



SOCIETY OF ACTUARIES

Article from:

Reinsurance News

Cwi wuv2014 – Issue 7;

A Message From The Frontier: The Living To 100 Symposium

By Jean-Marc Fix



Jean-Marc Fix is vice president, Research and Development, for Optimum Re in Dallas, Texas. He can be contacted at jean-marc.fix@optimumre.com.

Once upon a time a man had a vision. Many stories start like this but not so many take place in the actuarial world. Bob Johansen conceived the idea of a symposium unlike any the SOA had done until that time: a multidisciplinary meeting of the minds to better understand older age mortality. The concept of the Living to 100 and Beyond Symposium was born and in 2002 the first symposium took place. Five symposia and twelve years later, the Symposium is still going strong thanks to a dedicated team of volunteers embracing his vision.

This triennial symposium has evolved through the years to extend from the pure mortality aspect of older ages focused on annuities to a broader coverage. This includes mortality projections and life expectancy improvements but also medical advances and societal and individual implications of a rapidly growing older age population. It is a unique venue where specialists from the actuarial, governmental and academic world mingle, listen to informational papers and exchange views on what the future will bring for the oldest olds and what that will mean for individuals, for insurance companies and for the different countries represented.

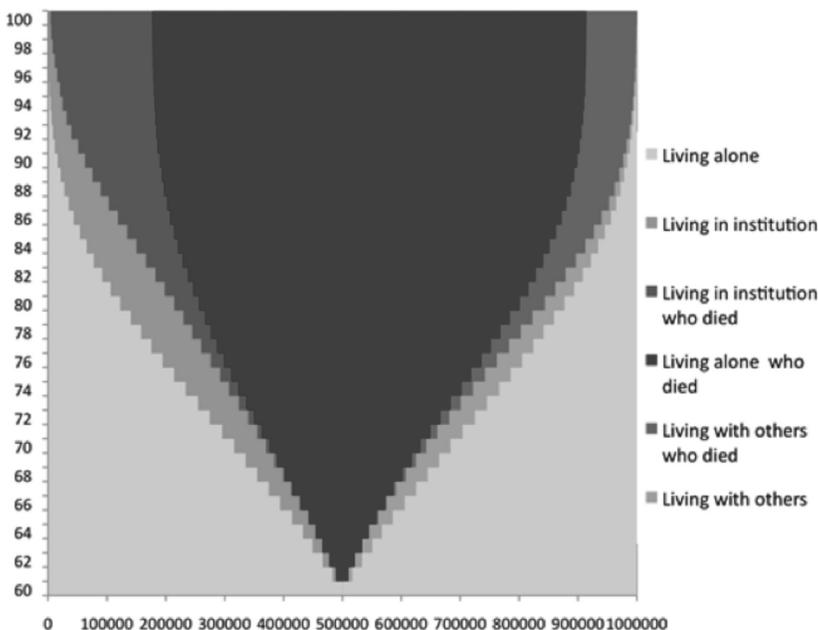
Several features make the symposium a unique offering among the many professional meetings the SOA offers. The breadth of the field represented by the speakers, the variety of topics and the occasion for frank discussion and debate both during and between the sessions is unmatched. At what other meeting can you hear Jim Vaupel, a world famous demographer and Founding Director of the Max Planck Institute for Demographic Research (talking about the future downward trend of older age mortality) and Anthony Atala, director of the Wake Forest for Regenerative medicine (talking about recent development in biological organs manufacturing using 3D printer technology)?

While discussing the symposium with Andrew Jenkins, VP of Annuity Product Development at Protective Life, for an upcoming presentation at the Life and Annuity Symposium, he mentioned that one of his biggest take home message was not the what but the how of the message. Because of the diversity of presenters, the information about mortality is presented in a variety of different ways that may encourage us to try new ways to tailor the right mortality message for our customers or for our upper management. I personally liked the graphs used by Michel Poulain (the originator of the “blue zone” concept of communities fostering longer living) and Anne Herm to illustrate the trajectories of residential support that centenarians start using at age 60 [1].

Each symposium has its own “vibe” and by that I mean a message which, by accident or design, pervades many sessions. This year the vibe I picked up is relating to mortality improvement at the older age.

Rectangularization of the survival curve refers to the fact that the survival curve appears to get closer and closer to a rectangle as we get closer to the present time. The ultimate rectangularization would imply that no one would die an untimely death but all would die very close to a maximal age, putatively around 105-110. This is the theory of mortality compression and in the first two symposiums there was reasonable consensus that it was in fact the case.

Living arrangement trajectories for those never married persons living alone at 60



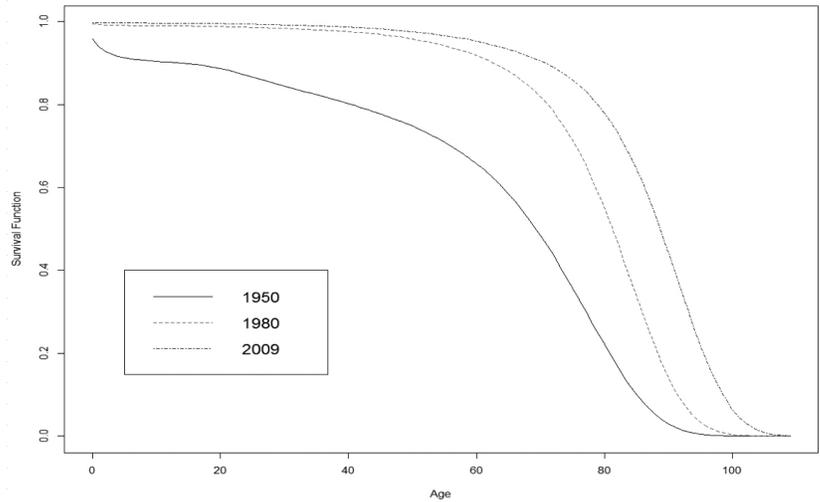
In this year's symposium, 12 years later we have additional data. In addition a number of methodological issues have been raised on precisely defining rectangularization and whether some calculation methods created distortions. It now appears that the survival curves have started once again to expand at older ages, suggesting that the maximum age was only a temporary setback and opening the tantalizing vision of increasing life expectancy and improving mortality even at the extreme older ages[2,3,4]. You get a unique feel at the symposium that you are at the edge of the known and the unknown with the ever moving frontier between the two being redrawn in front of our very eyes.

Having graduated from a small liberal arts school, I am a big proponent of liberal arts, especially for a technical field such as ours. The symposium provides just that: a liberal education for the actuary, exploring the many aspects of mortality at the older ages and looking not only at the mathematical modeling but also at the societal impact of that mortality. There are no massive revelations at the edge of knowledge but a relentless push to gather data and understand its implications and applications. This puts our profession in its proper context as a community of thinkers facing and addressing challenging problems not only for our employers but for society at large.

See you there in three years.

The SOA will publish a 2014 Living to 100 monograph of papers presented at this symposium. To learn more, go to <http://livingto100.soa.org>.

Figure 1. The Survival Curves of Japanese Female



REFERENCES

- [1] "Which Socio-demographic Living Arrangement Helps to Reach 100?" presented by Michel Poulain & Anne Herm
- [2] "Biodemographic Study of Mortality Trajectories at Advanced Old Ages" presented by Natalia S. Gavrilova & Leonid A. Gavrilov
- [3] "Measurement of Mortality among Centenarians in Canada (Quebec) Based on Nominative Data" presented by Nadine Ouelette and Robert Bourbeau
- [4] "A Study of Mortality Compression and Longevity Risk" presented by Jack C. Yue ■