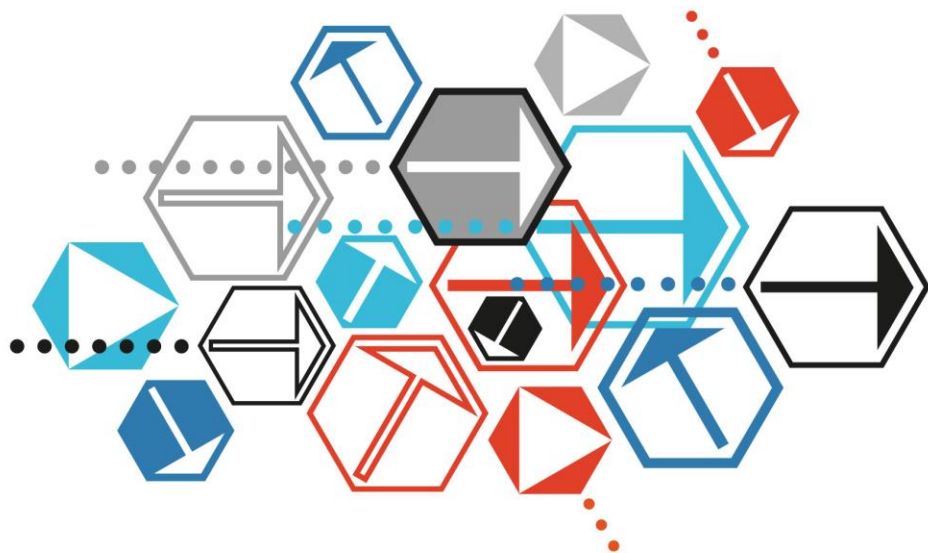


INSPIRING CHANGE

Young Actuaries Conference



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Working in the social sector

Hugh Miller

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*This presentation has been prepared for the Actuaries Institute 2018 Young Actuaries Conference.
The Institute Council wishes it to be understood that opinions put forward herein are not
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What is the social sector?

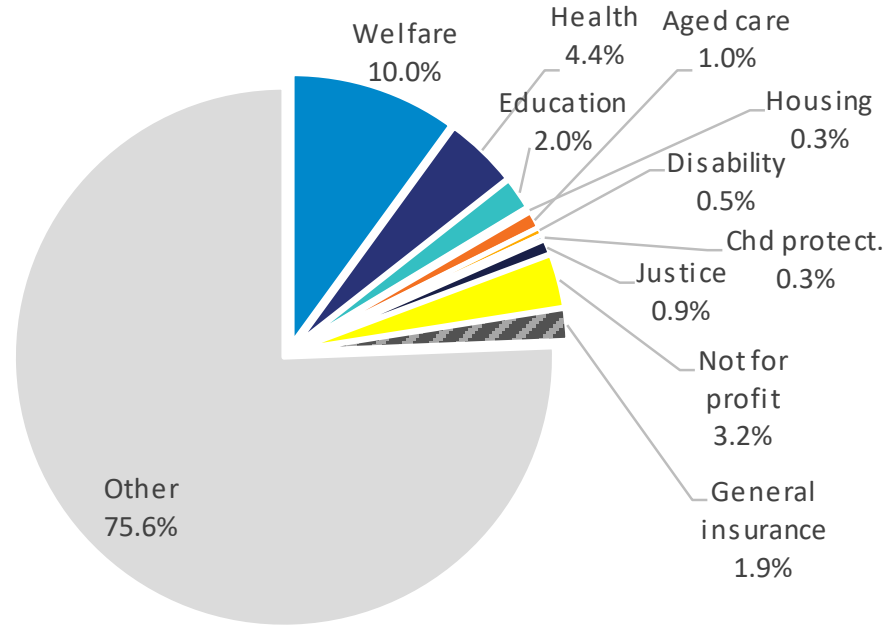
“Spending or programs that help people”

- Mostly government spending.
- A minority is ‘third sector’. A social sector organisation is one that “exists wholly or mainly to provide benefits for society or the environment.”

Has its origins in the development of the ‘welfare state’

- Beveridge report (UK), 1942, and the ‘5 great evils’
- Insurance ideas visible in the early thinking.

Social sector spending as a fraction of GDP



Why are actuaries in the social sector?

- There are **long-term costs**, with associated human misery
- A need to **predict future service use** and the uncertainty around it
- Increasing emphasis on **prevention and spending effectiveness**
- A need to plan for future spending and **fiscal sustainability**.
- A push for **data-based decisions** and a focus on **outcomes**.



What type of work is being done?



Welfare



Justice



Housing



Child protection



Disability



Education

Example – New Zealand Welfare system

Background:

- Identified issues with long-term welfare dependency
- Decision to manage the welfare system more like an insurance portfolio.
- Series of reforms:
 - Increased work requirements for some
 - Increased case management support
 - Randomised controlled trials on employment ideas

The modelling project:

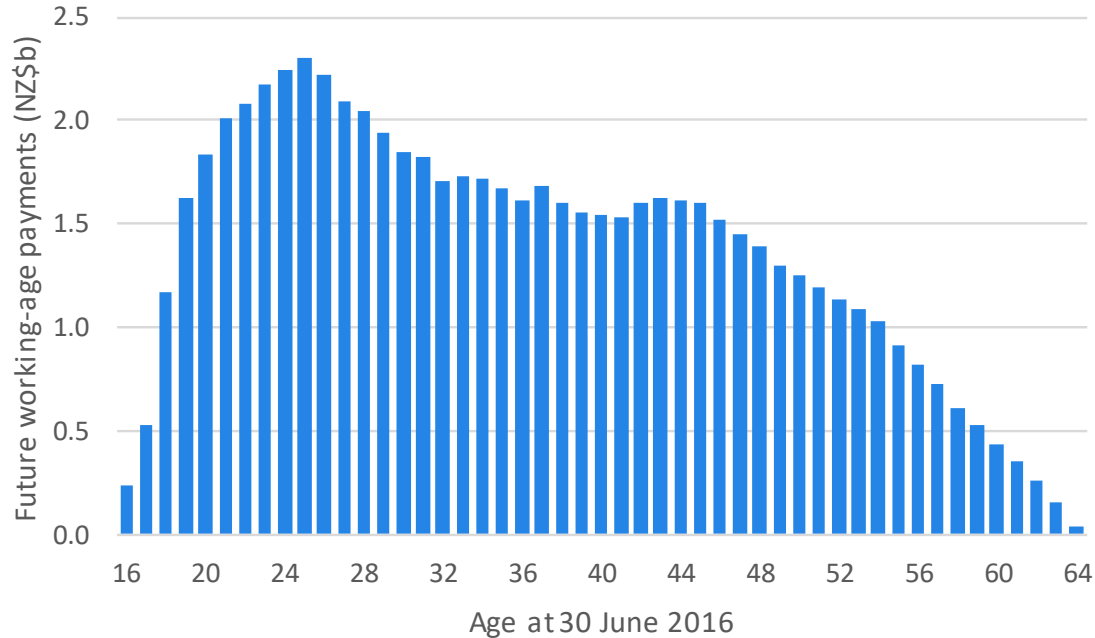
- Annual models of future cost
- Individual level quarterly projection model
- Cross-agency predictors, such as justice and education.

The results:

- In the 5 years to 2016, \$13.7b reduction in future working-age benefit payments, a 17.5% reduction.
- \$1.5b reinvested in the form of higher benefit rates.

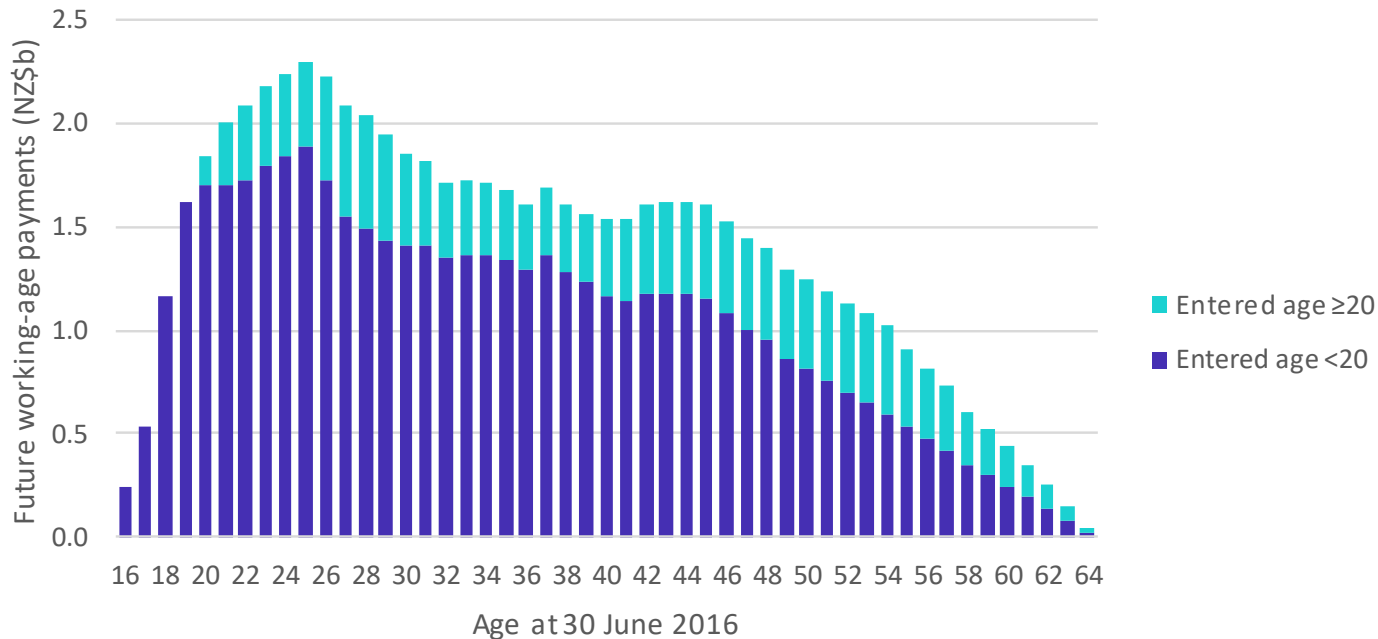
Example – New Zealand Welfare system

Future working-age benefit payments for those currently in the welfare system, by current age



Example – New Zealand Welfare system

Future working age benefit payments for those currently in the welfare system, by current age



Example – New Zealand Welfare system

Factors increasing the risk of long-term welfare receipt, clients aged 18-24.

Risk factor	Base rate	Change to incidence rate in the presence of...				
		CYF-CP History	YJ or adult conviction	Māori	Inter-generational receipt	Extensive JS history
CYF-CP History	36%		x1.7 59%	x1.3 45%	x1.6 56%	x1.3 47%
YJ or adult conviction	16%	x1.7 26%		x1.4 22%	x1.5 23%	x2.0 32%
Māori	40%	x1.3 50%	x1.4 56%		x1.4 54%	x1.2 47%
Intensive inter-generational receipt (>80%)	36%	x1.6 57%	x1.5 52%	x1.4 49%		x1.3 46%
Extensive JS history (>2 years)	28%	x1.3 36%	x2.0 56%	x1.2 33%	x1.3 36%	

Career comments

Skills

- Know your stuff technically, particularly analytics
- Communication
- Get to know government services – background reading

Other comments

- There are job opportunities out there
 - In government
 - Consultancies
- Usefulness of the actuary badge?