was 60.9%, and for persons with other degrees of pre-injury disability, the rates were about the same.

How should a clinician present prognosis for recovery to the injured, disabled patient and his family? How should providers, insurers and policymakers determine services based on potential to benefit? Certainly, expectations for function after a serious fall injury must be based in part on a clear understanding of pre-injury function. This paper says that, for the disabled elder, there is little or no chance of recovery. But if recovery means “return to pre-injury status”, then the probability of getting back to that same level of function is the same for the disabled elder as for other older persons.

Disability is a difficult burden for older people, their families and society. Older persons with disability have reduced life expectancy, and thus deserve to participate in a thorough discussion of appropriate and personally relevant goals of care. But when they sustain a serious fall injury, they still have a fair chance of getting back to where they were, and they deserve reasonable access to restorative services.

Acknowledgments

This work was supported by NIH Grant AG024827

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