

# Patterns & predictors of adolescent alcohol use - will the new laws work to reduce harm?

Nicki Jackson  
PhD candidate  
Section of Epidemiology and Biostatistics

# Overview

- Known risk & protective factors
- Single measures of alcohol consumption *versus* drinking patterns
- Drinking patterns in NZ Secondary Students
- Implications for research, intervention and policy

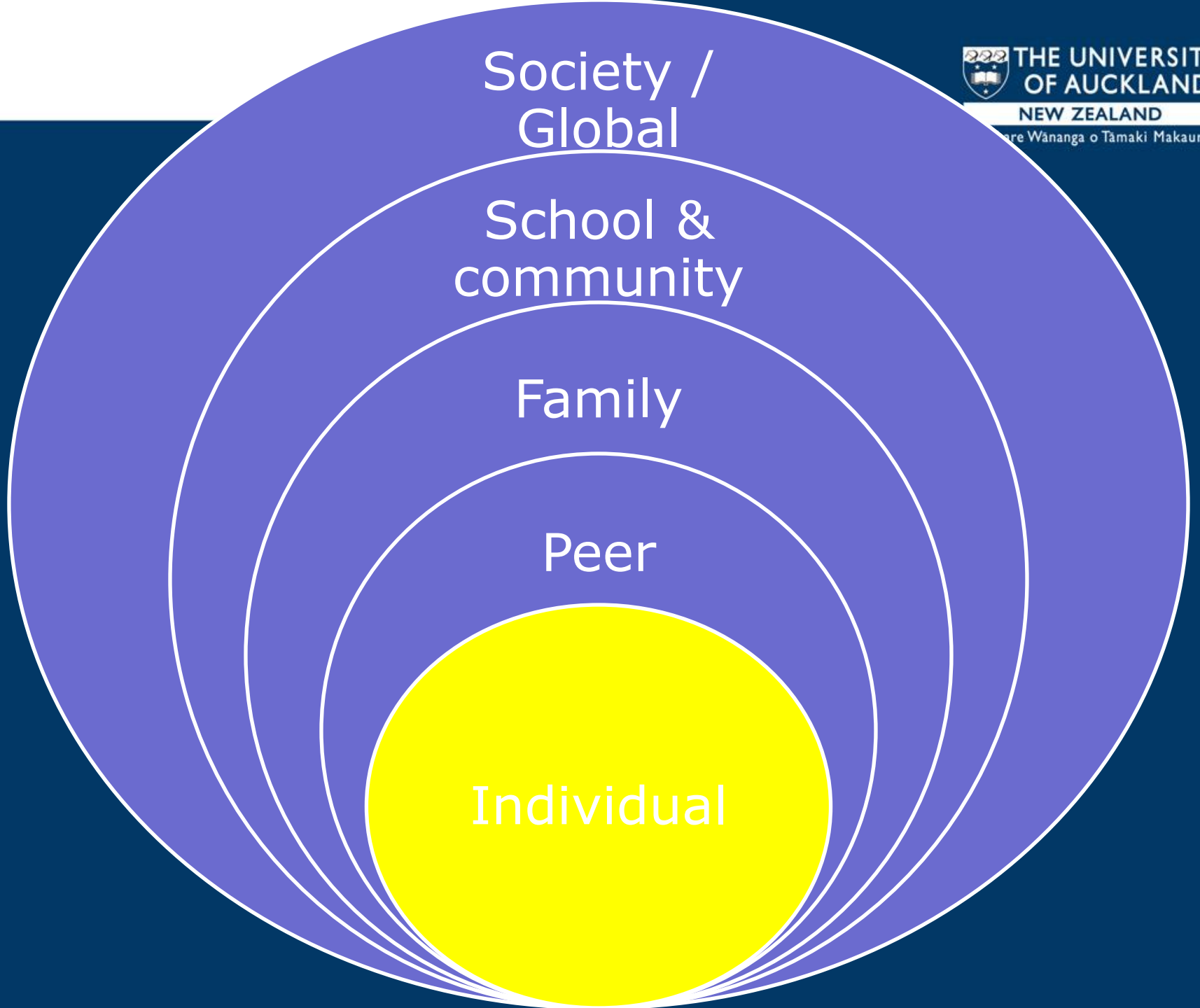
Society /  
Global

School &  
community

Family

Peer

Individual



aggressiveness

impulsivity

conduct disorder

sensation seeking

early puberty

reward responsiveness

academic failure

anxiety/  
depression

# Individual

low degree of  
commitment to  
school

deficits in attention

low resiliency

alienation and  
rebelliousness

sleep difficulties

attitudes favourable  
to alcohol use

social inhibition  
/shyness

expectancies of  
drinking

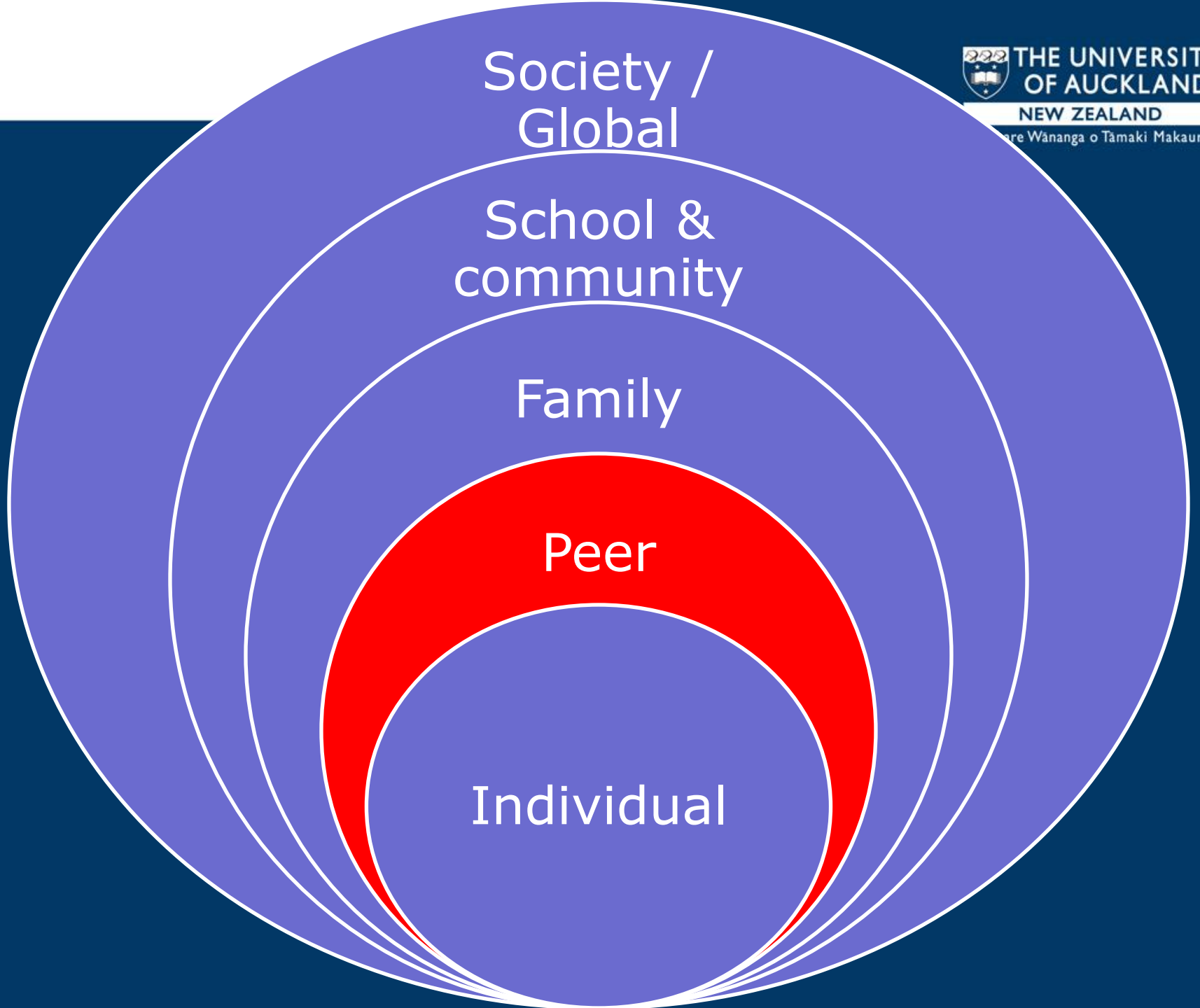
Society /  
Global

School &  
community

Family

Peer

Individual



Peer rejection

Association with alcohol-using peers

# Peer

Perceived alcohol use by peers

Perceived peer behaviours

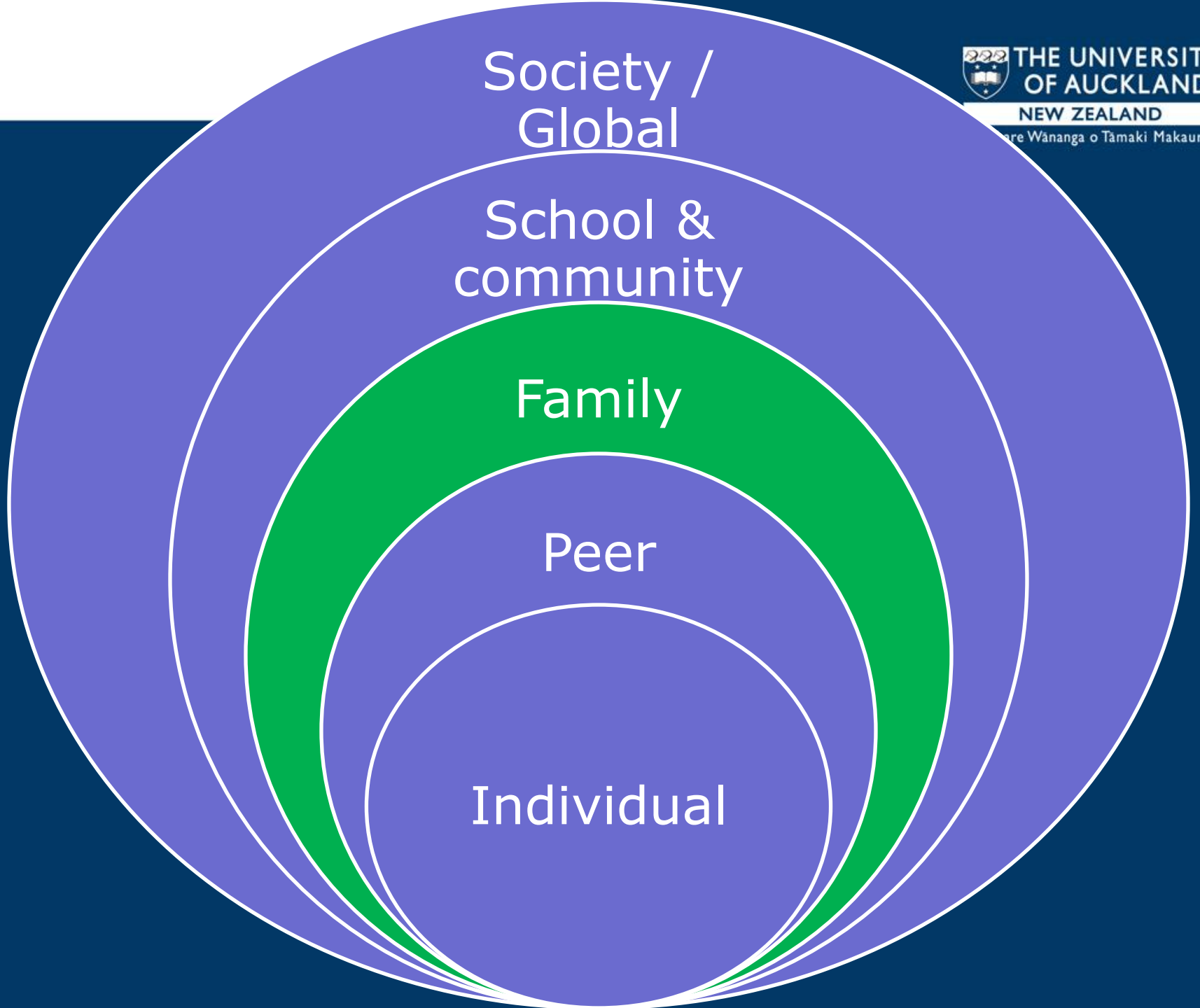
Society /  
Global

School &  
community

Family

Peer

Individual



**Family alcohol drinking behaviour -  
modelling**

**Family alcohol attitudes**

**Low bonding to family**

Rules about alcohol

**Parental  
involvement**

**Family**

Parental support

Family conflict

**Parental knowledge of adolescent activity**

**Provision of alcohol**

Alcohol-specific communication

General communication &  
discipline



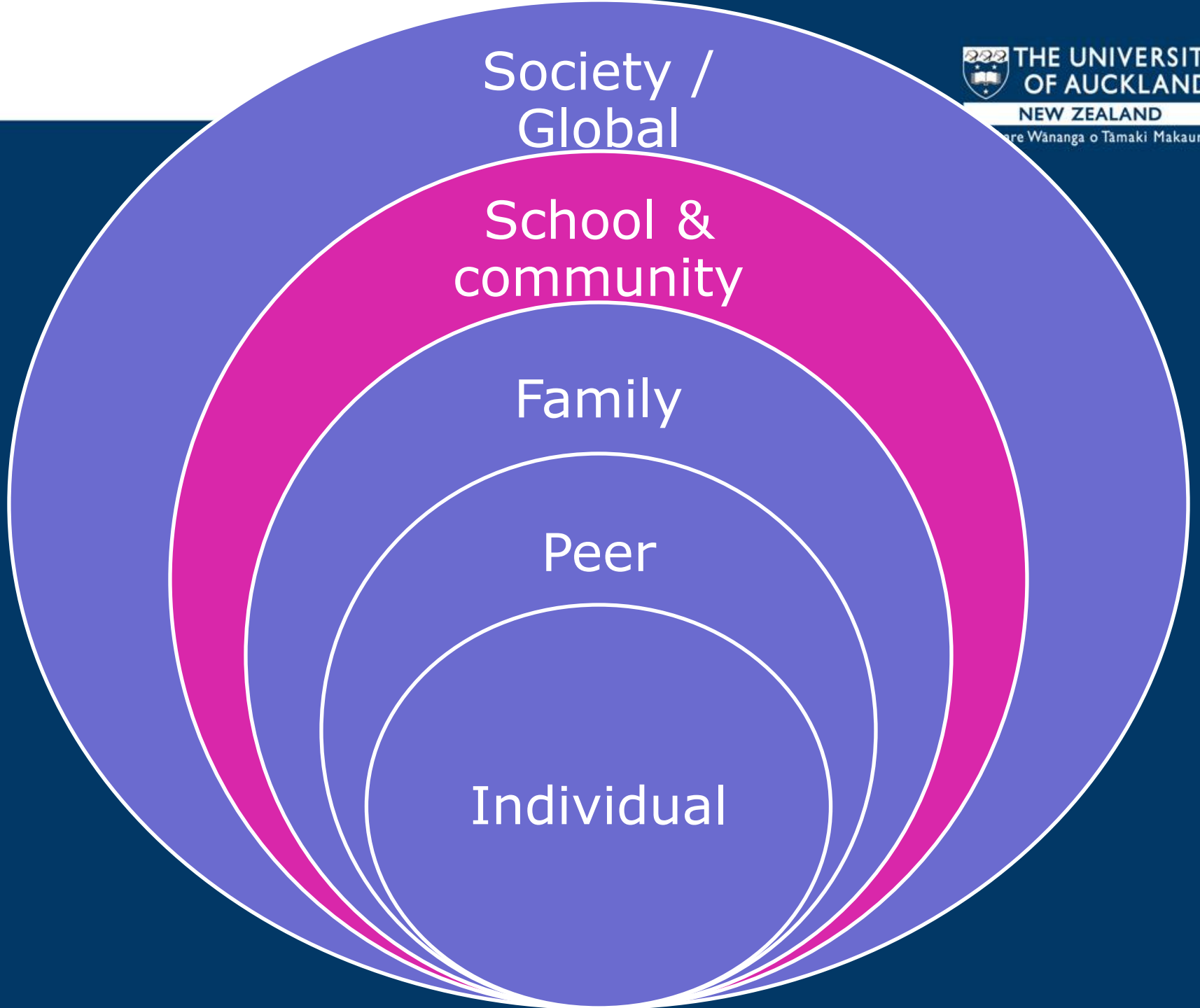
Society /  
Global

School &  
community

Family

Peer

Individual



Level of drinking in school

School policies

Attachment to school

School norms around drinking

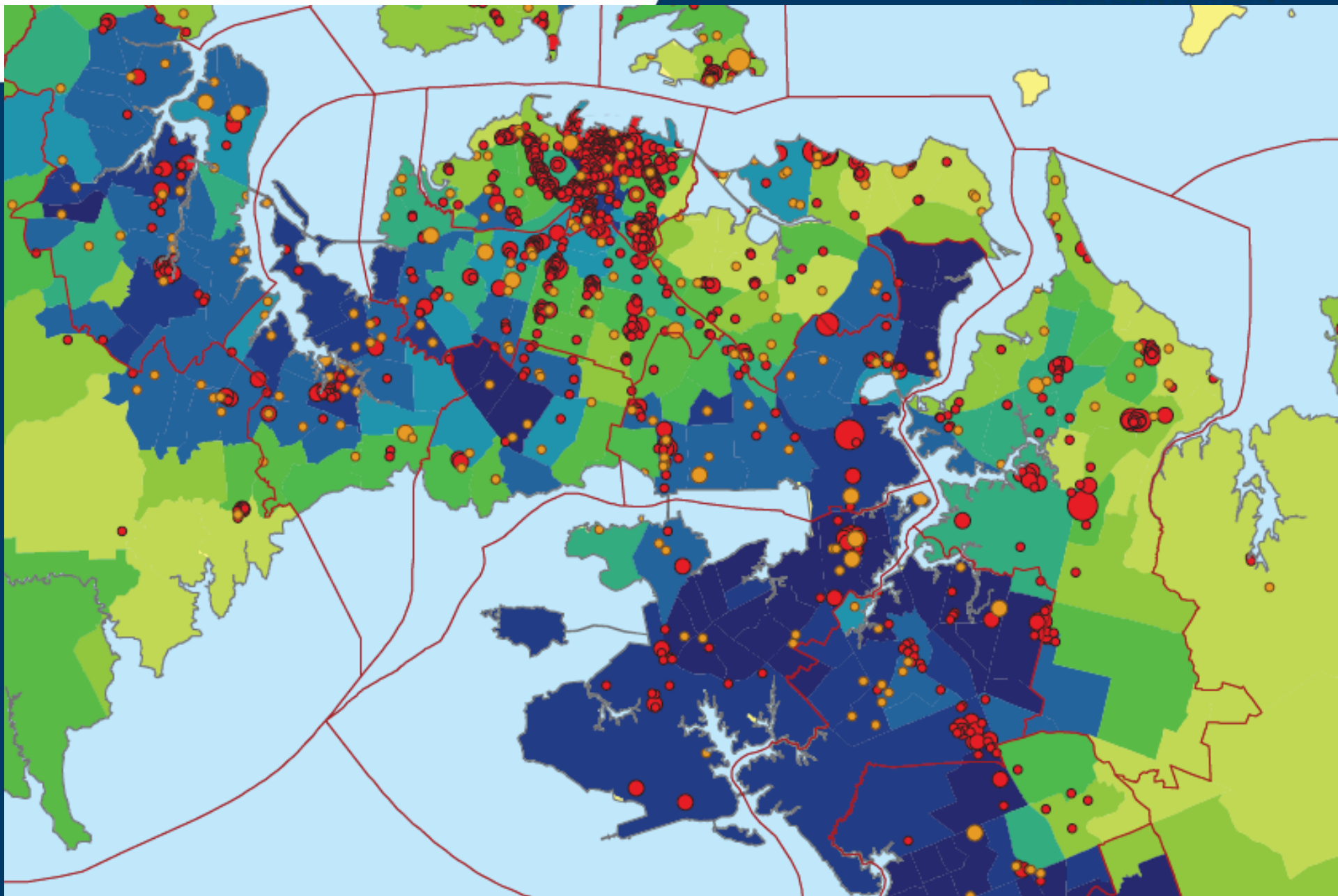
# School & community

Density / proximity to bars, bottle stores, etc.

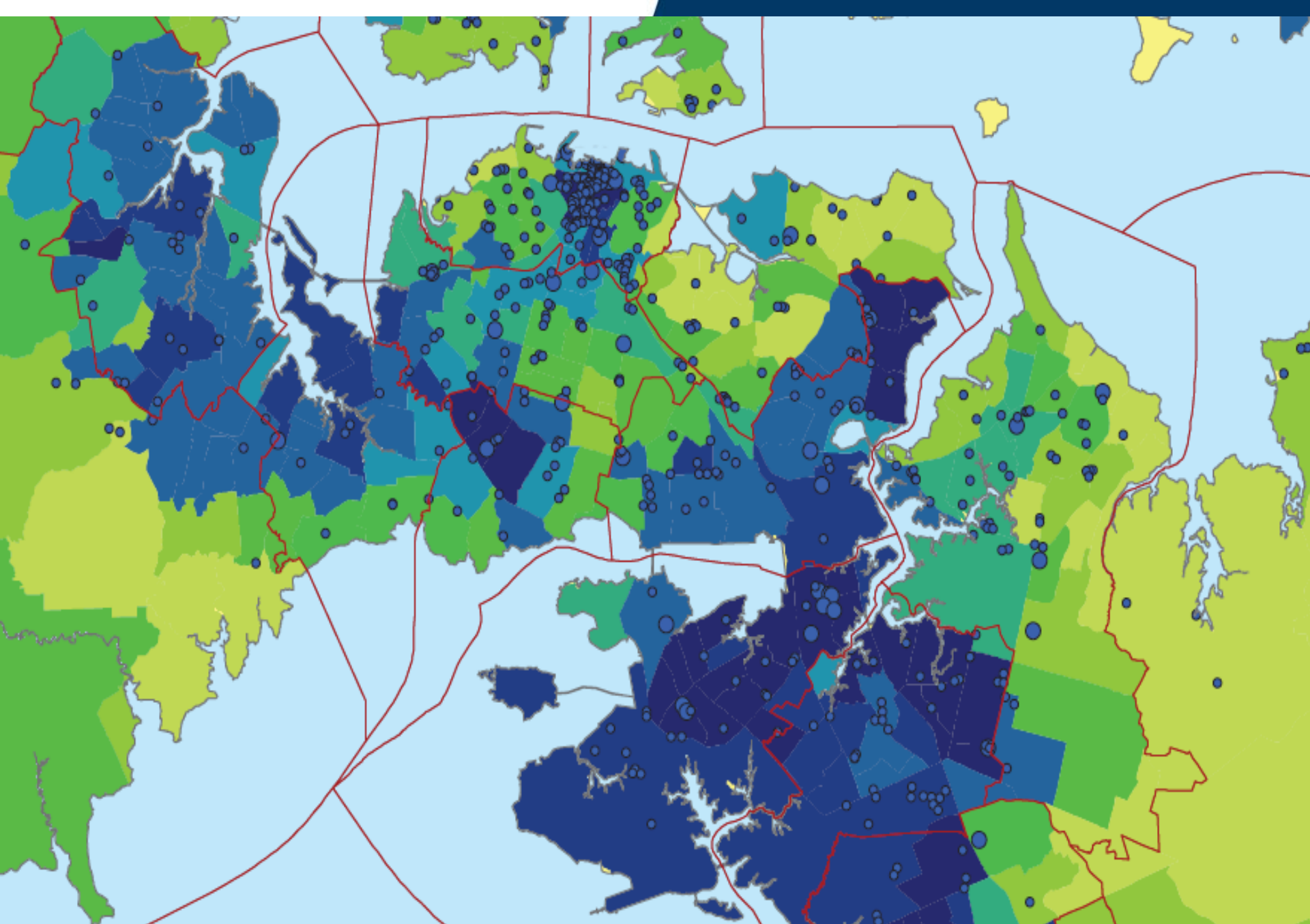
Trading hours & advertising

Enforcement of liquor laws

Drinking in public places



**Local Alcohol Policy Research Report. May 2012. Auckland Council.**



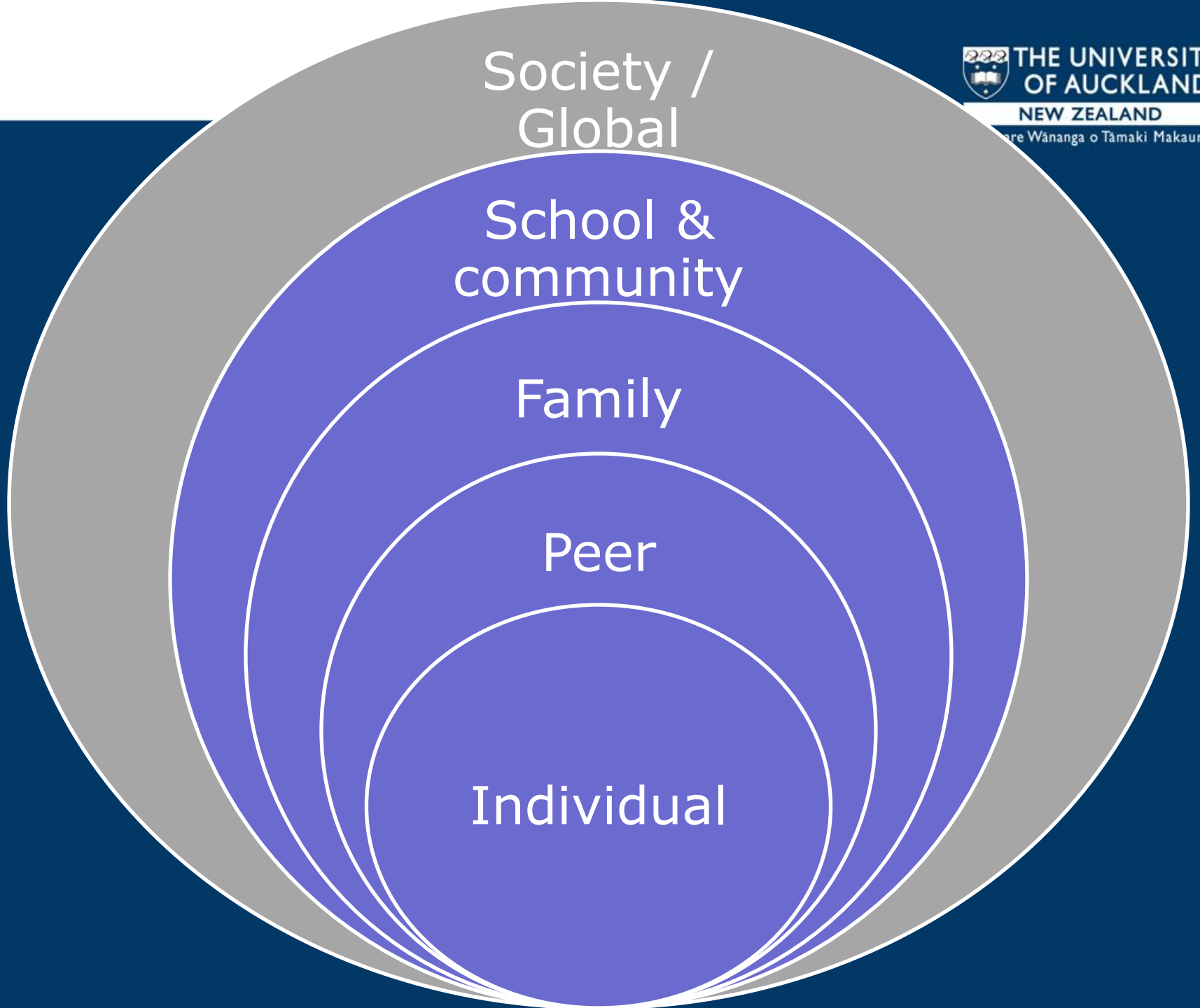
Society /  
Global

School &  
community

Family

Peer

Individual



## Laws and regulation

- Price
- Drink driving limits
- Age restrictions
- Liquor licensing – controlling availability / supply

# Society / Global

Advertising – national & global

Social norms

International trade agreements

Inequalities

# Measures of alcohol consumption

- Frequency of drinking
- Usual quantity consumed
- Frequency of binge drinking
- Beverage-specific & location-specific measures
- Reference periods & standard drinks

## ***It's how they're drinking***

- Drinking pattern
  - Better predictor of acute harms
  - Linked to chronic disease
  - Person-centred statistical modelling approaches





## Latent class analysis

- How many drinking patterns exist in the adolescent drinking population?
- What are the characteristics and predictors of these drinking patterns?



## Youth'07

- 389 eligible composite or secondary schools
  - 115 schools randomly selected
  - 96 schools (84%) took part
- 12,355 students invited to participate
  - 9,107 (74%) took part
- Average completion time = 73 mins (622 questions)
- Available in English and Māori



# Latent class analysis of Youth '07

Indicators used to identify types of drinking patterns

## Consumption measures:

1. Frequency of drinking (past 4 weeks)
2. Usual amount consumed
3. Frequency of binge drinking (past 4 weeks)

## Alcohol-related harms (past 12 months):

4. Injury or injured other or car crash
5. Unsafe or unwanted sex
6. Doing things which could result in serious trouble
7. Performance at school or work affected

	<b>Class One Low-risk 55.0%</b>	<b>Class Two Moderate-risk 12.5%</b>	<b>Class Three High-risk 19.7%</b>	<b>Class Four Very high-risk 12.7%</b>
<b>Frequency of drinking</b>	Low frequency	Low frequency	Moderate frequency	High frequency
<b>Typical amount consumed</b>	Low amount	Moderate-high amount	High amount	High amount
<b>Frequency of binge drinking (5+ drinks)</b>	Low binge frequency	Low binge frequency	High binge frequency	High binge frequency
<b>Alcohol-related outcomes</b>				
<b>Performance affected</b>	0.00	0.22	0.05	0.47
<b>Unsafe and/or unwanted sex</b>	0.02	0.30	0.22	0.57
<b>Trouble*</b>	0.03	0.43	0.17	0.73
<b>Injury and/or crash</b>	0.04	0.49	0.27	0.83
*Doing things that could have resulted in serious trouble (e.g. stealing)				

## Moderate risk group

- ? 'sick reducers'
- ? harmed from low levels of consumption
- ? drink in more harmful settings
- ? lower tolerance to very occasional binges

# Predictors of drinking patterns

Moderate-risk	High-risk	Very high-risk
16 years	14-17+ years	16+ years
Male	Male	Male
Māori	Māori	Māori
Pacific	Regular job	Pacific
Regular job	Positive attitude to alcohol	Positive attitude to alcohol
Positive attitude to alcohol	<b>Buy own alcohol (~3x)</b>	Positive attitude to alcohol
<b>Buy own alcohol</b>	<b>Friends use alcohol</b>	<b>Buy own alcohol (~6x)</b>
<b>Friends use alcohol</b>	<b>Social supply</b>	<b>Friends use alcohol</b>
<b>Social supply (~4x)</b>	Connection to friends	<b>Social supply (~4x)</b>
Connection to friends	Low parental knowledge	Connection to friends
Low connection to family		Low connection to family
Low parental knowledge		Low parental knowledge
Low connection to school		Low connection to school

# Policy, intervention & research implications

- Predictors
  - Buying own alcohol
    - × Increase purchase age
    - × Increase price of alcohol
    - × Remove high-alcohol content RTDs
    - × Restrict advertising – submissions now closed
    - ✓ Increase offences
    - ✓ Tinker with licensing conditions
    - ? ✓ Reduce availability of licensed premises
    - ? ✓ Reduced hours to purchase alcohol
    - ✓ Reduced BAC young drivers – submissions closed for adult BAC
    - ? Increase enforcement

## Auckland Council's Local Alcohol Policy

- Where new outlets can be located
- How many new outlets should be allowed
- Opening & closing hours
- Priority areas within Auckland
- One-way door policies
- Discretionary conditions

**Submit!**

16 June to 16 July







WHAT MATTERS TO YOU:

FILTER BY TOPIC: All

FILTER BY CONSULTATION STATUS: Current

FILTER BY AREA: All

KEYWORD SEARCH: Type keywords

RESULTS

**Help shape**  
**Local Alcohol Policy**  
 CLOSES 16 JUL 2014

The draft alcohol policy will help guide licensing decisions across Auckland. We need to balance the need to reduce alcohol-related harm with the desire for a vibrant and enjoyable region.

[READ MORE](#)

**Help shape**  
**Three Kings Plan**  
 6 JUN 2014 - 27 JUN 2014

This plan will provide strategic direction for the growth and development of the Three Kings

**Help shape**  
**Local Boards Funding Policy**  
 9 JUN 2014 - 9 JUL 2014

We are proposing to amend our

**Help shape**  
**Local Dog Access**  
 CLOSES 23 JUL 2014

Several local boards propose changing dog access rules in their

# Policy, intervention & research implications

- Predictors
  - Social supply of alcohol
    - ✓ New laws regarding supplying minors



# Policy, intervention & research implications

- Predictors
  - Parental knowledge
  - Perception of school connection
- Future research

# Acknowledgements

- Simon Denny and Shanthi Ameratunga
- Students and staff at participating schools
- Funders of Youth'07