Injury Schemes Seminar

Road to Recovery

Actuaries Institute

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Injury Schemes Seminar
Road to Recovery

An investment approach to reducing long term cost – lessons from welfare

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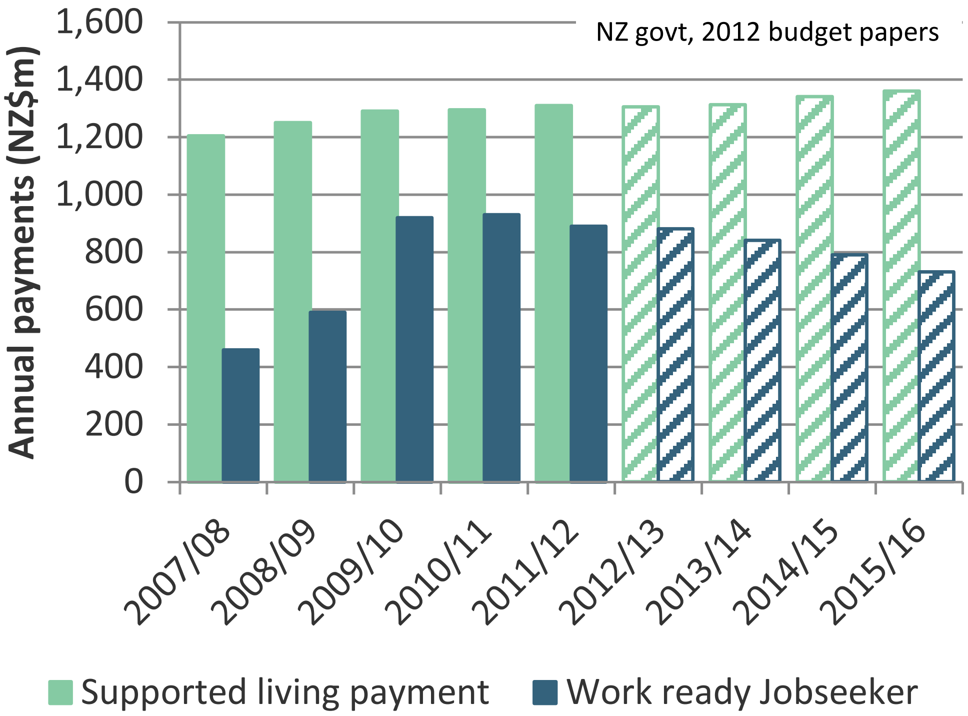
What is a welfare system?

- A series of fortnightly payments to support cost of living
- Significant variation in duration, needs and outcomes
- The most common form of exit is finding employment

→ Has many fundamental parallels with injury schemes

How is a welfare system traditionally managed?

- Budget forward estimates
- Emphasis on 'stock', not flow
- Changes to policy conditions with limited evidence base
- Supplementary benefits in separate categories
- Movements across benefit types not well understood



Welfare Reform in New Zealand

"the scale and consequences of long-term benefit receipt are deeply concerning .... [welfare] is not sustainable, it does not provide equal and fair opportunities for those people on different benefit types and it is associated with poor social outcomes."

Welfare Working Group (2011)

Key Recommendations:

- Up-front 'investment approach' to reduce benefit dependency
- Annual injury style valuations to make long-term costs of the benefit system transparent
- Accountabilities linked to managing long-term cost

Program of reform then developed by Ministry of Social Development (MSD) and NZ Treasury

Motivation

If we can improve employment outcomes then everybody wins

The Investment Approach

Level 1: Top level valuation

- Annual external valuation of lifetime welfare cost
- Incorporate macroeconomic trends, policy changes, trends in experience

Level 2: Segment lifetime costs

- Classify clients in segments to tailor interventions and monitor outcomes
- Set targets an accountability
- Allocate resources based on segment needs

Taylor Fry valuation

Level 3: Client and cohort level initiatives

- Run small trials and evaluate impacts
- Translate small scale results into likely liability impact

MSD internal analysis

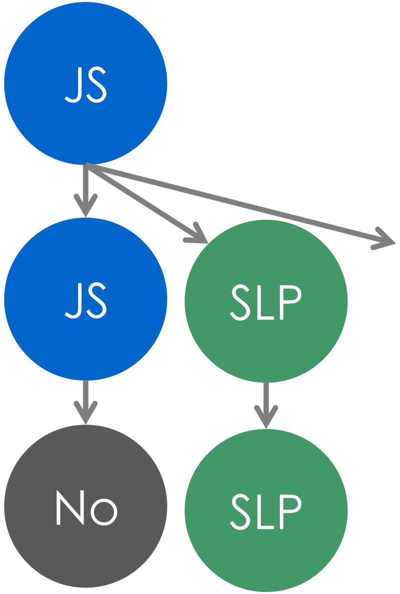
Not an ordinary valuation…

A sophisticated methodology that gives more power to the user

- Individual based, not payment type
- Project various lifetime pathways
- Large number of predictive factors incorporated
- Allows for macro-economic conditions

An integrated model that runs from aggregate estimates to individual level detailed projections

Project likelihood of each individual's pathways



Transition probabilities depend on over 20 characteristics

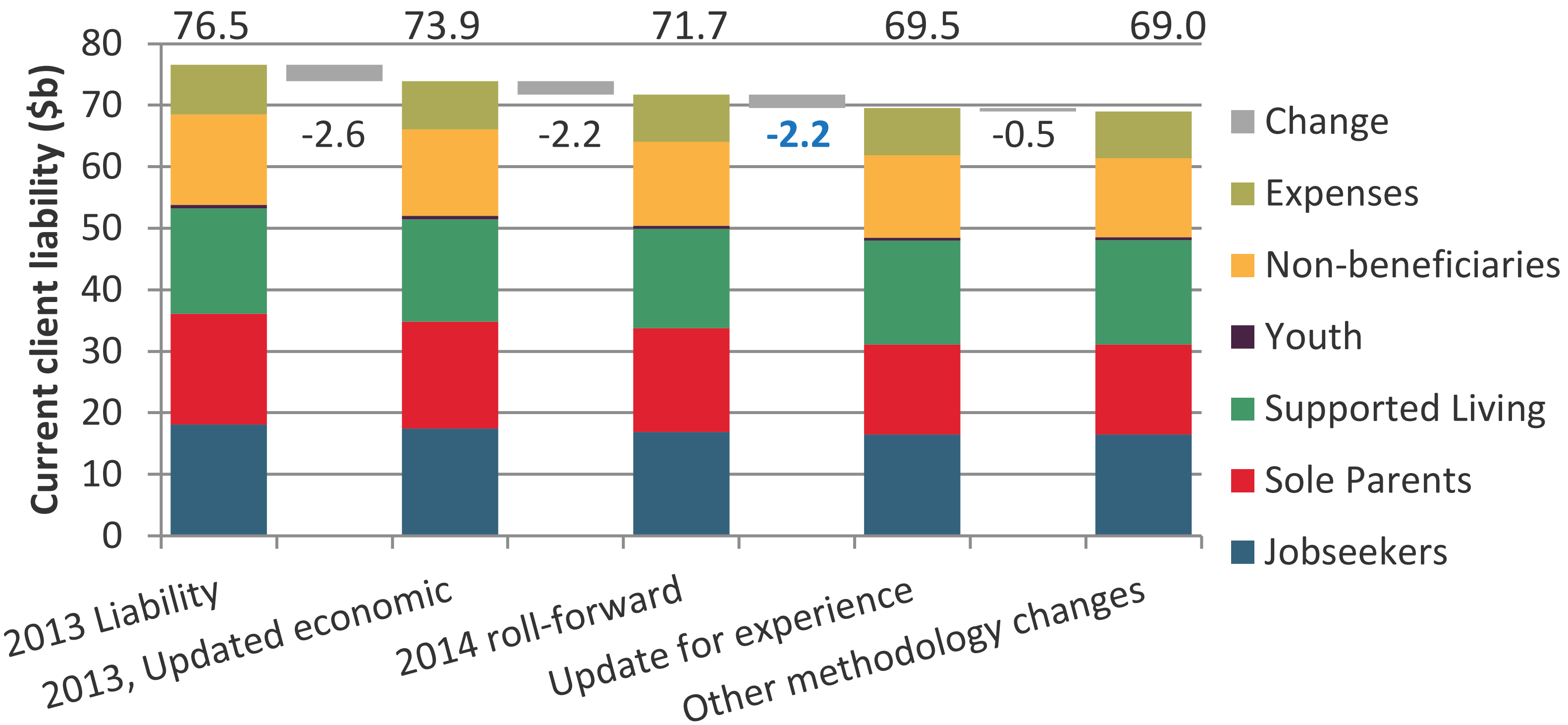
Cost models sit on top of each quarterly state

What the valuation provides

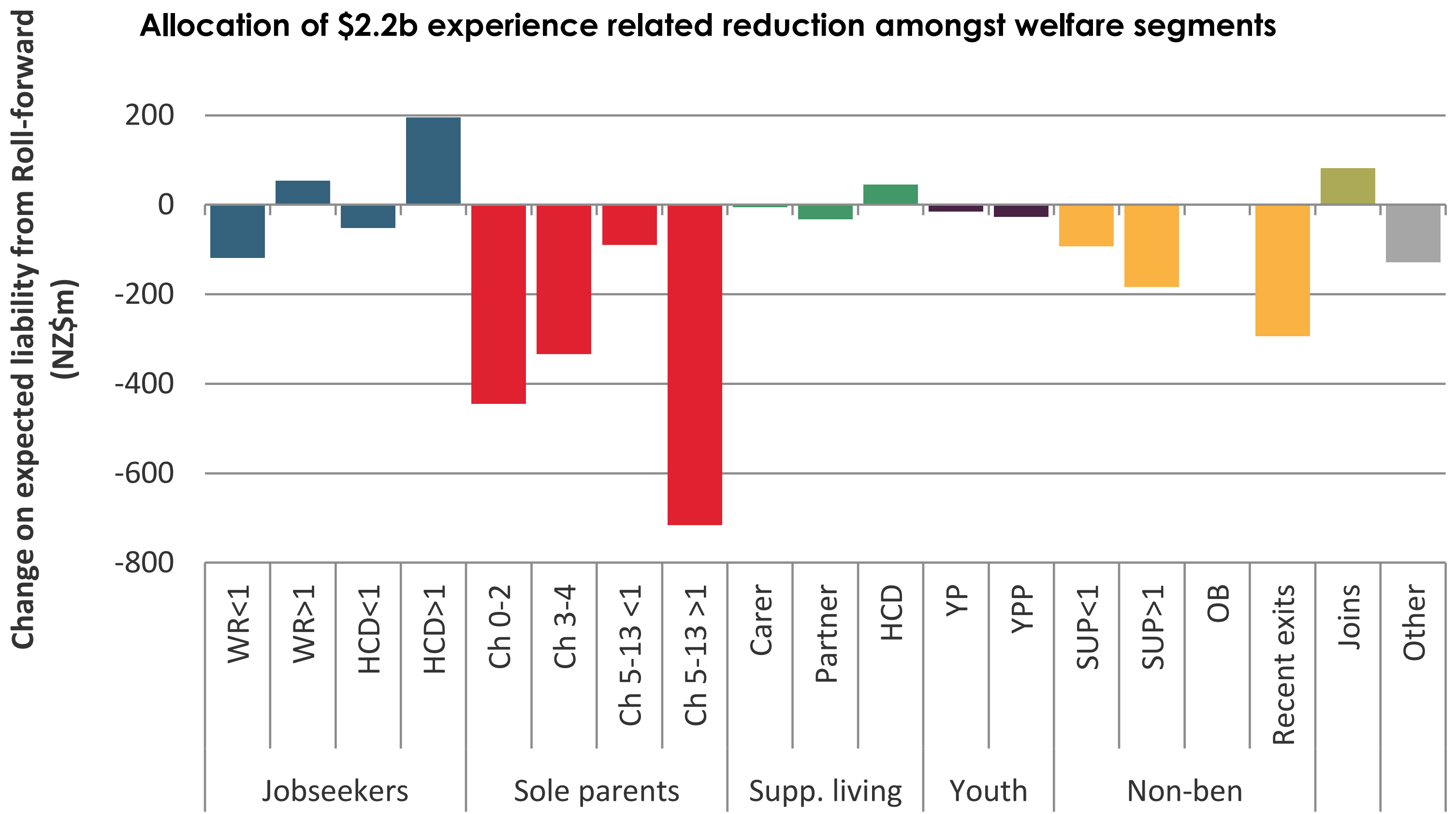
1. Top level attribution
2. Drill down attribution
3. Detailed impacts of legislative changes
4. Detailed impacts of programme changes
5. Better understanding of cost drivers
6. Basis for reform and intervention

1. Top line attribution

Reconciling 2013 valuation to the 2014 valuation result

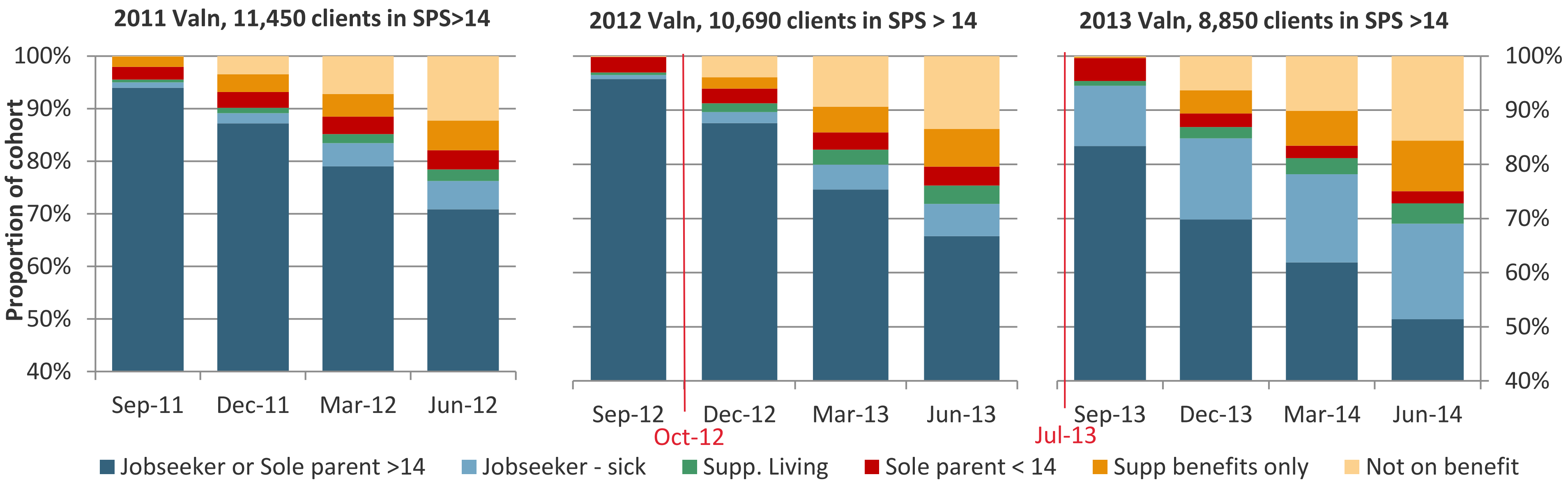


2. Drill down attribution



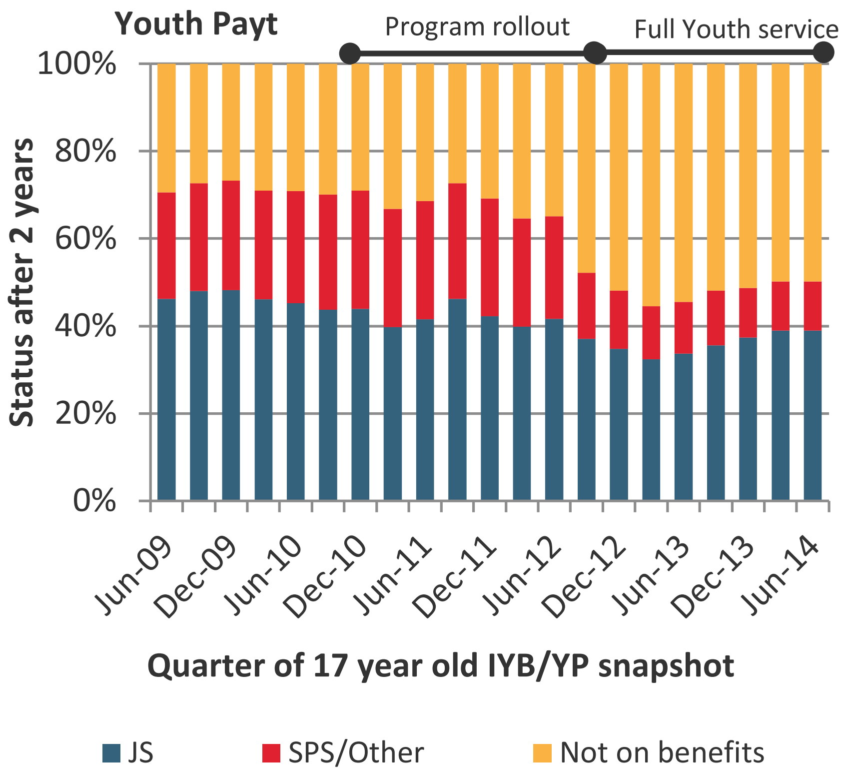
3. Detailed impacts of legislative changes

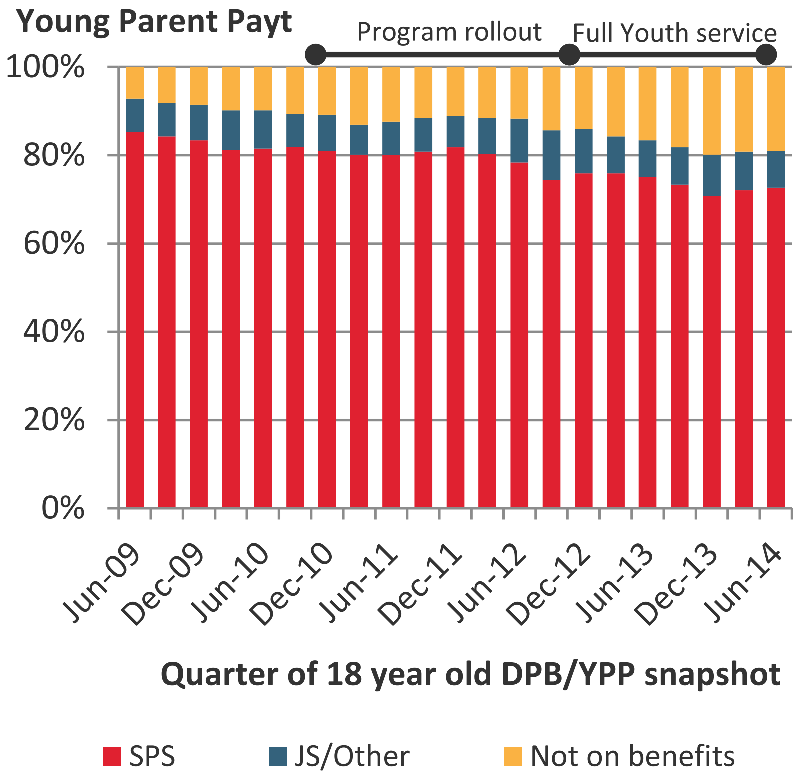
Transition pathways for clients who were Sole Parent Support recipients at 30 June each year



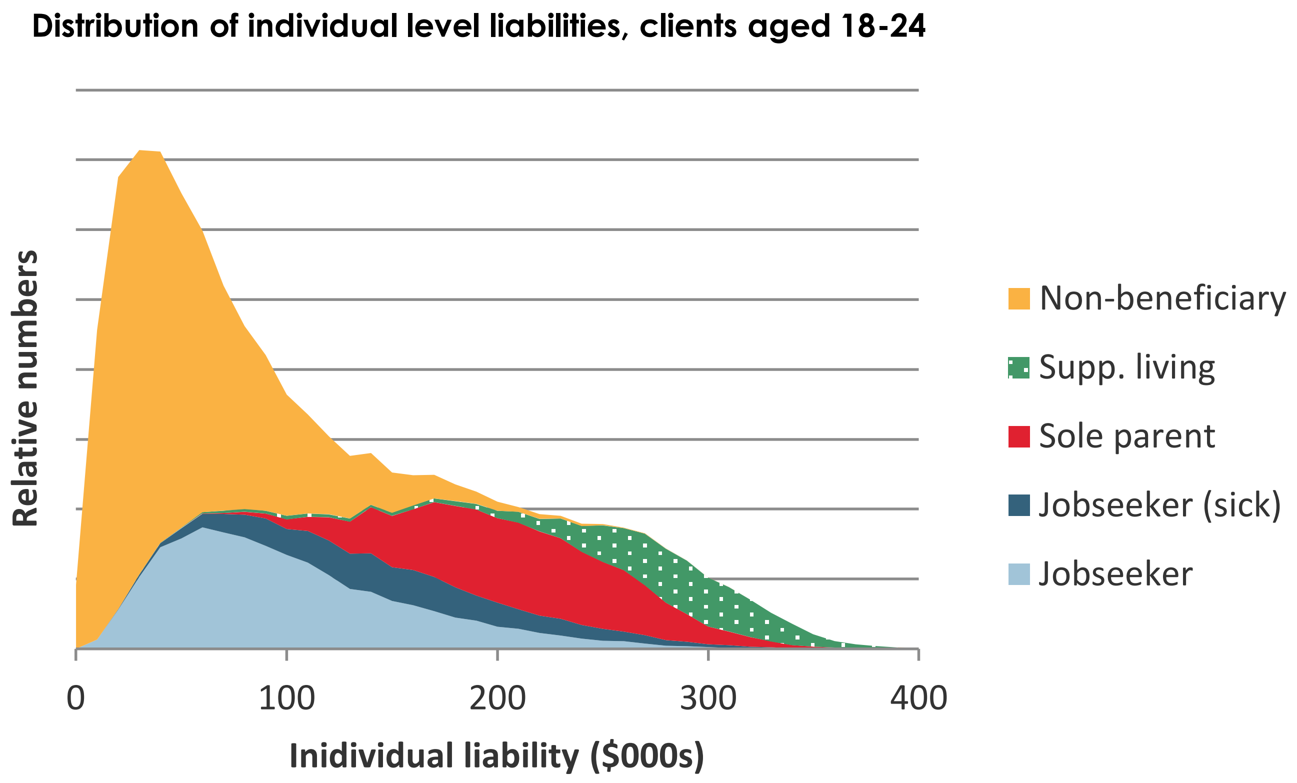
4. Detailed impacts of program changes

Two year welfare status for youth programme clients





5. Better understanding of cost drivers



5. Better understanding of cost drivers

Usefulness of predictors in estimating the lifetime welfare cost of current 18-24 year old clients

Sole parent and Supp. living highest

Entry before 19 very predictive

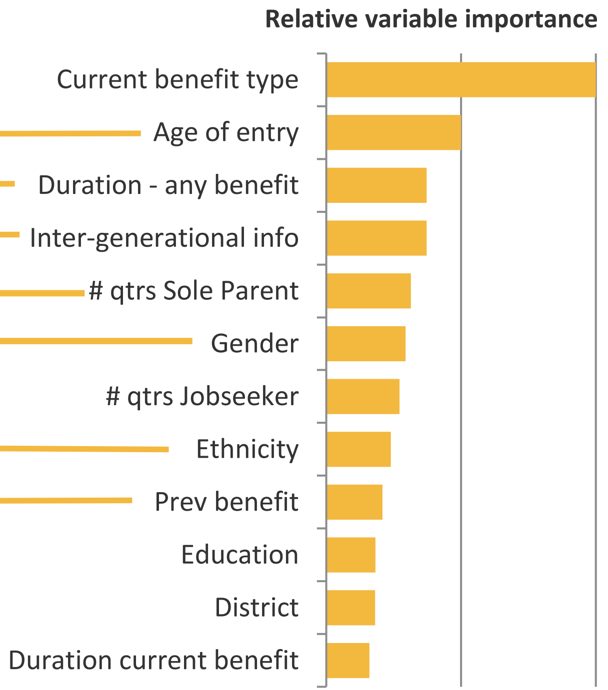
>5 quarters continuously on benefits → high risk

Increase for intensive family benefit history

These reflect Sole parent re-entry risk

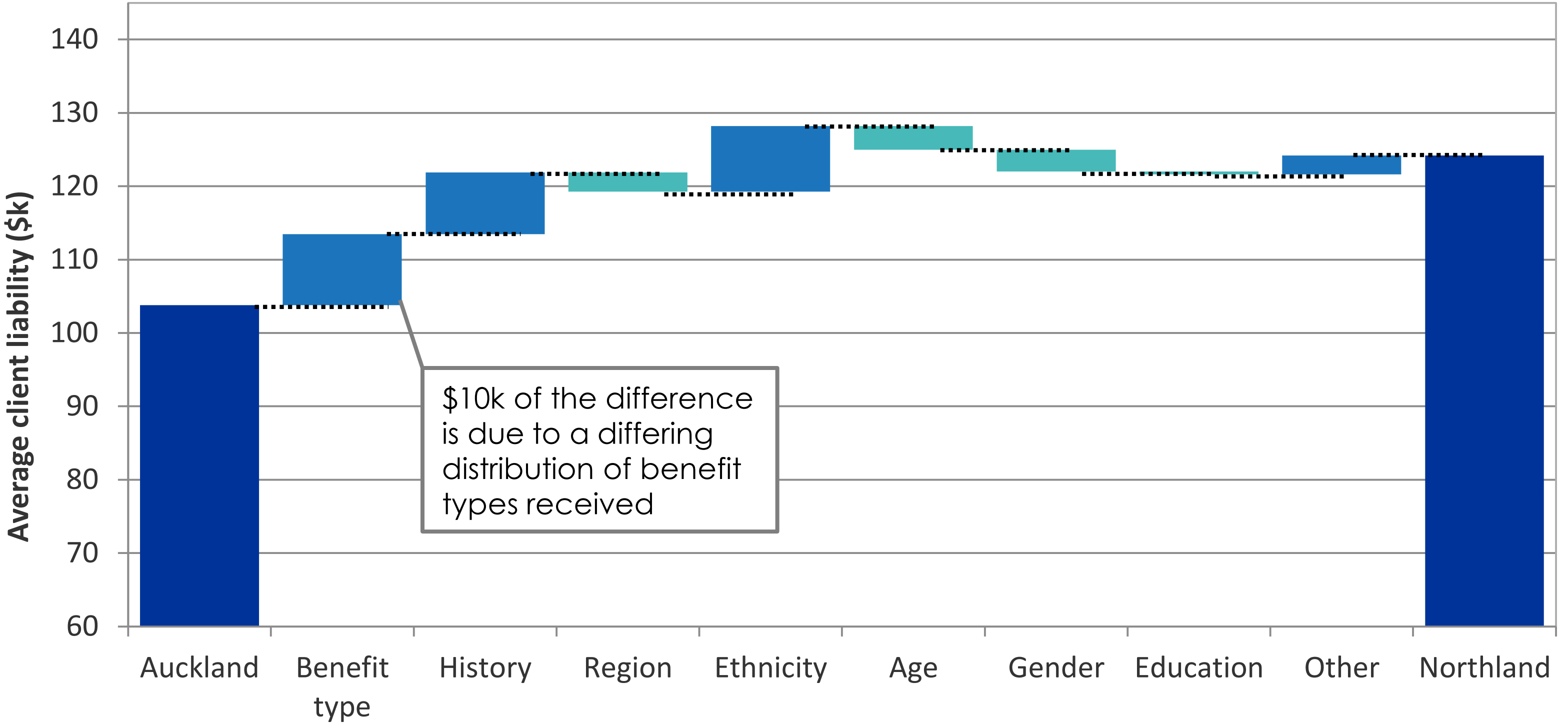
Maori particularly high

Heightened risk if Sole parent or Supported inving in the past



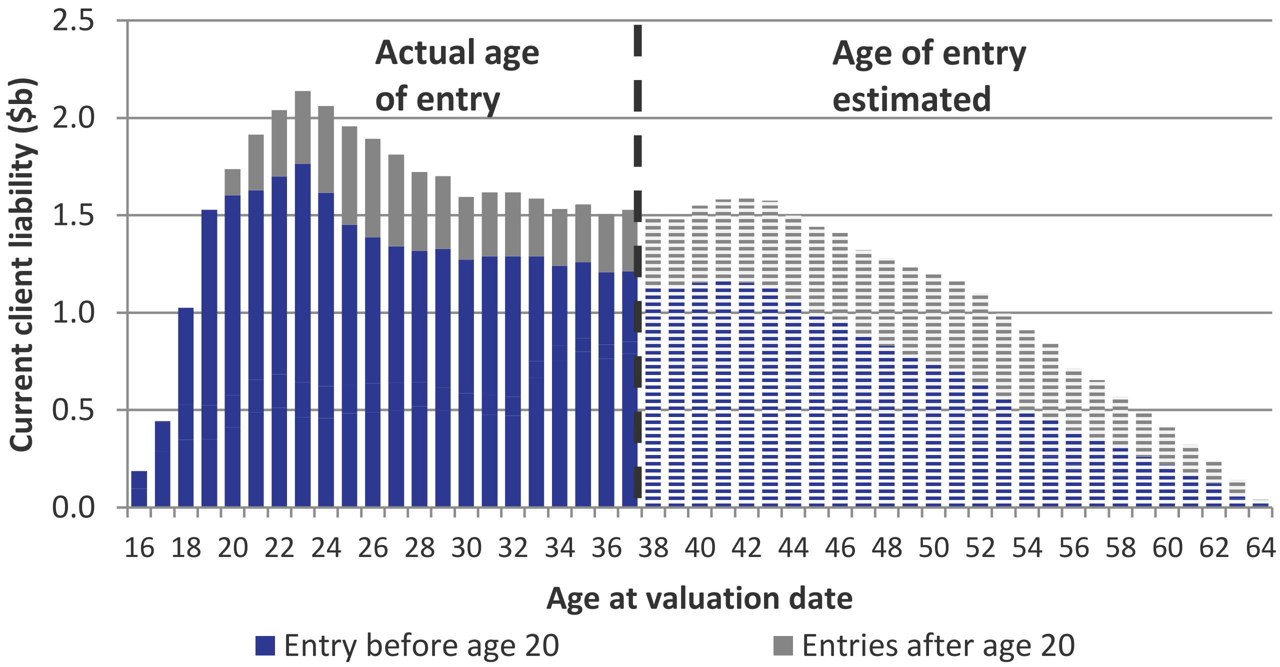
5. Better understanding of cost drivers

Comparison of average client lifetime cost for Auckland and Northland regions



6. Basis for reform and intervention

Lifetime welfare cost, split by current age and age of entry into welfare system



75% of the liability is attributable to those who enter before age 20, even though these represent less than 5% of the current caseload

Putting it all together – crucial elements

Stakeholder buy-in
Interventions
Data
Modelling
Communication

What next?

Political success has broadened the horizons of the investment approach:

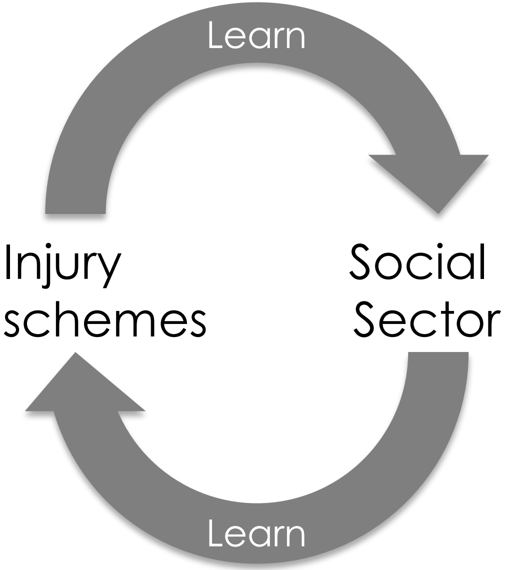
- Impact investing
- Other sectors
- Australian and international movements

Technical success has broadened the horizons of individual based multivariate modelling

- Social sector outcomes
- Injured worker outcomes
- Commercial sector applications

Completing the circle – What can injury schemes learn form welfare?

- Are you getting full value from your valuation?
  - Betting linking operations and top level control
  - Longitudinal view of cost
- How effectively are initiatives measured and targeted?
- How much can be gained by more detailed insights?



Further reading

- NZ Welfare 2014 Valuation report: https://www.msd.govt.nz/about-msd-and-our-work/newsroom/media-releases/2015/reforms-succeed.html
- Welfare Working Group http://igps.victoria.ac.nz/WelfareWorkingGroup/Index.html
- More effective social services, NZ Productivity commission http://www.productivity.govt.nz/inquiry-content/2032?stage=4
- NSW Government social impact investment hub http://www.dpc.nsw.gov.au/programs_and_services/social_impact_investment