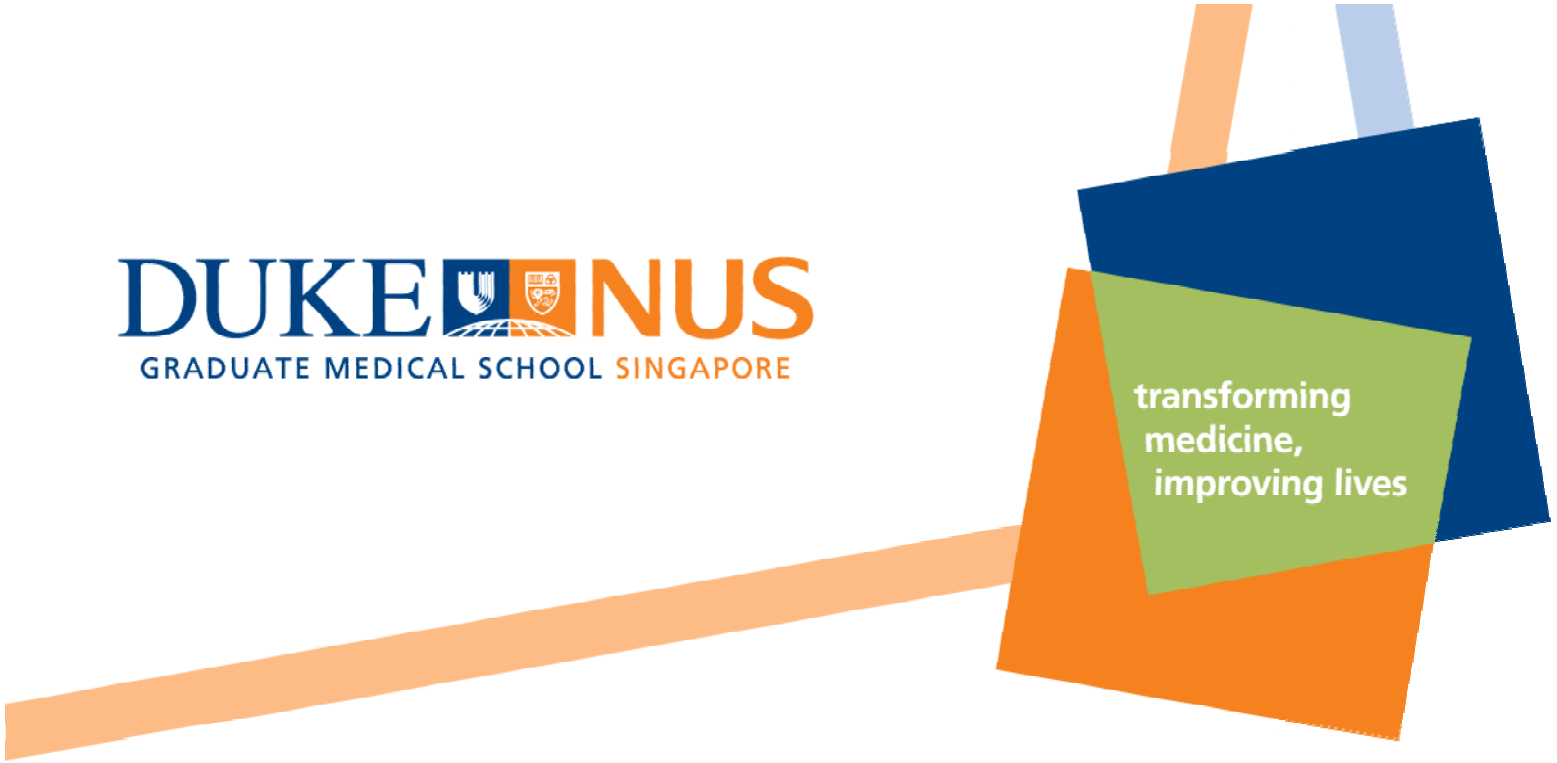



# System Dynamics of Diminishing Family Size on Living Arrangements of Singaporeans with Age-related Dementia

James P. Thompson, Crystal M. Riley, and David B. Matchar
Health Systems Design Laboratory

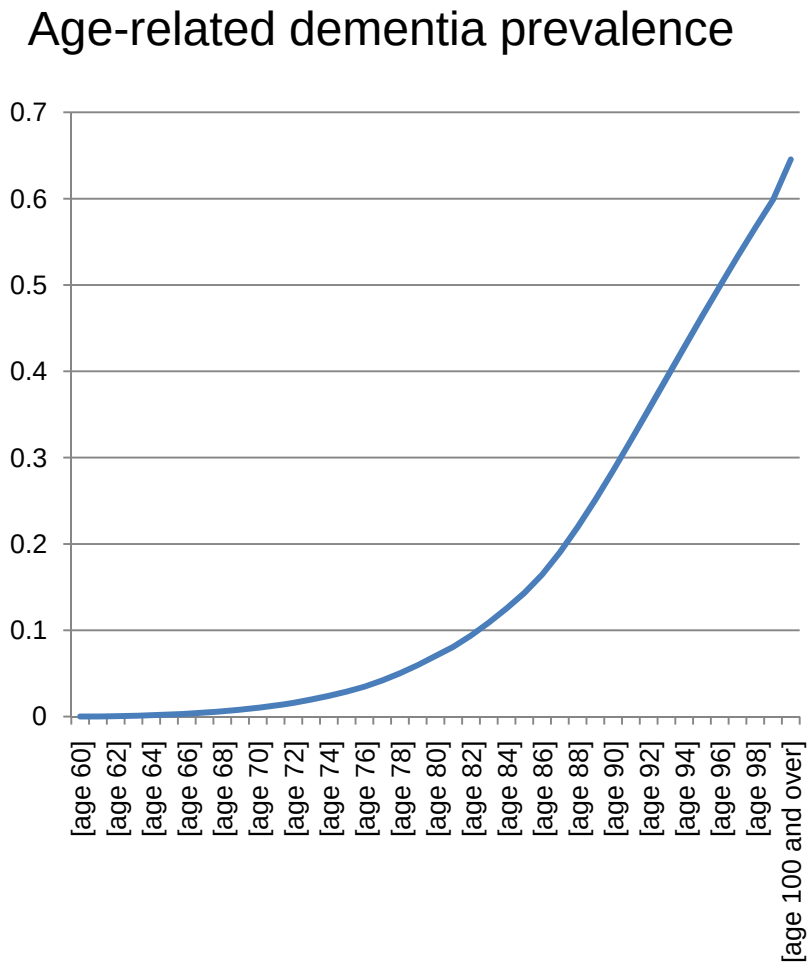
# Integrating different conceptual frameworks to increase understanding

- Contributing disciplines—sociology, demography, medicine, epidemiology, health policy, statistics

- Structure to simulate severity of condition in dynamic population and estimate effect on living arrangements

# Age-related Dementia

- Dementia – progressive loss of brain function
  - Mild stage ~ 2 years
  - Moderate stage ~ 4 years
  - Severe stage ~ 7 years
- Incidence increases with age over 60 years
- Prevalence by age grows exponentially with increasing incidence and longer life expectancy

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# Project Goals

- Investigate current care and treatment and develop policies→
  - Increase patient socialisation and reduce patient isolation
  - Increase care alternatives that reduce burden on formal and informal caregivers
  - Measure benefits and control costs

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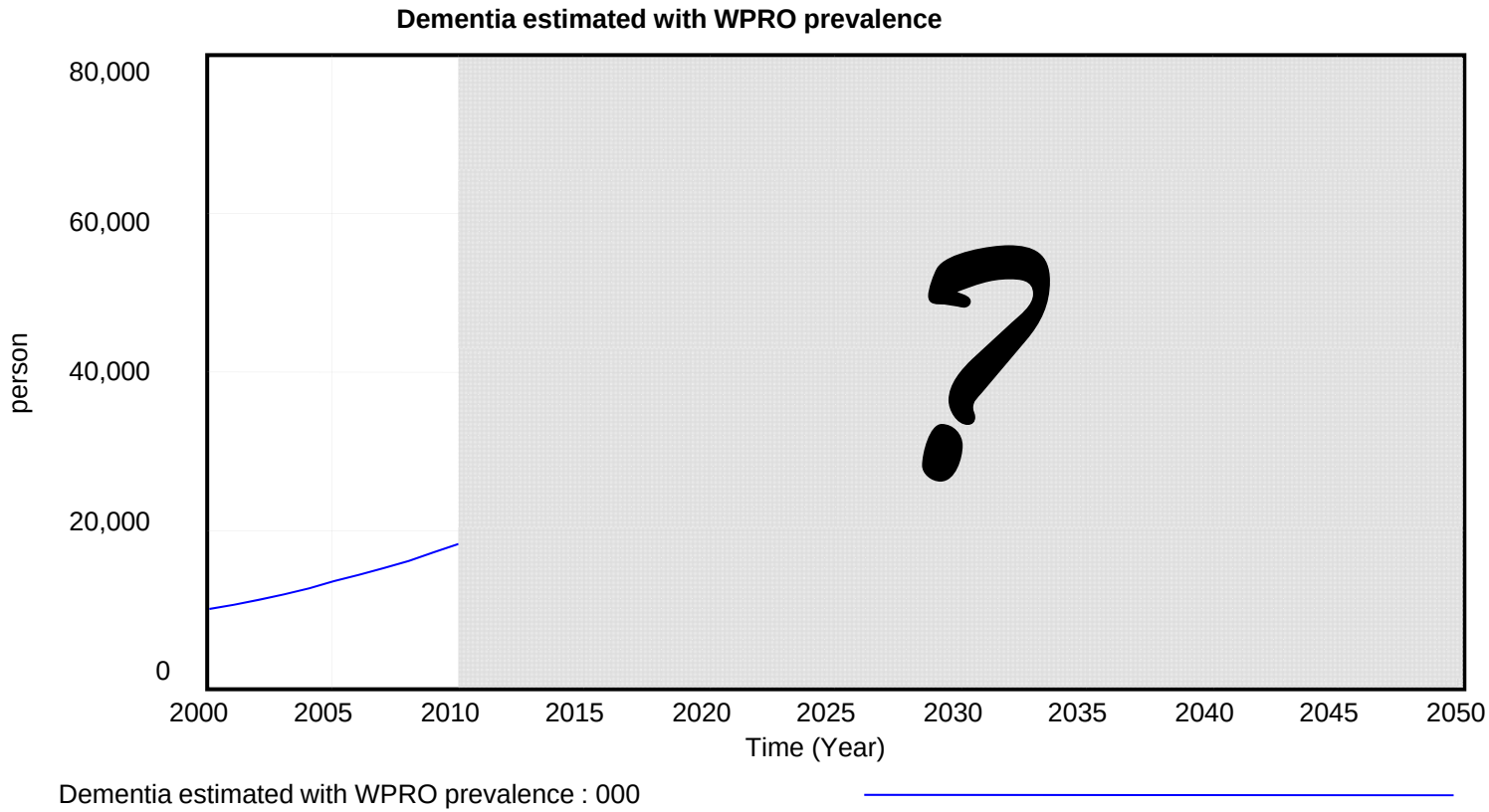
# Age-related Dementia in Singapore

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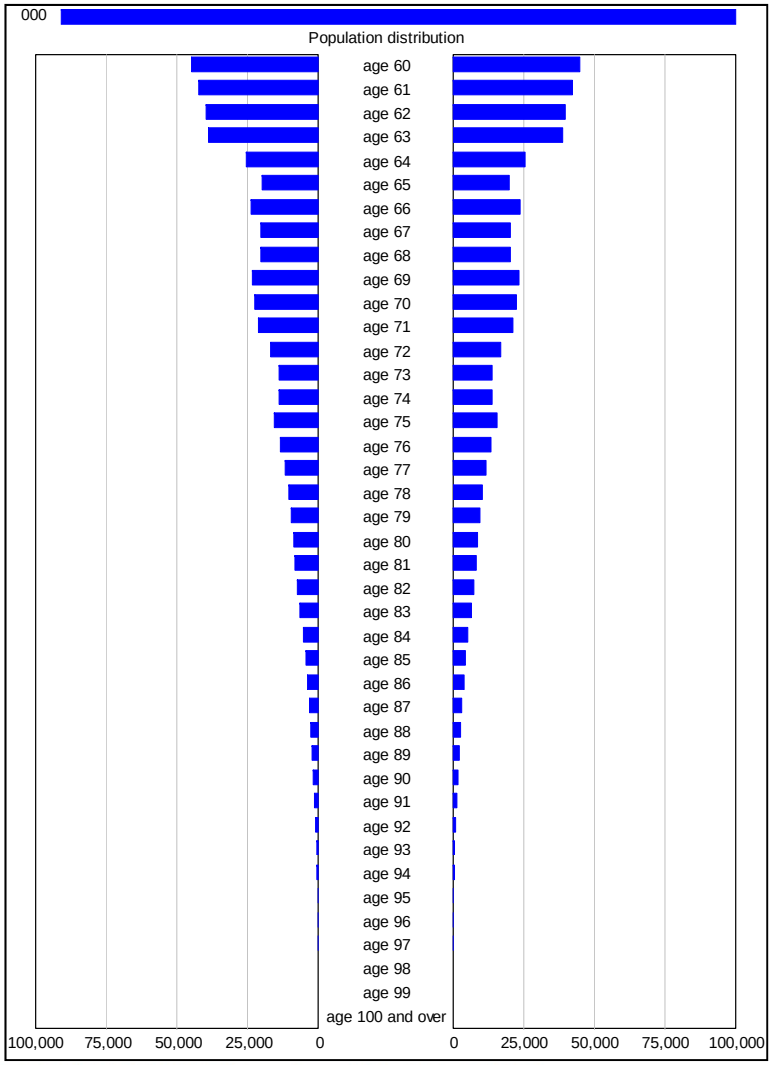
# Ageing in Singapore

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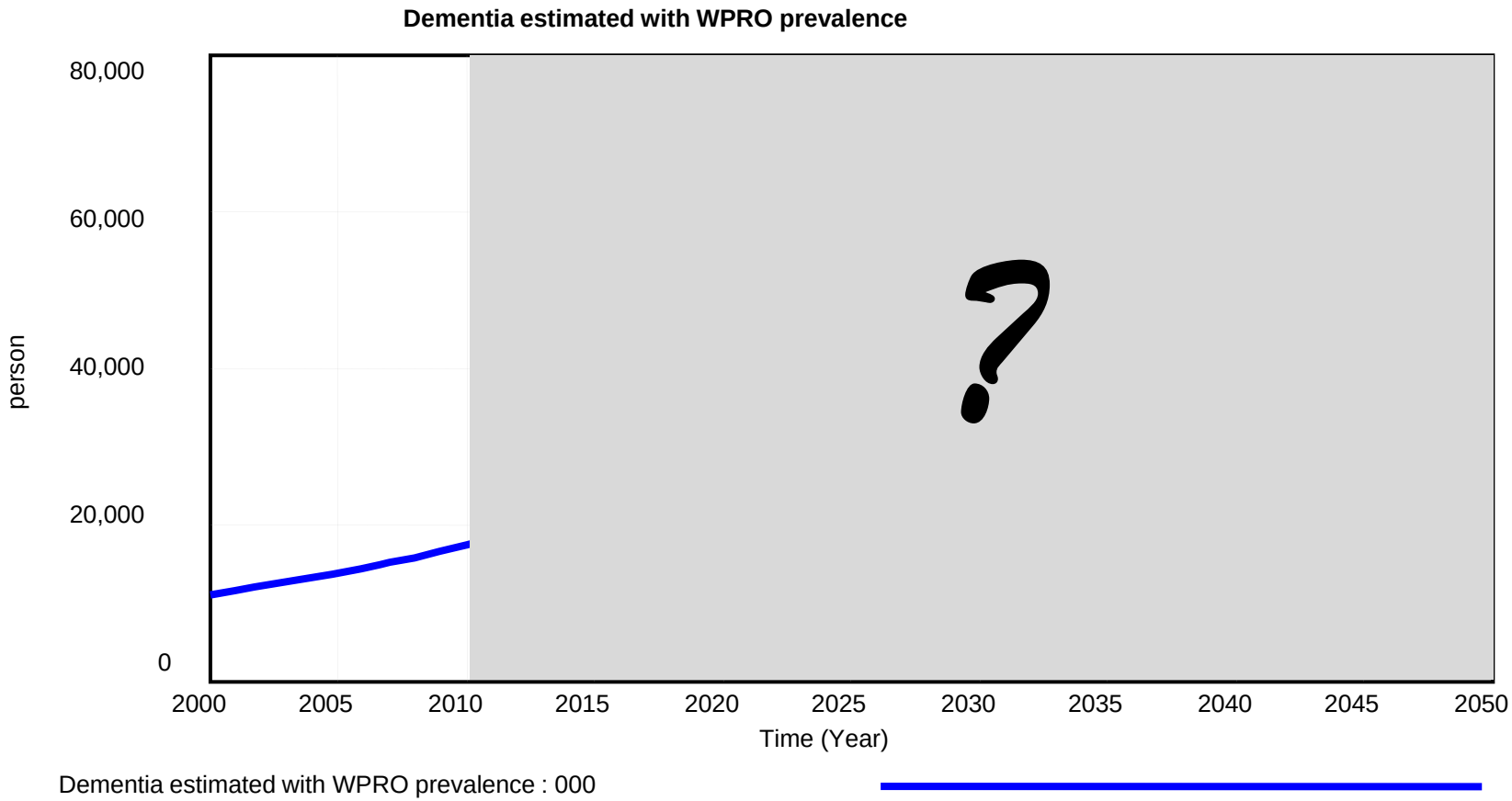
# Age-related Dementia in Singapore

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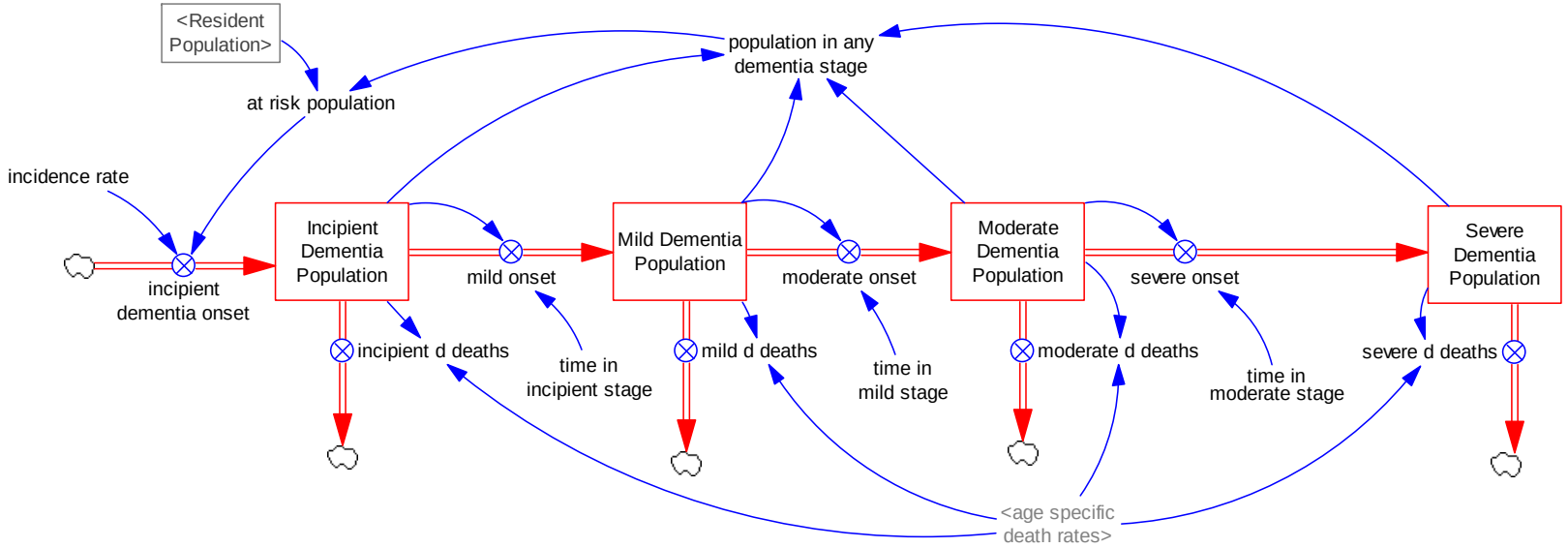
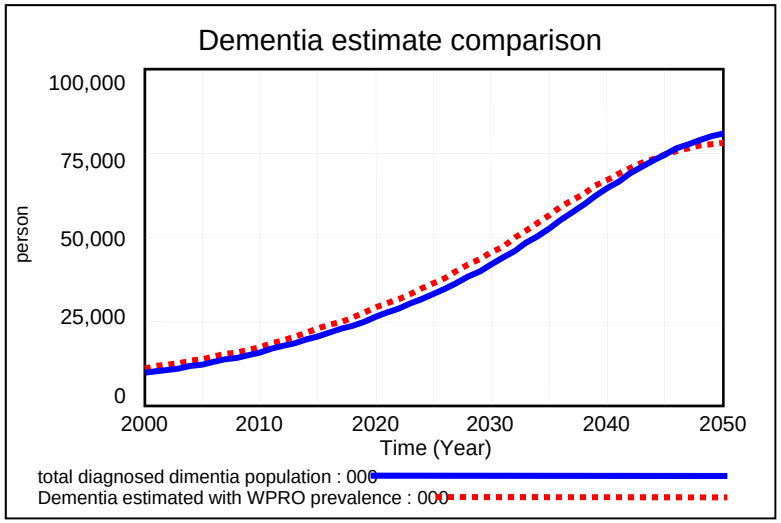
# Aggregate dementia population by severity of condition

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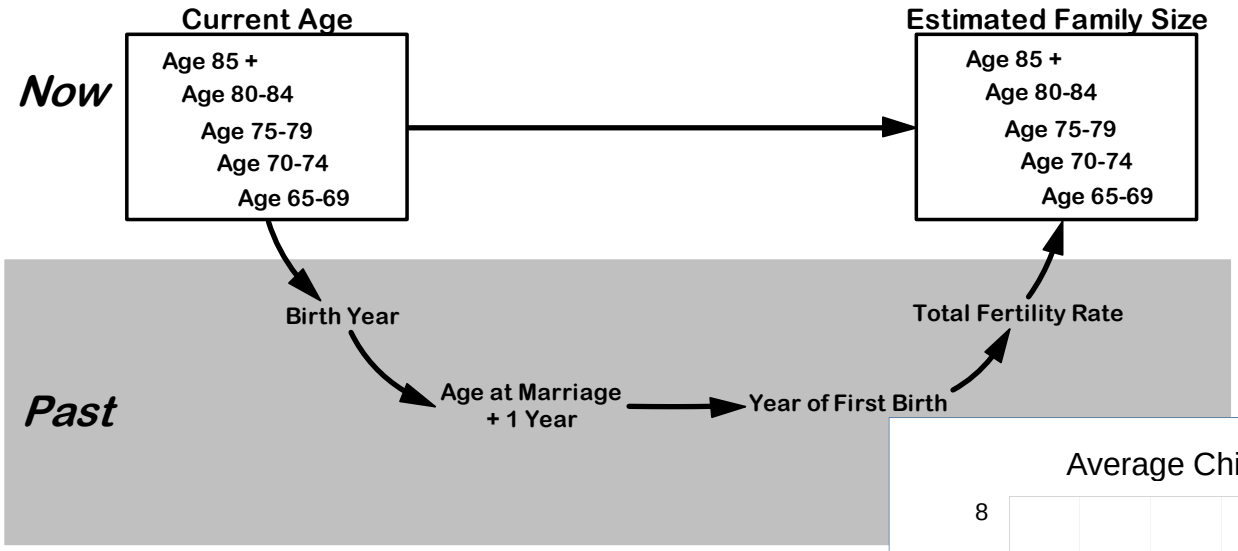
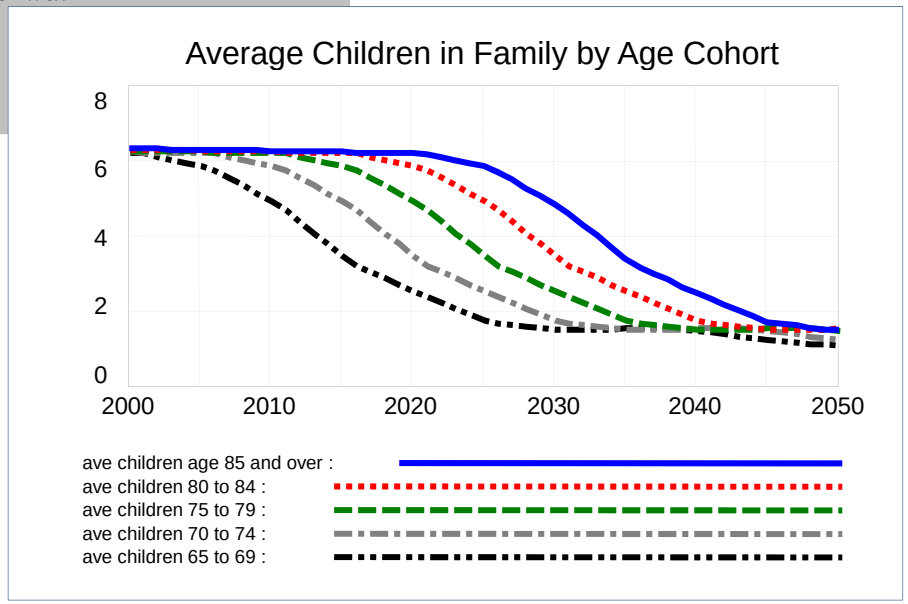
# Current family size estimated with historical total fertility rate

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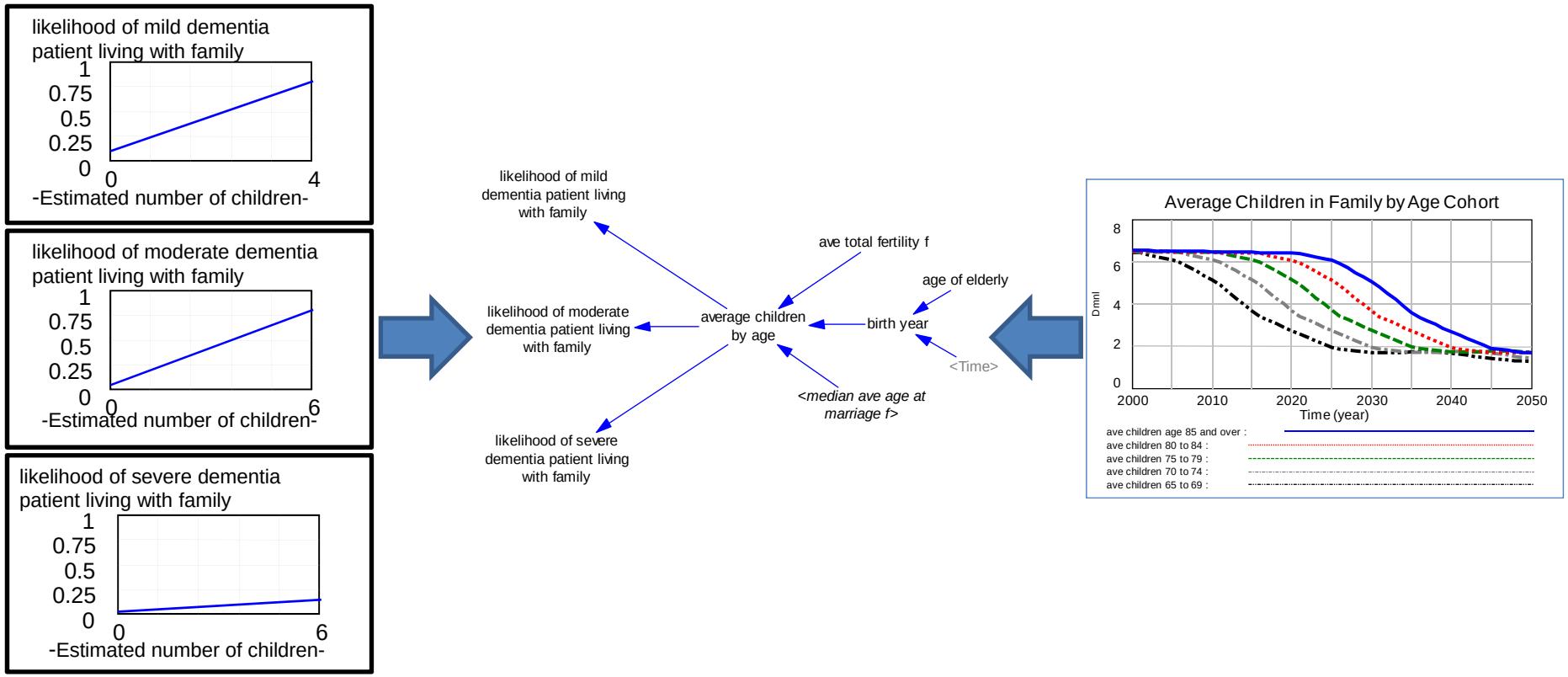
# Likelihood of dementia patient living with nuclear family member

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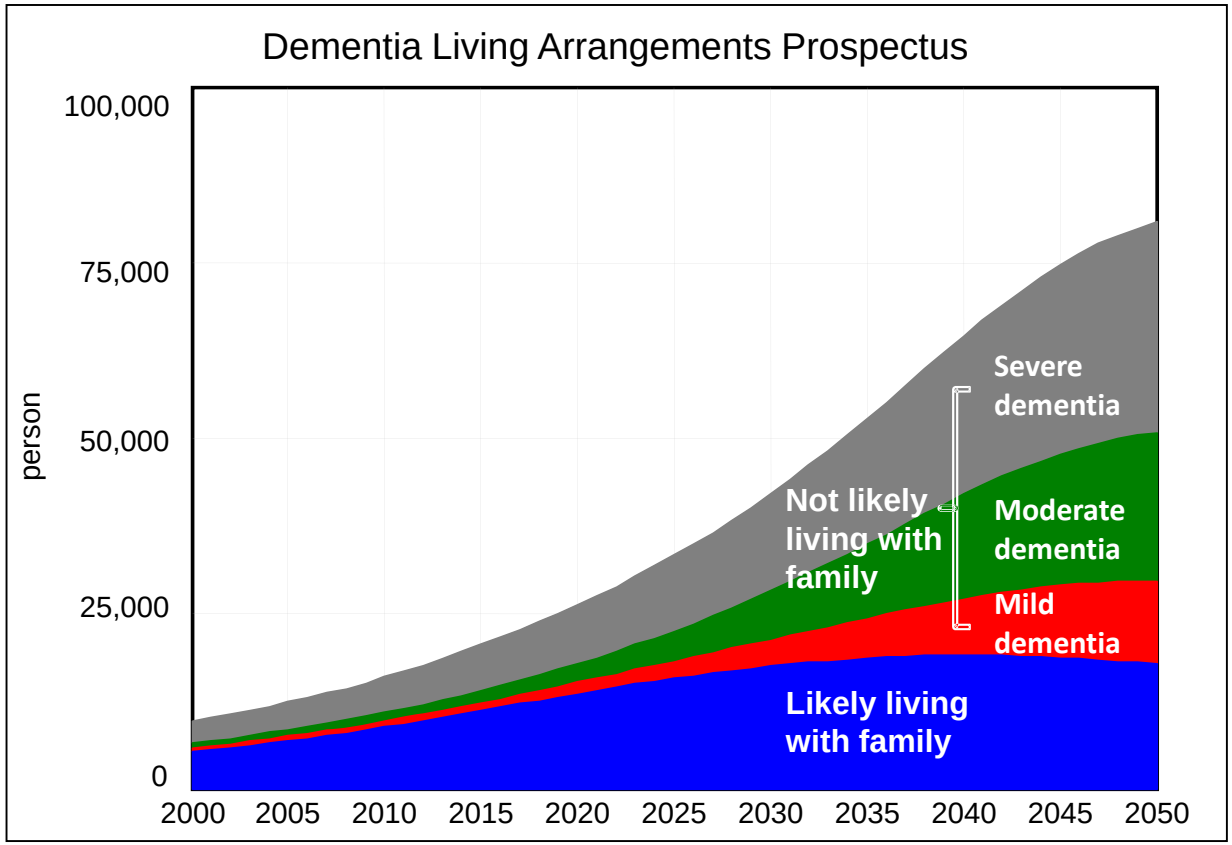
# Where will we live when are old and dependent?

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## Next steps

Why do dementia patients live where they live now?

Test effect of care alternatives

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# Questions?