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The effects of familial intellectual disability on labour force participation and family income in Australia

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Intellectual Disability in Australia

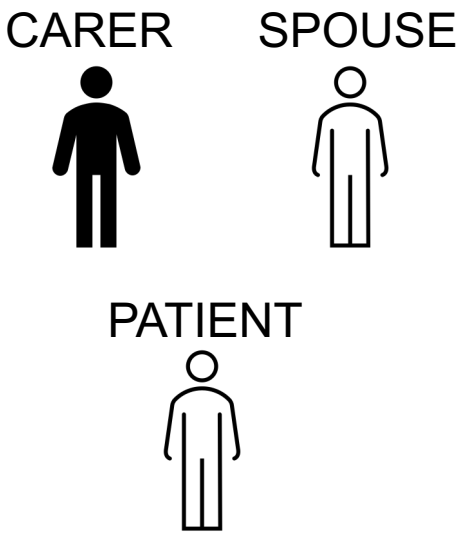
- There are about 450,000 people with intellectual disability in Australia.
- Communication challenges place them at a social disadvantage, and they face difficulties entering the workforce
- Due to its life-long and hereditary nature, the social and economic impacts of intellectual disability can affect not only patients, but carers, their spouses, and family members

Labour force and income

- Labour force participation rates refer to the proportion of a population who are employed or looking for work.
- Labour force participation is important to Australian socioeconomics and is key to social inclusion and financial independence.
- Factors contributing to a loss in labour force participation is important to the Australian economy.

EPIC-ID: Economic and Psychosocial Impacts of Caring for Families affected by Intellectual Disability

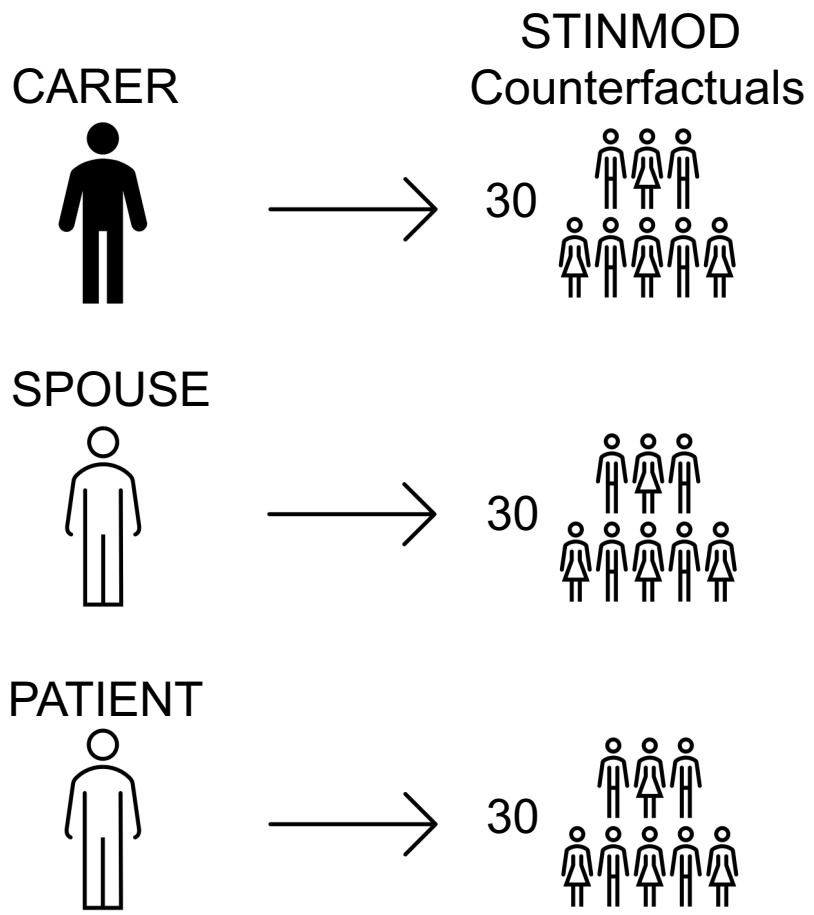
MODEL



- A microsimulation model, IDMOD, was developed to investigate the economic and social costs of ID.
- N=110 carers completed a comprehensive questionnaire for themselves, their spouses and their care recipients.
- The work presented here is based on the data from the IDMOD microsimulation model.

EPIC-ID

ANALYSES



- Individuals aged 16 to 64 years were each synthetically matched to 30 STINMOD counterfactual comparators by age and sex.
- Survey responses related to employment, income, health, family status and demographic characteristics were analysed.

Labour Force Participation

CARERS

- Counterfactuals (CF) were generated for 91 primary carers aged 64 or younger.

- The odds (adjusted for age, gender, and education) of the carers being in the labour force was about 0.35 times that of the general population ($P<0.001$).

- Most of the carers were women (87.9%). The odds of female carers being in the labour force was 0.30 ($P<0.001$) times that of their matched CF. There was insufficient evidence of a significant difference among the men.

Labour Force Participation

CARER SPOUSES

- Counterfactuals were generated for the 66 carer spouses aged 64 or younger.

- There was limited evidence (OR 0.79; P=0.478) that the odds (adjusted for age, gender, and education) of carer spouses being in the labour force were different to the general population.

- There was limited evidence that the odds of being in the labour force were lower for women (0.41; P=0.172) than men (0.99; P=0.990) when compared to their matched CF.

- The odds of spouses being employed were 0.59 times that of the general population (P=0.059).

Labour Force Participation

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PATIENTS

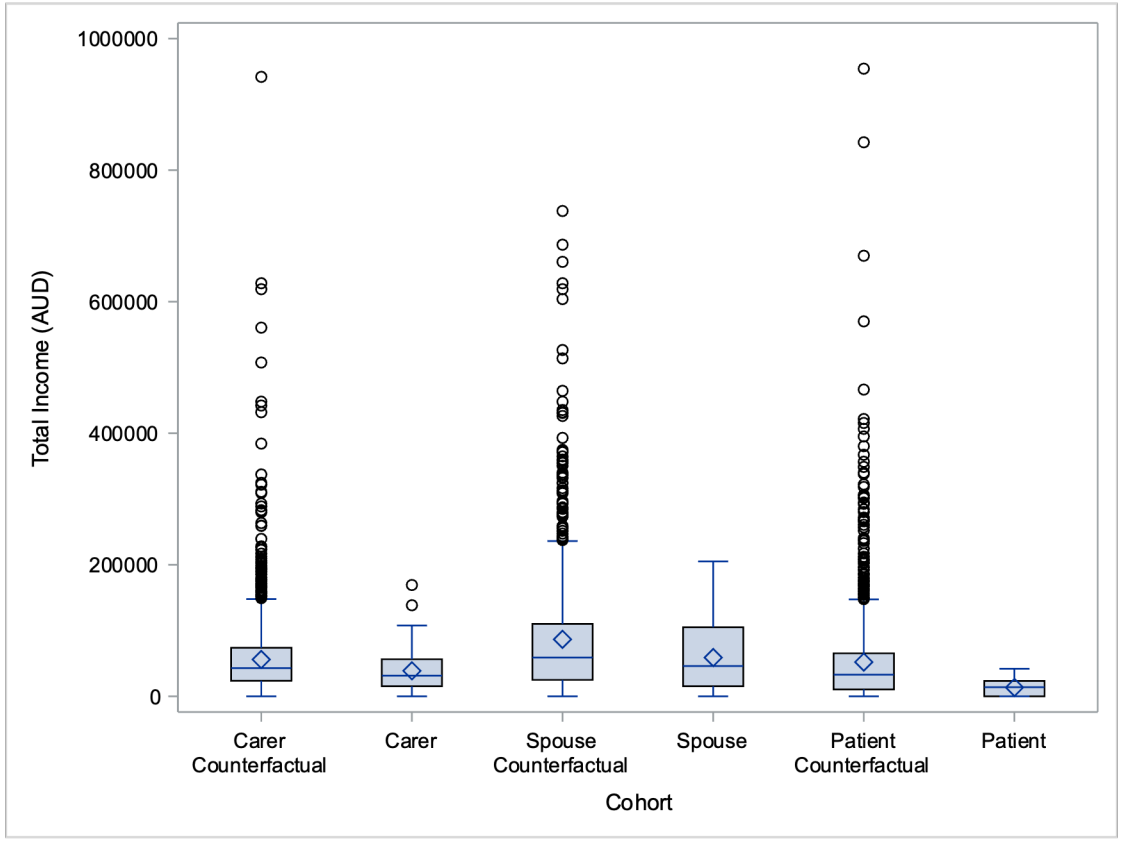
- A maximum of 3 ID care patients lived in each household.

- Counterfactuals were generated for the 98 patients aged 16 or over (between 16 and 60), the majority being male (85.7%).
    - Among the working ID patients, only 1 worked full-time.

- The odds (adjusted for age, gender, and household) of patients being in the labour force was 0.10 times that of the general population ($P<0.001$).

- The odds of female patients (0.07; $P<0.001$) being in the labour force were similar to the odds of male patients (0.08; $P<0.001$) when compared to their matched CFs.

Income



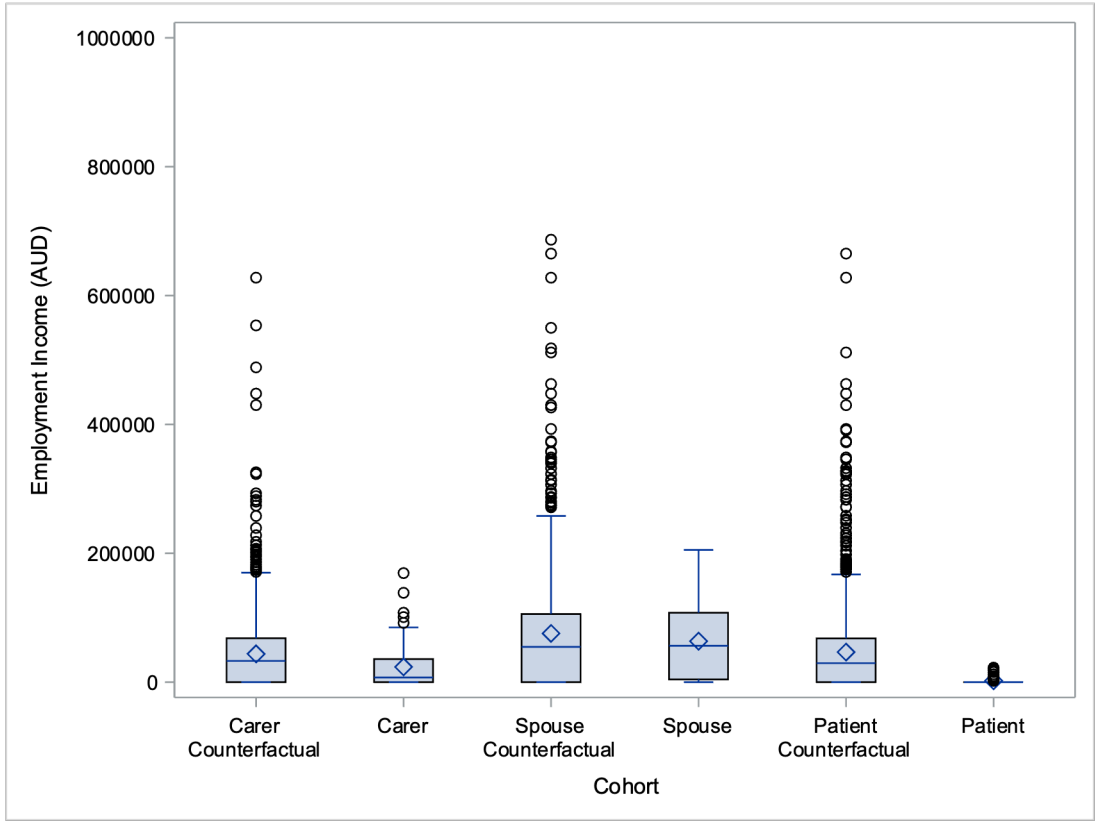


FIGURE 1: BOX AND WHISKER PLOT OF THE ANNUAL TOTAL (A) AND EMPLOYMENT (B) INCOMES ($AUD) OF ID CARERS, THEIR SPOUSES AND ID PATIENTS COMPARED TO THEIR MATCHED COUNTERFACTUALS.

- Across the three populations, the EPIC-ID total and employment income distributions are lower than their counterfactuals and have notably fewer or no outliers.

Income

- Non-zero incomes were log-transformed for a T-test comparison to the STINMOD counterfactuals.

EPIC-ID Cohort	Income	T-Test P value (non-zero incomes)
Carer	Total	▼0.001
	Employment	▼0.001
Carer Spouse	Total	▼0.078
	Employment	▼0.013
Patient	Total	▼<0.001
	Employment	▼<0.001

Key Associated Factors: Labour Force

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- Carers
  - Carers with a tertiary education were more likely to be in the labour force (P=0.083).
  - Carers were 2.4 times (P=0.099) more likely to be in the labour force if they were caring for one ID child than if they were caring for two.

- Carer Spouses
  - Spouses with one ID child were over 4.5 times more likely to be in the labour force than if they had two ID children (P=0.05) and 7.8 times than if they had three ID children (P=0.04).

- Patients
  - Older patients were more likely to be in the labour force (P<0.001)
  - Male patients were 0.34 times more likely to be in the labour force than female patients (P<0.0001).

Key Associated Factors with Total Income

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- Carers
  - Male carers (P=0.084) and carers with a higher interaction between the number of ID patients and ID severity (P=0.078) had higher non-zero total incomes.

- Patients
  - Older patients were more likely to have a higher (non-zero) total income (P=0.05).

COVID-19

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- Carers
  - 17.1% carers have either had a reduction in working hours, income or lost their jobs.
  - Two of the 3 carers who've experienced a reduction in income have also accessed or intended to access their superannuation early due to financial issues.

- Carer Spouses
  - 14.3% experienced reduced working hours or income.

- Patients
  - 23.3% patients have experienced reduced working hours
  - 13.3% patients were unable to unable to go to work or access employment services.

Conclusions

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- The effects of familial intellectual disabilities go beyond the patient.
- The findings serve as evidence to be used for Australian policy review and updates related to intellectual disabilities and employment.
- Australia can benefit from financial and employment support for families affected by intellectual disability

Thank you

- Genetics of Learning Disability (GoLD)
- Genetic Alliance Australia
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- The South Eastern Area Laboratory Services (SEALS) Genetics Laboratory
- The Austrian Institute of Economic Research (WIFO)