EIOPA-BoS-14/176

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Final Report

on

Public Consultation No. 14/036 on Guidelines on health catastrophe risk sub-module

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1. Executive summary

Introduction

According to Article 16 of Regulation (EU) No 1094/2010 (EIOPA Regulation) EIOPA may issue guidelines addressed to National Competent Authorities (NCAs) or financial institutions.

According to Article 16 of the EIOPA Regulation, EIOPA shall, where appropriate, conduct open public consultations and analyse the potential costs and benefits. In addition, EIOPA shall request the opinion of the Insurance and Reinsurance Stakeholder Group (IRSG) referred to in Article 37 of the EIOPA Regulation.

According to Article 105(4) of Directive 2009/138/EC[1] (Solvency II Directive) and to Articles 160, 161, 162 and 163 of the Implementing Measures[2], EIOPA has developed guidelines for facilitating convergent practices across Member States and helping undertakings calculate the health catastrophe capital requirement in different possible cases.

As a result of the above, on 2 June 2014 EIOPA launched a Public Consultation on the draft guidelines on the health catastrophe risk sub-module. The Consultation Paper is also published on EIOPA's website[3].

These guidelines were issued to NCAs to:

- Facilitate convergent practices across Member States and help undertakings to appropriately identify and compute the quantities involved in the calculation of the health catastrophe capital requirement in different possible cases and situations.

Content

This Final Report includes the feedback statement to the consultation paper (EIOPA-CP-14/036) and the Guidelines. The Impact Assessment and cost and benefit analysis, and the Resolution of comments are published on EIOPA's website[4].

[1] OJ L 335, 17.12.2009, p. 1–155
[2] As published by the European Commission on 10 October 2014: http://ec.europa.eu/internal_market/insurance/docs/solvency/solvency2/delegated/141010-delegated-act-solvency-2_en.pdf
[3] [4] https://eiopa.europa.eu/consultations/consultation-papers/2014-closed-consultations/june-2014/public-consultation-on-the-set-1-of-the-solvency-ii-guidelines/index.html

Next steps

In accordance with Article 16 of the EIOPA Regulation, within 2 months of the issuance of these guidelines, each competent authority shall confirm if it complies or intends to comply with these guidelines. In the event that a competent authority does not comply or does not intend to comply, it shall inform EIOPA, stating the reasons for non-compliance.

EIOPA will publish the fact that a competent authority does not comply or does not intend to comply with these guidelines. The reasons for non-compliance may also be decided on a case-by-case basis to be published by EIOPA. The competent authority will receive advanced notice of such publication.

EIOPA will, in its annual report, inform the European Parliament, the Council and the European Commission of the guidelines issued, stating which competent authority has not complied with them, and outlining how EIOPA intends to ensure that concerned competent authorities follow its guidelines in the future.

2. Feedback statement

Introduction

EIOPA would like to thank the Insurance and Reinsurance Stakeholder Group (IRSG) and all the participants to the Public Consultation for their comments on the draft guidelines. The responses received have provided important guidance to EIOPA in preparing a final version of these guidelines. All of the comments made were given careful consideration by EIOPA. A summary of the main comments received and EIOPA's response to them can be found in the sections below. The full list of comments provided and EIOPA's responses to them is published on EIOPA's website.

General comments

Stakeholders welcome these Guidelines and seem globally satisfied with them.

1. General provisions for the calculation of health catastrophe capital charges

a) Regarding the general provisions for the calculation of health catastrophe capital charges, some stakeholders believed that it would be worth moving the reference to the case where the cause of an accident is not covered in the insurance contract from explanatory text to the guideline itself.

b) EIOPA agrees with this comment and has taken it on board. As a consequence, it has been added to the Guideline that undertakings should not exclude a scenario, just because some potential causes of the catastrophe scenario are excluded by policy terms and conditions (e.g. terrorism).

2. Precisions when calculating the sum for disability benefits

a) Some stakeholders asked for precisions when calculating the sum insured for ten years disability and twelve months disability benefits. In particular, they asked if exits due to death were excluded when calculating the best estimate.

b) EIOPA confirms that those exits are to be excluded, as the calculation is based under the assumption that the insured individual will be disabled for a given period of twelve months or ten years. Explanatory text was added to the guideline for clarification.

3. Calculating the best estimate of medical expenses

a) Some stakeholders pointed out that when calculating the best estimate of medical expenses amount, some events (like the pandemic event) happen too rarely to avoid statistical error on individual claim costs.

b) EIOPA added explanatory text, saying that in such cases, where data is lacking, expert judgment could be used.

4. Submission of justification for assumptions

a) Stakeholders asked that the principle of proportionality is applied when submitting the justification for assumptions to the supervisory Authorities.

b) EIOPA agrees that supervisory Authorities should take into account the nature, scale and complexity of the risks and undertakings when asking for justifications. However, EIOPA believes there is no need to repeat this principle in the Guidelines.

General nature of the participants to the Public Consultation

EIOPA received comments from the Insurance and Reinsurance Stakeholder Group (IRSG) and five responses from other stakeholders to the public consultation. All the comments received have been published on EIOPA's website.

Respondents can be classified into three main categories: European trade, insurance, or actuarial associations; (re)insurance groups or undertakings; and other parties such as consultants and lawyers.

IRSG opinion

The IRSG opinion on the draft set 1 of the Solvency II Guidelines on Pillar 1 and Internal Models, as well as the particular comments on the Guidelines at hand, can be consulted on EIOPA's website[5].

Comments on the Impact Assessment

A separate Consultation Paper was prepared covering the Impact Assessment for the Set 1 of EIOPA Solvency II Guidelines. Where the need for reviewing the Impact Assessment has arisen following comments on the Guidelines, the Impact Assessment Report has been revised accordingly.

The revised Impact Assessment on the Set 1 of EIOPA Solvency II Guidelines can be consulted on EIOPA's website.

[5] https://eiopa.europa.eu/about-eiopa/organisation/stakeholder-groups/sgs-opinion-feedback/index.html

Annex: Guidelines

1. Guidelines on health catastrophe risk sub-module

Introduction

1.1. According to Article 16 of Regulation (EU) No 1094/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority ("EIOPA Regulation")[6].

EIOPA is drafting Guidelines on the health catastrophe risk sub-module. These Guidelines relate to Article 105 (4) of Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II)[7], as well as to Articles 160 to 163 and Annex VI of the Implementing Measures.

1.2. These Guidelines are addressed to supervisory authorities under Solvency II.

1.3. These Guidelines aim at facilitating convergent practices across Member States and at helping undertakings to appropriately identify and compute the quantities involved in the calculation of the health catastrophe capital requirement in different possible cases and situations.

1.4. The calculations for the determination of the capital requirement for the health catastrophe risk sub-module should be consistent with the design and calibration of the underlying scenarios.

1.5. Insurance and reinsurance undertakings may face different situations depending on the characteristics of their products and the national legislations.

1.6. For the purpose of these Guidelines the following definition has been developed:

- 'Single claim' means a claim following the occurrence of one particular event to one identified insured person.

1.7. If not defined in these Guidelines, the terms have the meaning defined in the legal acts referred to in the introduction.

1.8. The Guidelines shall apply from 1 April 2015.

Guideline 1 – General provisions for the calculation of Health Catastrophe capital charges

1.9. Where the determination of the cause of a catastrophe scenario is necessary in the calculations of the capital requirements for the health catastrophe risk sub-module and the effects described in the scenarios can have different causes, undertakings should use in the calculation the cause resulting in the highest loss in basic own funds. In particular, undertakings should not exclude the scenario where some potential causes of the catastrophe scenario are excluded by policy terms and conditions (e.g. terrorism).

[6] OJ L 331, 15.12.2010, p. 48–83
[7] OJ L 335, 17.12.2009, p. 1-155

Guideline 2 – Calculation of the sum insured for accidental death benefits

1.10. Where an insurance contract provides for benefits in case of death, irrespective of the cause, and for additional benefits in case of death caused by an accident, undertakings should take only the additional benefits into account when calculating the value of the benefits referred to in Article 161 (3)(b) and Article 162 (4) (c) of the Implementing Measures, provided the following conditions are met:

(a) the benefits have been unbundled;

(b) the risks related to the benefits in case of death irrespective of the cause are properly captured in the life underwriting risk module.

1.11. Where additional recurring benefit payments are provided for in case of death caused by an accident, undertakings should base the calculation of the value of the benefits payable on best estimate parameters (mortality table and discount rate curve) taking into account relevant demographic characteristics. Undertakings should also reflect in the calculation the contractual duration of the recurring benefit payments.

1.12. Where no or insufficient demographic data is available undertakings should use realistic assumptions on the demographic parameters based on public or internal statistics in the calculation of the value of the benefits. Undertakings should be able to justify these assumptions to the satisfaction of the supervisory authority.

1.13. In the calculation of the value of the benefits, undertakings should account for expected increases in the amount of recurring benefit payments and claims management expenses.

Guideline 3 – Calculation of the sum insured for permanent disability benefits

1.14. Where benefits for disability can be paid either as a single payment or as recurring payments, undertakings should follow a three step approach to determine the value of the benefits referred to in Article 161 (3) (b) and Article 162 (4) (c) of the Implementing Measures:

(a) Step 1: determination of the expected proportion of benefit payments in the form of a single payment.

(b) Step 2: determination, for each insured person, of the benefits in the case of a single payment and the best estimate of the recurring benefits.

(c) Step 3: calculation of the average between the two values determined in step 2 weighted by the proportion calculated in step 1.

1.15. Notwithstanding paragraph 1 of this Guideline, when the choice between a single payment and recurring payments is at the discretion of the beneficiary, the undertaking should use the maximum of the two values instead of the weighted average.

1.16. Undertakings should justify the assumptions underlying the calculation of the proportions referred to in paragraph 1. Where undertakings cannot justify the calculation of the proportions to the satisfaction of the supervisory authority, they should calculate the value of the benefits as the maximum between the single payment and the best estimate of the recurring benefits.

1.17. Where the amount of the disability benefit payments depends on the degree of disability of injured persons, undertakings should calculate the value of the benefits for all persons in the following way:

(a) derive a distribution of the degrees of disability amongst injured persons;

(b) calculate the claim costs associated with each degree of disability;

(c) apply the distribution of degrees to the associated claim costs accordingly.

1.18. Undertakings should justify the assumptions underlying the calculation of the distribution of degrees referred to in paragraph 4. Where undertakings cannot justify the calculation of the proportions to the satisfaction of the supervisory authority, they should use for all insured persons the maximum claim cost across all degrees of disability.

1.19. In the calculation of the best estimate of the recurring benefit payments for the event type "Permanent disability caused by an accident", undertakings should assume that payments are made over the full benefit period specified in the terms and conditions of the policy, but that exits due to mortality may occur.

1.20. For the calculation undertakings should make realistic assumptions on the mortality rates for permanently disabled people based on public or internal statistics. Undertakings should be able to justify these assumptions.

1.21. In the calculation of the value of benefits, undertakings should account for expected increases in the amount of recurring benefit payments and claims management expenses.

Guideline 4 – Calculation of the sum insured for ten year disability and twelve month disability benefits

1.22. Where the beneficiary can receive either a single payment or recurring benefit payments in the case of the event types "Disability that lasts 10 years caused by an accident" or "Disability that lasts 12 months caused by an accident", undertakings should apply the same approach as set out in Guideline 3.

1.23. Where the amount of the disability benefit payments depends on the degree of disability of injured persons, undertakings should apply the same approach as set out in Guideline 3 paragraph 4 and 5.

1.24. When calculating the best estimate of the recurring benefit payments for the event type "Disability that lasts 10 years caused by an accident" or "Disability

that lasts 12 months caused by an accident", undertakings should exclude any exit cause and take into account all future payments between:

the end of any deferred period;

(a) the end of the 10 years or 12 months period or, if this is earlier, the end of the coverage period.

1.25. In the calculation undertakings should account for expected increases in the amount of recurring benefit payments and claims management expenses.

Guideline 5 – Calculation of the sum insured for medical treatment caused by accident

1.26. Undertakings should calculate the average amounts in the case of the event type "Medical treatment caused by an accident" as the benefits for medical treatment caused by an accident observed during prior years, including related expenses, divided by the number of single claims corresponding to these benefits.

1.27. Undertakings should ensure that the observation period is long enough to minimise statistical errors.

1.28. For the calculation of the average amounts, undertakings should adjust past data for the inflation rate of medical payments.

1.29. Where a medical treatment is expected to last more than one year, undertakings should take into account the expected inflation rate of medical payments.

1.30. Undertakings should appropriately discriminate between benefits paid for medical treatment caused by an accident and other benefits on the basis of past observations. Where necessary, undertakings should complement this analysis by expert judgement. Undertakings should base all estimations on public or internal statistics. Undertakings should be able to justify these assumptions to the satisfaction of the supervisory authority.

Guideline 6 – Calculation of the sum insured in the accident concentration risk sub-module

1.31. For the calculation of the value of the benefits referred to in Article 162 (4) (c) of the Implementing Measures, undertakings should apply the same principles as set out in Guidelines 2 to 4.

1.32. Where an insured person is covered by two or more contracts with benefit payments in the case of the event type *e* and which are not mutually exclusive, undertakings should add up the benefit payments for the different contracts to determine SI(*e,i*) as referred to in Article 162 (4) (c) of the Implementing Measures.

Guideline 7 – Calculation of the income protection pandemic exposure

1.33. Where the contract provides for recurring benefit payments, undertakings should calculate the best estimate of the benefit payments in case of a permanent work disability caused by an infectious disease as referred to in Article 163 (2) (b) of the Implementing Measures, in the same way as set out in Guideline 3 for the best estimate of the benefit payments in case of the event type "Permanent disability caused by an accident".

Guideline 8 – Calculation of the best estimate of medical expense amounts

1.34. Undertakings should calculate the best estimate of amounts payable for healthcare utilisation *h* as referred to in Article 163 of the Implementing Measures as the product of:

(a) the expected number of healthcare treatments *h* for an insured person;

(b) the expected average claim cost for a single healthcare treatment *h*

where the expected number of healthcare treatments has at least a value of 1.

1.35. Undertakings should make an accurate estimation, based on their own experience, of:

(a) the expected number of uses of each healthcare treatment *h*;

(b) the average claim cost for a single use of each healthcare treatment *h*.

1.36. When undertakings can justify that past experience does not allow for an accurate estimation, they should use as the expected number of healthcare treatments for the healthcare utilisation type "Hospitalisation" and "No formal medical care sought" a value of 1 and for healthcare utilisation type "Consultations with a medical practitioner" a value of 2.

1.37. Undertakings should adjust the estimation of the average claim cost for the inflation rate of medical payments, and complement it if necessary by expert judgement. The observation period should be long enough to avoid statistical errors.

Compliance and Reporting Rules

1.38. This document contains Guidelines issued under Article 16 of the EIOPA Regulation. In accordance with Article 16(3) of the EIOPA Regulation, national competent authorities shall make every effort to comply with guidelines and recommendations.

1.39. Competent authorities that comply or intend to comply with these Guidelines should incorporate them into their regulatory or supervisory framework in an appropriate manner.

1.40. Competent authorities shall confirm to EIOPA whether they comply or intend to comply with these Guidelines, with reasons for non-compliance, within two months after the issuance of the translated versions.

1.41. In the absence of a response by this deadline, competent authorities will be considered as non-compliant to the reporting and reported as such.

Final Provision on Reviews

1.42. The present Guidelines shall be subject to a review by EIOPA.

2. Explanatory text

Guideline 1 – General provisions for the calculation of Health CAT capital charges

Where the determination of the cause of a catastrophe scenario is necessary in the calculations of the capital requirements for the health catastrophe risk sub-module and the effects described in the scenarios can have different causes, undertakings should use in the calculation the cause resulting in the highest loss in basic own funds. In particular, undertakings should not exclude the scenario just because some potential causes of the catastrophe scenario are excluded by policy terms and conditions (e.g. terrorism).

2.1. Consider as an example the case of the mass accident scenario: it consists of an accident occurring in an arena stadium, which results in a large number of people being injured. Such an accident can be caused for instance by a terrorist attack, by an explosion not caused by terrorists, or by the arena collapsing for any reason (subsidence, earthquake, construction defects, etc.).

2.2. A health insurance undertaking may explicitly exclude in its contracts any payment where the cause of the accident is a terrorist attack. However, as the same accident, and its consequences, could also have other causes than a terrorist attack, the undertaking does not have to consider its exposure to such a scenario as nil.

Guideline 2 – Calculation of the sum insured for accidental death benefits

Where an insurance contract provides for benefits in case of death irrespective of the cause and additional benefits in case of death caused by an accident, undertakings should take only the additional benefits into account when calculating the value of the benefits referred to in Article 161 (3) (b) and Article 162 (4) (c) of the Implementing Measures, provided the following conditions are met:

(a) the benefits have been unbundled;

(b) the risks related to the benefits in case of death irrespective of the cause are properly captured in the life underwriting risk module.

Where additional recurring benefit payments are provided for in case of death caused by an accident, undertakings should base the calculation of the value of the benefits payable on best estimate parameters (mortality table and discount rate curve) taking into account relevant demographic characteristics. Undertakings should also reflect in the calculation the contractual duration of the recurring benefit payments.

Where no or insufficient demographic data is available undertakings should use realistic assumptions on the demographic parameters based on public or internal statistics in the calculation of the value of the benefits. Undertakings should be able to justify these assumptions to the satisfaction of the supervisory authority.

In the calculation of the value of the benefits, undertakings should account for expected increases in the amount of recurring benefit payments and claims

management expenses.

2.3. The relevant demographic characteristics include, but are not limited to, the percentage of married persons, the number of children and the age and gender of the beneficiaries.

Guideline 3 – Calculation of the sum insured for permanent disability benefits

Where benefits for disability can be paid either as a single payment or as recurring payments, undertakings should follow a three step approach to determine the value of the benefits referred to in Article 161 (3) (b) and Article 162 (4) (c) of the Implementing Measures:

(a) Step 1: determination of the expected proportion of benefit payments in the form of a single payment;

(b) Step 2: determination, for each insured person, of the benefits in the case of a single payment and the best estimate of the recurring benefits;

(c) Step 3: calculation of the average between the two values determined in step 2 weighted by the proportion calculated in step 1.

Notwithstanding paragraph 1, when the choice between a single payment and recurring payments is at the discretion of the beneficiary, the undertaking should use the maximum of the two values instead of the weighted average.

Undertakings should justify the assumptions underlying the calculation of the proportions referred to in paragraph 1. Where undertakings cannot justify the calculation of the proportions to the satisfaction of the supervisory authority, they should calculate the value of the benefits as the maximum between the single payment and the best estimate of the recurring benefits.

Where the amount of the disability benefit payments depends on the degree of disability of injured persons, undertakings should calculate the value of the benefits for all persons in the following way:

(a) derive a distribution of the degrees of disability amongst injured persons;

(b) calculate the claim costs associated with each degree of disability;

(c) apply the distribution of degrees to the associated claim costs accordingly.

Undertakings should justify the assumptions underlying the calculation of the distribution of degrees referred to in paragraph 4. Where undertakings cannot justify the calculation of the proportions to the satisfaction of the supervisory authority, they should use for all insured persons the maximum claim cost across all degrees of disability.

In the calculation of the best estimate of the recurring benefit payments for the event type "Permanent disability caused by an accident", undertakings should assume that

payments are made over the full benefit period specified in the terms and conditions of the policy, but that exits due to mortality may occur.

For the calculation undertakings should make realistic assumptions on the mortality rates for permanently disabled people based on public or internal statistics. Undertakings should be able to justify these assumptions.

In the calculation of the value of benefits, undertakings should account for expected increases in the amount of recurring benefit payments and claims management expenses.

Determination of the expected proportion of benefits payments in the form of a single payment:

2.4. When determining the expected proportion of benefits payments in the form of a single payment as set out in Guideline 3, undertakings have to use all available and relevant statistical and contractual information, including, but not limited to:

- the conditions in which the benefits can be paid as a single payment;
- the discretionary power of the undertaking to choose between the single payment and recurring payments;
- the compatibility of each mode of payment (single payment / recurring payments) with the underlying assumptions of the scenario, and the fact that injured persons are permanently disabled;
- the historical proportion of permanent disability claims paid as a single payment.

2.5. As an example, consider an undertaking providing insured persons with compensation in case of:

- temporary disability;
- permanent disability type 1;
- permanent disability type 2;
- permanent disability type 3.

2.6. This undertaking, on the basis of its historical claim data in case of accidents, can derive the following statistics: amongst all persons eventually considered as permanently disabled:

- 50% were initially considered as temporarily disabled;
- 10% were initially considered as disabled type 1;
- 35% were initially considered as disabled type 2;
- 5% were initially considered as disabled type 3.

2.7. Moreover, the terms and conditions of the contracts stipulate that recurring benefits are paid to temporarily disabled people, as well as to permanently disabled persons of type 1 and 2. Disabled persons of type 3 receive a single payment.

2.8. On the basis of such statistics and contractual information, when calculating the value of the benefits for permanent disability, the undertaking will determine as a result of step 1 a proportion of 5%.

Calculation of the value of the benefits when the amount of the disability benefit payments depends on the degree of disability of injured persons:

2.9. To illustrate the use of the distribution of disability degrees as set out in Guideline 3, consider a disability product with the following structure of benefits (where x is the degree of disability):

- for a disability degree between 0% and 33%, no benefit is paid;
- for a disability degree between 33% and 67%, the beneficiary receives a recurring payment of 100*x;
- for a disability degree above 67%, the beneficiary receives a recurring payment of 67.

2.10. Based on estimates by the undertaking following an accident:

- 20% of disabled persons have a disability degree between 0% and 33%;
- 60% of disabled persons have a disability degree between 33% and 67%;
- 20% of disabled persons have a disability degree above 67%.

Moreover, for persons in the bracket between 33% and 67% disability degrees are uniformly distributed.

2.11. On this basis the undertaking has to consider for each insured person an average recurring payment of

0 * 20% + 50 * 60% + 67 * 20% = 43.4

The value of 50 used above is the uniform average within the range 33% to 67%.

2.12. If the undertaking was not in a position to justify any distribution of disability degrees, it would have to assume for each insured person an average recurring payment of 67 (i.e. the maximum possible amount).

2.13. Once the recurring payments have been determined for each insured person, the calculation of the value of the benefits has to be derived in the normal way following the relevant guidelines.

Guideline 4 – Calculation of the sum insured for ten year disability and twelve month disability benefits

Where the beneficiary can receive either a single payment or recurring benefit payments in the case of the event types "Disability that lasts 10 years caused by an accident" or "Disability that lasts 12 months caused by an accident", undertakings should apply the same approach as set out in Guideline 3.

Where the amount of the disability benefit payments depends on the degree of disability of injured persons, undertakings should apply the same approach as set out

in Guideline 3 paragraph 4 and 5.

When calculating the best estimate of the recurring benefit payments for the event types "Disability that lasts 10 years caused by an accident" or "Disability that lasts 12 months caused by an accident", undertakings should exclude any exit cause and take into account all future payments between:

the end of any deferred period;

(a) the end of the 10 years or 12 months period or, if this is earlier, the end of the coverage period.

In the calculation undertakings should account for expected increases in the amount of recurring benefit payments and claims management expenses.

2.14. Any exit cause has to be excluded as the "ten years disability" and "twelve months disability" are actually scenarios: the insurance company has to actually assume a case where the insured person will be disabled for a period of 12 months / 10 years. As a consequence, there is no reason to make a calculation based on recovery or mortality tables, as the period of disability is already given by the scenario. The undertaking only has to consider how much benefits it would have to pay for someone being disabled for a period of 12 months / 10 years.

2.15. The 12 months / 10 years disability scenarios have to be applied to all existing business, even if the business includes a shorter compensation period.

2.16. For illustration, consider a company providing for 3-years temporary disability guarantees. The CAT scenario actually states that x% of the insured people are disabled over a 10 years period. However, in financial terms, the undertaking will have to pay guarantees for a period of 3 years to the x% of the insured people affected by the scenario. Even if it is a 10 years disability scenario and if the undertaking only covers 3 years, the undertaking is affected by the scenario.

Guideline 6 – Calculation of the sum insured in the accident concentration risk sub-module

For the calculation of the value of the benefits referred to in Article 162 (4) (c) of the Implementing Measures, undertakings should apply the same principles as set out in Guidelines 2 to 4.

Where an insured person is covered by two or more contracts with benefit payments in the case of the event type e and which are not mutually exclusive, undertakings should add up the benefit payments for the different contracts to determine SI(e,i) as referred to in Article 162 (4) (c) of the Implementing Measures.

2.17. For illustration, consider a company A with 1000 employees and a second company B with 500 employees located in the same building. An insurance undertaking covers:

- all employees of company A for workers' compensation;

- 200 employees of company A for income protection, by way of a 50% quota-share reinsurance;
- 350 employees of company B for both workers' compensation and income protection.

2.18. In some cases, income protection benefits and workers' compensation benefits may be mutually exclusive, while in other cases both will be triggered by the accident concentration event.

2.19. In cases where the benefits are mutually exclusive, only the triggered benefits have to be taken into account when calculating $SI_{(e,i)}$. If both are triggered, then $SI_{(e,i)}$ has to be determined by adding up income protection and workers' compensation benefits for the insured person *i*.

Guideline 7 – Calculation of the income protection pandemic exposure

Where the contract provides for recurring benefit payments, undertakings should calculate the best estimate of the benefit payments in case of a permanent work disability caused by an infectious disease as referred to in Article 163 (2) (b) of the Implementing Measures, in the same way as set out in Guideline 3 for the best estimate of the benefit payments in case of the event type "Permanent disability caused by an accident".

2.20. The disease underlying the calibration of this scenario is the *Encephalitis Lethargica*. If they consider this information relevant, undertakings may use it for the determination of E.

Guideline 8 – Calculation of the best estimate of medical expense amounts

Undertakings should calculate the best estimate of amounts payable for healthcare utilisation *h* as referred to in Article 163 of the Implementing Measures as the product of:

(a) the expected number of healthcare treatments h for an insured person;

(b) the expected average claim cost for a single healthcare treatment h

where the expected number of healthcare treatments has at least a value of 1.

Undertakings should make an accurate estimation, based on their own experience, of:

(a) the expected number of uses of each healthcare treatment h;

(b) the average claim cost for a single use of each healthcare treatment h.

When undertakings can justify that past experience does not allow for an accurate estimation, they should use as the expected number of healthcare treatments for the healthcare utilisation type "Hospitalisation" and "No formal medical care sought" a value of 1 and for healthcare utilisation type "Consultations with a medical practitioner" a value of 2.

Undertakings should adjust the estimation of the average claim cost for the inflation

rate of medical payments, and complement it if necessary by expert judgement. The observation period should be long enough to avoid statistical errors.

2.21. Where a medical treatment is expected to last more than one year, undertakings have to take into account the expected inflation rate of medical payments. Undertakings have also to take it into account when estimating the average claim cost for a single use of healthcare type "No formal medical care sought".

2.22. The average claim cost for the healthcare treatment "no formal medical care sought" can actually be greater than 0. In particular, when a medical expense contract allows for the reimbursement of medicines bought without medical prescription, the associated costs has to be taken into account.

2.23. Undertakings may use expert judgment to estimate the average claim cost for a single use of each healthcare treatment, provided that relevant data is lacking.

2.24. Where a legally enforceable commitment by the government of a country exists to provide financial support to insurance or reinsurance undertakings or to settle claims directly with the persons insured in the case of a pandemic, undertakings have to take the effect into account in the calculation of the average claim costs for each healthcare treatment h.

2.25. The pandemic scenario has been calibrated for medical expense on the basis of an influenza pandemic. If they consider this information relevant, undertakings may use it for the determination of *CH*.