The COLLaboration on AGEing (COLLAGE)

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University College Cork, Ireland.

The Lessons from Europe
Seminar 23-09-15
Overview

• Exemplars within COLLAGE:
  1. What is COLLAGE?
  2. The Community Assessment of Risk and Treatment Strategies (CARTS) Project.
  3. Let Me Decide.
COLLaboration on AGEing (COLLAGE)

Article in Press

COLLaboration on AGEing-COLLAGE: Ireland's three star reference site for the European Innovation Partnership on Active and Healthy Ageing (EIP on AHA)


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Related Articles
- Factors associated with successful aging in persons aged 65 to 75 years
  European Geriatric Medicine, Vol. 5, Issue 6
- Ageing and fasting glucose values – the role of cardiovascular events
  European Geriatric Medicine, Vol. 5, Issue 6
Site: Ireland: Collaboration on Ageing (COLLAGE)

COLLAGE is a collaboration formed by Cork Healthy Ageing (through Resource Generation & Education - University College Cork) and Louth Age Friendly County. This cross-sectoral initiative includes healthcare providers, local authorities, older people economic development agencies, SMEs, industry partners, community groups and academia.

The CARTS (Community Assessment of Risk and Treatment Strategies) Programme aims to delay or prevent functional decline and frailty and 3 adverse outcomes: institutionalisation, hospitalisation and death. It is an integrated screening assessment and treatment package that uses a rapid screening tool (providing a global assessment in 2-5 minutes) helping identifying and understanding the risk factors and thus to define the most beneficial interventions for the patients.

Within the framework of Ireland’s National Age-Friendly Counties Programme, Louth has set out as the first county in Ireland to develop and implement an age-friendly county action plan: the Louth Age-Friendly County Initiative (LAFCI). Among its objectives there are an improvement in the seniors’ health and well-being, an increased participation of older people in the community life and the delivery of services through imaginative and cost-effective partnerships. Housing, building and transport are among the “physical” environments that are object of innovation in order to increase their age-friendliness.

The Let Me Decide* Advance Care Planning and Palliative Care Programme in Long-term Care implements an advance care planning programme and a palliative care educational initiative into long-term care settings. The objective is to increase older people’s independency and reduce unnecessary treatments.

Some examples of the impact of these good practices:

• CARTS is improving patients’ empowerment, allowing them to take part in the definition of their specific management plans, based on their personal risk level. 803 patients were tested in the pilot phase, currently 5000 older adults are being assessed.

• Preliminary data on the use of CARTS show that high-risk individuals are 33 times more likely to be institutionalised, 3 times more likely to be hospitalised and 16 times more likely to die than the low-risk group within 6 month from the assessment. The tool proved to have a superior sensitivity, accuracy and specificity in predicting long term care, hospitalisation and death, improving care delivery, detection of frailty, communication and integration of care settings.

• 13,500 citizens aged 65+ participated in the pilot of the Louth Age-friendly Initiative. The guidelines for "Place to Flourish", directed to improving the person-centred characteristics of the environment in long term care setting, were adopted in 181 out of 561 places in residential care.

For further information: http://www.collage-ireland.eu
Fig. 1

COLLAGE is Ireland’s joint candidate Reference Site for the European Innovation Partnership on Active and Healthy Ageing

Horizontal Issues
- Application of Science to Simulation, Education Research and Training (ASSET) for Health at UCC
- Louth Age Friendly Community Initiative, Netwell Centre, CASALA Centre for Gerontology and Rehabilitation
- Trinity EngAGE Centre for Research in Ageing/The Irish Longitudinal Study on Ageing (TILDA)
- AFFINITY (Irish Health Services Executive Falls Initiative)
- Tyndall National Institute
- National Health Services Research Institute (NHSRI)
- Health Information Systems Research Centre (HSRC)
- Cork: A WHO Healthy City

Prevention, Screening & Early Diagnosis
- A1 (Prescription and Adherence at Regional Level): Let Me Decide, Health literacy initiatives to empower patients and improve medication adherence (A1 applicant)
- A2 (Personalised Health Management: Fall Initiative): Trinity EngAGE
- A3 (Prevention of functional decline and frailty): Community Assessment of Risk Tool and Strategies Programme CARTS

Care & Cure
- B3 (Capacity building and replicability of successful integrated care systems): Haematology Telemedicine Clinic (B3 Applicant)

Active Ageing & Independent Living
- D4 (Age friendly environments): Age-Friendly Regional Alliances in the North East working Together / Louth County Council
- Kinsale Community Response to Dementia (K-CoRD)

Marketplace Members
- BodyArea Networks, Dem@Care, ELDERMET, European Later Life Active Network (ELLAL), LifeMatters SV, RAPid Community COGniteive screening programme (RAPCOG), Software Engine for the Assessment & optimization of drug and non-drug Therapy in Older persons (SEnATOR), Wireless Inertia Sensing for Early Warning of Clinical Events

Website: http://www.collage-ireland.eu
The CARTS Project

Aim: To screen for frailty, triage those at medium-high risk of adverse healthcare outcomes and perform comprehensive assessments with person-centered treatment strategies.
Perspective of Older People

Consider the following:
1. What is frailty?
2. How is it defined and conceptualised?
3. How are social circumstances relevant?
4. How could it be linked with a person’s risk of hospitalisation, nursing home transfer and death?

Image credit: http://www.thejournal.ie/older-people-deprivation-1699306-Sep2014/

https://www.youtube.com/watch?v=VOAogfrv2A0
Understanding Frailty

- Difficult to define:
  - Multi-factorial definition: Should correlate with
    - disability
    - co-morbidity
    - self reported health
- About identifying a group with adverse outcomes.
- “State of vulnerability defined by many factors” K Rockwood; Age & Ageing 2005.
- “physiological syndrome characterised by decreased reserve and diminished resistance to stressors resulting from a cumulative decline across multiple physiological systems, and causing vulnerability to adverse outcomes” American Geriatric Society.
- Biological syndrome model (Frieds frailty phenotype) versus deficit accumulation (burden) model: Clinical frailty scale.
Clinical Frailty Scale*

1. Very Fit – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.

2. Well – People who have no active disease symptoms but are less fit than category 1. Often, they exercise or are very active occasionally, e.g. seasonally.

3. Managing Well – People whose medical problems are well controlled, but are not regularly active beyond routine walking.

4. Vulnerable – While not dependent on others for daily help, often symptoms limit activities. A common complaint is being “slowed up”, and/or being tired during the day.

5. Mildly Frail – These people often have more evident slowing, and need help in high order IADLs (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.

6. Moderately Frail – People need help with all outside activities and with keeping house. Inside, they often have problems with stairs and need help with bathing and might need minimal assistance (cuing, standby) with dressing.

7. Severely Frail – Completely dependent for personal care, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).

8. Very Severely Frail – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.

9. Terminally Ill - Approaching the end of life. This category applies to people with a life expectancy <6 months, who are not otherwise evidently frail.

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common symptoms in mild dementia include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In moderate dementia, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In severe dementia, they cannot do personal care without help.


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Frailty in EU (SHARE)

The frailty index = the proportion of the number of deficits to the total number of deficits possible.
Frailty in Ireland: NI v ROI

Figure 2: frailty by age group

(Scarlett et al., 2014)

Frailty is more prevalent among women than men in ROI: 7% compared with 6%. Both sexes have higher rates in NI where 22% of women and 19% of men are frail.

http://www.cardi.ie/sites/default/files/FrailtybriefFINAL-lowres.pdf
The Challenge of Managing Frail Older Adults in the Community

Who is at risk?

What is the greatest risk?

What is the most appropriate response?

Should this person stay at home.....go to a nursing home?

It is possible to identify risk but how do we quantify it?
### Understanding Risk

#### Risk Matrix

<table>
<thead>
<tr>
<th></th>
<th>Minimal</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
<th>Extreme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certain</td>
<td>Green</td>
<td>Green</td>
<td>Yellow</td>
<td>Orange</td>
<td>Red: Extreme Risk</td>
</tr>
<tr>
<td>Likely</td>
<td></td>
<td>Green</td>
<td></td>
<td>Yellow</td>
<td>Orange: High Risk</td>
</tr>
<tr>
<td>Possible</td>
<td>Green</td>
<td></td>
<td>Medium</td>
<td></td>
<td>Yellow: Medium Risk</td>
</tr>
<tr>
<td>Unlikely</td>
<td></td>
<td></td>
<td>Low</td>
<td></td>
<td>Green: Low Risk</td>
</tr>
<tr>
<td>Rare</td>
<td>Green</td>
<td></td>
<td></td>
<td></td>
<td>Purple: Minimal Risk</td>
</tr>
</tbody>
</table>

Legend:
- **Green**: Minimal Risk
- **Yellow**: Moderate Risk
- **Orange**: Severe Risk
- **Red**: Extreme Risk
- **Purple**: Minimal Risk
Risk Factors

Presence of risk factors + Reduced resilience = Frailty

Age (>75 years)
No formal education
Living alone
Chronic medical conditions
Depression
Cognitive impairment
Sensory impairment (visual or hearing)
Poor nutrition
Poor mobility and ADL dependence
• An exemplar within COLLAGE, Ireland’s 3* reference site on active & healthy ageing.
• CARTS operationalizes “risk” as a surrogate marker for “frailty”
• Frailty is heightened vulnerability.
• Instead of looking at frailty, the CARTS uses risk of adverse outcomes directly instead.
• Practical, approach taking caregiver network into consideration so it is more holistic than single patient parameters.
• Two instruments developed:
  - The Risk Instrument for Screening in the Community (RISC),
  - The Community Assessment of Risk Instrument (CARI).
CARTS
Integrated Care Pathway
CARTS
Integrated Care Pathway
The RISC Tool

• Assesses risk of adverse outcomes within a defined time period (i.e. one year).

• Measures care needs (mental state, medical state and ADLs) & care deficits (ability of the caregiver network to manage any issues)

• Quick, objective and reproducible

• Predicts hospitalisation, institutionalisation and death
  – Triage those at higher risk to rapid assessment

• Enhances the integrated care agenda
  – A common language between primary and secondary care
**RISC Score Sheet**

### Demographics

**Personal Details:**
- **Name:**
- **Address:**

**Gender:**
- M [ ]
- F [ ]
- DOB / / ID

**Living Arrangements:**
- Alone [ ]
- Spouse [ ]
- Child [ ]
- Other [ ]

### Instructions

#### Step 1

**Domain**
- Mental State
- ADLs
- Medical/Physical State
- Other (specify)

**Concern**
- Yes [Y]
- No [N]

#### Step 2

- Circle the present severity of the concern (Circle 1, 2, 3)
  - 1. Mild
  - 2. Moderate
  - 3. Severe

#### Step 3

**Caregiver Network**
- Is the caregiver network able to manage (Circle 1, 2, 3, 4 or 5)
  - 1. Can manage
  - 2. Can't manage
  - 3. Some help
  - 4. Cannot manage
  - 5. Absent/Failure

### Global Risk Score

(circle 1, 2, 3, 4 or 5)

#### A. Institutionalisation

- Overall risk of admission to long-term care (nursing home) in the next year.
- **1. Minimal / rare**
- **2. Low / unlikely**
- **3. Moderate / possible**
- **4. High / likely**
- **5. Extreme / certain**

#### B. Hospitalisation

- Risk of hospitalisation including prolonged admission or readmission in the next year.
- **1. Minimal / rare**
- **2. Low / unlikely**
- **3. Moderate / possible**
- **4. High / likely**
- **5. Extreme / certain**

#### C. Death

- Risk of death in the next year.
- **1. Minimal / rare**
- **2. Low / unlikely**
- **3. Moderate / possible**
- **4. High / likely**
- **5. Extreme / certain**

### Global Risk Score Definitions

1. **Minimal:** Little or no serious consequence related to the risk / Rare: The event will almost never occur.
2. **Low:** Small impact from the risk, unlikely to cause serious harm / Unlikely: Low probability of the event occurring.
3. **Moderate:** Significant risk present / Possible: The event may occur but is infrequent or unlikely to occur soon.
4. **High:** Serious impact likely from the risk / Likely: High probability of the event occurring.
5. **Extreme:** Severe consequences likely / Certain: The event will almost certainly occur.
The CARI Tool

• More detailed risk assessment
• Collects demographic data and records the presence and magnitude (low, medium, high) of concern within and across three domains:
  – Mental state (7 items)
  – ADLs (15 items)
  – Medical state (9 items)
• 10 minutes to complete as part of a comprehensive geriatric assessment
**CARI Score Sheets**

**Demographics:**
- **Personal Details:** Name__________ Gender M/F__________ DOB__________ MRN__________
- **Reason for referral:**__________ **Date of assessment:**__________

**Educational Level:**
- Primary = Secondary = 3rd level = Other =

**Living Arrangements:**
- Alone = Living with__________

**Location:**
- Own Home = Others’ homes = Sheltered Housing = Nursing home = Other =

**Support:**
- Informal: Yes = No =
- hrs/day = days/week =
- Family/partner = Friend = Neighbour = Other =

**Carer burden:**
- Primary carer__________
- Carer Burden Score: Mild (0-10) = Moderate (11-20) = Severe (21-30)=

**Medical History:**
- Primary diagnosis__________

**Other diagnoses:**__________

**Healthcare use:**
- No. A&E attendances (in the last year) =
- No of admissions (in the last year) =
- N/A =

**Medication:**
- Prescription meds =
- Over the counter meds =

**Frailty:**
- (Your overall impression) Frail - Yes = No =

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**Instructions**

**Step 1**
- Domain: __________
- Concern: __________
- Status: __________

**Step 2**
- Circle the present severity of the concern:
- 1. Mild.
- 3. Severe.

**Step 3**
- If NO concern, move on to the next Domain.
- If YES complete each section A, B, C below.

**A. Thinking & Reasoning**
- If NO concern, move on to next section until domain is complete.

**B. Behaviours**
- Insight & Executive Function
- Agitation (restlessness)
- Aggression (physical)

**C. Psychiatric**
- Anxiety/Depression
- Delusions/Hallucinations/Paranoia

**D. Other**

**Care Network**
- Can the caregiver network manage this concern for this domain? 1. Can manage. 2. Can manage. 3. Cannot manage. 4. Cannot manage. 5. Absent/Inability.
<table>
<thead>
<tr>
<th>Domain 2.</th>
<th>Step 1 Concern</th>
<th>Step 2 Status</th>
<th>Step 3 Care Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADLs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activities of daily living</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there concern about issues in this domain? (Circle Yes or No)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N □ Y □</td>
<td>If NO concern, move on to next Domain, 3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ □ □ □</td>
<td>If YES complete each section A, B, C below.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ □ □ □</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### A. Basic ADLs

<table>
<thead>
<tr>
<th>Issue</th>
<th>Step 1 Concern</th>
<th>Step 2 Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bladder</td>
<td>N □ Y □</td>
<td>1. Occasional incontinence e.g. once per week /situational.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>2. Frequently incontinent /wears pads.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>3. Completely incontinent, needs physical help with pads or toilet.</td>
</tr>
<tr>
<td>Bowel</td>
<td>N □ Y □</td>
<td>1. Occasional incontinence e.g. once per week /situational.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>2. Frequently incontinent /wears pads.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>3. Completely incontinent, needs physical help with pads or toilet.</td>
</tr>
<tr>
<td>Transfer</td>
<td>N □ Y □</td>
<td>1. Minor help /standby assistance of one person /requires raised toilet seat or handrails.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>2. Major help /assistance of one to two people.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>3. Hoist /bed bound.</td>
</tr>
<tr>
<td>Mobility</td>
<td>N □ Y □</td>
<td>1. Uses aid (stick/frame) or standby assistance one person.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>2. Major help /assistance of one to two people.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>3. Immobile.</td>
</tr>
<tr>
<td>Dressing</td>
<td>N □ Y □</td>
<td>1. Can dress with supervision or set up /Rarely changes clothes.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>2. Can dress upper half (but not lower half).</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>3. Full assistance (upper &amp; lower half) or resistive or refusing.</td>
</tr>
<tr>
<td>Bathing</td>
<td>N □ Y □</td>
<td>1. Supervision in shower /bath but wash themselves /Not washing.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>2. Needs assistance with set up.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>3. Full assistance or unable as resistive or refusing.</td>
</tr>
<tr>
<td>Stairs/steps</td>
<td>N □ Y □</td>
<td>1. Needs supervision on stairs but can use stairs /requires handrails.</td>
</tr>
<tr>
<td>(No stairs/ not used □ )</td>
<td>□ □ □ □</td>
<td>2. Physical assistance of one to two people up &amp; down.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>3. Unable /needs stairs-lift/unwilling to move downstairs but unsafe.</td>
</tr>
<tr>
<td>Feeding</td>
<td>N □ Y □</td>
<td>1. Supervision /encouragement eating /set up.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>2. Needs some assistance e.g. cutting up food but patient can feed themselves.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>3. Hand fed /not eating or refusing food /peg feeding.</td>
</tr>
</tbody>
</table>

### B. Instrumental

<table>
<thead>
<tr>
<th>Issue</th>
<th>Step 1 Concern</th>
<th>Step 2 Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology use</td>
<td>N □ Y □</td>
<td>1. Difficulty learning how or cannot use new appliances</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>2. Can use with assistance/passive user (e.g. can answer phone but cannot initiate).</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>3. Unable /using inappropriately (calling at night).</td>
</tr>
<tr>
<td>Shopping</td>
<td>N □ Y □</td>
<td>1. Needs someone to plan shopping with them / help with bags.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>2. Needs someone to plan /physically assist them with shopping.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>3. Unable to shop, would need shopping delivered.</td>
</tr>
<tr>
<td>Food preparation</td>
<td>N □ Y □</td>
<td>1. Can only make simple meals (sandwiches/breakfast etc.).</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>2. Reheats meals prepared by carer/meals on wheels/makes tea.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>3. Needs meals served to them /Unsafe (hazard) in kitchen.</td>
</tr>
<tr>
<td>Housekeeping/Laundry</td>
<td>N □ Y □</td>
<td>1. Assistance needed for heavy housework only (hoovering).</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>2. Assistance needed for light housework (dishes, laundry).</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>3. Unable to do any housework /laundry /unsanitary conditions.</td>
</tr>
<tr>
<td>Transportation (Not referring to driving ability)</td>
<td>N □ Y □</td>
<td>1. Can arrange own transport out of house (call taxi, LK).</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>2. Needs someone to accompany them outside the house.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>3. Cannot travel outside house even with assistance/housebound.</td>
</tr>
<tr>
<td>Medications</td>
<td>N □ Y □</td>
<td>1. Needs prompting to take medications /needs meds organised.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>2. Needs to be given some (e.g. subcut insulin) /all medications.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>3. Poor compliance /inappropriate administration /refusing.</td>
</tr>
<tr>
<td>Finances</td>
<td>N □ Y □</td>
<td>1. Directs people but can’t manage complex banking.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>2. Needs assistance with bills, money, poor concept of value.</td>
</tr>
<tr>
<td></td>
<td>□ □ □ □</td>
<td>3. Taken care of by other/no concept of money /financial abuse.</td>
</tr>
</tbody>
</table>

### C. Other

<table>
<thead>
<tr>
<th>Issue</th>
<th>Step 1 Concern</th>
<th>Step 2 Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specify</td>
<td>□ □ □ □</td>
<td>1 2 3</td>
</tr>
</tbody>
</table>
## Medical State

<table>
<thead>
<tr>
<th>Domain 3.</th>
<th>Step 1</th>
<th>Step 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issues</td>
<td>Concern</td>
<td>Status</td>
</tr>
<tr>
<td>Medical State</td>
<td>Is there concern about issues in this domain? (Circle Yes or No)</td>
<td>Circle the present level of function</td>
</tr>
<tr>
<td></td>
<td>N Y Y</td>
<td>1. Mild.</td>
</tr>
<tr>
<td></td>
<td>N Y Y</td>
<td>2. Moderate.</td>
</tr>
<tr>
<td></td>
<td>N Y Y</td>
<td>3. Severe.</td>
</tr>
<tr>
<td></td>
<td>N Y Y</td>
<td>If NO concern, complete the Global Risk Score.</td>
</tr>
<tr>
<td></td>
<td>N Y Y</td>
<td>If YES complete each section below.</td>
</tr>
<tr>
<td>A. Med issues</td>
<td>IF NO concern, move on to next section until domain is complete.</td>
<td></td>
</tr>
<tr>
<td>Chronic medical condition(s)</td>
<td>N Y Y</td>
<td>1. Asymptomatic/condition(s) controlled/ no recent exacerbation.</td>
</tr>
<tr>
<td>Exclude mental state issues</td>
<td>N Y Y</td>
<td>2. Symptoms but not affecting function/ recent exacerbation.</td>
</tr>
<tr>
<td>Symptoms/ Palliative care issues (e.g., pain)</td>
<td>N Y Y</td>
<td>3. Frequent exacerbations / affecting function.</td>
</tr>
<tr>
<td>B. Physical</td>
<td>N Y Y</td>
<td>1. Reduced hearing/uses hearing aid to help.</td>
</tr>
<tr>
<td></td>
<td>N Y Y</td>
<td>2. Difficulty hearing (+/- despite hearing aid).</td>
</tr>
<tr>
<td></td>
<td>N Y Y</td>
<td>3. Profoundly deaf, marked difficulty communicating.</td>
</tr>
<tr>
<td></td>
<td>N Y Y</td>
<td>1. Reduced visual acuity but normal eyelight (wears glasses).</td>
</tr>
<tr>
<td></td>
<td>N Y Y</td>
<td>2. Visually impaired (+/- despite glasses).</td>
</tr>
<tr>
<td></td>
<td>N Y Y</td>
<td>3. No vision and interfering with function.</td>
</tr>
<tr>
<td>Communication</td>
<td>N Y Y</td>
<td>1. Expressive dysphasia, difficulty communicating but intelligible.</td>
</tr>
<tr>
<td></td>
<td>N Y Y</td>
<td>2. Mixed dysphasia, marked difficulty communicating.</td>
</tr>
<tr>
<td></td>
<td>N Y Y</td>
<td>3. Aphasic or non-communicating.</td>
</tr>
<tr>
<td>Swallow</td>
<td>N Y Y</td>
<td>1. History / concerns of aspiration but not evident at present.</td>
</tr>
<tr>
<td>Nutrition</td>
<td>N Y Y</td>
<td>2. Episodes of aspiration, needs diet modified.</td>
</tr>
<tr>
<td>Gait / Falls</td>
<td>N Y Y</td>
<td>3. Aspiration/no compliance with diet/ swallow absent/ needs or using peg.</td>
</tr>
<tr>
<td></td>
<td>N Y Y</td>
<td>2. Malnourished, abnormal BMI.</td>
</tr>
<tr>
<td></td>
<td>N Y Y</td>
<td>3. Evidence of serious malnutrition, severe anorexia or obesity.</td>
</tr>
</tbody>
</table>

## Global Risk Score

### A. Institutionalization
Overall risk of admission to long-term care (nursing home) in the next year.

<table>
<thead>
<tr>
<th>Score</th>
<th>Minimal</th>
<th>Low</th>
<th>Moderate Possible</th>
<th>High</th>
<th>Extreme Certain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>2</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>3</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>4</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>5</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

### B. Hospitalization
Risk of hospitalization including prolonged admission or readmission in the next year.

<table>
<thead>
<tr>
<th>Score</th>
<th>Minimal</th>
<th>Low</th>
<th>Moderate Possible</th>
<th>High</th>
<th>Extreme Certain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>2</td>
<td>□</td>
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<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>3</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>4</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>5</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

### C. Death
Risk of death in the next year.

<table>
<thead>
<tr>
<th>Score</th>
<th>Minimal</th>
<th>Low</th>
<th>Moderate Possible</th>
<th>High</th>
<th>Extreme Certain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>2</td>
<td>□</td>
<td>□</td>
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<td>□</td>
<td>□</td>
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<tr>
<td>3</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>4</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>5</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

Comments:  
Signed: ___________ Role/position: ______ Years of experience: ___ Date: __/__/
The CARTS instruments have been used with community-dwelling older adults in Portugal (n=4,499), Australia (n=500), Spain (n=374) and Ireland (n=803).

Results to date indicate that the RISC has good predictive validity (for hospitalisation, institutionalisation and death); high internal consistency and inter-rater reliability.

Unlike other risk/frailty instruments, the RISC takes into account the ability of the caregiver network to manage any concerns.
Baseline data comparing the RISC and Clinical Frailty Scale (n=803)
Instrument Testing

ROC curves comparing the outcomes between the RISC and Clinical Frailty Scale

Institutionalisation  Hospitalisation  Death
Table 1: Receiver operating characteristic (ROC) curve area under the curve scores and 95% confidence intervals (CI) for the global risk score and components of the Risk Instrument for Screening in the Community (RISC) scores including mental state, activities of daily living (ADL), and medical state domains, the primary caregiver, and primary cohabitant (who the patient is living with), for predicting one-year risk of institutionalisation, hospitalisation, and death.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Institutionalization</th>
<th>Actual outcomes</th>
<th>Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>RISC global risk score (CI)</td>
<td>0.70 (0.62–0.76)**</td>
<td>0.61 (0.55–0.66)**</td>
<td>0.70 (0.64–0.75)**</td>
</tr>
<tr>
<td>Mental state</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental state concern</td>
<td>0.62 (0.55–0.69)**</td>
<td>0.52 (0.47–0.58)</td>
<td>0.56 (0.50–0.61)*</td>
</tr>
<tr>
<td>Mental state severity of concern</td>
<td>0.64 (0.57–0.71)**</td>
<td>0.53 (0.47–0.58)</td>
<td>0.56 (0.51–0.62)*</td>
</tr>
<tr>
<td>Mental state caregiver network</td>
<td>0.64 (0.57–0.71)**</td>
<td>0.53 (0.47–0.58)</td>
<td>0.56 (0.50–0.61)</td>
</tr>
<tr>
<td>ADLs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADLs concern</td>
<td>0.60 (0.54–0.66)**</td>
<td>0.55 (0.50–0.60)</td>
<td>0.56 (0.50–0.61)*</td>
</tr>
<tr>
<td>ADLs severity of concern</td>
<td>0.66 (0.60–0.72)**</td>
<td>0.54 (0.49–0.59)*</td>
<td>0.63 (0.58–0.69)**</td>
</tr>
<tr>
<td>ADLs caregiver network</td>
<td>0.68 (0.62–0.74)**</td>
<td>0.57 (0.52–0.63)**</td>
<td>0.59 (0.53–0.65)**</td>
</tr>
<tr>
<td>Medical state</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical state concern</td>
<td>0.54 (0.48–0.61)</td>
<td>0.52 (0.47–0.58)</td>
<td>0.53 (0.48–0.59)</td>
</tr>
<tr>
<td>Medical state severity of concern</td>
<td>0.62 (0.55–0.69)**</td>
<td>0.57 (0.52–0.62)*</td>
<td>0.62 (0.56–0.67)**</td>
</tr>
<tr>
<td>Medical state caregiver network</td>
<td>0.63 (0.56–0.69)**</td>
<td>0.54 (0.49–0.59)</td>
<td>0.56 (0.50–0.61)*</td>
</tr>
</tbody>
</table>

* Statistically significant with P value <0.05.
** Statistically significant with P value <0.01.
*** Statistically significant with P value <0.001.
Kaplan meier survival analysis comparing high and low risk patients (classified by RISC)
Instrument Testing

Cross cultural comparisons between participants in different countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Setting where RISC was used</th>
<th>Sample size</th>
<th>Discipline/role</th>
<th>Experience working with older adults (mean years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Ireland</td>
<td>Older people’s homes and residential care settings</td>
<td>n = 8</td>
<td>Senior nurse</td>
<td>27*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Practitioners (n = 8)</td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>Primary and community</td>
<td>n = 7</td>
<td>Registered nurses (n = 7)</td>
<td>12.70</td>
</tr>
<tr>
<td>Australia</td>
<td>Aged care assessment Teams intertary hospitals</td>
<td>n = 4</td>
<td>Social workers (n = 2)</td>
<td>21.75</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Clinical nurse consultant (n = 1) Geriatrician (n = 1)</td>
<td></td>
</tr>
<tr>
<td>Portugal</td>
<td>Community and primary care</td>
<td>n = 8</td>
<td>Nurse (n = 4)</td>
<td>18.33</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>General Practitioner (n = 2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Geriatrician (n = 2)</td>
<td></td>
</tr>
<tr>
<td>Rep of Ireland</td>
<td>Community and primary care</td>
<td>n = 5</td>
<td>Public health nurses (n = 4)</td>
<td>10.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>assistant directors of public health nursing (n = 1)</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Characteristics of study participants
### Instrument Testing

Comparisons between baseline RISC data between countries

<table>
<thead>
<tr>
<th>Variable</th>
<th>Irish data n=801 (17%)</th>
<th>Portuguese data n=3426 (75%)</th>
<th>Spanish data n=374 (8%)</th>
<th>Total (all 3 databases) n=4601</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RISC score at baseline</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Institutionalization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimal/rare</td>
<td>570 (73%)</td>
<td>1874 (55%)</td>
<td>124 (33%)</td>
<td>2568 (56%)</td>
</tr>
<tr>
<td>Low/unlikely</td>
<td>116 (15%)</td>
<td>950 (28%)</td>
<td>144 (38%)</td>
<td>1210 (27%)</td>
</tr>
<tr>
<td>Moderate/possible</td>
<td>63 (8%)</td>
<td>379 (11%)</td>
<td>74 (20%)</td>
<td>516 (11%)</td>
</tr>
<tr>
<td>High/likely</td>
<td>17 (2%)</td>
<td>148 (4%)</td>
<td>22 (6%)</td>
<td>187 (4%)</td>
</tr>
<tr>
<td>Extreme/certain</td>
<td>16 (2%)</td>
<td>49 (2%)</td>
<td>10 (3%)</td>
<td>75 (2%)</td>
</tr>
<tr>
<td>- Hospitalization</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimal/rare</td>
<td>340 (43%)</td>
<td>1249 (37%)</td>
<td>56 (15%)</td>
<td>1645 (36%)</td>
</tr>
<tr>
<td>Low/unlikely</td>
<td>159 (20%)</td>
<td>1053 (31%)</td>
<td>140 (38%)</td>
<td>1352 (29%)</td>
</tr>
<tr>
<td>Moderate/possible</td>
<td>170 (22%)</td>
<td>839 (24%)</td>
<td>128 (34%)</td>
<td>1137 (25%)</td>
</tr>
<tr>
<td>High/likely</td>
<td>76 (10%)</td>
<td>239 (7%)</td>
<td>41 (11%)</td>
<td>356 (8%)</td>
</tr>
<tr>
<td>Extreme/certain</td>
<td>37 (5%)</td>
<td>31 (1%)</td>
<td>9 (2%)</td>
<td>77 (2%)</td>
</tr>
<tr>
<td>- Death</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimal/rare</td>
<td>494 (63%)</td>
<td>1439 (42%)</td>
<td>117 (31%)</td>
<td>2050 (45%)</td>
</tr>
<tr>
<td>Low/unlikely</td>
<td>127 (16%)</td>
<td>1157 (34%)</td>
<td>125 (33%)</td>
<td>1409 (31%)</td>
</tr>
<tr>
<td>Moderate/possible</td>
<td>140 (18%)</td>
<td>641 (19%)</td>
<td>105 (28%)</td>
<td>886 (19%)</td>
</tr>
<tr>
<td>High/likely</td>
<td>12 (2%)</td>
<td>162 (5%)</td>
<td>21 (6%)</td>
<td>195 (4%)</td>
</tr>
<tr>
<td>Extreme/certain</td>
<td>9 (1%)</td>
<td>11 (&lt;1%)</td>
<td>6 (2%)</td>
<td>26 (1%)</td>
</tr>
<tr>
<td><strong>Demographic</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females, %</td>
<td>64.5%</td>
<td>59.3%</td>
<td>69.8%</td>
<td>61.1%</td>
</tr>
<tr>
<td>Live alone, %</td>
<td>47.4%</td>
<td>18.1%</td>
<td></td>
<td>23.6%</td>
</tr>
<tr>
<td>Age, M±SD</td>
<td>79.77±7.43</td>
<td>76.19±7.22</td>
<td>84.82±8.94</td>
<td>77.51±7.84</td>
</tr>
</tbody>
</table>
Low Risk

- Past
- Present
- Future
RISC Predictive Validity

- **Baseline**
- Screened 803 March-August 2013

- **Follow up**
- August 2013 to March 2014
Risk and Actual Rate (%) of Institutionalisation
Rate (%) of Institutionalisation based on Clinical Frailty Scores (Frail $\geq$ 5 CFS) & Non-frail (< 5 CFS)
Risk of Hospitalisation and Actual No. of Hospital Days

**Total No. of Hospital Days**

- Low risk (n=687)
- Medium risk (n=63)
- High risk (n=33)

**Average No. of Hospital Days/patient**

- Low risk (n=687)
- Medium risk (n=63)
- High risk (n=33)
Hospitalisation (days) based on Clinical Frailty Scores (Frail $\geq$ 5 CFS) & Non-frail (< 5 CFS)
Risk and Actual Rate (%) of Death
Rate (%) of Death based on Clinical Frailty Scores (Frail $\geq$ 5 CFS) & Non-frail (< 5 CFS)
Computerised application

### A. INSTITUCIONALIZAÇÃO
Risco global de admissão em lar (prós-dias de longo prazo), durante o próximo ano. Selecione uma opção:

<table>
<thead>
<tr>
<th>Nível</th>
<th>Ícone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mínimo / Raro</td>
<td>1</td>
</tr>
<tr>
<td>Baixo / Improvável</td>
<td>2</td>
</tr>
<tr>
<td>Moderado / Passível</td>
<td>3</td>
</tr>
<tr>
<td>Alto / Provisível</td>
<td>4</td>
</tr>
<tr>
<td>Extremo / Certo</td>
<td>5</td>
</tr>
</tbody>
</table>

### B. HOSPITALISATION
Risco de internação incluindo internação prolongada ou readmissão, durante o próximo ano. Selecione uma opção:

<table>
<thead>
<tr>
<th>Nível</th>
<th>Ícone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mínimo / Raro</td>
<td>1</td>
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<tr>
<td>Baixo / Improvável</td>
<td>2</td>
</tr>
<tr>
<td>Moderado / Passível</td>
<td>3</td>
</tr>
<tr>
<td>Alto / Provisível</td>
<td>4</td>
</tr>
<tr>
<td>Extremo / Certo</td>
<td>5</td>
</tr>
</tbody>
</table>

### C. Morte
Risco de morte durante o próximo ano. Selecione uma opção:

<table>
<thead>
<tr>
<th>Nível</th>
<th>Ícone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mínimo / Raro</td>
<td>1</td>
</tr>
<tr>
<td>Baixo / Improvável</td>
<td>2</td>
</tr>
<tr>
<td>Moderado / Passível</td>
<td>3</td>
</tr>
<tr>
<td>Alto / Provisível</td>
<td>4</td>
</tr>
<tr>
<td>Extremo / Certo</td>
<td>5</td>
</tr>
</tbody>
</table>
Caregiver network

• The ability of the caregiver network to manage a person’s care is vital in risk of adverse healthcare outcomes such as hospitalisation, transfer to nursing home and death

• According to prior research:
  – The ability of the caregiver network to manage is a significant predictor of adverse healthcare outcomes
    
    (O’Caoimh et al, J Aging Research, 2015)
  
  – Providing emotional and instrumental support to caregivers can reduce hospitalisation

    (Longacre et al, Research in Gerontological Nursing, 2014)
Publications to Date


- International Association of Gerontology and Geriatrics – IAGG-ER Congress (April 2015)
- National Homecare and Assisted Living Conference in Dun Laoghaire in May 2015 (invited speaker)
- ICT4Ageing Conference in Lisbon in May 2015 (Prof Molloy keynote speaker)
- GSA Conference in Orlando, USA in November 2015 (Symposium)
Screening for markers of frailty and perceived risk of adverse outcomes using the Risk Instrument for Screening in the Community (RISC)

Rónán O’Caoimh1,7, Yang Gao1, Anton Svendrovski2, Elizabeth Healy3, Elizabeth O’Connell4, Gabrielle O’Keeffe5, Una Cronin1, Eileen O’Herlihy1, Nicola Cornally1,6 and William D Molloy1,7

Abstract

**Background:** Functional decline and frailty are common in community dwelling older adults, increasing the risk of adverse outcomes. Given this, we investigated the prevalence of frailty-associated risk factors and their distribution according to the severity of perceived risk in a cohort of community dwelling older adults, using the Risk Instrument for Screening in the Community (RISC).

**Methods:** A cohort of 803 community dwelling older adults were scored for frailty by their public health nurse (PHN) using the Clinical Frailty Scale (CFS) and for risk of three adverse outcomes: i) institutionalisation, ii) hospitalisation and iii) death, within the next year, from one (lowest) to five (highest) using the RISC. Prior to scoring, PHNs stated whether they regarded patients as frail.

**Results:** The median age of patients was 80 years (interquartile range 10), of whom 64% were female and 47.4%
The Risk Instrument for Screening in the Community (RISC): a new instrument for predicting risk of adverse outcomes in community dwelling older adults

Rónán O’Caoimh¹,²,³, Yang Gao¹, Anton Svendrovskí², Elizabeth Healy³, Elizabeth O’Connell⁴, Gabrielle O’Keeffe⁵, Una Cronin¹, Estera Igras¹, Eileen O’Herlihy¹, Carol Fitzgerald¹, Elizabeth Weathers¹,⁶, Patricia Leahy-Warren⁶, Nicola Cornally¹,⁶ and D. William Molloy¹,⁷

Abstract

Background: Predicting risk of adverse healthcare outcomes, among community dwelling older adults, is difficult. The Risk Instrument for Screening in the Community (RISC) is a short (2–5 min), global subjective assessment of risk created to identify patients’ 1-year risk of three outcomes: institutionalisation, hospitalisation and death.

Methods: We compared the accuracy and predictive ability of the RISC, scored by Public Health Nurses (PHN), to the Clinical Frailty Scale (CFS) in a prospective cohort study of community dwelling older adults (n = 803), in two Irish PHN sectors. The area under the curve (AUC), from receiver operating characteristic curves and binary logistic regression models, with odds ratios (OR), compared the discriminatory characteristics of the RISC and CFS.
Risk Instrument for Screening Older People in the Community (RISC): Cross Cultural Perspectives

1Patricia Leahy-Warren, 1,2Elizabeth Weathers, 3Marina Lupari, 3Sadie Campbell, 4Roger Clarnette,
5Francesc Orfila, 2Christine Fitzgerald, 6Constança Paúl, 2Eileen O’Herlihy, 1,2Nicola Cornally, 2Rónán
O’Caíomh, 1Mary Rose Day, 1Helen Mulcahy and 2William Molloy

1School of Nursing and Midwifery, University College Cork, Ireland
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3Northern Health and Social Care Trust, Northern Ireland
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Abstract: Older people are at an increased risk of developing multiple comorbidities causingsubsequent cognitive, functional decline and frailty and increasing the risk of adverse healthcare outcomes. Public Health Nurses (PHNs), geriatricians and researchers developed the Risk Instrument to Screen in the Community (RISC) to record the presence of problems, severity (mild, moderate, severe) of concerns and caregiver networks’ ability to manage the patient across three domains: mental state, activities of daily living and medical state. The aim of this study was to explore the experiences of healthcare professionals who had used the RISC with community-dwelling older adults, between countries. Five focus groups (n = 28) were conducted in five countries (Australia, Northern Ireland, Portugal, Republic of Ireland and Spain). Four main themes were identified: difficulties in using the RISC, TED (Time Estimated Duration) of RISC, RISC (Tool)
Which Part of a Short, Global Risk Assessment, the Risk Instrument for Screening in the Community, Predicts Adverse Healthcare Outcomes?

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THE COMMUNITY ASSESSMENT OF RISK INSTRUMENT: INVESTIGATION OF INTER-RATER RELIABILITY OF AN INSTRUMENT MEASURING RISK OF ADVERSE OUTCOMES


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Abstract: Background: Frailty is increasingly common in community dwelling older adults and increases their risk of adverse outcomes. Risk assessment is implicit in the Aged Care Assessment Teams process, but few studies have considered the factors that influence the assessor’s decision making or explored the factors that may contribute to their interpretation of risk. Objective: to examine the inter-rater reliability of the Community Assessment of Risk Instrument (CARI), which is a new risk assessment instrument. Design: A cohort study was used. Setting and participants: A sample of 50 community dwelling older adults underwent comprehensive geriatric assessment by two raters: a geriatrician and a registered nurse. Procedure and measurements: Each participant was scored for risk by the two raters using the CARI. This instrument ranks risk of three adverse outcomes, namely i) institutionalisation, ii) hospitalisation and iii) death within the next year from a score of 1, which is minimal risk to 5, which is extreme risk. Inter-rater reliability was assessed with Gamma, Spearman correlation and Kappa statistics. Internal consistency was assessed with Cronbach’s alpha. Results: There were 30 female (mean age 82.23 years) and 20 male (mean age 81.75 years) participants. Items within domains showed good-excellent agreement. The gamma statistic was >0.77 on 6/7 Mental State items, 14/15 items in the Activities of Daily Living domain. In the Medical domain, 6/9 items had Gamma scores >0.80. The global domain scores correlated well, 0.88, 0.72 and 0.87. Caregiver network scores were 0.71, 0.73 and 0.51 for the three domains. Inter-rater reliability scores for global risk scales were 0.86 (institutionalisation) and 0.78 (death).
COMPONENTS OF THE RISK INSTRUMENT FOR SCREENING IN THE COMMUNITY (RISC) THAT CORRELATE WITH PUBLIC HEALTH NURSES’ PERCEPTION OF RISK

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Abstract: Background: Functional decline and frailty are common in community-dwelling older adults, leading to an increased risk of adverse outcomes. Objective: To examine the factors that public health nurses perceive to cause risk of three adverse outcomes: institutionalisation, hospitalisation, and death, in older adults, using the Risk Instrument for Screening in the Community (RISC). Design: A quantitative, correlational, descriptive design was used. Setting and Participants: A sample of 803 community-dwellers, aged over 65 years receiving regular follow-up by public health nurses. Procedure and Measurements: Public health nurses (n=15) scored the RISC and the Clinical Frailty Scale (CFS) on patients in their caseload. We examined and compared correlations between the severity of concern and ability of the caregiver network to manage these concerns with public health nurses’ perception of risk of the three defined adverse outcomes. Results: In total, 782 RISC scores were available. Concern was higher for the medical state domain (686/782, 88%) compared with the mental state (306/782, 39%) and activities of daily living (595/782, 76%) domains. Concern was rated as severe for only a small percentage of patients. Perceived risk of institutionalisation had the strongest correlation with concern over patients mental state, (r=0.53), while risk of hospitalisation, (r=0.53) and death, (r=0.40) correlated most strongly...
Review

Risk prediction in the community: A systematic review of case-finding instruments that predict adverse healthcare outcomes in community-dwelling older adults

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ABSTRACT

Few case-finding instruments are available to community healthcare professionals. This review aims to identify short, valid instruments that detect older community-dwelling risk of four adverse outcomes:
Thank You

ANY QUESTIONS??
Advance Care Directives
Let Me Decide: an update on recent research

Presenter: Professor William Molloy
Centre for Gerontology and Rehabilitation, University College Cork
Ireland
Todays Presentation

Includes

• An over-view of Advance Care Directives
• Findings from a study conducted in Ireland and 4 other countries on End of Life Treatment preferences
• Findings from a before/after study in Ireland using ‘Let Me Decide’ Advance Care Planning and Palliative Care Programme
Advance Care Planning & Advance Care Directives

What do they really mean?

- **Advance Care Planning (ACP)**
  - *Voluntary* process
  - Discussion and review with **person with capacity**
  - To help them **understand** their condition and how it may affect them in the future
  - To establish a person’s needs, preferences and goals of care
  - Educate and Consider treatment choices for future care

- **Advance Care Directive (ACD)**
  - Output of Advance Care Planning
  - Statement of wishes (by a person with capacity) about future care, if specific circumstances arise and the person no longer has capacity to make care decisions (e.g. Dementia)
  - ACD decisions only apply if the person has lost capacity
  - Legally binding in some countries
Current Irish Law for competent people

There is **NO absolute right** to health care

BUT

There **IS** an absolute right for a **competent** person to **refuse medical treatment**, even if it leads to death.
**Let Me Decide** Advance Care Directive

1. Summary of Patient Treatment Choices

IF I had an *Unacceptable/Irreversible* condition of health/ functioning and *if I became seriously ill* I would choose:

<table>
<thead>
<tr>
<th>Life-Threatening Illness</th>
<th>Cardiac Arrest</th>
<th>Feeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palliative Care</td>
<td>No CPR</td>
<td>Basic</td>
</tr>
<tr>
<td>Limited Care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgical Care</td>
<td>CPR</td>
<td></td>
</tr>
<tr>
<td>Intensive Care</td>
<td></td>
<td>Tube</td>
</tr>
</tbody>
</table>
Let Me Decide  Advance Care Directive

2. Personal Statement

I would consider an **UNACCEPTABLE** condition to be any condition WHERE: ____________________
______________________________
______________________________
______________________________

I would agree to the following:

- Donating my organs
- Cremation: Yes ☐ No ☐

after my death: Yes ☐ No ☐
PATIENT CASE SCENARIO: MR MURPHY

- 84yrs old
- Living in a nursing home
- Has Alzheimer’s Disease for 7yrs
- Unable to recognise children, sometimes recognises wife
- Needs assistance with mobilising
- Incontinent

Mr Murphy is having episodes of hematemesis and is hypotensive. Unless treated he will most likely die. His family are not available and there is no advance directive. What would you do?
If this was your patient

- Palliative
- Limited
- Surgical
- Intensive

Percentage choosing this level of care
If this was your Father

<table>
<thead>
<tr>
<th>Level of Care</th>
<th>Percentage Choosing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palliative</td>
<td>30%</td>
</tr>
<tr>
<td>Limited</td>
<td>40%</td>
</tr>
<tr>
<td>Surgical</td>
<td>20%</td>
</tr>
<tr>
<td>Intensive</td>
<td>10%</td>
</tr>
</tbody>
</table>
If this was your self

Percentage choosing this level of care

<table>
<thead>
<tr>
<th>Level of Care</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palliative</td>
<td>60%</td>
</tr>
<tr>
<td>Limited</td>
<td>30%</td>
</tr>
<tr>
<td>Surgical</td>
<td>10%</td>
</tr>
<tr>
<td>Intensive</td>
<td>5%</td>
</tr>
</tbody>
</table>
Palliative / Limited Care Option

Patient

Parent

Self

CASE

HONGKONG

ITALY

IRELAND

USA

ISRAEL

%
Why do ACP

- Older people want to be consulted themselves
  - Holland: 70% (VanMil, Med Dec Making 1997)
  - Ireland: 39% (O’Keeffe, Eur J Med 1993)
  94% (Cotter P., Age and Aging 2009)
‘Let Me Decide’

Pilot Study - Ireland

- Prof Willie Molloy
- Dr. Ciara McGlade
- Dr. Edel Daly
- Dr. Nicola Cornally

Funded by the Irish Hospice Foundation/Atlantic Philanthropies
‘Let Me Decide’ Programme

The systematic implementation of both an Advance Care Planning using the ‘Let Me Decide’ Advance Care Directive and a General Palliative Care Educational Programme

In long-term care institutions in Ireland
Let Me Decide - ACD training

• Introduction to Advance Care Directives
• Legal Issues
• Ethical Issues
• Practical Issues
• Measuring Capacity
• Completing an ACD
Advance care planning and Advance Care Directive up-take

- Following implementation, over 50% of residents had some form of end-of-life care plan in place (advance care directives; advance care plans; or end-of-life care plans for those with diminished capacity).

<table>
<thead>
<tr>
<th>Nursing Home</th>
<th>ACDs/EOL Care Plans completed (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 120 Beds</td>
<td>N = 68/120 (57%)</td>
</tr>
<tr>
<td>2. 97 Beds</td>
<td>N = 58/97  (60%)</td>
</tr>
<tr>
<td>3. 79 Beds</td>
<td>N = 39/79  (50%)</td>
</tr>
</tbody>
</table>
Health Care Utilisation

42% reduction of acute hospital bed days from Nursing Home residents observed

Data from largest university teaching hospital in Ireland, only Level 1 Trauma centre in the country showed:
Increase of 10.34% NH transfers and 5.76% NH in-patient bed days for the same period