The Use of interRAI scales- ways of summarizing interRAI data

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Multiple ways of Summarizing Assessments

CAPS: Clinical Assessment Protocols - care and service planning

Scales: Prognosis, outcome monitoring

RUGs: Resource utilization groups – intensity of services, staffing and payment

Quality indicators (Qis): performance of an organization/facility over time
Clinical Assessment Protocols (CAPS)

- 6 Functional performance CAPS eg ADL, IADL and physical activity
- 6 Cognition/mental health CAPS eg delirium, mood
- 3 Social life CAPS eg social relationships
- 12 Clinical issues CAPS eg falls, pain, medications

K Berg 2009
Rates of CAPs Triggered by Service Setting

![Bar chart showing rates of CAPs by service setting. The chart compares 'Old' and 'New' categories across Well Elderly, HC, LTC Homes, and CCC Hospital.]
“triggered” CAPS require action

- Patients/residents may have multiple problems
- CAPS identify areas where action is needed
- Evidence exists for benefit in terms of improvement or prevention
- Help guide service planning decisions
- Multiple areas may share risk factors

K Berg 2010
Interaction with other CAPS

- Common risk factors
- Common potential interventions
- Physical Activity promotion
- ADL
- IADL
ADL, IADL and Physical Activity

Non-fall triggered:
• CCC: 72.1% of persons trigger ADL CAP
• LTC: 78.4% trigger ADL CAP
• HC: 57.1% trigger 1 or more of ADL, IADL and Physical Activity
Conclusion

• New Fall Cap identified those at highest risk – action required

• Full array of CAPS including medications, vision, ADL, IADL, physical activity offer potential to address shared risk factors for falls

• Greater specificity helps focus the interventions and choose best outcomes for monitoring
interRAI scales

- Embedded in the assessments
- Core items are common to all interRAI assessments
- Shorter and longer versions exist in different settings
- Permit comparison across settings
- Reliability of items, scales – very good agreement
Adl long form

Total score 0-28


• Criterion validity: strongly correlated with FIM, and Barthel scores
ADL Long Form Responsiveness

- Detect differences in patients who received home care by PT or OTs- after 6 months
- Large degrees of improvement in post-acute care (effect size comparable to FIM change scores)
- Detect decline in physical function in cognitively impaired nursing home residents (Carpenter et al BMC 2006)
<table>
<thead>
<tr>
<th>Service Category</th>
<th>ADL Scales</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Short (0-16)</td>
<td>Long (0-28)</td>
<td>Hierarchy (0-6)</td>
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<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
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<td>Acute Care Premorbid</td>
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<td>5.1</td>
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<td>Acute Care Admission</td>
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<td>5.9</td>
<td>8.0</td>
<td>7.5</td>
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<tr>
<td>Post Acute Care (suite)</td>
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<td>4.0</td>
<td>8.1</td>
<td>7.3</td>
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<tr>
<td>Community Health (CHA)</td>
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<td>0.5</td>
<td>0.1</td>
<td>0.7</td>
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<tr>
<td>Complex continuing Care</td>
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<td>5.0</td>
<td>17.3</td>
<td>8.8</td>
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<td>Home Care (HC)</td>
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<td>3.7</td>
<td>3.8</td>
<td>6.5</td>
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<tr>
<td>HC (suite)</td>
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<tr>
<td>Long Term CareFacility (suite)</td>
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<td>5.2</td>
<td>14.0</td>
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<td>LTC- Ontario</td>
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<td>5.2</td>
<td>16.5</td>
<td>9.3</td>
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<tr>
<td>Palliative Care (suite)</td>
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<td>5.4</td>
<td>16.5</td>
<td>9.3</td>
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<tr>
<td>Mental Health (at admission)</td>
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<td>2.3</td>
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<tr>
<td>Community Mental Health</td>
<td>0.3</td>
<td>1.5</td>
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<tr>
<td>Intellectual Disability</td>
<td>9.2</td>
<td>5.5</td>
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</tr>
</tbody>
</table>
CPS Validation

- Criterion validity - strong relationship with:
  - MMSE (Mini Mental State Exam)
  - Test for Severe Impairment
  - Nursing judgments of disorientation
  - Neurological diagnoses of Alzheimer's disease and other dementias.
Depression Rating Scale (DRS)

• Clinical screen for depression if score of 3 or greater/14.

Validation of DRS

- Criterion validity based on comparison of the DRS with the Hamilton Depression Rating Scale and the Cornell Scale for Depression.
- Compared to DSM-IV Major or minor depression diagnoses, the DRS was 91% sensitive and 69% specific at a cut-point score of 3.
Pain Scale

• 4 category pain scale

• Original development:
## IADL Performance

<table>
<thead>
<tr>
<th>Service Category</th>
<th>Score (SD)</th>
</tr>
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<tbody>
<tr>
<td>Home Care</td>
<td>11.6 (6.0)</td>
</tr>
<tr>
<td>Community Health (CHA)</td>
<td>3.1 (6.9)</td>
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<tr>
<td>Intellectual Disability (ID)</td>
<td>20.1 (1.8)</td>
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<tr>
<td>Community Mental Health</td>
<td>4.7 (6.5)</td>
</tr>
</tbody>
</table>

K. Berg  Australia 2010
CHESS
(Changes in Health, End-stage Disease and signs and symptoms)

- medical complexity and health instability **Scores range from 0 to 5.**
- items: vomiting, dehydration, leaving food uneaten, weight loss, shortness of breath, edema, end-stage disease, and decline in cognition and ADL.

CHESS

![Bar Chart]

K. Berg  Australia 2010  www.interrai.org
Conclusion

• Existing scales have good measurement properties
• Distribution of scale scores consistent with expectation
• Advocate for use in research and clinical practice
• Opportunities exist to further enhance scales
Additional scales

• Communication Scale
• Social Engagement Scale and the RISE or Revised Social Engagement Scale
• Aggressive Behaviour Scale (ABS)
• Delirium Scale
• BBC crosswalk to Berg Balance Scale
• PSI- Personal Severity Index