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# **Examining variation in healthcare service-use among frail older people who live at home: Implications for Irish health policy**

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**Sally** is 83 year old woman from Glasnevin in Dublin.  
Vascular dementia, high blood pressure and diabetes  
Still living at home.



**Ben** her husband is Sally's primary carer  
Buys grocery's, pays bills, organises health appointments.  
Continuous care and knows Sally's preferences and traits.  
Ben got very sick with an infection and died last month.



Daughter **Deirdre**, a HR Consultant living in Australia  
Home on extended bereavement leave  
Care resolved in the short term  
Not familiar with her Mums routine and health problems  
But her mum wont get out of bed and seems to be going downhill  
fast before her eyes?



**Crisis:** Sally isn't coping and Deirdre must return to work.

The **GP** describes Sally's situation as 'complex',  
No clinical guidelines for the management of someone like Sally  
Fears that her Endocrinologist is overly aggressive in managing her  
diabetes, and might be increasing her risk of falls  
Sally cannot realistically cope at home on her own, but what are her  
options?

# How can Sally remain living at home?!

- There's lots of help out there!
  - GP, PHN, older persons psychiatry, geriatrician, home help, respite care, carers allowance, home adaptation grant, living alone allowance, fuel allowance, household benefits, Alzheimer's Society, ALONE, day care, counselling, OT, social worker, meals on wheels, retirement group...*nursing home care*

## INFO OVERLOAD!

- 50% older people go see their GP, 20% contact the HSE to get information on services; but;
  - The HSE does not deliver all of these services
  - Geographical lottery of service provision
  - Older people report difficulty accessing good information
  - Long waiting times for specialist consultant care in public system

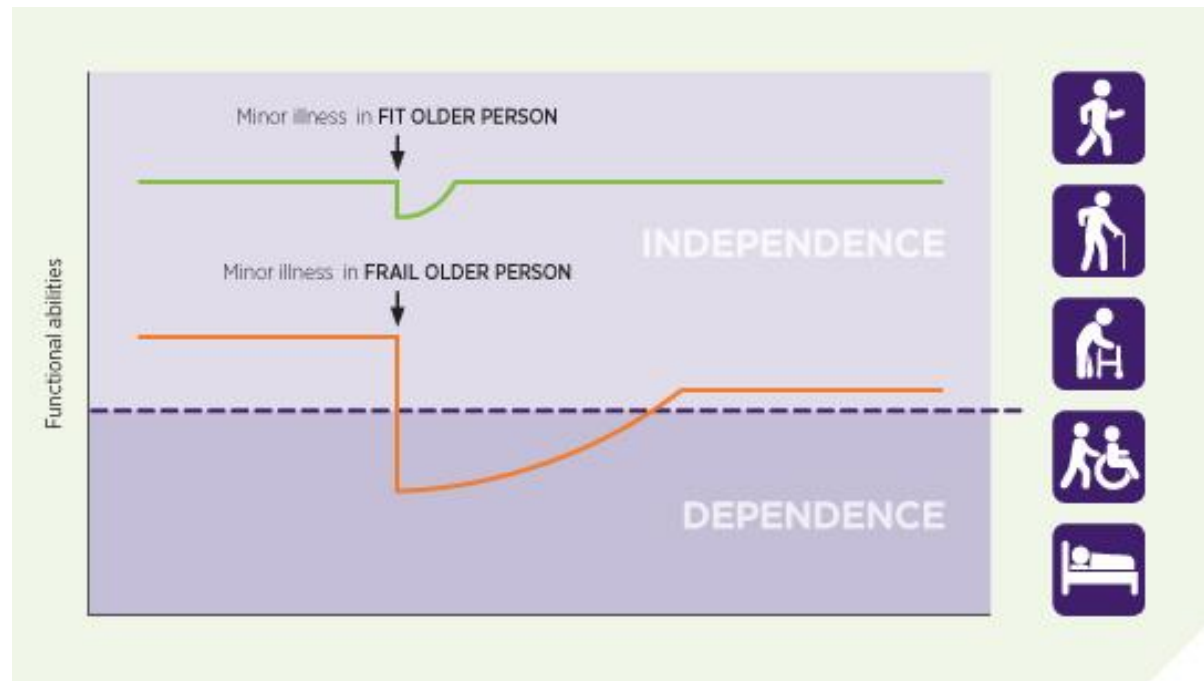
# Irish Health Policy

- **Committed** to supporting people like Sally to remain living at home
  - National Positive Ageing Strategy, National Carers Strategy etc
- **Future Health (2012)**- Key policy on integrated care
  - *Aims* create a **new integrated model of care to**
    - deliver the right care, in the right place, at the right time
    - target those with complex needs
    - needs are measured and services are well co-ordinated around needs
  - *Achievements to date*
    - HSE National Clinical Care Programmes
      - National Clinical Care Programme for Older People (NCPOP)
        - » Acute Specialist Geriatric Model of Care

# Achieving this model of integrated care(1)

Capturing Sallys complexity

- Chronological ageing?
- Disability or multimorbidity?
- Frailty



# Achieving this model of integrated care(2)

- **Models of integrated care for frail community-living older people**
  - single access point
  - case management
  - comprehensive geriatric assessment
  - multidisciplinary teams
  - financial incentives to promote downward substitution
- **Others have been quicker off the mark but...**
  - Poor evidence of current service utilisation
    - Targeting and risk stratification: does frailty matter?
    - User-friendly design: do we design care for a one-size-fits-all?
    - Model aim: Move those out of hospital to the community?  
Or to improve access?

# Achieving this model of integrated care(3)

## Research Question:

Do frail older people use the Irish healthcare system in similar ways?

## Research Aims:

- To model patterns of service use, considering ***all*** primary, hospital and informal care services potentially used by an individual
- To examine the factors associated with these configurations



## The Irish Longitudinal Study on Ageing (TILDA)

**Design:** prospective cohort study

**Sample:** 8517 people aged  $\geq 50$  years

**Data:** Computer Assisted Personal Interview (CAPI) trained interviewers

**Did you receive X in the last year:**

Optician, Dental, Chiropody, Physiotherapy, Occupational Therapy,  
Home Help, Personal Care, Meals on Wheels, Day Care, Informal Care,  
Public Health Nurse

**How many times did you visit X in the last year:**

GP, outpatients, day case procedures, ED, hospital admissions, nights  
spent in hospital

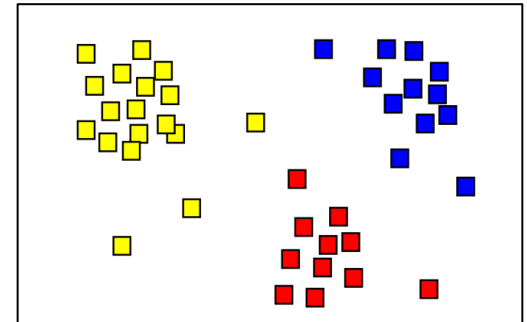
[www.tilda.ie](http://www.tilda.ie)

# Measuring Frailty

- **How to measure frailty??**
  - $\geq 20$  different measures of frailty
  - 2 conceptual approaches; phenotype & cumulative deficits
  - Each frailty measure is associated with adverse outcomes, but identifies slightly different groups as frail
- **Frailty Index operationalised**
  - *Cumulative deficits*: “Counting what is wrong with you”
  - *32 deficits*: functional, sensory, cardiovascular, chronic illness and other health deficits
  - *Score*: deficits present/total deficits, makes a score of 0-1
  - *Category*:  $<0.10$ : Robust ,  $0.10-0.24$ : Pre-frail ,  $\geq 0.25$ : Frail

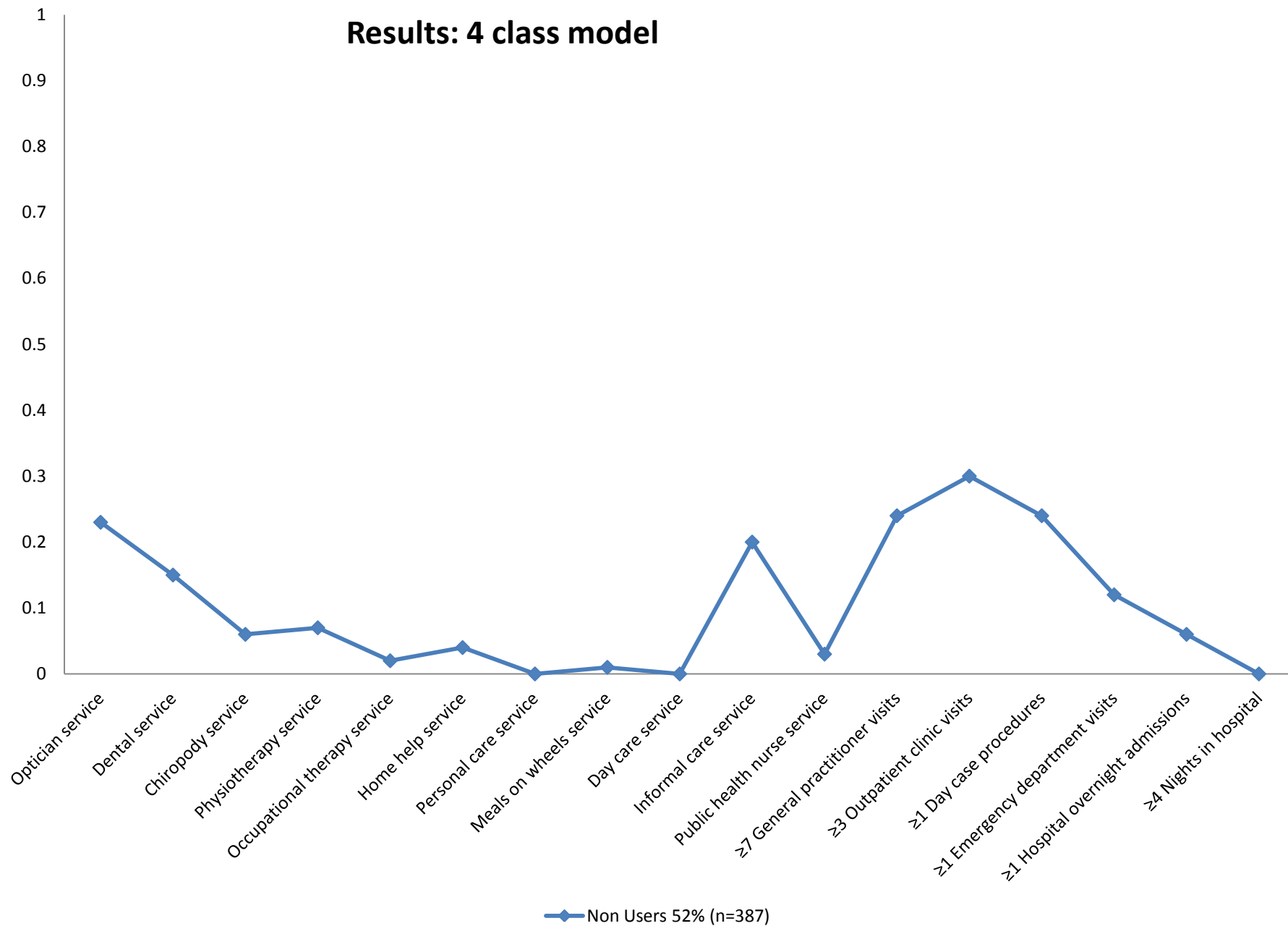
# Analytical Strategy: latent class analysis

- **Latent Class Analysis** – R software (v .3.1.2 ‘BayesLCA’ package)
  - Model service use behaviour
  - Identifies those who are similar to others on the basis of how they used services

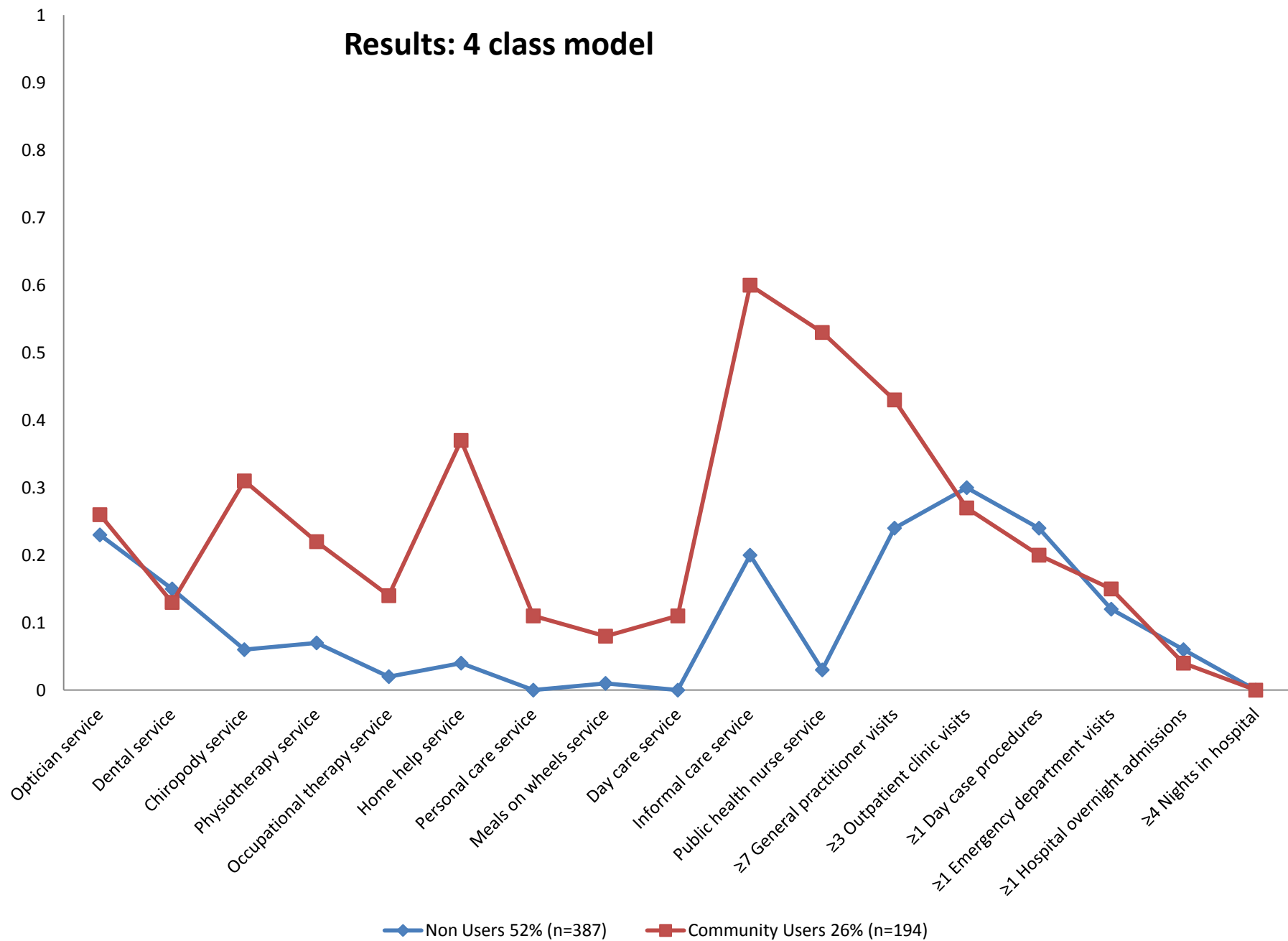


- **Analytical Process:** Model identifies the number of groups with fit statistics and substantive interpretation. Examine the factors associated with class membership; Pearson's chi square test statistic (STATA 13)
- **Sample:** 745 TILDA participants aged  $\geq 65$  years who were classified “frail”

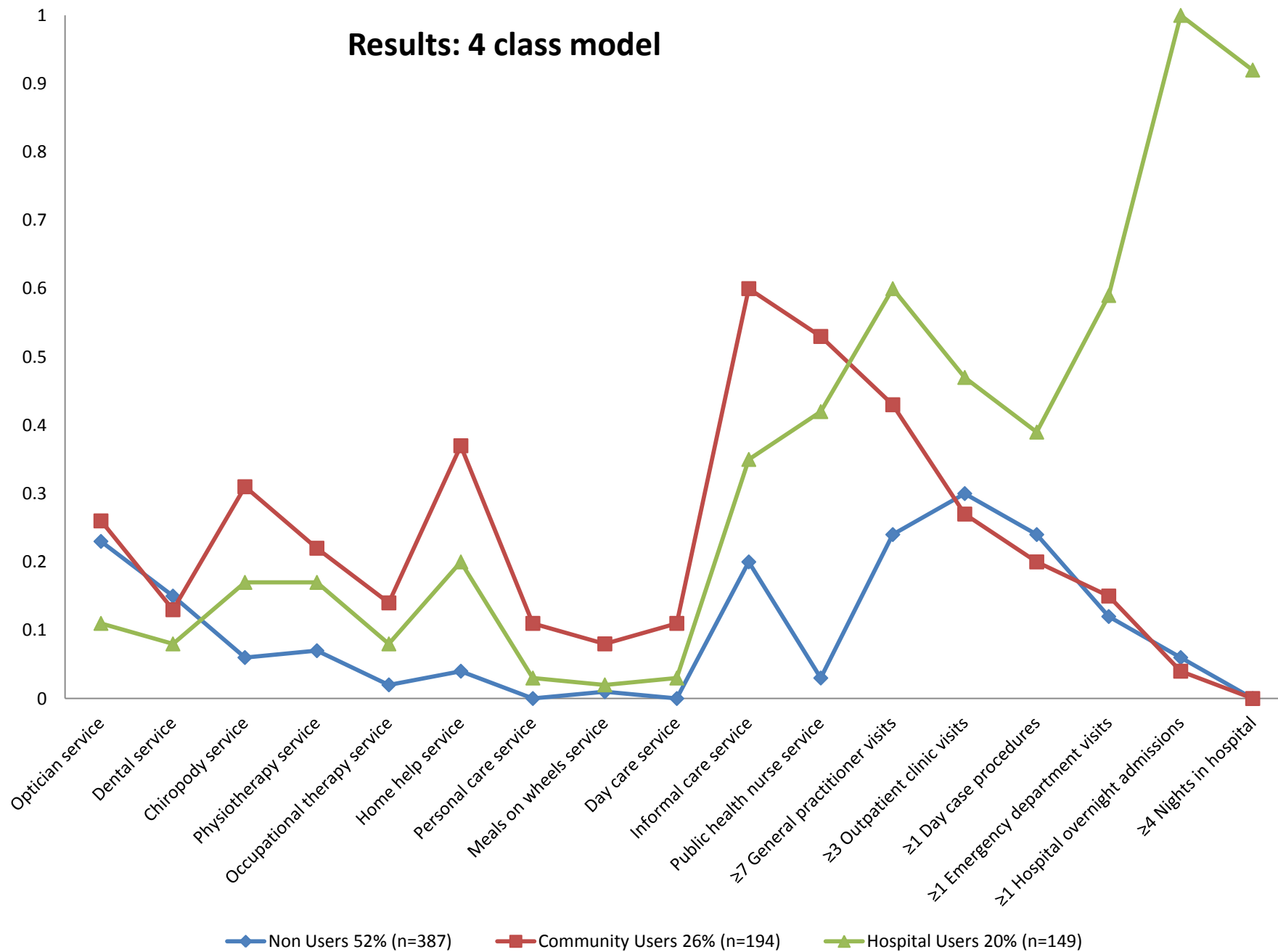
## Results: 4 class model



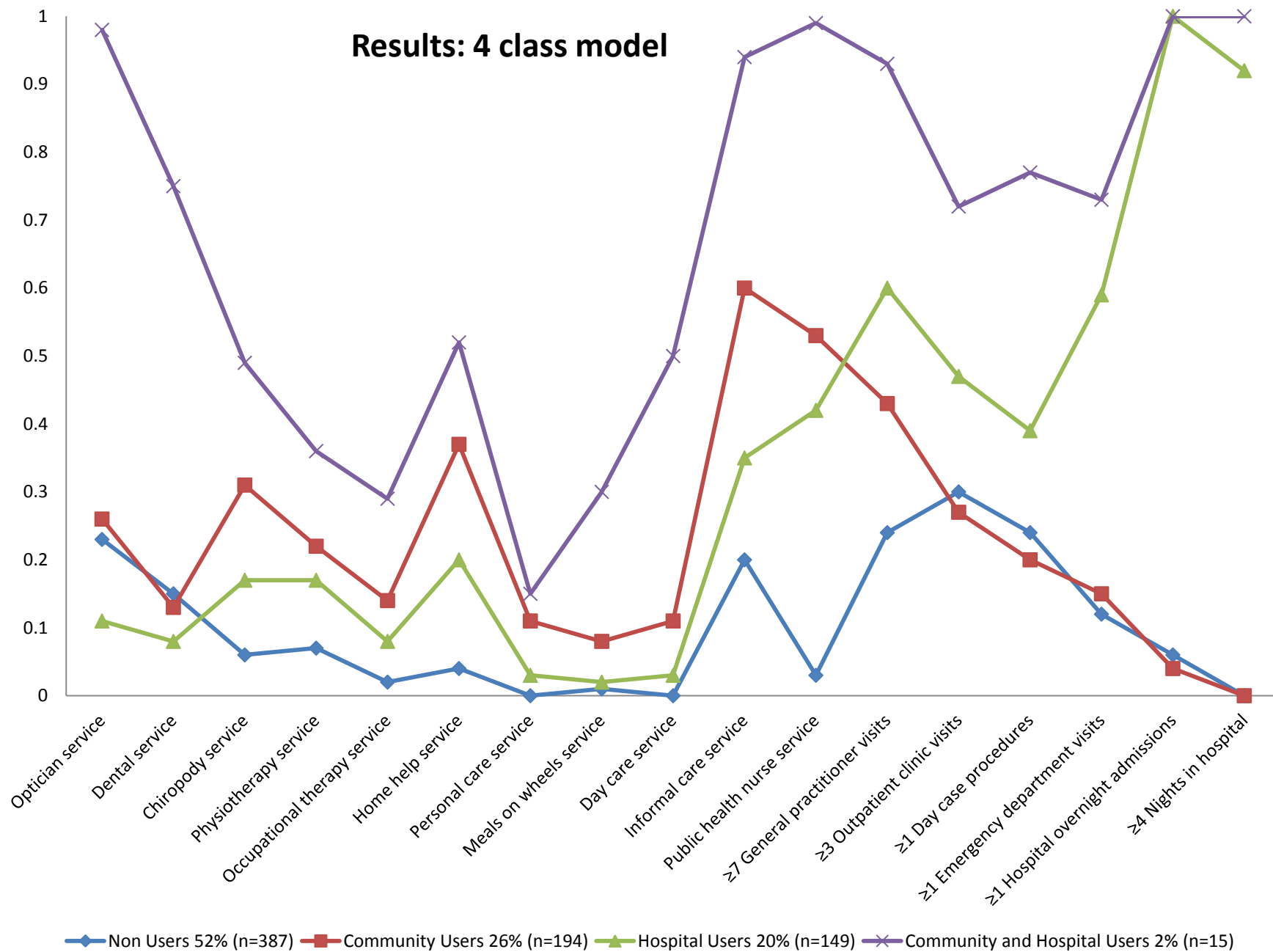
## Results: 4 class model



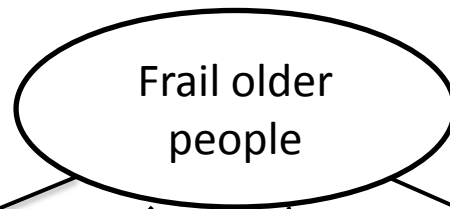
## Results: 4 class model



## Results: 4 class model



## Results: 4 class model



### **NON USERS (52%)**

GP  
Outpatient clinic  
Day Case procedures

### **COMMUNITY USERS (26%)**

GP  
Public health nursing  
Informal Care  
Home help

### **HOSPITAL USERS (20%)**

GP  
Emergency department  
Outpatient clinic  
Day case procedures  
Hospital admissions  
Nights in hospital

### **COMM & HOSPITAL USERS (2%)**

GP  
Public Health Nurse  
Optician  
Dental  
Home help  
Meals on wheels  
Day care  
Informal carer  
Emergency department  
Outpatient clinic  
Day case procedures  
Hospital admissions  
Nights in Hospital

**Threshold-frail,  
younger-old, live  
with others**

**Threshold-frail,  
disabled, older women,  
highest proportion with  
a medical card**

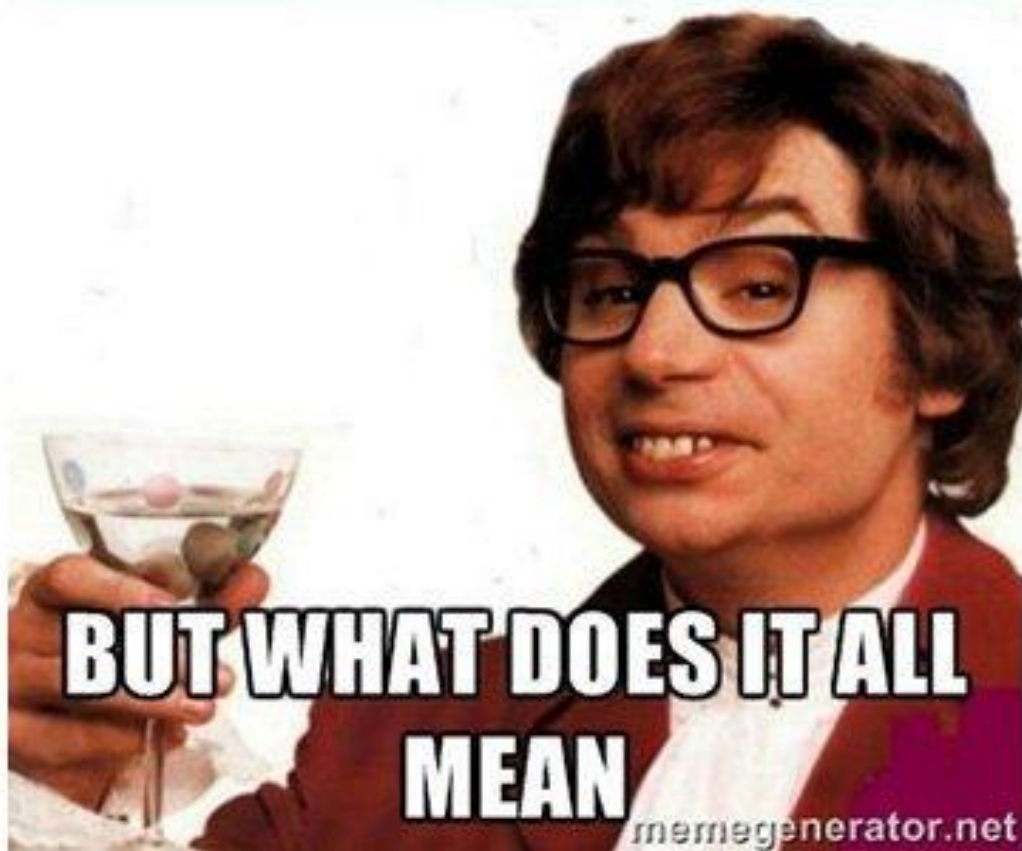
**Threshold-frail, some  
disability, falls, highest  
proportion with private  
health insurance**

**Very-frail,  
disabled, mainly fallers  
& younger-old**

# Discussion

- *User-friendly design*: do we design care for a one-size-fits-all?
  - No, frail older people living in the community are not using services in homogenous ways
- *Model aim*: Move those out of hospital to the community? Or to improve access?
  - Evidence of a community care system which compliments (a) hospitals and (b) existing informal care provision
  - Evidence of limited access to community care and potentially poor access to hospital care for the majority of frail older people
- **Limitations**
  - Small sample size of class 4 (n=12)
  - Mixture latent class modelling
  - LCA is exploratory rather than explanatory
  - Results need to be investigated with longitudinal data
    - *HSE Research Award on Ageing (2016) Normand C, Roe L, O'Halloran AM & Kenny RA.*

**WOOPY DOO BASIL**



**BUT WHAT DOES IT ALL  
MEAN**

memegenerator.net

# Relevance to wider Irish context (1)

## **(1) Single Access Point**

- Risk stratification mechanisms & resource allocation
  - Classifying risk e.g. Frailty classification
  - Basket of services allocated according to level of need
- Evidence of ad-hoc practice of service allocation among those who are frail
  - Need to identify and manage frailty
  - Particularly important in the context of desire to “do more with less”
    - Ageing demographic,
    - Budgetary pressures
    - Desire for new health technologies and pharmaceutical interventions
- Measurement
  - Hugely important. Many different ways to measure frailty
  - Must ensure the bar is not set too high so RS and RA becomes a tool to impede access

# Relevance to wider Irish context (2)

## **(2) Case management**

- Information
  - NCPOP: Information and Communications Hub
  - Wider issue of clarity in rights and entitlements!!!
- Care Coordination
  - Who is providing care coordination? The GP or the PHN?

## **(3) Multidisciplinary teams**

- Consultant and GP clinical networks: how NB is PHI?
- How to include the private and voluntary providers in MDT?

# Relevance to wider Irish context (3)

## **(4) Comprehensive geriatric assessment**

- Essential to identify frailty
  - E.g. English pilot of an electronic FI. (Irish SAT)
- Screening for risk of frailty in primary care; resourcing is an issue
  - E.g. Lessons from implementing the Disability Act 2005

## **(5) Financial incentives to promote downward substitution**

- Mechanism of paying for and providing care
  - Dealing with the two-tier system and silo funding
- Orientation of funds in the Irish HCS
  - Clearly a hospital-centric HCS
  - Imbalance of funds available for community care

# Conclusions and future directions

1. LCA *can* model unobserved trends in service use across the whole system of care.
  - This diversity points to the vagaries of the healthcare system in Ireland as resource allocation and access are not assigned on a rational basis.
2. There is no grand design and we quite seriously need a health policy focus on the needs of older people including;
  - Risk stratification with a population health approach
  - Payment mechanism (and levels) for community care
  - Deal with the two-tier system in hospital care
  - Examining the strengths and weaknesses of current case management roles



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