March 2011

Risk Matters

Dear Reader,

Long Term Care (LTC) insurance experience in the UK shows that cognitive claims often occur early in the history of policies and are of long duration (Campbell 2009). Few young consumers seem willing to make preparation for their future care needs, so most new LTC customers are already old. Identification of the early stages of dementia in these applicants is therefore an important aspiration for underwriters. Many older people (and their families) only begin to consider the implications of their care at the point when they are perceived to be developing changes in their cognitive capacities. Some LTC insurance applications are even submitted only after the onset of significant levels of cognitive impairment. For some in this group, alternative funding solutions may be available (ABI 2010). For those with only the slightest cognitive change, identifying a "pre-dementia" state (Jessen et al. 2010) would allow underwriters to stratify the risk accordingly.

The "pre-dementia" state has been conceptualised in a number of different ways, usually described as Mild Cognitive Impairment (MCI) with subjective memory complaints (SMC), which are a consistent part of the criteria, along with measurable impairment, preservation of functional ability and not meeting the criteria for dementia (Sachdev, Ganguli & Peterson 2010).

This edition of the LTC Quarterly explores the question of SMCs and the value of obtaining information of this type at underwriting stage.

For other Gen Re publications please check our website: www.genre.com.

Dr. Chris Ball
Consultant Medical Officer
Gen Re, UK

Long Term Care Quarterly, Winter 2010

Man is a unique animal, able to turn internal experiences, such as cognitive function or mood states, into an object upon which it can then comment and convey to others. However, there is no agreed, standardised way of measuring a person's ability to identify and rate the severity of their own cognitive problems. A number of different concepts have been employed. Anosognosia describes an inability to appreciate the degree to which you are suffering from an illness but more specifically implies a lack of awareness. "Awareness" itself is another term that is used, as is "insight", but in some studies insight is defined as the awareness of a problem in a rather circular way. Insight has been used more usefully as the "ability to elaborate on the symptoms of disease and label the symptoms as pathological". Roberts et al. (2009) also draw attention to the different "objects" of awareness. These may be very broad (having an illness) or very specific (making an error on a memory test). The awareness a person has may be different for different objects. A person can be aware of suffering memory problems but not of the behavior that results from them. Equally, their degree of awareness may be more important than a purely dichotomous measure of subjective memory complaint present or absent.

Three common approaches to exploring the relationship between self assessment and objective reporting of cognitive problems include measuring (1) the discrepancy between the predicted and actual performance by patients, (2) the discrepancy between patient and caregiver ratings of patient performance, and (3) the clinician's judgment of the patient's awareness level.

Barrett et al. (2005) developed a complex system to derive an Anosognosia ratio in which a subject's perceived problems with his or her memory is measured against the demonstrable function of memory. Lin et al. (2010) used this technique to look at the awareness of memory problems in a group of elders living in the community (a strategy that contrasts earlier work with clinically defined groups). Three groups emerged from their study: those without cognitive impairment, those who had received a diagnosis of dementia or MCI and those who were suspected as suffering from these problems but had not received a diagnosis. Large numbers (96%) of those who were suspected of having problems but did not have a diagnosis significantly over-estimated their memory abilities, compared to 73% of those in the diagnosed group and only 26% in the control group. The level of awareness of problems in both of the impaired groups was inversely proportional to their memory functioning. The worse their measured function, the more they over-estimated their abilities. This finding is important as it is unlikely that those who over-estimate will seek help or receive a diagnosis. In a clinical population Calley (2010) found that SMCs correlated well with standardised measures of cognitive function but assessments of word finding difficulties did not. The author suggests that screening for subjective memory problems might be useful but not for word finding difficulties.

These two recent studies give a flavour of the literature reviewed by Roberts, Clare and Wood (2009). Five studies were identified that compared subjects' self-rating with objective testing. Overall the results were heterogeneous. Clear correlations between memory complaints and the objective testing were seen in some studies and not in others. It would appear that the type of testing used makes a difference to the results of the study. When measuring subjective awareness against informant accounts of the problems, the accounts become more discrepant as the cognitive impairment worsens. Similar findings were identified when clinician ratings of awareness were used.

The group concluded that there was a great deal of variability in awareness of cognitive problems in those who had measurable impairment but that did not amount to dementia. Surprisingly there is even a group that over-estimate their problems, with a possible relationship to low mood. There is a lack of evidence as to whether unawareness of cognitive problems actually predicts a progression to dementia.

Depending upon how the question is phrased, up to 95% of people or informants will report the presence of a cognitive problem, suggesting that the question is not very discriminating (Sachdev et al. 2010). Asking, however, if cognitive function has declined appears to be a much better guide to the presence of underlying problems (Roberts et al. 2009). Merely asking about current memory functioning is not adequate.

The author has argued elsewhere that the information gathered for LTC underwriting should not be cross sectional but must understand how the applicant is changing over time (e.g., Ball 2009). Ganguli et al. (2010) explore change over time and a range of possible symptoms in order to better define SMC with a standardised questionnaire (Box 1). A large part of their argument for doing this comes from the review of Jonker et al. (2000), showing that the prevalence of SMCs in the population ranges between 25% - 50%, depending upon the method used to define SMC.

Conclusion

There is still a great deal of debate about the concept of MCI and its relationship to dementia. Using SMCs as a defining characteristic or a risk factor for the development of dementia may or may not be useful depending upon the methods used. However, the concept of looking for change across a range of cognitive functions, as part of the evidence gathering at underwriting, is an attractive strategy to better understand the risks.

Standard Cognitive Questionnaire (after Ganguli et al. 2010)

General Symptoms

– How do you feel your memory is for a person your age?
– Do you feel you remember things less well than you did a year ago?

Specific Symptoms

- Compared to a year ago are you worse at remembering:
- Events/people from a long time ago
- Things that happened or were said a few days ago
- Appointments or messages
- Names of people you have known for a long time
- Names of people you have only met recently
- Telephone numbers of people you call often
- Location of items (keys, watches, glasses) you use often
- How to use familiar tools or gadgets
- A familiar/favourite recipe
- The right word to describe a familiar object
- The current day, date or month
- A recent major event like a trip or a wedding
- Details of a recent major event
- Time relationships of different events
- A few things to buy at the shops without writing them down
- To perform important routine activities (such as locking the front door)

Other symptoms

– Solving problems as easily as before
– Understanding what is being said or going on around you
– Getting along with people, talking and behaving like you used to
– Handling a household emergency such as a plumbing leak or a kitchen fire
– Keeping up with hobbies or interests

Further reading

Association of British Insurers. (2010) A sustainable future for Long term care: the insurance industry perspective. London. Association of British Insurers.

Ball, C. J. (2009) Clinical Aspect of long term risk management . European Papers on the New Welfare. 11. 137-142.

Barrett A. M. et al. (2005) Unawareness of cognitive deficit (cognitive anosognosia) in probable AD and control subjects. Neurology. 64. 693-699.

Calley, C. S. (2010) Subjective Report of Word-finding and Memory Deficits in Normal Aging and Dementia. Cognitive and Behavioral Neurology. 23 185-191. Campbell R (2009) Long term Care Underwriting and Claims Assessment Protocols – The UK Experience. European Papers on the New Welfare. 11. 143-146.

Ganguli, M. et al. (2010) Prevalence of mild Cognitive impairment by multiple classifications: The Monongahela-Youghiogheny Healthy Aging Team (MYHAT) Project. The American Journal of Geriatric Psychiatry. 18. 674-683

Jessen et al. (2010) Prediction of dementia by subjective memory impairment. Effects of severity and temporal association with cognitive impairment. Archives General Psychiatry 67. 414-422.

Jonker, C., Geerlings, M. I. and Schmand, B. (2000) Are memory complaints predictive for dementia? A review. International Journal of Geriatric Psychiatry. 15. 983-991.

Lin, F. et al. (2010) Awareness of Memory Abilities in Community-Dwelling Older Adults with Suspected Dementia and Mild Cognitive Impairment. Dementia and Geriatric Cognitive Disorders 30. 83–92.

Roberts, Clare, & Woods (2009) Subjective Memory Complaints and Awareness of Memory Functioning in Mild Cognitive Impairment: A Systematic Review. Dementia and Geriatric Cognitive Disorders 28. 95-109.

Sachdev, P. S., Ganguli, M & Peterson, Peterson, R. C. (2010) How can we best characterize cognitive impairment in non-demented older adults? The American Journal of Geriatric Psychiatry. 18. 657- 661.

Sachdev, P. S. et al. (2010) The Sydney Memory and Ageing Study (MAS): methodology and baseline medical and neuropsychiatric characteristics of an elderly epidemiological non-demented cohort of Australians aged 70-90 years. International Journal of Geriatric Psychiatry. 22. 1248-1264.

General Reinsurance
London Branch
Corn Exchange
55 Mark Lane
London EC3R 7NE
Tel. +44 20 7426 1800
Fax +44 20 7426 1898
www.genre.com

Editor
Ross Campbell, ross_campbell@genre.com

Photos
© istockphoto/Dean Mitchell; Frances Twitty