

12th Accident Compensation Seminar 2009 Rising to the Challenge

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Institute of Actuaries of Australia



Superimposed Inflation in CTP Schemes – What's in our toolkit?

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Today's presentation

- What is superimposed inflation?
- What are the problems in measuring SI?
- What's in the toolkit?
 - Actuarial model
 - Comparable claims model
 - Individual claim file reviews



What is superimposed inflation?

- *“a tendency for benefits for a given injury to increase ... faster ... than a suitable standard measure of inflation”*
- *“the increase in the total cost of compensation ... that has not been explicitly provided by the actuarial model(s)”*



Drivers of SI

- Many drivers including:
 - Legal decisions/precedents or scheme dynamics
 - An increased level of legal involvement
 - Better preparation by plaintiff lawyers
 - Claims handling practices of insurers



Why is it important?

- Understanding the level is important for:
 - good scheme management
 - input into valuation and pricing assumptions
- Arguably the area of most subjectivity due to:
 - problems in measuring it
 - the nature of SI



Problems in measuring SI

- Changes to claim frequency
- Changes in order of finalisation of claims
- Cause vs effect
- Model structure



So why use actuarial models?

- Problems do not invalidate their use
- But models should be used appropriately bearing in mind their limitations. Can:
 - provide indication and estimate of quantum
 - indicate areas where SI is apparent
 - direct further investigations into causal impacts



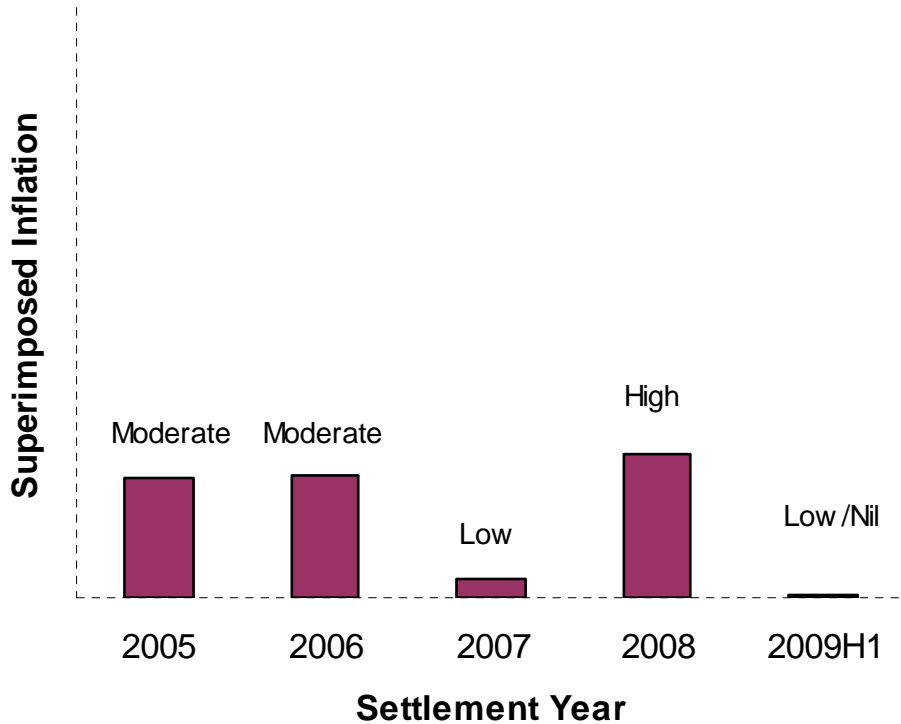
Case study: Actuarial model results

- Normalises for changing claim mix and changes in order of finalisation
- Claims mix dealt with by adopting common claim profile for all accident periods, using bootstrapping and simulation techniques
- Order of finalisation dealt with by forcing order to be more consistent, using boosting techniques

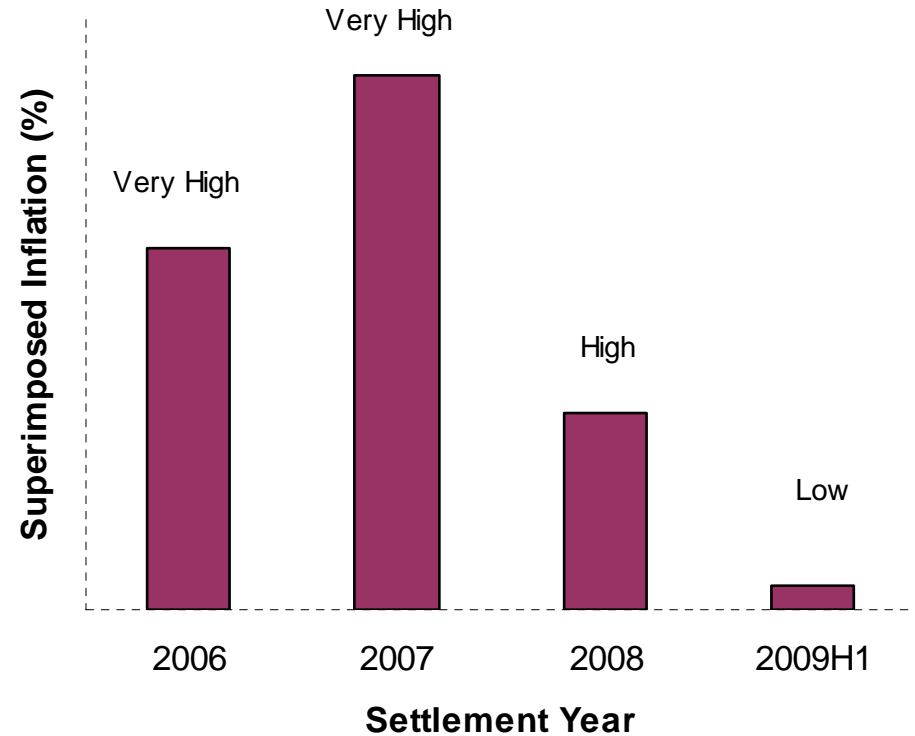


Case study: Total SI

NSW



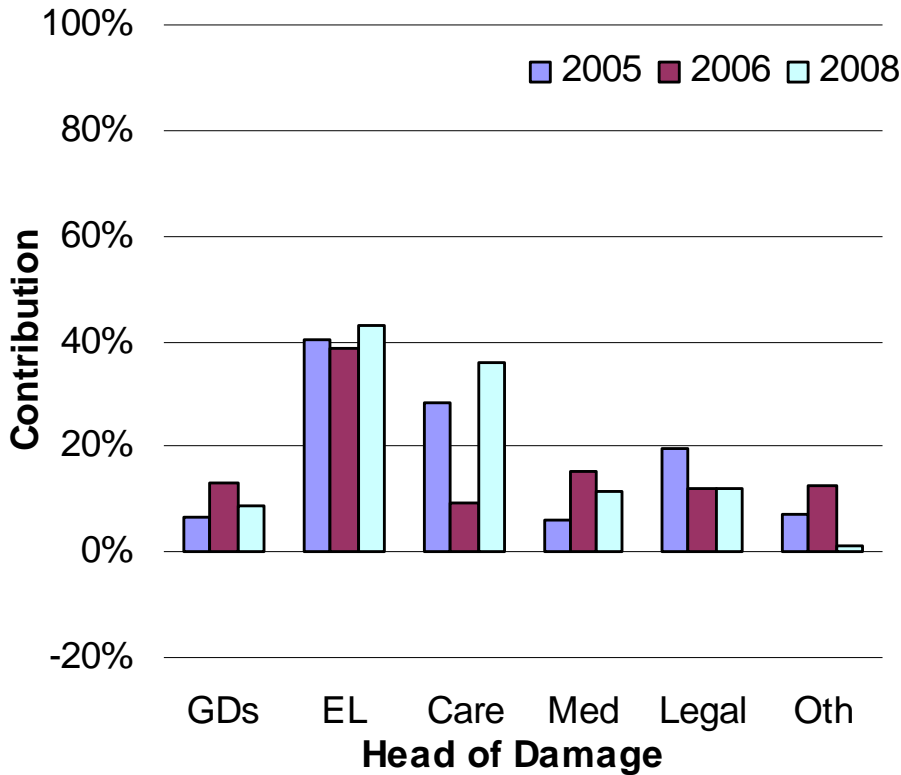
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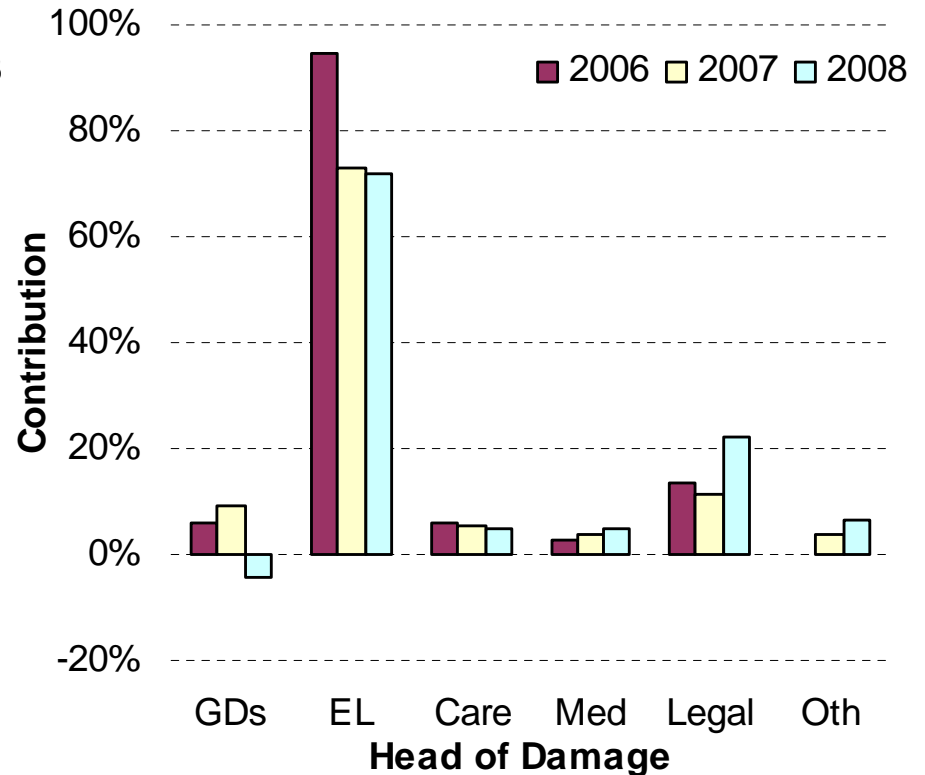


Case study: By HoD

NSW



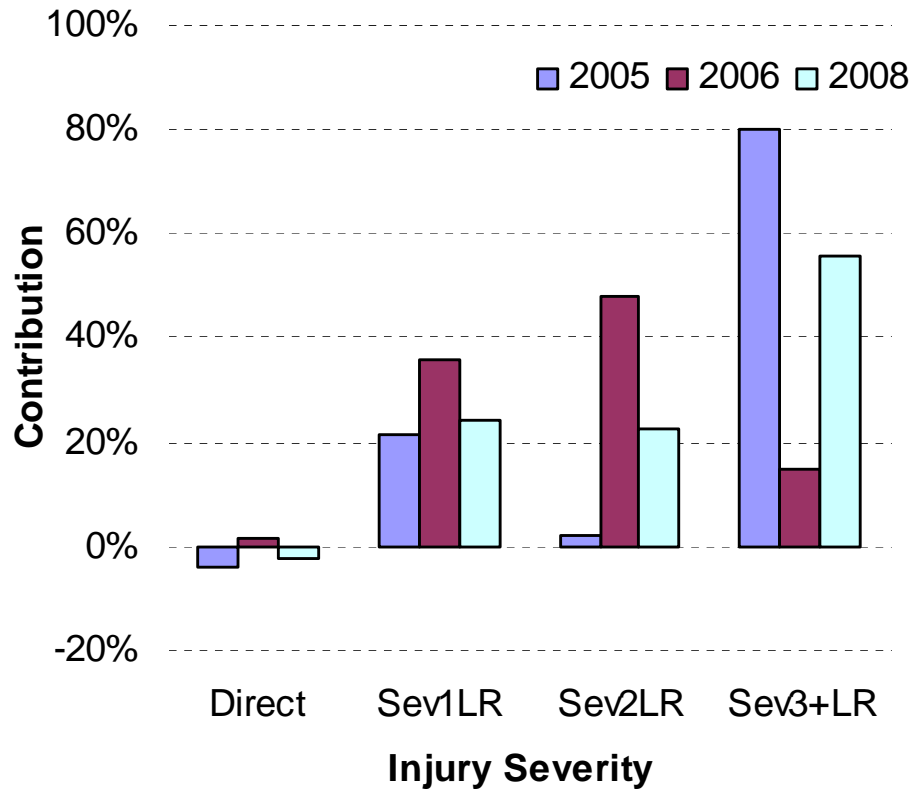
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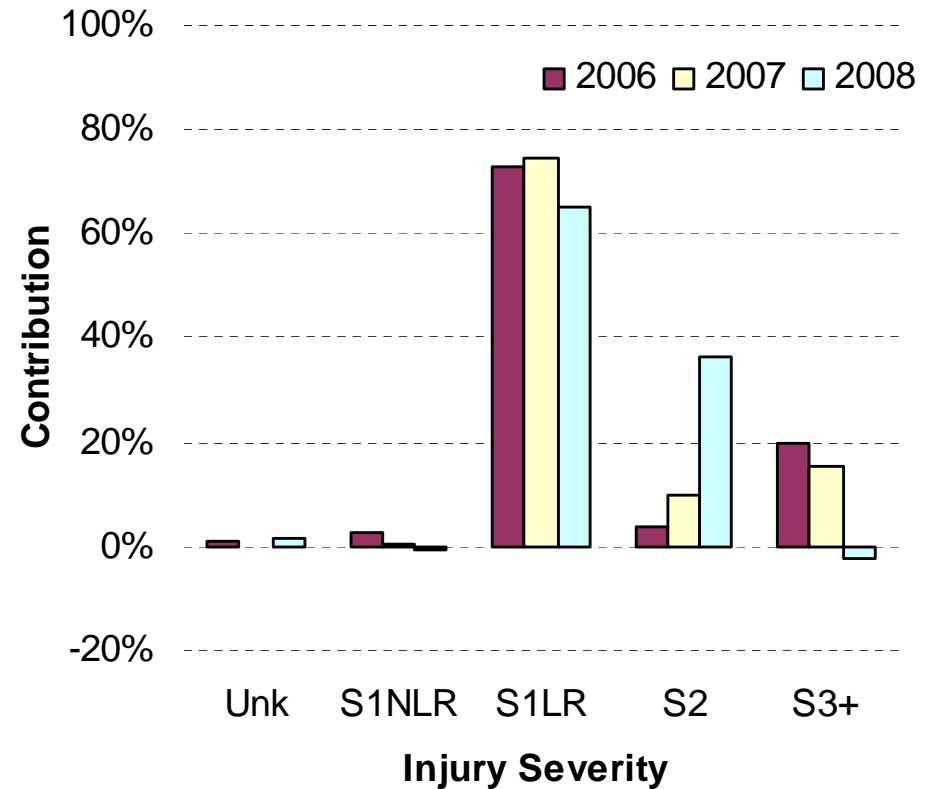


Case study: By Injury severity

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Comparable claims model

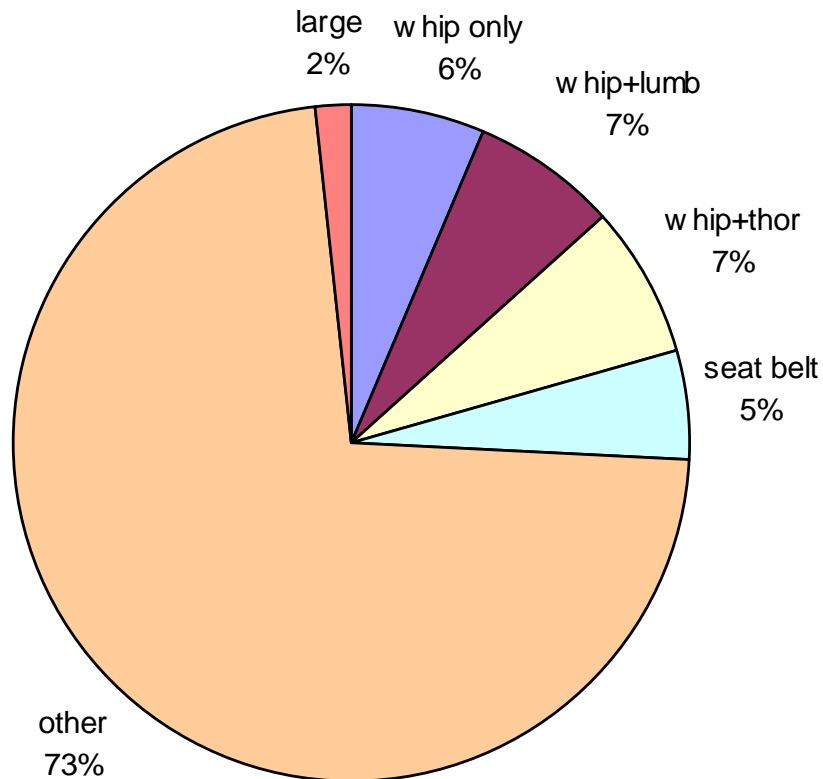
- Compares average size of “like” claims over time
- Four specific injuries examined
 - whiplash only, whiplash plus lumbar strain, whiplash plus thoracic strain, seat belt injuries
- Excluded certain claims to achieve more comparable body of claims



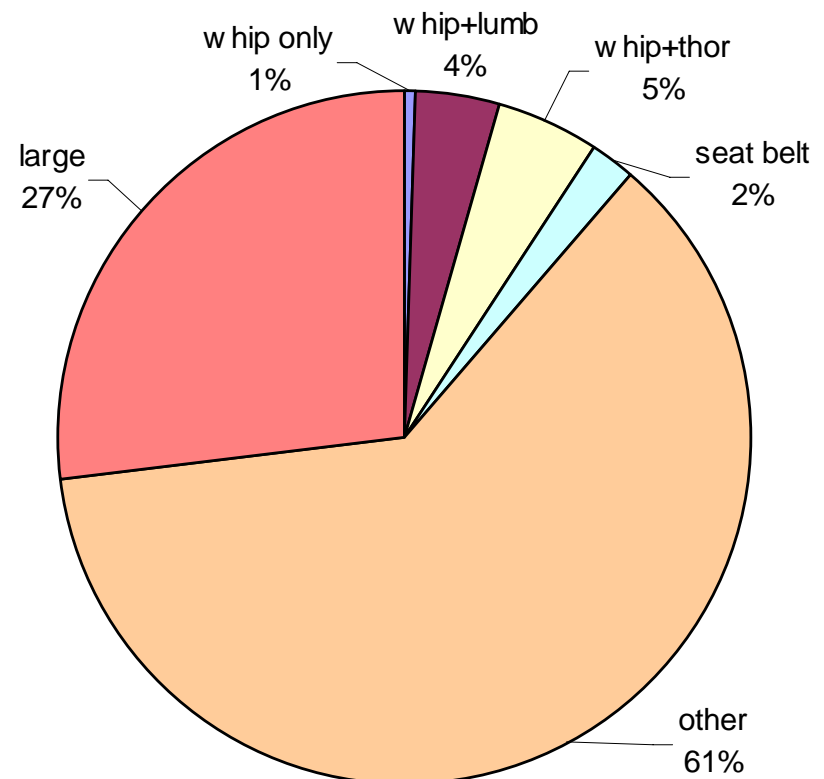
Case Study: NSW

- Injuries examined in context

Number



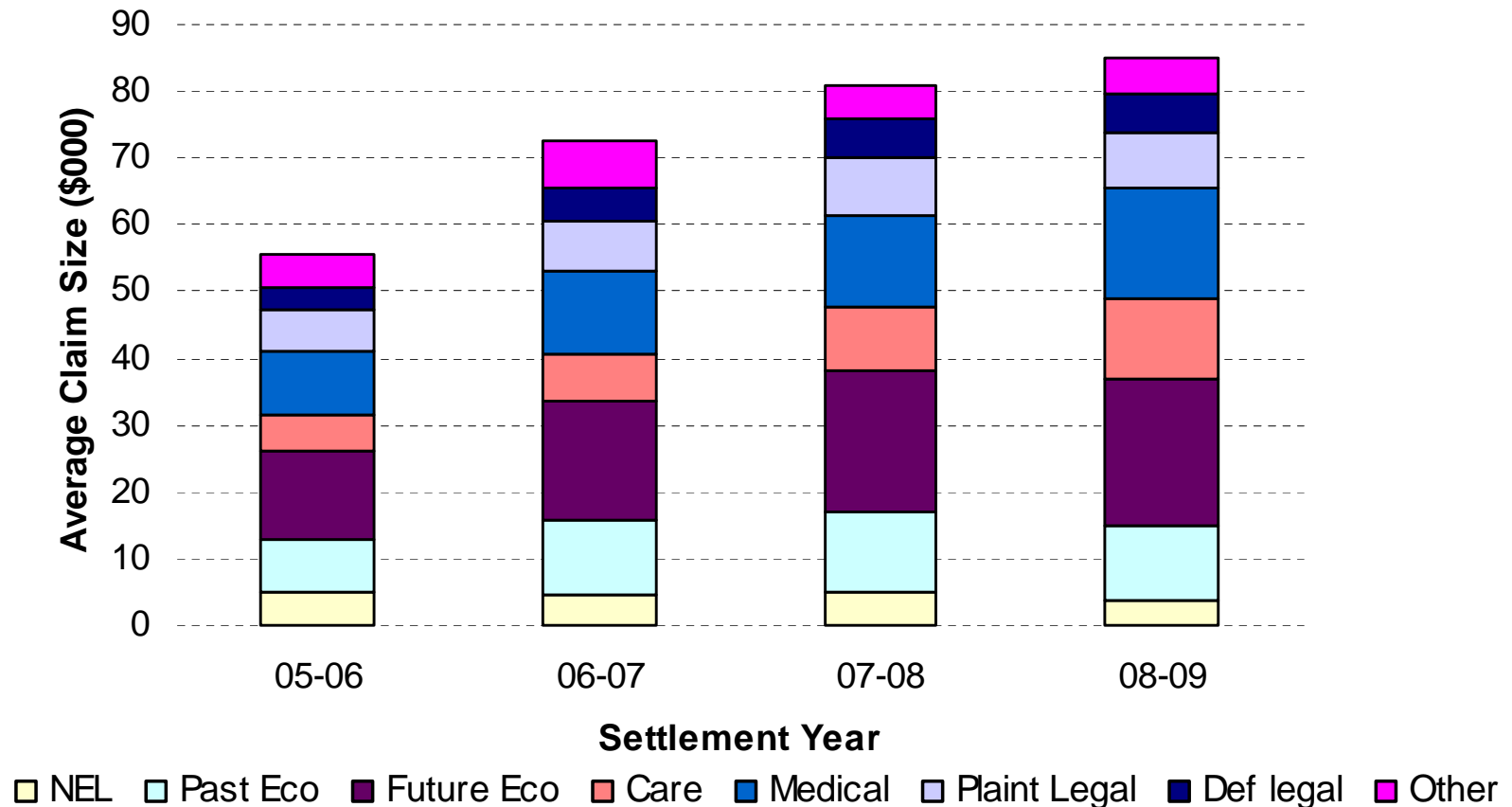
Cost





Case Study: NSW Whiplash+Lumbar

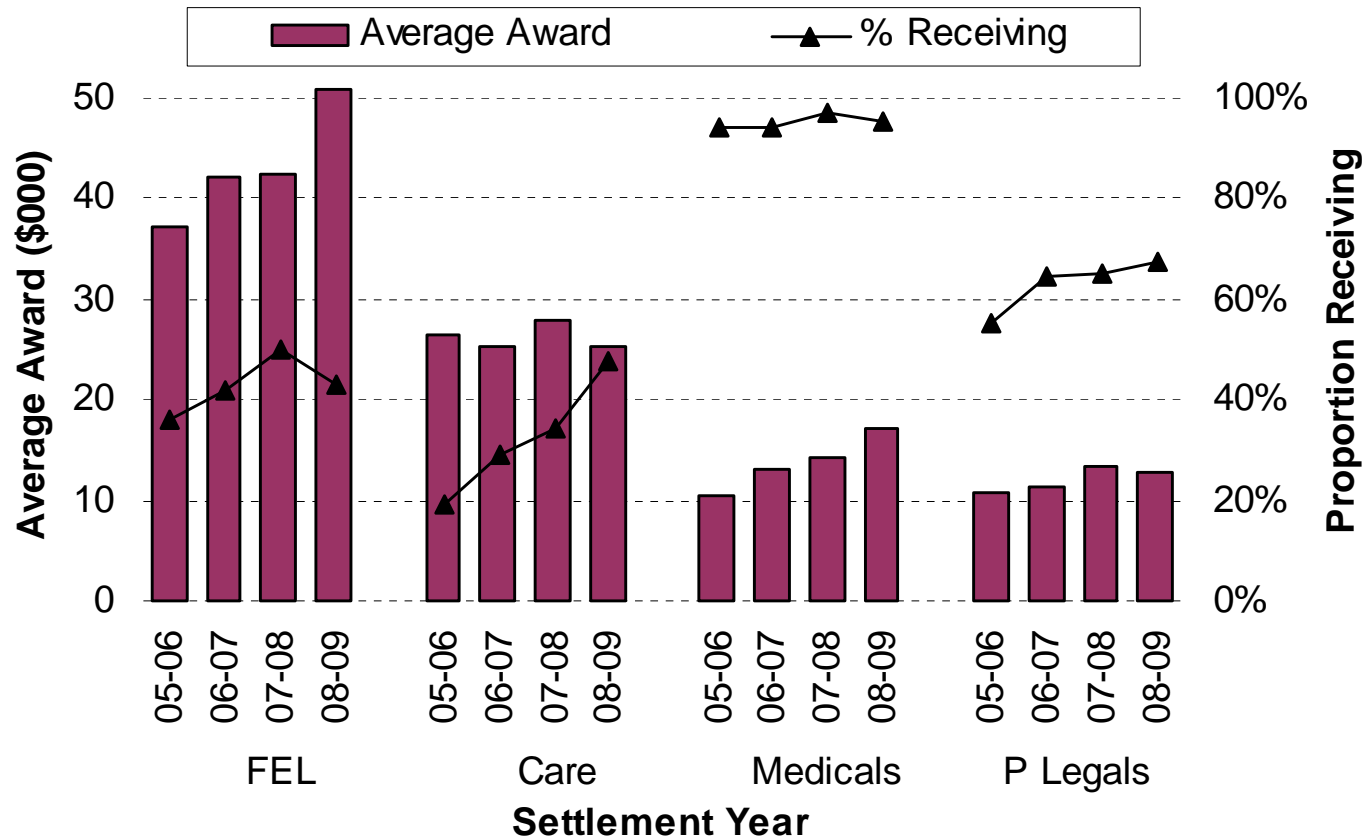
- Average size by HoD





Case Study: NSW Whiplash+Lumbar

- Average awards and proportion receiving

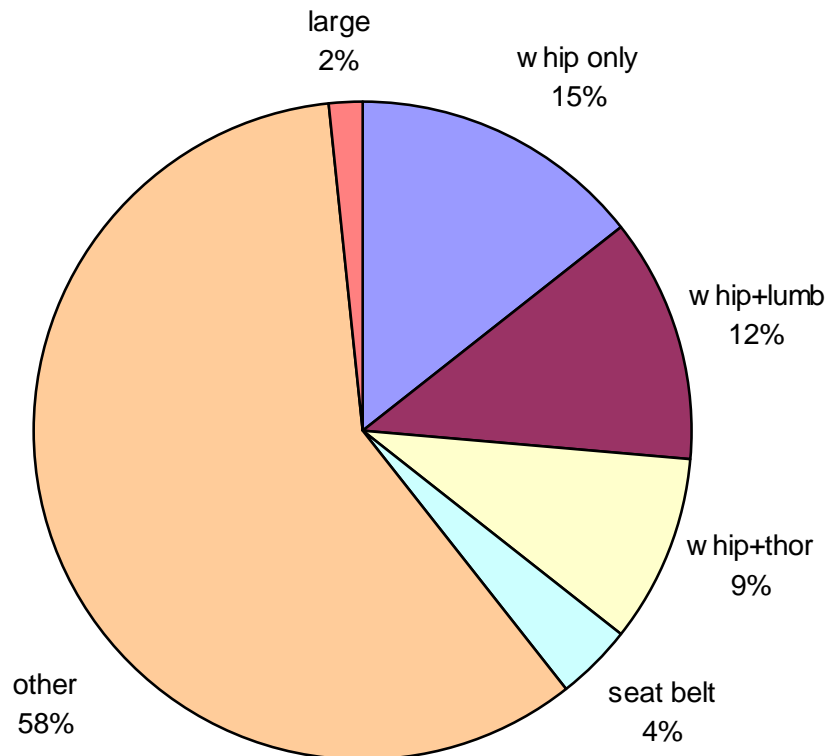




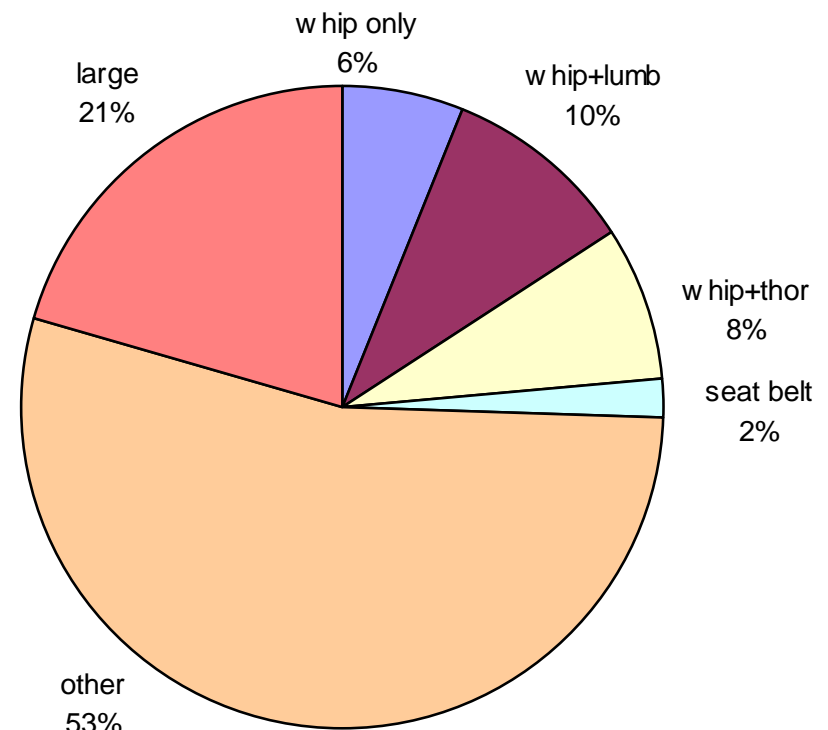
Case Study: Queensland

- Injuries examined in context

Number



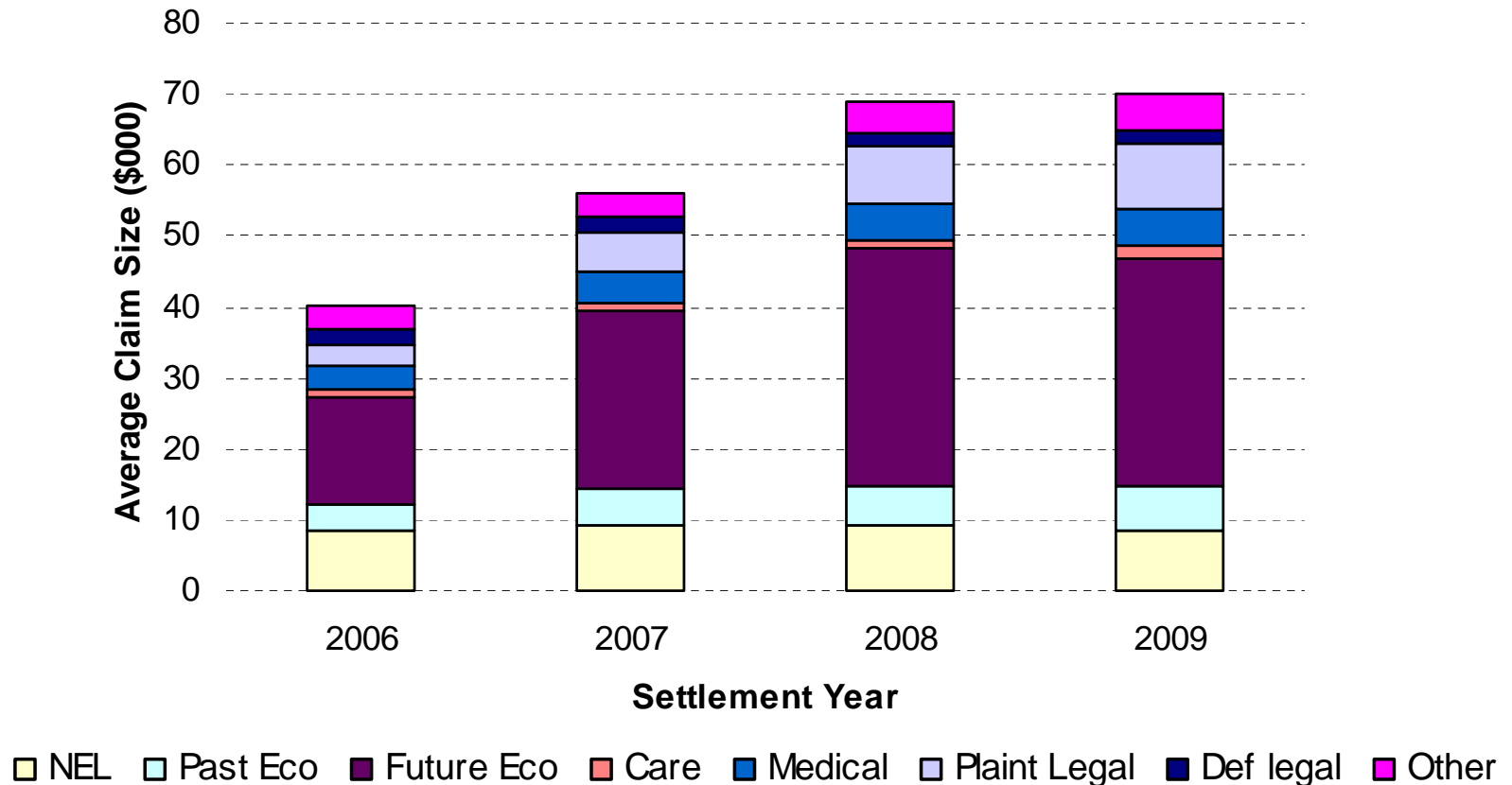
Cost





Case Study: Qld Whiplash+Lumbar

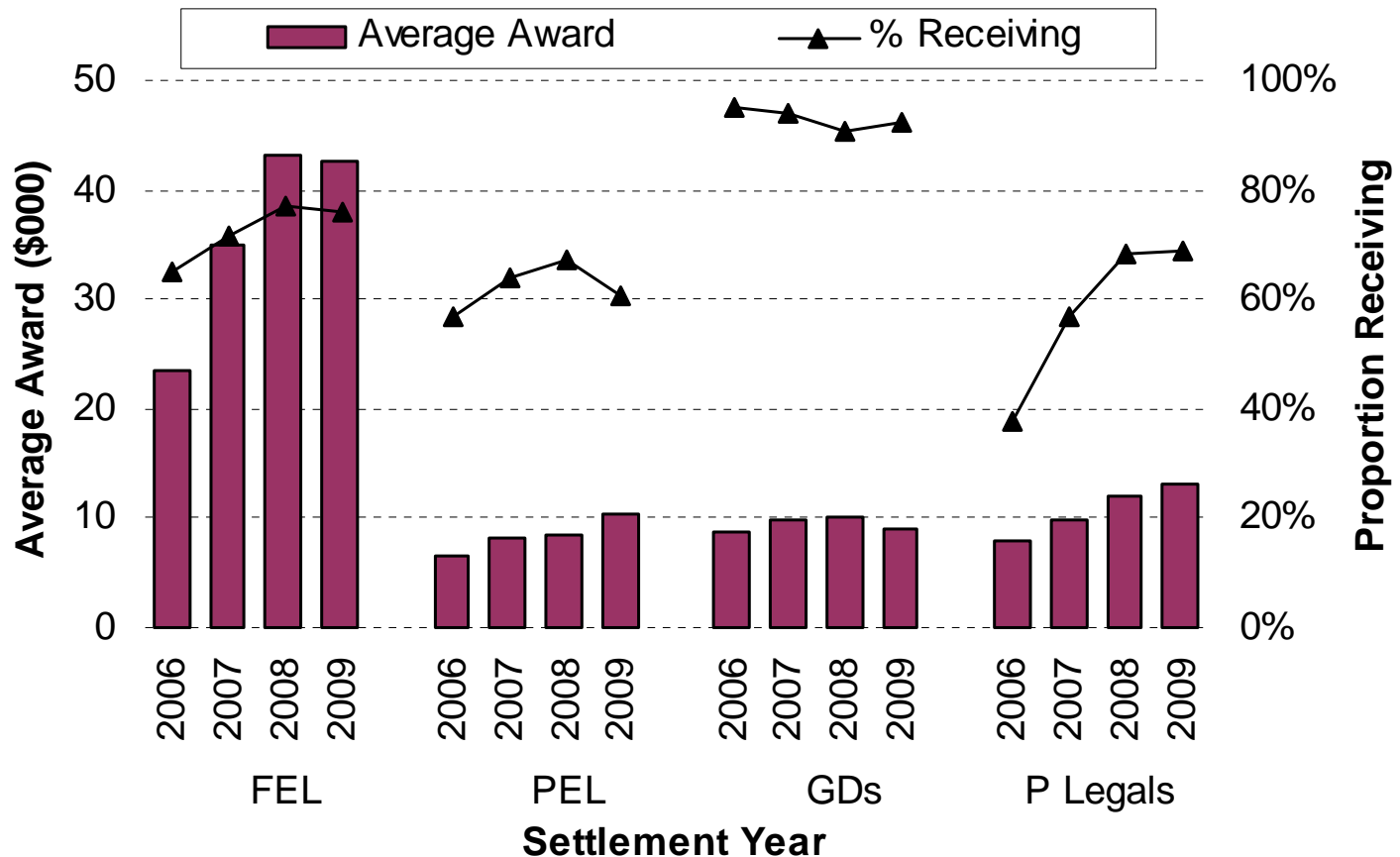
- Average size by HoD





Case Study: Qld Whiplash+Lumbar

- Average awards and proportion receiving





Individual claim file reviews

- Used to test various hypotheses e.g:
 - “have changes in claims management contributed to SI? What changes could be made to reduce SI?”*
- Important that question(s) to examine is clearly defined



Individual claim file reviews

- Define pool of claims from which sample will be drawn
- Actuarial model and comparable claims model help define the pool (i.e. those claims where SI observed)
- Sample size big enough that conclusions can be expected to hold for whole pool



Individual claim file reviews

- Design data collection form to collect information about each claim in the sample
- Collect information not contained on electronic files
- Some information may be subject to judgement



Individual claim file reviews

- Conducted by suitably qualified, independent claims personnel
- Double review of some claims to ensure consistency in the review



Individual claim file reviews

- Analysis of sample may:
 - identify changes in plaintiff/defendant behaviour over time
 - help identify actions and strategies aimed at reducing SI
- A repeat file review could be conducted post-implementation of strategies to assess if effective



Conclusion

- SI is and will remain a difficult aspect of scheme management and actuarial work
- Measurement must be approached in a rigorous manner, but care taken regarding precision of measurement
- Sources and reasons for SI must be well understood



Conclusion

- Use of a variety of tools provides the best outcome for identifying and reacting to SI
 - simple comparable claims model for regular monitoring of “problem” areas
 - complex actuarial model for scheme wide assessment at least annually
 - individual file reviews for more complex questions around causes and remedial action