



Mortality Working Group (Part 1)

Mortality Working Group
Wednesday, April 19, 2017
Budapest, Hungary

Minutes

The attendance list is posted at the end of these minutes.

Brian Ridsdale – **Chairperson**
Al Klein – **Co Vice Chairperson**
Ermanno Pitacco – **Co Vice Chairperson**

Mortality Working Group Meeting (Part 1)

1. Welcome, apologies, minutes, new members, retiring members

The Chairman Brian Ridsdale welcomed all members and observers present. The Chairman discussed [the minutes of the previous meeting](#). No changes to the minutes were necessary and they were taken as read and correct, and a true reflection of the meeting.

2. Discussion on [Workplan](#), structure, member data base and [member contributions](#)

The Chairman went through the workplan that reflects what IAA wants MWG to do. It was noted that we have been successful in sending out the requests to support Human Mortality Database.

The Chairman gave a [presentation](#) on what it means to be a member of MWG. Membership in the group is open by invitation only and everyone is expected to participate in some way.

New members joining the committee include Dale Hall (US SOA), Onofre Simoes (Portugal), Marine Habart (France).

Leza Wells has agreed to chair the Support Team with assistance from two other members.

3. Discussion on five projects

- [Annuitant/pension/life/population mortality](#)

The members of this group has changed a lot during the last year which has been a challenge. Marc Tardif gave a [presentation](#) from the Mortality Comparison Task Force where population mortality is compared with mortality among insured groups in a few countries. Contributions to the task force from more countries are welcome and they can contact Marc. They would prefer 10 or more countries before presenting this wider.

The project needs mortality from general population, pensioner, annuitant, insured ultimate and insured select.

One idea is to create a template where different countries can collect and send mortality data to the task force in a uniform way. It might be difficult to compare insured mortality because it depends a lot on the underwriting.

The usefulness of the project was questioned. Members of this Mortality Comparison Task Force to consider and report back with proposed terms of reference in a month.

- Older age mortality
Al Klein gave a short update. Work is under way and he hopes to have something to present within this year.
- Long term drivers of future mortality
Al Klein gave a short update. The plan is to have a report that is approved by IAA and presented at ICA in 2018.
- Older age mortality improvement
Sam Gutterman gave a [presentation](#). The improvement data fluctuates a lot over the years and it is difficult to find patterns even if the graphs are smoothed over 3-4 years.

The World Health Organisation (WHO) has a lot of information about the causes of deaths, but there can be a lot of uncertainty in determining the cause of deaths in old ages. The plan is to write a paper for ICA 2018 in Berlin. There was a reminder that abstracts for ICA 2018 will need to be submitted by 31 July 2017.

- E-cigarettes
Sam Gutterman gave a [presentation](#) on his [draft paper](#). There is a debate on whether e-cigarettes should be promoted or discouraged. The question is what value can we as the actuarial community add to the existing medical work on this topic. The draft has been sent for commentary to a task force of the Institute & Faculty of Actuaries in the UK who are also studying this topic (no response yet received).

Members questioned what would be the proposed outcome from the project. There are at present no agreed terms of reference. There was a suggestion for Sam to put together a short questionnaire to understand from different countries the local opinion on use of e-cigarettes and whether the government has taken a stance or wishes to regulate. This can be sent to the MWG members to assist complete.

4. Possible new research project – Pandemics

Al Klein raised the issue of pandemics. MWG has talked about pandemics but have never really dug into it. There has not been much research on this and the question is if we can do something as a group. Michael Eves pointed out that financial services companies all have to prepare a contingency plan, so pandemic risks are well researched. An early terms of reference for the research was requested to consider if this might be to take this forward as a group. Members

were asked whether they would like to work on this project, and as there was only one person interested it was decided not to go ahead. Mika Makinen has some ideas that he will put together for the next meeting in Chicago. Other members are welcome to step forward to volunteer.

5. IFoA International research in mortality

Andrew Cairns gave a presentation. One interesting question is whether blood pressure medicine decreases or increases mortality and the results of the ARC research is being discussed with US medical researchers.

He described the three major projects being funded by the Institute and Faculty of Actuaries (IFoA). Work is being done internationally, and two of the projects focus entirely on mortality. The intention is to produce results that are useful to practitioners.

Andrew mentioned that the IFoA is keen to develop international projects in cooperation with other associations and research organisations.

The ARC are interested in other datasets from other populations or sub-populations.

6. SOA research in mortality

Dale Hall gave a presentation on the mortality research sponsored by the Society of Actuaries (SoA). It included an update on recent mortality table and experience analysis releases for US Individual life policies, US annuities and pension mortality studies providing a summary of how individual payout annuity experience reports and group pension experience compares to standard tables. Dale highlighted some of the practice research projects they are involved in including the Human Mortality Database (HMD) on mortality by cause for 8 countries, reports with focus on CDC data, looking at components of Historical Mortality Improvement and co-sponsorship of IFoA Mortality Modeling Project. There will be a Living to 100 mini-symposium within SOA Annual Meeting in Boston in October 2017.

7. Discussion on how MWG can be more involved

Brian stated that the MWG is interested in making its research more useful internationally. Also, as the team contains members from 27 countries, it could be a useful resource for researchers who need to liaise internationally.

There was no time to continue on this topic, and members agreed to discuss issues of common interest with the two research heads over lunch.

8. Buffer

9. Working Lunch

Individual conversations were held.



Mortality Working Group (Part 2)
Mortality Working Group
Friday, April 21, 2017
Budapest, Hungary

Minutes

Mortality Working Group (Part 2)

The Chair welcomed new observers and members to Part 2. Two people had requested to join the MWG: Dilara Asadova from Azerbaijan and Yair Babad from the US and Israel. Brian emphasised that Working Group membership is by invitation, and is subject to the proposed member accepting the terms of membership – basically agreeing to participate actively. He would begin the process by sending invitation letters to Dilara and Yair.

10. Country Reports

Mika Mäkinen presented the highlights from the updated [Finland Country Report](#).

Marc Tardif presented the highlights from the updated [Canada Country Report](#) – there is work to try form a consensus view of mortality improvements from life, pensions and population.

11. [Mortality Evolution in Algeria](#)

Farid Flici gave a presentation. The population pyramid shows very different picture to the developed countries. ONS civil registration data shows life expectancy at birth has improved from 55.13 in 1977 to 77.2 in 2014. The ONS civil registrations is incomplete and needs correction and evolution of the mortality rates over time has been impacted by changes in methodology to adjust.

12. [South African Pensioner Mortality Investigation](#)

Leza Wells gave a presentation showing the results of the first Pensioner Mortality analysis where graduation rates split by pension amount band were produced. The mortality experience shows a significantly different shape to UK table PA(90) typically used to value pension fund liabilities which much higher mortality at ages 50-70.

13. [Mortality trends in Hungary](#)

Gyula Horvath spoke through the presentation he gave at the Current Developments in Aging and Mortality Seminar for the benefit of those members that did not attend the seminar. This mortality over time shows three distinct periods – 1950-1966 showed post war decrease in mortality, 1967-1992 showed increasing mortality during the demographic catastrophe of the late social era and then mortality has been improving in the most recent period 1993-2014.

14. UK Update

Brian Ridsdale presented an update from the UK highlighting the Mortality deceleration work, Big Data in Health project and listing a lot of academic research work underway. Brian highlighted articles in the Longevity Bulletin Issue 9: Big Data in Health dated Dec 2016.

15. Country Report – Israel

Dov Raphael presented a draft Israel Country Report. With an average of 3 children per woman, Israel has the highest fertility rate in the OECD by a considerable margin. A new ILAA Mortality Research Committee has been set up to focus on mortality improvements which is important as many products have long term guarantees.

16. Is longevity still improving?

Brian Ridsdale spoke through the presentation he gave at the Current Developments in Aging and Mortality seminar for the benefit of those members that did not attend the seminar. There has been a reduction in mortality improvements in UK, Europe and US although 2015 and 2017 were noted as particularly poor years of mortality experience and the question of whether this is a blip or overall trend is posed. There was general consensus that MWG should be educating others on this observed change however we cannot at this stage conclude anything about future improvements. Simon Brimblecombe from ISSA agreed it was an important matter to raise to Supranational organisations.

There was an interest in whether the same seasonal patterns in mortality were observed in Southern hemisphere countries – South Africa and Australia to possibly consider.

17. Marketing Committee Update

Ksenia Novikova presented an update. ToR for the Marketing Committee have been finalised and will be distributed to MWG. It was reiterated that all members of the MWG are responsible for marketing efforts.

Results of survey on MWG website content was presented – poor participation but some useful comments. Suggestion that country comparisons would be useful. Assia Billing will suggest a summary of country population pyramids be produced by PIWG.

The Chair requested that the Marketing Committee provide suggestions for topics at the seminar in Chicago.

Marketing to Supranational organisations will be further discussed at the scientific committee meeting to be held later in the day. Simon Brimblecombe (ISSA) offered to co-ordinate half day discussion in Geneva following a forum in November 2017. OECD have a sub-committee who are meeting at IAA later in the day. Henk VanBroekhoven was attending and would provide feedback on marketing efforts and requirements from the OECD.

Suggestions to improve marketing of IAA content included holding more webinars and feedback through local country committee meetings.

18. Buffer and 19. Coffee Break

20. Forecasting Mortality Using Logistic Equations

Dimitri Pomazkin presented the results of his work posing the questions around whether a limit of life expectancy exists and how long can mortality improvements be continued. Members felt demonstrating the impact on base qx/pension age/population size was a useful way of demonstrating the impact of continued future mortality improvements.

21. Living to 100 Seminar

Sam Gutterman provided a verbal update. This seminar was held in the US in January 2017 and presentations can be accessed from the webpage (<https://livingto100.soa.org/>). Sam to confirm links for Ermanno Pitacco for MWG site. The seminar consisted of 3 areas on longevity – Quantitative (modelling), Applications and the Impacts of Aging. One of the highlights were the non-actuarial keynote speakers to understand how much mortality research is being done outside of the actuarial profession.

Sam Gutterman will be attending the Annual Meeting of the Population Association of America in Chicago soon and will provide feedback if anything of interest.

22. Recap on Australia

Michael Sherris presented an [update on the Longevity Risk Research Workshop](#) held in Australia on 15 February 2017 focusing on Older Age mortality, a Longevity Research Forum held on 16 February 2017 as well as an update on related research.

Presentations can be accessed from here:

- [Longevity Workshop and Forum](#)
- [Longevity Research Forum](#)

Ermanno Pitacco to consider listing the relevant individual papers on the Information Base webpages separately in addition to agenda with links.

23. Website update and editorial issues

Ermanno Pitacco provided a verbal update.

Members of sub-committee: Eduardo Trigo Martinez, Morteza Aalabaf, Severine Arnold, Ermanno Pitacco.

ToR for the committee have been finalised - the Editorial Team constitutes an interface between the production of material of interest to the MWG (scientific papers, technical reports, statistical data, etc., produced by academics, consultants, insurance companies, public institutions, etc.) and the flow of information provided by the MWG and available on the MWG pages within the

IAA website. Relevant MWG pages include the Information Base and the Country Reports.

The Information Base mainly consists of a collection of scientific papers and technical reports on mortality and longevity topics. Currently, the Information Base consists of an Overview, 14 Sections, and a list of papers and websites. In order to guarantee the quality of the information provided, the material submitted to the MWG (in particular, by members of the MWG) is analyzed via a selection process. While papers already published in scientific journals are usually accepted without specific analysis of the contents (provided that these are of interest in the mortality / longevity field), other contributions are analyzed and can be rejected if the contents are not in line with the quality standards required by the Information Base.

Country Reports provide information concerning the various countries, referring to both the general population (mortality, structure by age, and so on) and the insurance market as well (mortality among insureds, annuitants and pensioners, main products sold on the market, and so on). The Country Reports should be structured according to a standard template. It was agreed at the meeting to move older versions of the Country reports into an archive section so still available if referenced and only have the latest country report showing on the main page.

Country Reports recently updated (in 2016 or in the current year) include Finland, Japan, Norway, Poland, Sweden, Turkey, United Kingdom, United States and Italy. (In some cases, updates are not yet uploaded in the website.)

Recent updates, to be uploaded to the Information Base

Page "Trends and uncertainty", owner Ewa Dylewska.

Page "Pensions and annuity reserving assumptions", owner Ayse Arik.

Page "Financial products", owner Eduardo Trigo Martinez.

An update will be provided for the page "Underwriting" (Al Klein)

A new page has been added in 2016 - "Old age mortality, heterogeneity, and frailty". Ermanno Pitacco is owner of this page.

A link to the website of CEPAR (Sydney) will be added among the websites of interest to MWG.

Martin Stevensen indicated that the scientific committee supervises the MWG and was available to provide advice – he is the liaison to MWG.

24. Obesity and Smoking

Sam Gutterman presented research he did using HMD data by cause of death in 2016 that was presented at the Living to 100 Seminar on two human behaviours that impact mortality. This quantified the positive impact of smoking reduction and the negative impact on life expectancy of obesity trends.

Sam Gutterman has also published a paper in the North American Actuarial Journal discussing the multi-faceted issue of the relationship between obesity

and mortality, including many studies that have shown a beneficial effect of moderate levels of obesity in for older ages. Sam to send to Ermanno Pitacco for website.

Sam Gutterman will circulate to MWG a paper on the impact of Climate Change on mortality.

25. Cause-specific mortality differences by socio-economic class

Séverine Arnold presented a very interesting presentation considering causes of mortality contributing to the gap in mortality between socio-economic classes and scenario testing the potential cures to those causes showing the impact this might have on the mortality gap and the overall life expectancy. Targeting interventions on maximising life expectancy will in fact increase the mortality gap. Finding the optimal solution is an issue for public policy. The next step is to introduce restraints on the budget to be spent on health to assist with public policy advice. Unclear timetable on this and issue is obtaining data on this – Simon Brimblecombe offered to assist with contacts.

There was great interest in this topic for the Chicago seminar.

26. Planning for Chicago

MWG meetings – discussions at these committee meetings were good and we should aim to build another 2 hours into the agenda. Ermanno Pitacco will select a few Country Reports for updating and send email request to member responsible for updating.

Al Klein mentioned a paper on Underwriting around the world showing results of survey done with updates from trends around the world where 3 more countries have been added. Al Klein to consider this as an agenda topic for Chicago or circulate to the MWG.

Agenda for the seminar with PIWG at Chicago is currently being discussed and Al Klein has a list of 17 suggestions already. Members will still have the next month or two to propose presentation to be added.

Assia Billing suggested inequality as a topic (at least this is what the PIWG will be focusing on).

Chicago marathon is on Sunday 10th Oct – be aware when travelling for traffic, hotel availability and flight costs.

Other Business:

1. Jari Niittuinperä (Finland) highlighted an interesting talk done 2 years ago on Pekka Martikainen's presentation "The changing contribution of alcohol and smoking to social inequalities in life expectancy in Finland", held in the mortality seminar organized by the Society of Actuaries of Finland. Presentation in English available on the website of the Actuarial Society of Finland:

http://www.actuary.fi/uutiset/tapahtumat/kuukausikokous-kuolevuusseminaari-26.5.2015/20150526_Martikainen_tup.pdf

Here you may find his other papers some of which are in English:

[https://tuhat.helsinki.fi/portal/en/persons/pekka-martikainen\(b735a63b-e658-4724-bf0a-ea905b461d0c\)/publications.html?pageSize=50&rendering=author&page=2](https://tuhat.helsinki.fi/portal/en/persons/pekka-martikainen(b735a63b-e658-4724-bf0a-ea905b461d0c)/publications.html?pageSize=50&rendering=author&page=2)

2. Dilara Asadova – requested assistance in developing mortality and morbidity tables for from Azerbaijan commenting that AWB has a large short-term focus. Dov Raphael agreed to exchange thoughts with other interested members around providing advice and assistance to countries with less data and skills.
3. Update from PIWG - LTC paper published last week and presented at seminar. PIWG focusing on Actuarial perspectives around inequality – interested parties should contact AB to get involved (IAA meeting on Saturday to discuss further).

In general, a request for members to consider what new research they would like to see from MWG and send ideas to Al Klein.

Actions:

- Agenda Item 3: Members of the Mortality Comparison Task Force to consider the project purpose and report back with proposed terms of reference in a month.
- Agenda Item 3: E-cigarettes – Sam Gutterman to consider whether a short questionnaire to understand from different countries the local opinion on use of e-cigarettes would be useful and respond to MWG.
- Agenda Item 4: Possible project on pandemics - Mika Mäkinen to consider scope for project proposal.
- Agenda Item 16: South Africa and Australia to consider whether the same seasonal patterns in mortality were observed in Southern hemisphere countries over the last few years.
- Agenda Item 21 and 22: Australia update - Ermanno Pitacco to consider listing the relevant individual papers on the Information Base webpages separately in addition to agenda with links.
- Agenda Item 21: Living to 100 Seminar - Ermanno Pitacco to add links to MWG site.
- Agenda Item 24: Sam Gutterman to send to Ermanno Pitacco to add to MWG site the paper published in the North American Actuarial Journal discussing the multi-faceted issue of the relationship between obesity and mortality.
- Jari Niittuinperä (Finland) to send hyperlink on presentation on smoking and alcohol impact on life expectancy by socio-economic class to Leza Wells and Ermanno Pitacco. [Done]

Presentations, papers and attachments are listed here:

- Item 1 – [Minutes from Capetown meeting](#)
- Item 2a – [Workplan](#)
- Item 2b – [Member contribution](#) (Brian Ridsdale)
- Item 3 – [E-cigarettes paper](#) (Sam Gutterman)
- Item 3 – [E-cigarettes presentation](#) (Sam Gutterman)
- Item 3 – [Older Age Mortality Improvement](#) (Sam Gutterman)
- Item 5 - [IFoA International research in mortality](#) (Andrew Cairns)
- Item 6 – [SOA research in mortality](#) (Dale Hall)
- Item 10a – [Finland country report](#) (Mika Mäkinen)
- Item 10b – [Canada country report](#) (Marc Tardif)
- Item 11 – [Mortality Evolution in Algeria](#) (Farid Flici)
- Item 12 – [South African Pensioner Mortality Investigation](#) (Leza Wells)
- Item 13 – [Mortality Trends in Hungary presentation](#) (Gyula Horvath)
- Item 14 – [UK Update](#) (Brian Ridsdale)
- Item 15 – [Israel Country Report](#) (Dov Raphael)
- Item 16 – [Is longevity still improving? Presentation](#) (Brian Ridsdale)
- Item 17 – [Marketing Update](#) (Ksenia Novikova)
- Item 20 – [Forecasting Mortality Using Logistic Equations](#) (Dimitri Pomazkin)
- Item 22 – [Longevity Risk Research Workshop and Forum in Sydney – Update on related research](#) (Michael Sherris)
- Item 25 – [Cause specific mortality differences across socio-economic categories](#)
(Séverine Arnold)

Participants:

Brian Ridsdale – **Chairperson**
Al Klein – **Co Vice Chairperson**
Ermanno Pitacco – **Co Vice Chairperson**

Members:

Morteza Aalabaf-Sabaghi	Iran
Ayse Arik	Turkey
Séverine Arnold	Switzerland
Rikard Bergström	Sweden
Assia Billig	Canada
Ewa Dylewska	Poland
Michael Eves	Switzerland
Farid Flici	Algeria
Sam Gutterman	United States
R.Dale Hall	United States
William Horbatt	United States
Mika Mäkinen	Finland
Ibrahim Muhanna	Lebanon
Ksenia Novikova	Russia
Hans Michael Øvergaard	Norway
Dmitry Pomazkin	Russia
Lars Pralle	Germany
Dov Raphael	Israel
Adam Reese	United States
Michael Sherris	Australia
Onofre Simões	Portugal
Marc Tardif	Canada
Eduardo Trigo Martinez	Spain
Henk Van Broekhoven	Netherlands
Leza Wells	South Africa

Guest speakers and Invited Guest:

Andrew Cairns	United Kingdom
Gyula Horvath	Hungary
Simon Brimblecombe	Switzerland

Observers:

Dilara Asadova	Azerbaijan
Yair Babad	Israel Association of Actuaries
Janet Barr	United States
Hung-Sheng Chen	Chinese Taipei
Geoffrey Flaxbard	Canada
Ted Goldman	United States
Kriszti Halay	Hungary
Daniel Israeli	Israel
Daegy Kim	South Korea

Erzsebet Kovács	Hungary
Judit Kovács	Hungary
Andrew Mandley	United Kingdom
Ana Ramos Estrela	Portugal
Helge-Ivar Magnussen	Norway
Jari Niittuinperä	Finland
Sangrae Park	South Korea
Tibor Párniczky	Hungary
Thierry Poincelin	France
Odd Svendsen	Norway
Martin Stevensen	Co-Vice-Chairperson, Population Issues
Ágnes Tasnády	Hungary
Krisztián Tóth	Hungary
Paula Tusnády	Hungary
Ivanko Yuriy	Ukraine