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# UK Asbestos Working Party Repeat of GIRO 2018 session B5 (18 September 2018)

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# IMPORTANT

ALL FIGURES PRESENTED IN THIS  
WORKSHOP ARE DRAFT

FINAL ESTIMATES WILL BE PUBLISHED IN OUR  
PAPER LATER WHEN WE CONCLUDE OUR  
WORK ON MESOTHELIOMA



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## UK asbestos working party

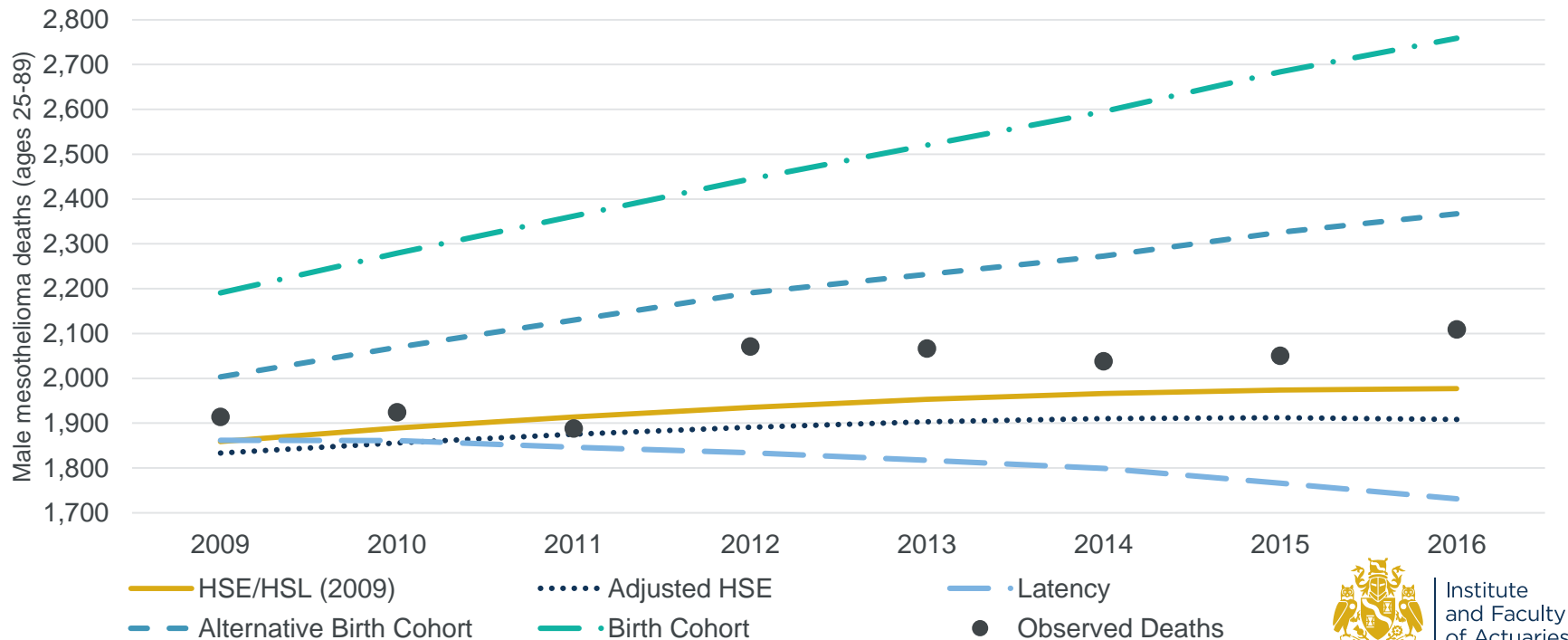
# Mesothelioma deaths

Two models: Age-Birth GLM model and HSE model



# Mesothelioma deaths

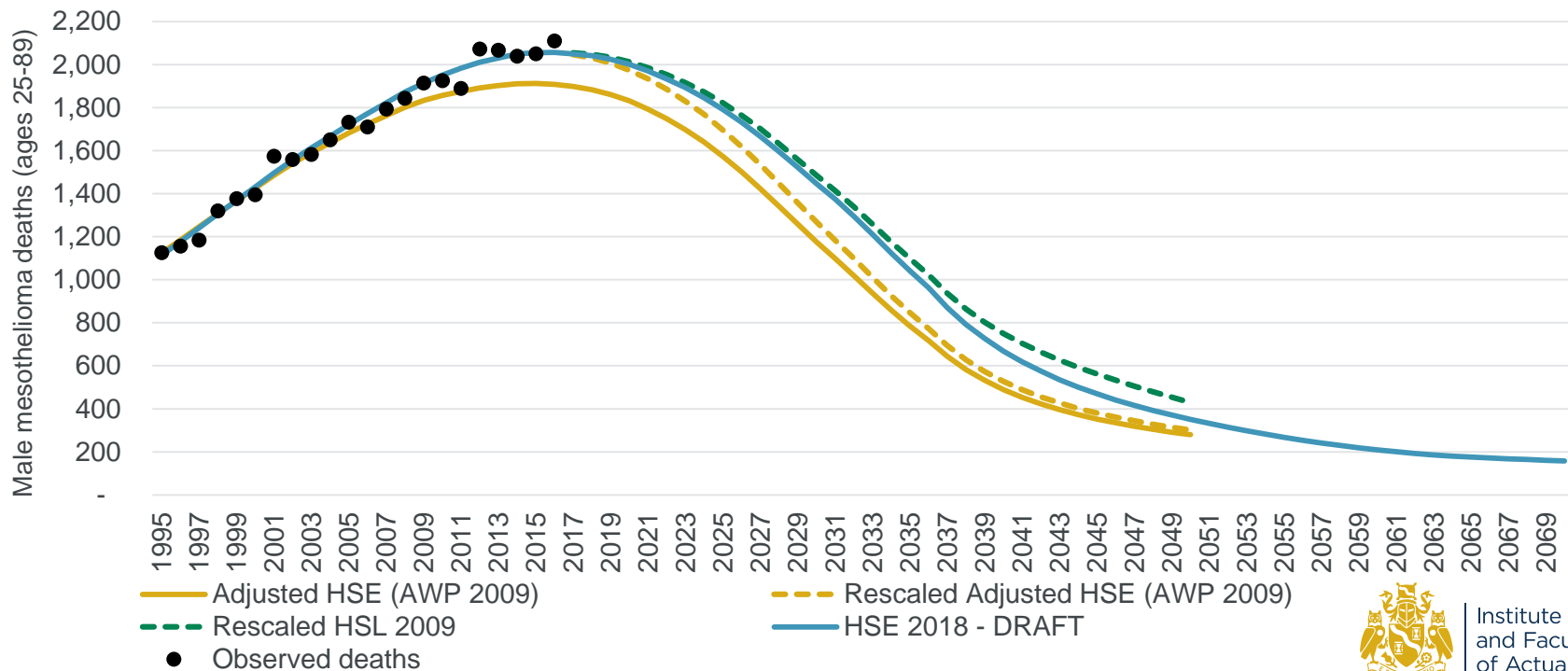
## Recap



# Mesothelioma deaths

## HSE latest curve

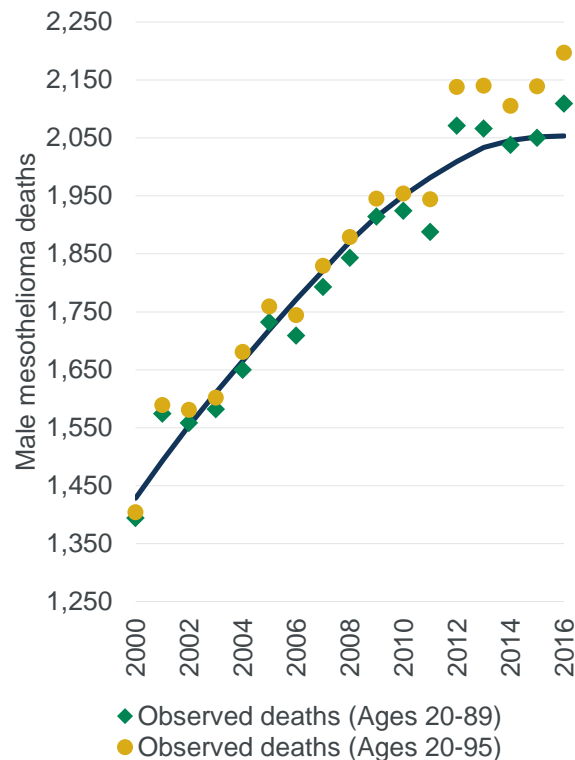
NOTE: HSE 2018 model parameters subject to change



# Mesothelioma deaths: HSE

## Age 90+

- Extension of the model to project deaths age 90+ is a key area of uncertainty
- We have discussed with the HSE and are comparing a number of approaches:
  - a. Linear extrapolation of actual deaths age 90+ to deaths age 20-89 (HSE prior approach)
  - b. Using our GLM output to inform the death rates above age 90 in the HSE model
  - c. Judgementally applying death rates based on HSE model output for younger age bands
  - d. Full model parameterisation by HSE to fit deaths up to age 95
- Depending on the outcome of (d), we will determine if we have a preferred method or a set of alternatives / sensitivities
- Propensity to claim at these older ages is another key issue for the market estimate



# Mesothelioma deaths: Age-Birth GLM

## Overview

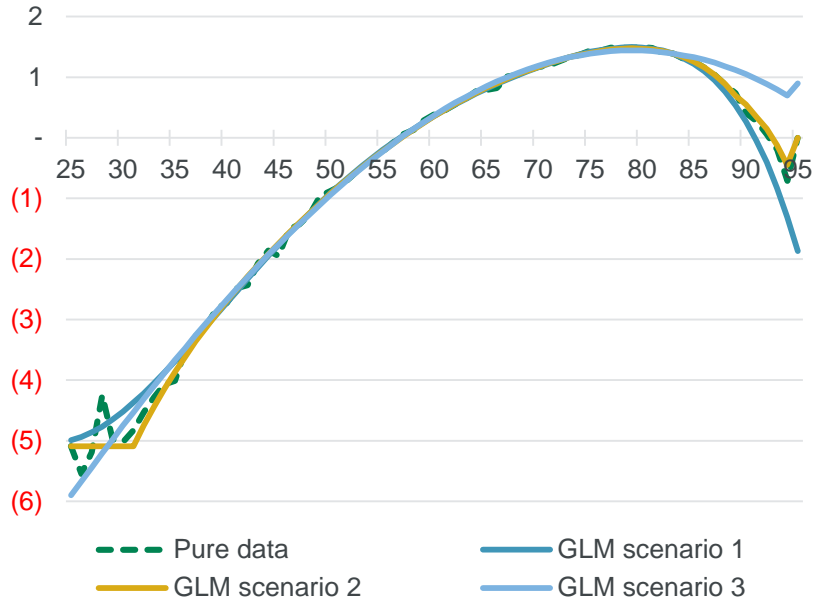
- Updated parameters for 2016 deaths data
- Limited impact of re-parameterisation
- Alternative scenarios based parameters based on uncertainty at older ages (85+) and birth cohorts (1960 and onwards)
  - Scenario 1: Deaths at ages 85+ and birth cohorts post 1950 will be lower than currently reported
  - Scenario 3: Deaths at ages 85+ and birth cohorts post 1950 will be higher than currently reported
- A potential range of outcomes but by no means provide an upper or lower bound
  - Practitioners may wish to consider or use the alternative parameterisations



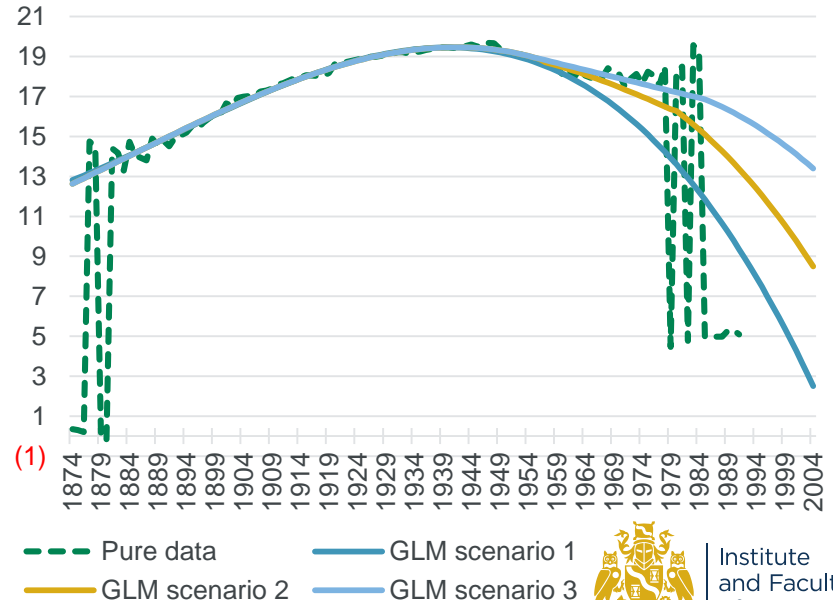
# Mesothelioma deaths: Age-Birth GLM

## Parameters

### Age parameters

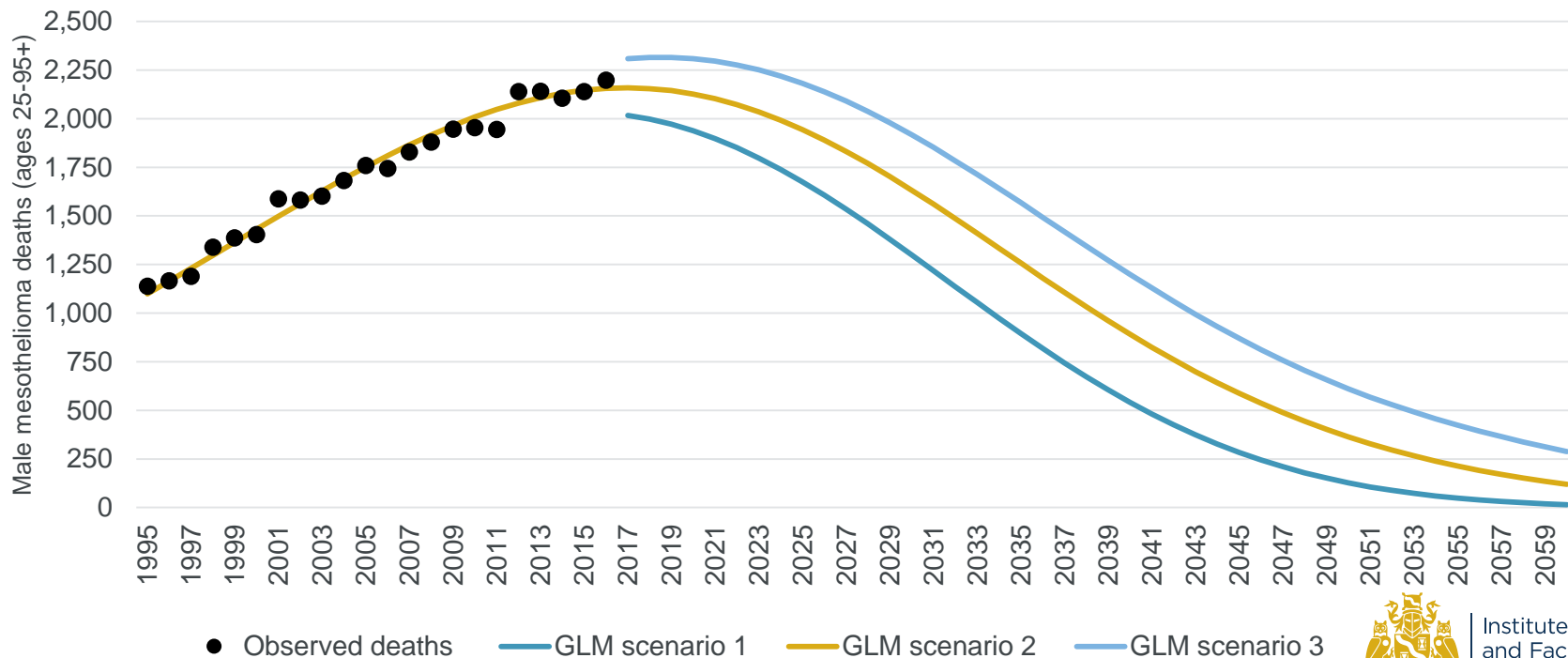


### Birth parameters





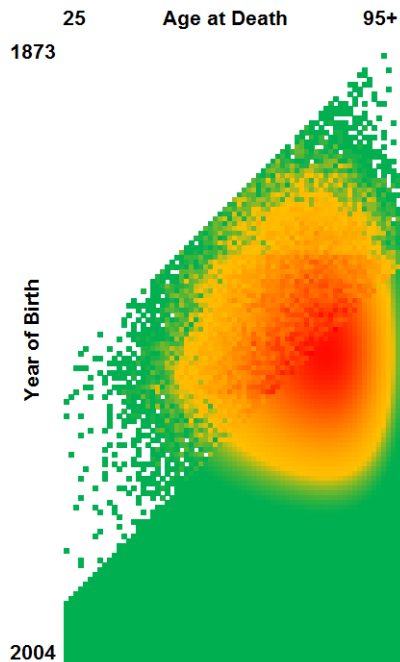
# Mesothelioma deaths: Age-Birth GLM Scenarios



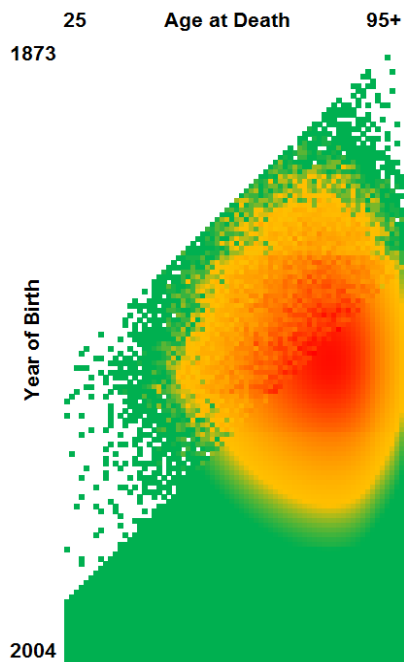
# Mesothelioma deaths: Age-Birth GLM

## Heat maps

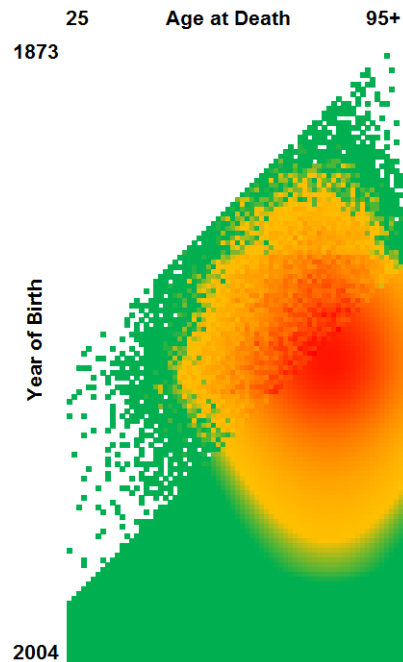
### GLM scenario 1



### GLM scenario 2

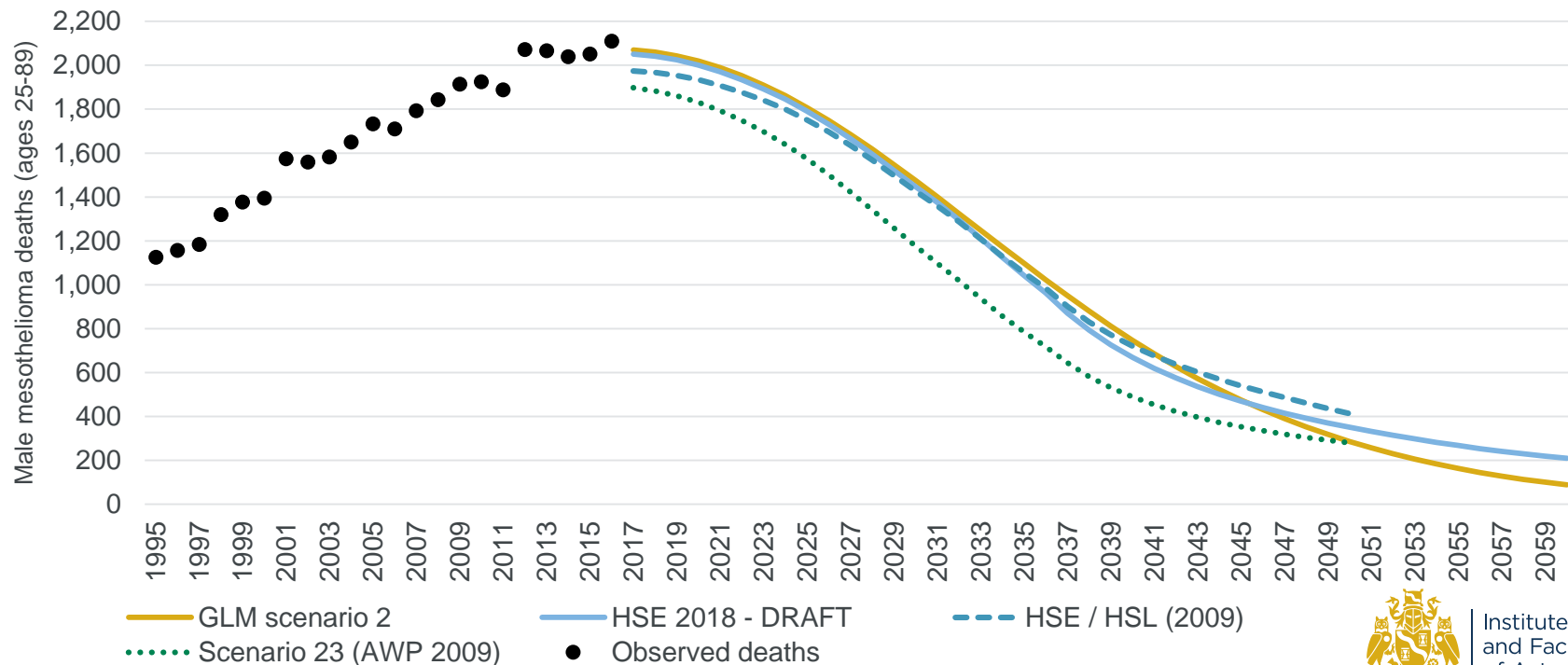


### GLM scenario 3



# Mesothelioma deaths

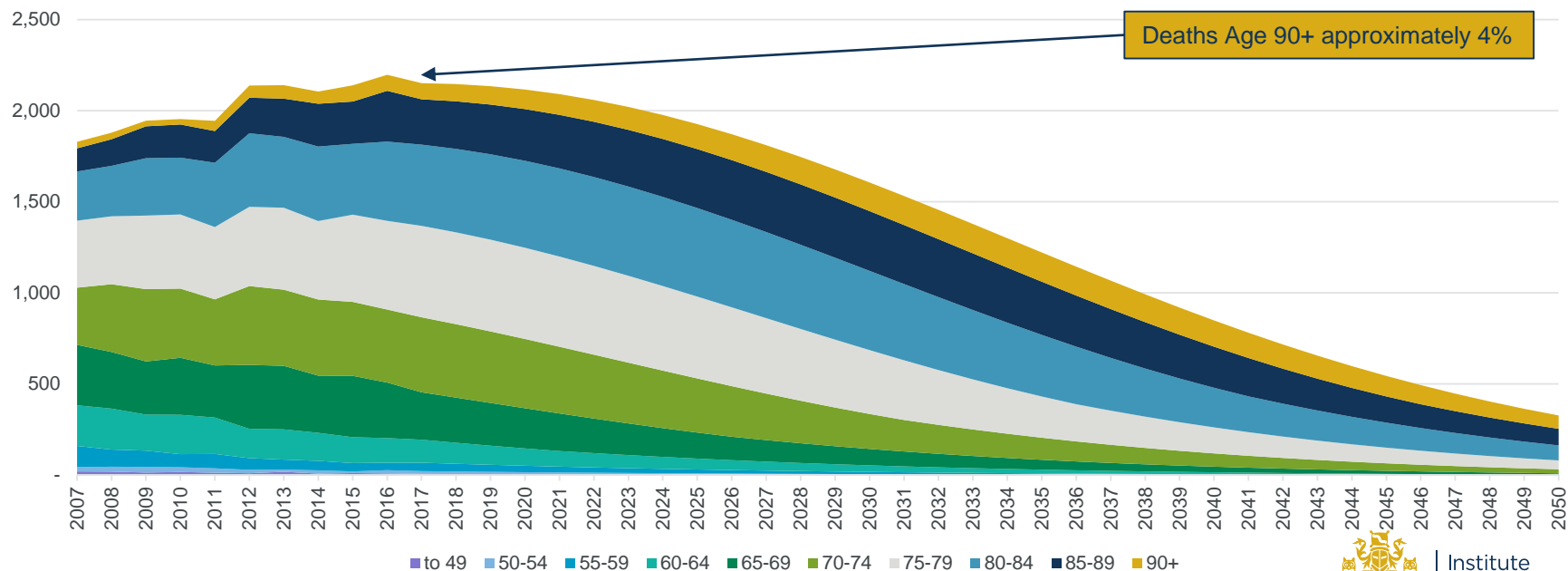
## Comparisons



# Mesothelioma claims to deaths

## Deaths : Changing age profile

Male deaths by age band - Actual to 2016 then projected



- Partially more deaths at older ages mitigated by lower propensity to claim as age increases

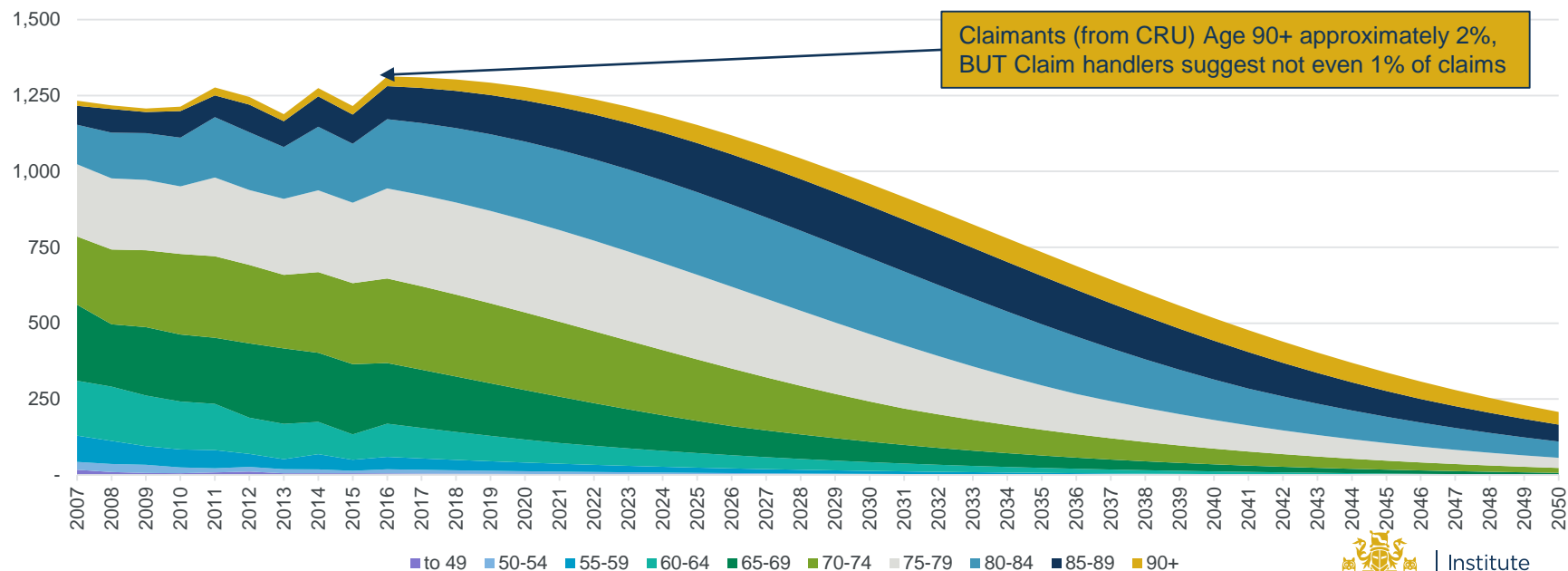


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# Mesothelioma claims to deaths

## Claims : Changing age profile

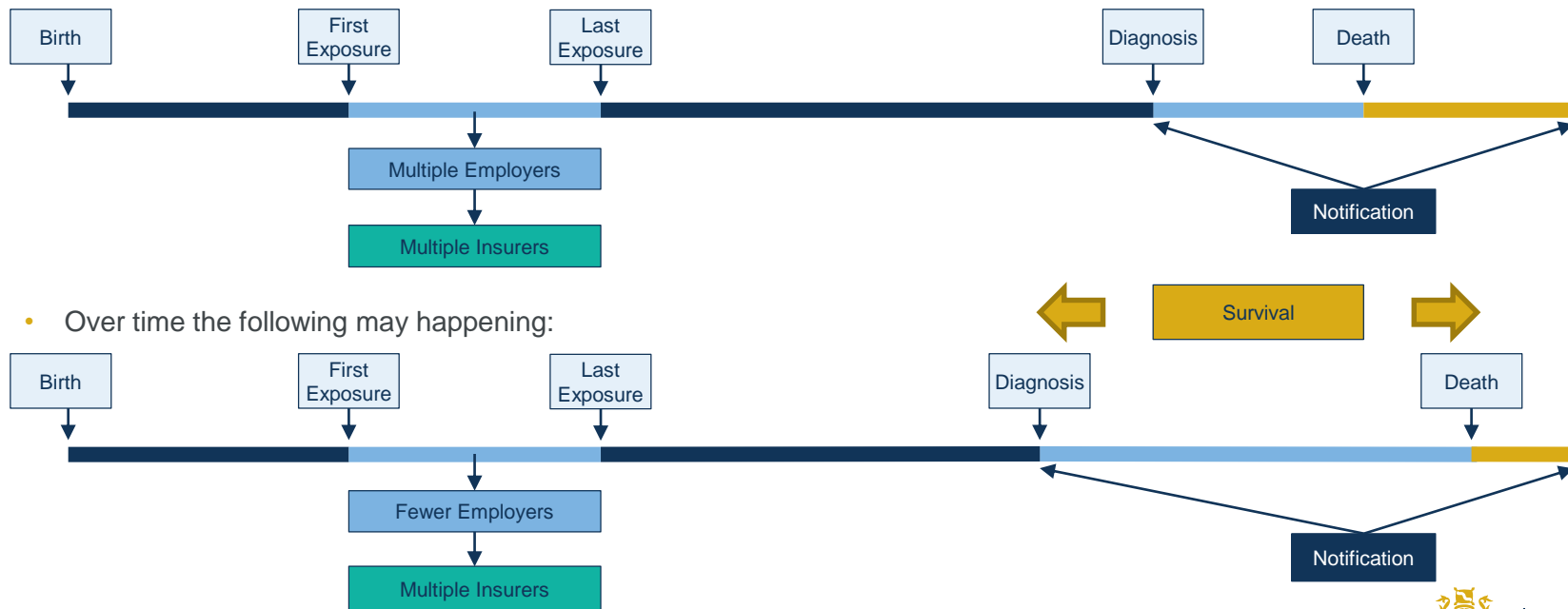
Male claimants by age band - Actual to 2015 then projected



- The above uses the slightly increasing propensity, so the impact would be greater if flat propensity

# Mesothelioma claims to deaths

## Moving parts underlying the trends



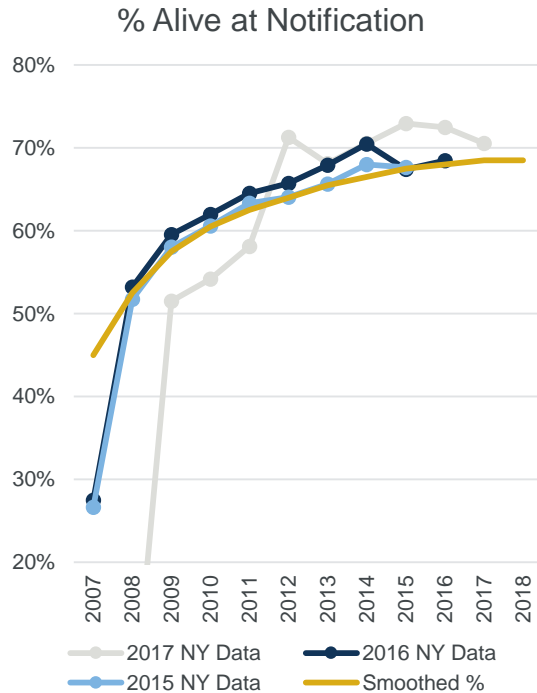
- Over time the following may happen:

- We discussed some of these issues with some claims managers in the market to help us interpret the data



# Mesothelioma claims to deaths

## Proportion live at notification



- Proportion of Live claimants from the data collection has increased over time but looks to be stabilising
- Additional background from claims experts
  - Historically Scottish claims waited until after death to get higher claim for multiple dependants, but legislation in 2012 and 2014 changed this
  - Diagnosis is earlier, and also people living longer
  - Anecdotally, it was felt that the length of time between diagnosis and notification has shortened over the last five years but has plateaued around 4-6 months for the last two years
  - Potential of data being provided to help us investigate trends in length of time between notification and death
  - One view was that while the live proportion appears to have levelled off, immunotherapy will give it another boost with people claiming earlier to secure treatment rather than purely to support dependents



# Mesothelioma claims to deaths

## CRU data – Background

- The Compensation Recovery Unit (CRU) is informed of all asbestos-related claims giving rise to compensation, whether from the insurance industry or the Government, and an insurer must notify CRU of a claim within 14 days, so should be minimal delay in notification dates compared to insurance notification date
- The last set of data received from the CRU (under a Freedom of Information (FOI) request) was for notification years 2007 to 2015, received in February 2016
- The FOI for 2016 and 2017 data have since been rejected based on the cost to produce the data, which we are currently appealing. We also plan to ask for “date of death” to be added to the data in future
- Anonymised Customer Number provided to enable us to “group multiple claims for each customer”, i.e. to produce a “claimant” list rather than “claim” list. Where a claimant has more than one data field classification, we have used the following “priority” order to map:
  - IP’s Sex: Male, Female
  - Liability Type: Employer, Public, Other, Clinical Negligence
  - Type: Non-State, Local Authority, National Industry, NHS, Government Department
  - Country: England, Scotland, Wales, Northern Ireland, Channel Islands, Isle of Man
  - Claim Status: Live, Settled, Withdrawn
- Reduces 22,319 claims to 15,023 claimants, which the claim experts agree should represent all claimants who bring a claim (although the claim data will be inconsistent)

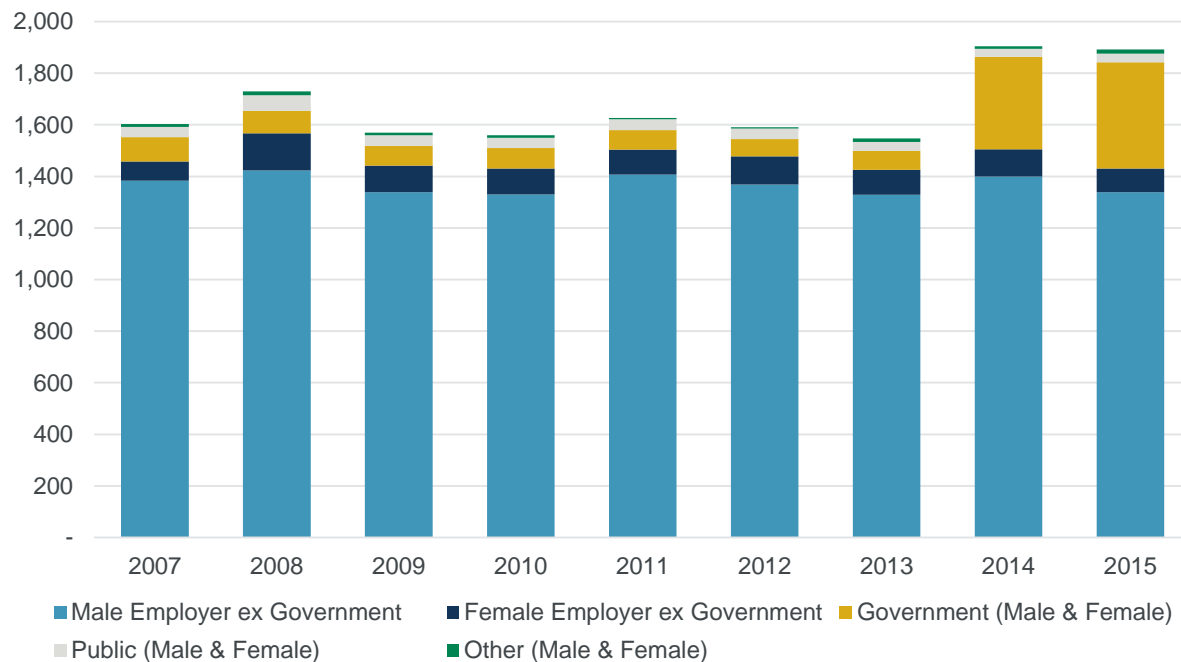




# Mesothelioma claims to deaths

## CRU data by notification year

CRU Claimants (including withdrawn)

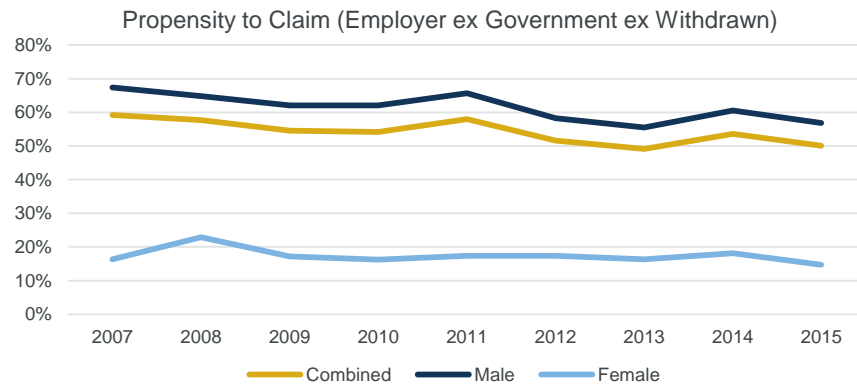
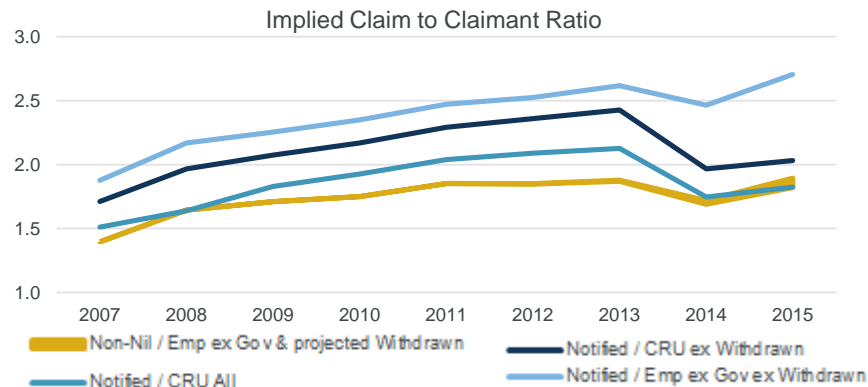


- Male Employer (ex Gov) claims consistently around 1,330 to 1,420 for 2007-2015
- Female Employer (ex Gov) claims consistently around 90 to 110 for 2007-2015
- Increase in Government claims for 2014-2015 due to DMPS, increase broadly consistent with claim numbers announced by DMPS
- Public & Other combined quite stable around 45-50 claims per year, but these make up a higher proportion of female claims

# Mesothelioma claims to deaths

## Moving parts between deaths and claims

- Notification earlier, more likely when still alive due to:
  - Diagnosis earlier
  - Scotland legislation
  - Immunotherapy (and other private medical treatments)
- Potential longer survival
  - Claimants living longer due to medical advances, not just due to earlier diagnosis
- Lower propensity to claim from older ages
  - Propensity stable or slightly increasing for a particular age, but aging population will reduce the aggregate propensity



- Changing claim to claimant:
  - Claim manager view is that the number of cases with multiple defendants is reducing in line with the UK exposure profile, e.g. classic multiple defendant case is a lagger
  - Could the number of insurance claims be reducing due to market consolidation
  - Ratio comparing non-nil claims compared to CRU Employer (ex Government) claimants pretty stable since 2011



# Mesothelioma claims to deaths

## Moving parts underlying the trends

- Implications of these underlying changes:
  - Where we previously assumed claim notifications were spread fairly evenly before and after date of death, there seems to be evidence that the notification date is now (on average) earlier than deaths
  - Will impact the propensity to claim assumed over recent years and projected going forward.
  - Will also impact the claim to claimant assumption
- How do we plan to model propensity to claim going forward:
  - Estimate the future live vs deceased proportion
  - Estimate the delay between notification and death or death and notification as appropriate
  - Combine to produce a matrix mapping notification year to death year (and visa-versa)
  - Use this along with (updated) CRU claimant data and HSE death data to get a better understanding of propensity to claim when looking at consistent groups of people.
- How do we plan to model claim to claimant going forward:
  - Combine the market survey data with the CRU claimant data (for Employer, Non-Government claimants only) to see what trends are emerging
  - Combine with qualitative data from the market to project going forward.



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# Mesothelioma average cost

Per claimant average cost



# Mesothelioma average cost

## Overview

Model based on 2008 detailed data

Key changes:

- General Damages (new guidelines and reduced court inflation)
- Ogden multipliers and discount rate
- Proportion living at settlement from market survey
- Settlement pattern

Using Ogden discount rate at -0.75%, but showing scenarios at 2.5% and 0.5%

Model allows for a different Ogden discount rates

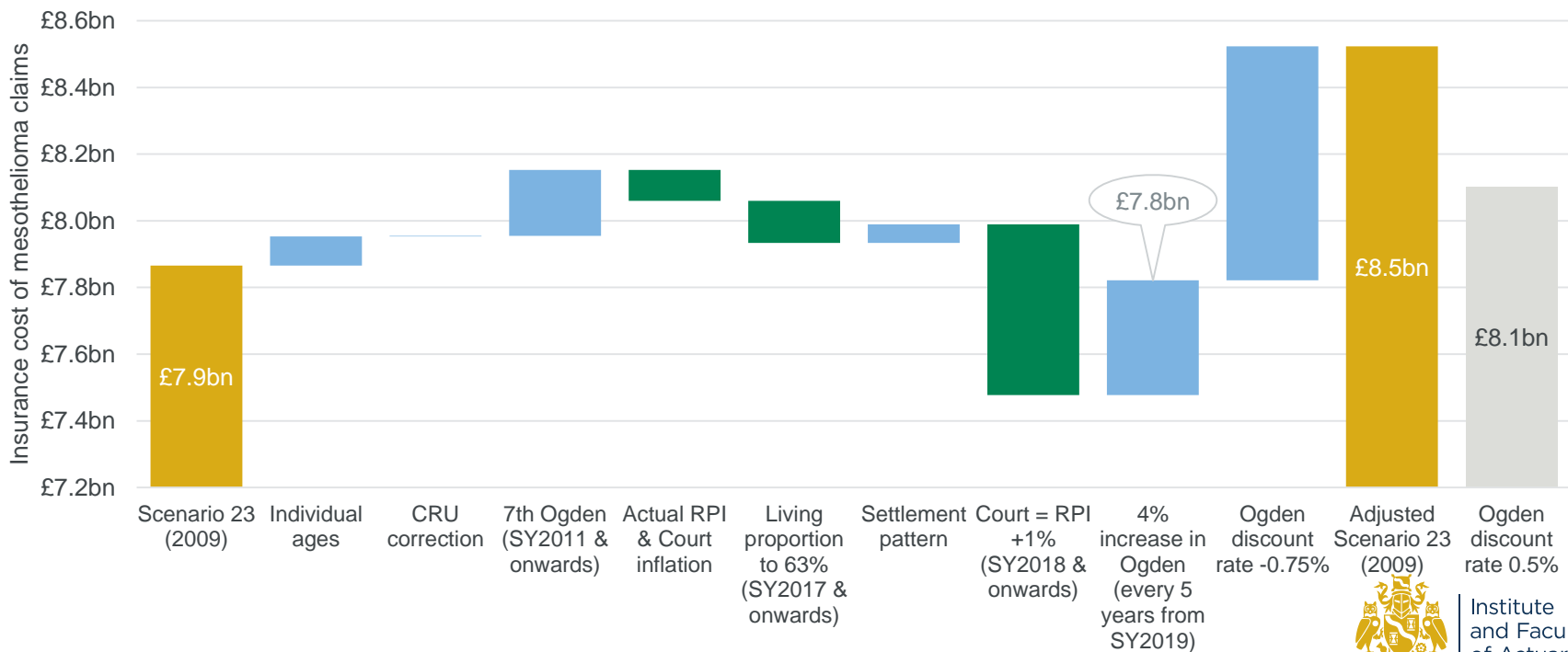
Three cost scenarios by considering the future inflation by each type

Inflation type	Scenario A	Scenario B	Scenario C
RPI	1.5%	2.5%	3.5%
Wage	2.5%	4.0%	5.5%
Court	1.5%	3.5%	5.5%
Ogden uplift %	2.0%	4.0%	6.0%
Ogden uplift every	6 years	5 years	4 years
<i>Implied p.a. inflation</i>	2.2%	4.1%	6.0%



# Mesothelioma average cost

## Impact on 2009 Scenario 23 (years 2018 to 2050)



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# Mesothelioma average cost

## Further developments

Considering changes based on:

- qualitative views from claims handlers; and
- quantitative analysis from CRU and survey data
  - Increasing the payment pattern (also evidence by survey data)
  - Changes to heads of damage by age
  - Claims to claimant ratio consistency with propensity to make a claim



# Mesothelioma average cost

## Areas of uncertainty

Areas of practitioner consideration:

- Inflation over a 20+ year period
- Mortality changes and impact on Ogden multipliers
- Ogden discount rate
- Treatment (Immunotherapy) / Cure – drugs, care costs, etc.
- Legal and legislative changes





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# Mesothelioma insurance cost



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# Mesothelioma claims

## Overview – Illustrative numbers (Ogden discount = 2.5%)

- Scenario 23 = £7.9bn undiscounted (2018-2050)
  - 1% decrease updated deaths, propensity and inflation
  - 7% increase extending to 2060
  - 6% increase including ages 90+
  - 16% increase extending to 2060 & ages 90+
- Extremely difficult to project:
  - Deaths and propensity to make a claim at ages 90+
  - Deaths in 2040+ and their link to an employers liability claim



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# Non-mesothelioma insurance cost



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# Non mesothelioma claims

## Overview

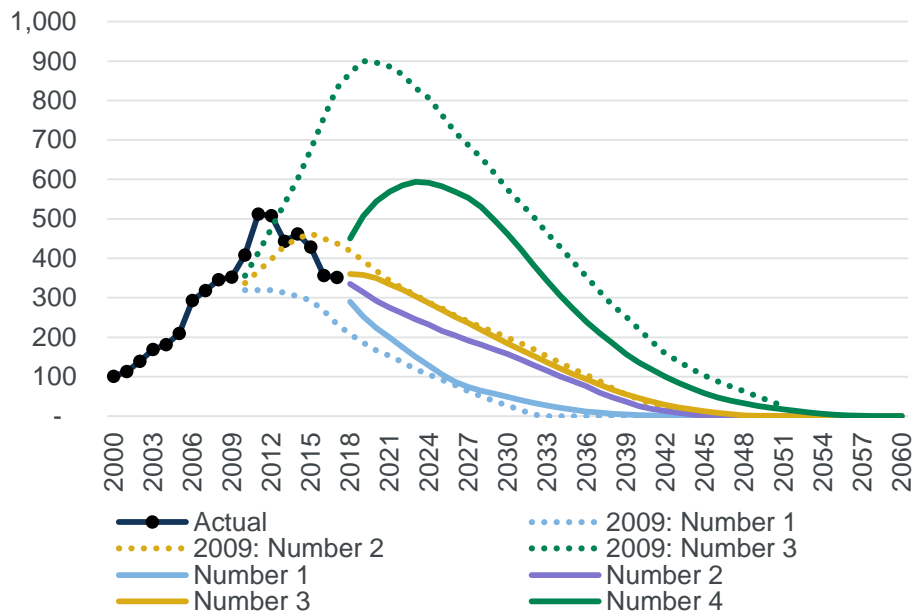
- Not detailed models for claim numbers or costs
- Numbers judgemental, given epidemiological and non-epidemiological impacts
  - 3 scenarios based on scaling Age-Birth GLM mesothelioma patterns:
  - 1 scenario based on AWP 2009\* number 2 curves
- Costs based on settled (reported and settlement year basis) and incurred, recent year averages
- Projections include nils – historical trends on nil rates have been reasonably stable
- Included pleural plaques for Scottish and Northern Irish exposures



# Non mesothelioma claims

## Lung cancer

### Number of claim assumptions



### Cost assumptions

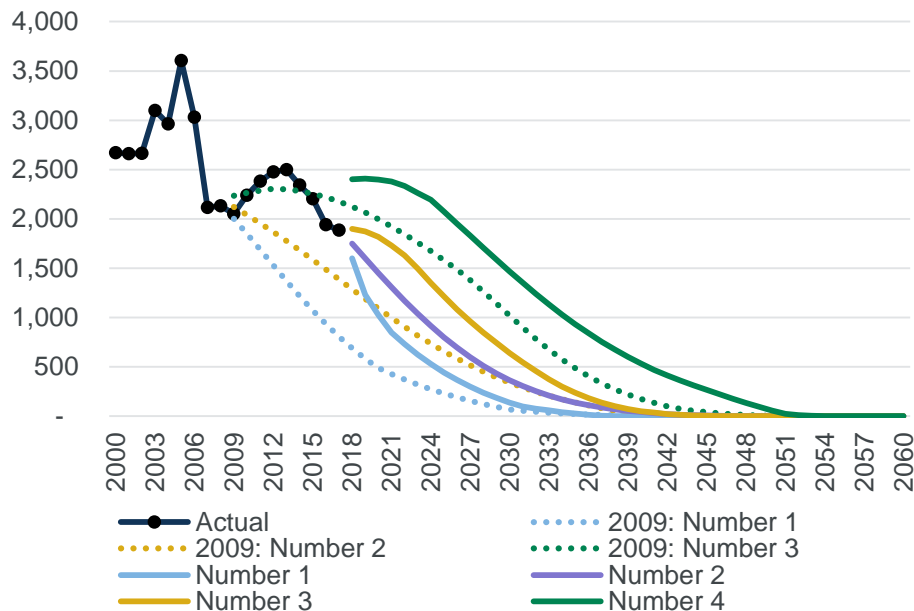
Inflation p.a.	Cost A	Cost B	Cost C
2009	1%	3%	5%
2017	1%	3%	5%

ACPC as RY2018	Cost A	Cost B	Cost C
2009	£45,995	£55,959	£67,825
2017	£18,500	£28,000	£45,000

# Non mesothelioma claims

## Asbestosis and pleural thickening

### Number of claim assumptions



### Cost assumptions

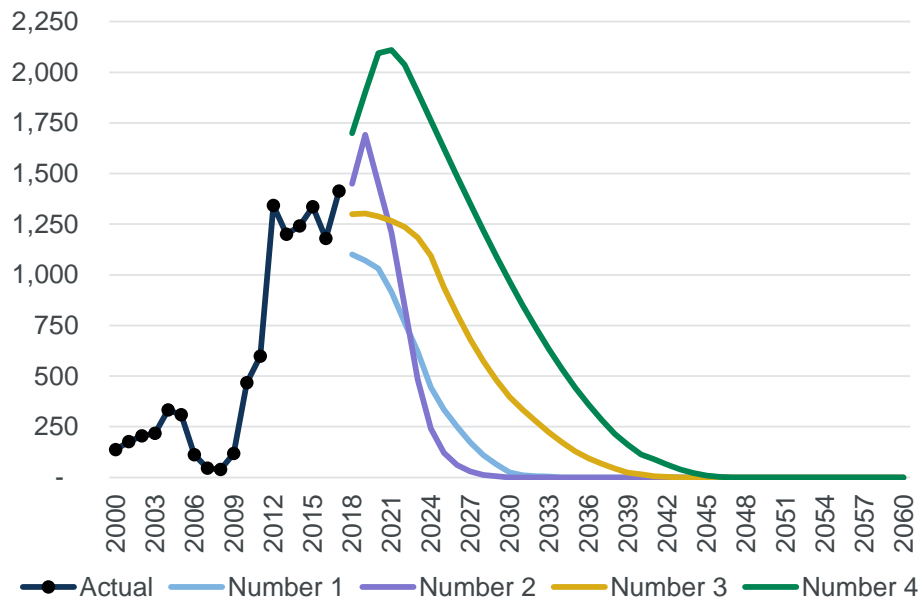
Inflation p.a.	Cost A	Cost B	Cost C
2009	1%	3%	5%
2017	1%	3%	5%

ACPC as RY2018	Cost A	Cost B	Cost C
2009	£18,612	£25,611	£35,087
2017	£15,000	£18,500	£23,000

# Non mesothelioma claims

Pleural plaques (Scottish and Northern Ireland exposure only)

## Number of claim assumptions



## Cost assumptions

Inflation p.a.	Cost A	Cost B	Cost C
2017	1%	3%	5%

ACPC as RY2018	Cost A	Cost B	Cost C
2017	£5,500	£7,500	£10,000

# Non mesothelioma claims

## Insurance cost

### All non-mesothelioma diseases

	Number 1	Number 2	Number 3	Number 4
<b>Cost A</b>	£213m	£346m	£554m	£1,002m
<b>Cost B</b>	£303m	£514m	£842m	£1,608m
<b>Cost C</b>	£446m	£796m	£1,327m	£2,697m

### Lung cancer

	Number 1	Number 2	Number 3	Number 4
<b>Cost A</b>	£39m	£79m	£97m	£212m
<b>Cost B</b>	£66m	£140m	£175m	£398m
<b>Cost C</b>	£120m	£269m	£340m	£808m

### Asbestosis and pleural thickening

	Number 1	Number 2	Number 3	Number 4
<b>Cost A</b>	£134m	£225m	£375m	£638m
<b>Cost B</b>	£180m	£312m	£542m	£967m
<b>Cost C</b>	£244m	£442m	£796m	£1,508m

### Pleural plaques

(Scottish and Northern Ireland exposure only)

	Number 1	Number 2	Number 3	Number 4
<b>Cost A</b>	£39m	£43m	£81m	£153m
<b>Cost B</b>	£58m	£61m	£125m	£243m
<b>Cost C</b>	£82m	£85m	£190m	£381m





# Non mesothelioma claims

## Comparisons to 2009 (2018 to 2050)

### Asbestosis and pleural thickening

	Number 1	Number 2	Number 3	Number 4
<b>Cost A</b>	£134m	£225m	£375m	£637m
<b>Cost B</b>	£180m	£312m	£542m	£966m
<b>Cost C</b>	£244m	£442m	£796m	£1,504m

### Lung cancer

	Number 1	Number 2	Number 3	Number 4
<b>Cost A</b>	£39m	£79m	£97m	£210m
<b>Cost B</b>	£66m	£140m	£175m	£394m
<b>Cost C</b>	£120m	£269m	£340m	£796m

### *AWP 2009: Asbestosis and pleural thickening*

	Number 1	Number 2	Number 3
<b>Cost A</b>	£82m	£124m	£189m
<b>Cost B</b>	£230m	£352m	£545m
<b>Cost C</b>	£543m	£866m	£1,396m

### *AWP 2009: Lung cancer*

	Number 1	Number 2	Number 3
<b>Cost A</b>	£59m	£78m	£102m
<b>Cost B</b>	£230m	£330m	£476m
<b>Cost C</b>	£709m	£1,059m	£1,607m



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# Summary and Next steps



# Summary and Next steps

## Summary

- Not a significant change, but an increase in the insurance market estimates
- Uncertainty around when mesothelioma claims peak and how they run-off
  - We will only know we peaked with 5 years of data after the peak
  - Limited deaths and claims at 89+ ages – difficult to assess

## Plans

- Awaiting HSE confirmation of the re-parameterisation of their model for latest deaths
- Assess the model and adjust parameters
- Finalise mesothelioma and non-mesothelioma scenarios
- Models and spreadsheets on website
- Paper outline results and key sections from previous papers



# Questions

# Comments

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