UK Asbestos

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Today's agenda

- Background on the problem
- Summary of recent population studies
- Impact on Insurance companies
- Participants' experience

AGENDA

Background - What is asbestos ?

- Group of minerals that occur naturally
- Three most common are crocidolite, amosite and chrysolite - blue, brown and white
- Long thin fibres similar to fibreglass
- Used in building materials, friction products, gaskets

Background - Why is it a problem ?

- Human carcinogen
- Asbestosis
  - impairs elasticity of lung leading to inadequate oxygen intake
  - It is progressive
  - latency period of 15 to 30 years

Background - Why is it a problem ?

- Human carcinogen
- Mesothelioma
  - cancer of the pleural lining
  - exclusively related to asbestos exposure
  - almost always fatal
  - latency period of 30 to 40 years
  - latency period of 15 to 30 years

Background - Why is it a problem ?

- Human carcinogen
- Lung cancer
  - tumours obstruct air passages
  - may be exacerbated by smoking
  - latency period of 20 to 30 years

Background - Why is it a problem ?

- Asbestos is relatively safe when it is intact
- Work to remove asbestos may have worsened the problem
- Construction, maintenance and demolition workers may still be exposed
- Specialist contractors must be used, but some builders may not follow regulations
- Exposure to the specialist contractors

Population Studies

- UK HSE has compiled mortality and morbidity information on asbestos related diseases
  - Disablement benefit awards for asbestosis have risen erratically but strongly since the early 1980s
  - Mesothelioma deaths increased from 153 deaths in 1968 to 1301 in 1996
  - The relative mortality by occupation groups varies significantly
  - Worst affected metal plate workers, plumbers and gas fitters, carpenters and electricians

Analysis of mesothelioma mortality in Britain

- Peto et al 1995
  - Analysed death rates by year of birth and age at death
  - Used a Poisson regression
    - death rate = $k_a * c_b$
  - Usual chain ladder considerations
    - calendar year trend (diagnostic trend)
    - bottom part of triangle has biggest impact on numbers

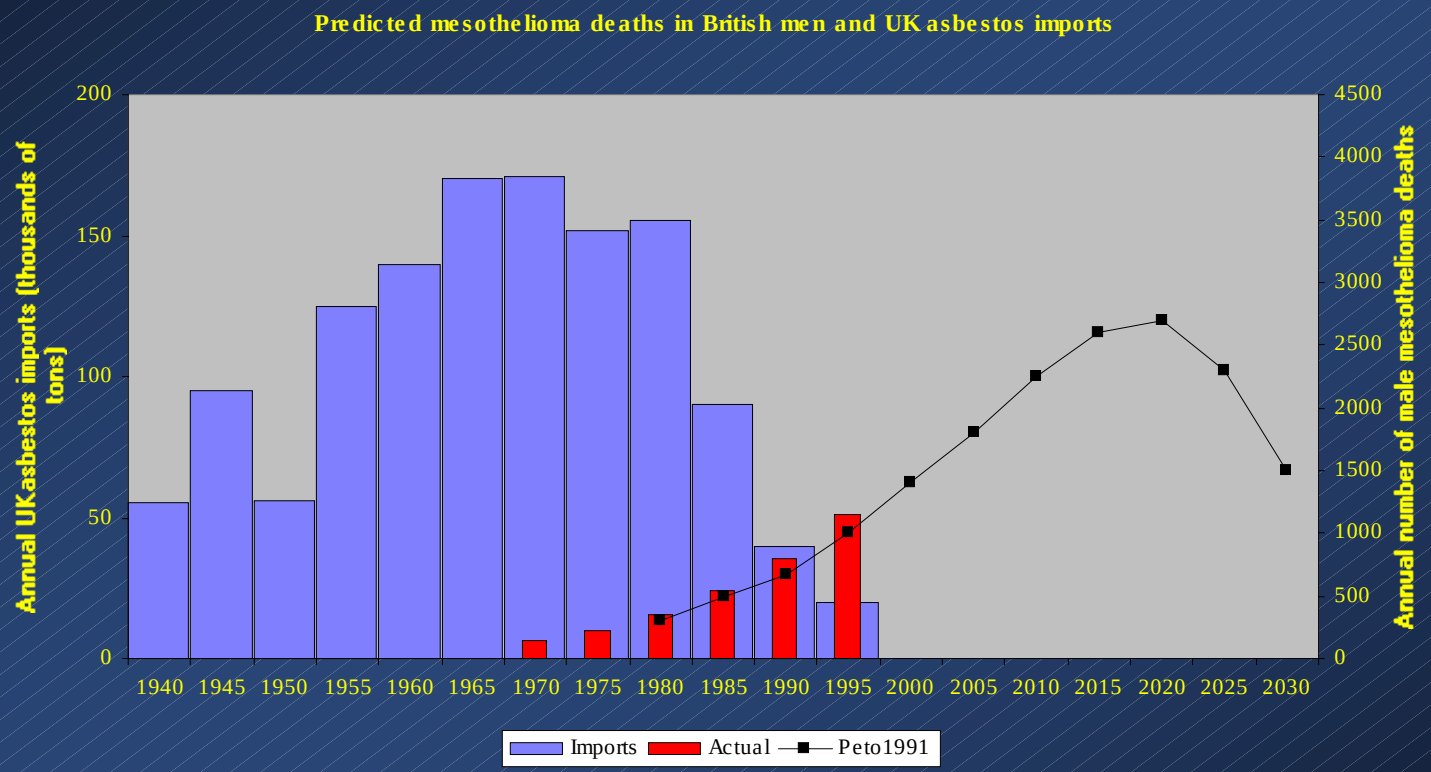
Analysis of mesothelioma mortality in Britain

England, Wales and Scotland - Males
Actual death rates

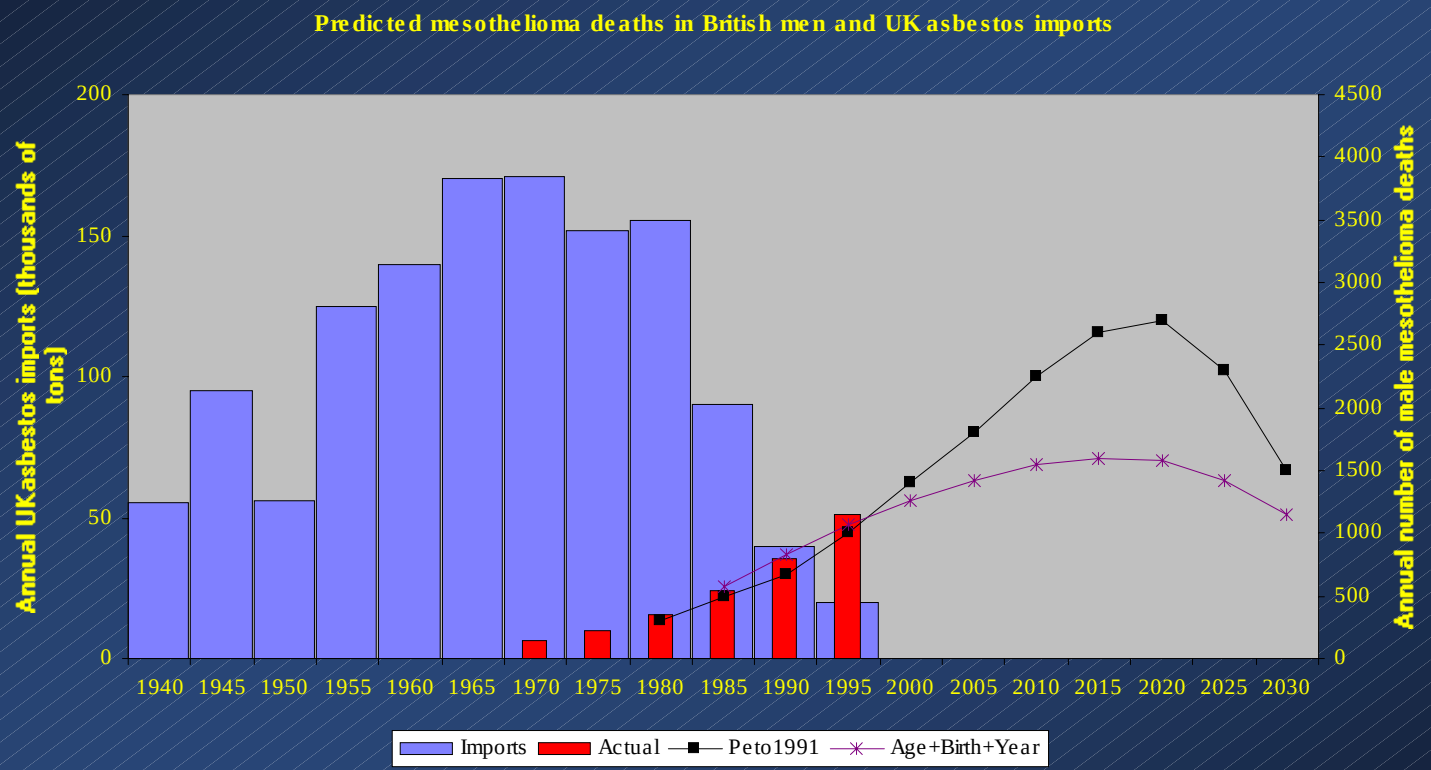
Death rates per 1 million man years

	Age at death								
Year of Birth	**25-29**	**30-34**	**35-39**	**40-44**	**45-49**	**50-54**	**55-59**	**60-64**	**65-69**
1915-1919					1.02	7.15	20.73	40.93	74.75
1920-1924				0.55	3.91	14.24	34.25	71.70	118.63
1925-1929			0.36	1.95	11.06	24.55	55.71	99.90	159.42
1930-1934		0.00	0.88	3.33	12.16	27.33	63.56	109.08	185.47
1935-1939	0.24	0.24	1.37	7.10	16.58	44.92	79.82	100.17	
1940-1944	0.35	0.82	3.10	7.98	24.74	46.07	78.58		
1945-1949	0.39	0.59	2.97	8.56	16.25	38.59			
1950-1954	0.21	0.54	2.37	5.27	4.00				
1955-1959	0.10	0.40	0.37	2.67					
1960-1964	0.17	0.21	1.13						
1965-1969	0.10	0.00							

Peto et al study - 1995

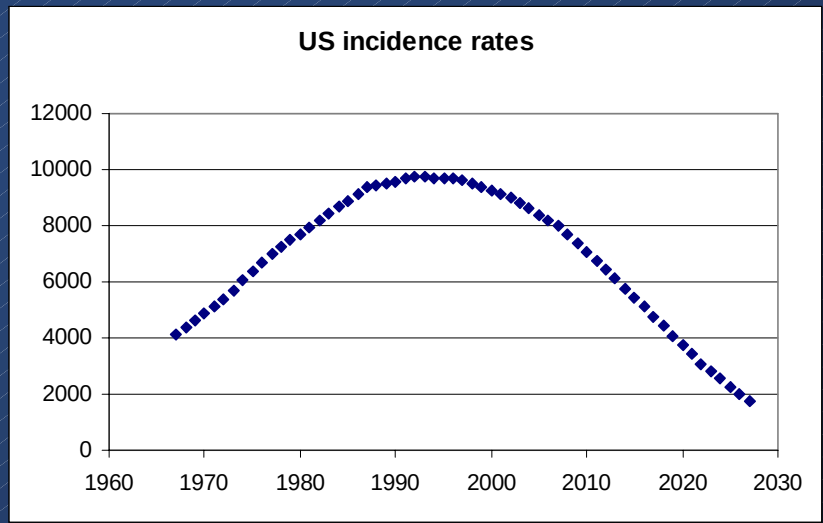


Peto et al study - 1995



Comparison with US experience

- UK experience will peak in the next century
- In 1980s US incidence rates similar to UK death rates for over 65 age group
- Below age 55 US rates have declined
- Asbestos imports peaked in 1970s



Comparison with US experience

- US
  - Asbestos mined and many products made
  - Claims against product policies
  - Legal environment - class actions
- UK
  - Asbestos imported
  - Asbestos products made and used
  - Claims mainly against Employer's liability policies
  - Individual claims

How does this impact the UK insurance industry ?

- Peto study is for mesothelioma deaths
  - How does this apply to all claim types resulting from asbestos related diseases ?
  - How does the population projection filter down to insured liabilities ?
  - What allowance do you make for mix of business ?
  - Impact of industrial regulations ?
  - What about claim size ?

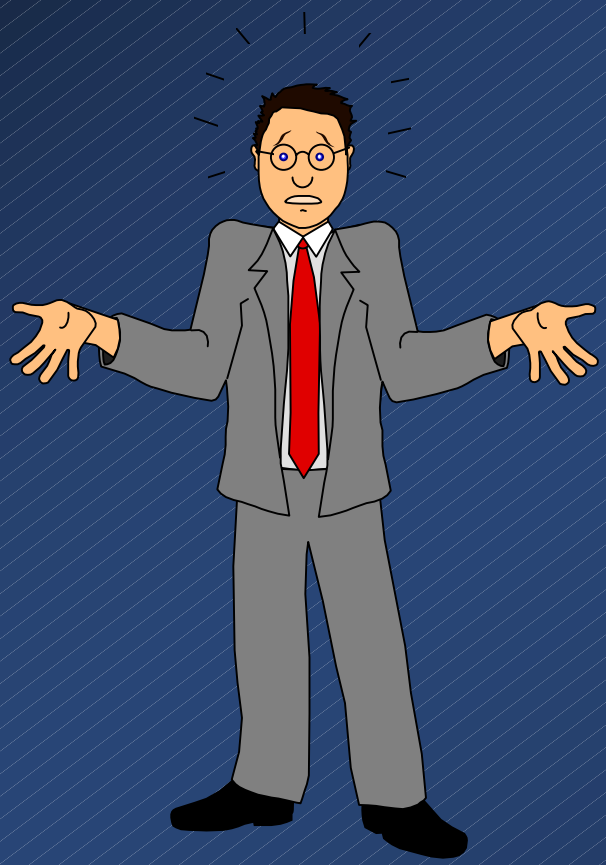
How can I use the population study ?

- Use as a benchmark emergence pattern
- Adjust for known differences
  - eg exposure to heavily regulated industries reporting pattern may be expected to be faster than for certain sections of the construction industry
- Compare to pattern of reported claim numbers
- Calculate IBNR to reported ratio

How can I use the population study ?

- Caution
  - Projection curve is very sensitive
  - Range of possible results is large
- Are are all the claims already earned ?
- If the problem is there are undiscounted reserves appropriate ?
- Will an industry claims sharing agreement be needed ?

Why bother ?



- The journey is often more illuminating than the destination
- Going through the analysis will help give comfort that it is not an issue

Finally

- European perspective in Peto at al 1999
  - Confirms UK results in 1995 paper
  - Shows UK and NL highest rates for men born after 1940
- UK government has issued regulations that ban importation of white asbestos