PPO Working Party Update

Sarah MacDonnell, LCP
Update from the PPO Working Party

• Five years in - where are we now?
• Areas for further focus
• 2014 Workstreams
# Five years in

- **Four papers**

<table>
<thead>
<tr>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
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</thead>
<tbody>
<tr>
<td>Case Studies of Recent Court Cases</td>
<td>Best Estimate Reserving</td>
<td>Impaired Life mortality update</td>
<td>Survey of Members’ Views</td>
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<tr>
<td>Projections of a GI Company</td>
<td>Solvency Capital Required</td>
<td>Liability limits</td>
<td>Impaired Life investigations</td>
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<td>Assumptions</td>
<td>Mitigation Options for Underwriting Stop Losses and other aggregate reinsurance</td>
<td>Reinsurance</td>
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<td>Impaired Life Mortality</td>
<td>Industry Pools</td>
<td>Ogden tables version 7 and mortality improvements</td>
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<td>Reserving Methodology</td>
<td>Role of the FSCS</td>
<td>Ongoing reserving</td>
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<td>Capital Issues</td>
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<td>Pricing</td>
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<td>Reinsurance</td>
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<td>Operational Challenges</td>
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<td>Risk Mitigation</td>
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# Industry Survey

19 May 2014
So where are we now?

Diversity

Size/Business mix
- Motor proportion
- International Group
  - Composite

Demographics

Risk attitude/appetite

Outlook
- Long/short term
How concerned are you about PPOs?

Insurers

1 least concerned, 5 most concerned

19 May 2014
Diversity

Size/Business mix
- Motor proportion
- International
- Composite

Demographics

Understanding

Risk attitude/appetite

Outlook
- Long/short term
Understanding

The Bereavement Curve

Denial

Anger/fear

Depression

Understanding

Acceptance

19 May 2014
Further focus

• SII
• Stochastic models
• Investment
• Mortality
Solvency II
Matching Adjustment

• Debate raging in the life industry for some time
• One of the principal reasons behind SII delays
  - Risk-free discount rate

Bank of England real yield curve as at March 2013

General Insurance Industry getting left behind
Industry practice 2012

Stochastic models

• Invaluable process to develop understanding of risk
• Wide ranging applications
  – Reserve uncertainty
  – Cost of capital
  – RI structure and negotiation
• Helps with communicating and quantifying of risk
• Very few insurers have developed stochastic models
Stochastic models

Reflect features relevant to you

Diversity  Correlations

Applications

IBNR
• especially net position

Propensity  Strategy

Injury type

Life expectancy

Delay to settlement

Size of claim

Applications

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Motor/Liability?

Age of claimant

Comp/Non Comp

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Reflect features relevant to you

Stochastic models

Stochastic models
Investment

• Our survey said:
  just 3 out of 14 insurers
  and one reinsurer
  had changed their investment strategy

• Critical mass?

**Call for Government to issue longer term gilts**

“Better to be doing something”
Mortality matters

Discount rate

Inflation rate

Mortality assumptions
Working Party Mortality Research
NZ findings

• Spinal injury has higher mortality rate than brain injury
• Severity of injury is significant
• Not enough data to comment on shape of curve
  ▪ Age is important
  ▪ No evidence of reduction in mortality over time
    ▪ but not conclusive
Working Party mortality research
NZ findings

• UK experience (so far) comparable to NZ
• US spinal experience comparable to NZ
• UK insurer recorded impaired life expectancies “not inconsistent” with mortality experience to date
  ▪ Some evidence of variation in insurer practice
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Description details</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>PVS - Permanent Vegetative State</td>
<td>No purposeful motor or cognitive function. Requires a feeding tube.</td>
</tr>
<tr>
<td>B2</td>
<td>Cannot walk - Fed by others</td>
<td>Does not feed self, must be fed completely (either orally or by a feeding tube)</td>
</tr>
<tr>
<td>B3</td>
<td>Cannot walk - Self feeds</td>
<td>Can feed self with fingers or utensils, with assistance and/or spillage</td>
</tr>
<tr>
<td>B4</td>
<td>Some walking ability</td>
<td>Walks with support, or unsteadily alone at least 10 feet but does not balance</td>
</tr>
<tr>
<td>B5</td>
<td>Walks well alone</td>
<td>Walks well alone for at least 20 feet, and balances well</td>
</tr>
<tr>
<td>B6</td>
<td>No mobility issues</td>
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</tbody>
</table>

- Spinal and amputation codes (S1-S5 and A1-A4)
## Working Party Injury Categorisation

### Care regime

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>24/7 2 or more care ratio</td>
<td>24 hour care needing two or more carers for all that time</td>
</tr>
<tr>
<td>C2</td>
<td>24/7 1-2 care ratio</td>
<td>24 hour care needing one to two carers for all that time</td>
</tr>
<tr>
<td>C3</td>
<td>24/7 but night sleeper</td>
<td>24 hour care with at least one carer but carers can sleep at night</td>
</tr>
<tr>
<td>C4</td>
<td>9 or more hours duty care a day</td>
<td>Walks with support, or unsteadily alone at least 10 feet but does not balance</td>
</tr>
<tr>
<td>C5</td>
<td>5 to 8 hours duty care a day</td>
<td>Walks well alone for at least 20 feet, and balances well</td>
</tr>
<tr>
<td>C6</td>
<td>0 to 4 hours duty care a day</td>
<td></td>
</tr>
<tr>
<td>C7</td>
<td>Domestic help only, no personal care</td>
<td></td>
</tr>
<tr>
<td>C8</td>
<td>No regular care</td>
<td></td>
</tr>
</tbody>
</table>
2014 Workstreams

Mortality – UK
• Nick Betteridge, Canopius and Tina Ruffle, Aviva

Mortality – Australian
• Sarah MacDonnell, LCP

Reinsurance
• Peter Saunders, Swiss Re

Market Solution
• Frank Chacko, NFU

Bodily injury almanac
• Fiona Annandale, KPMG

PPO Guidance Note
• Anthony Wright, The MDU

Industry Survey
• Emma Potter, Towers Watson
Expressions of individual views by members of the Institute and Faculty of Actuaries and its staff are encouraged.

The views expressed in this presentation are those of the presenter.