



# 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

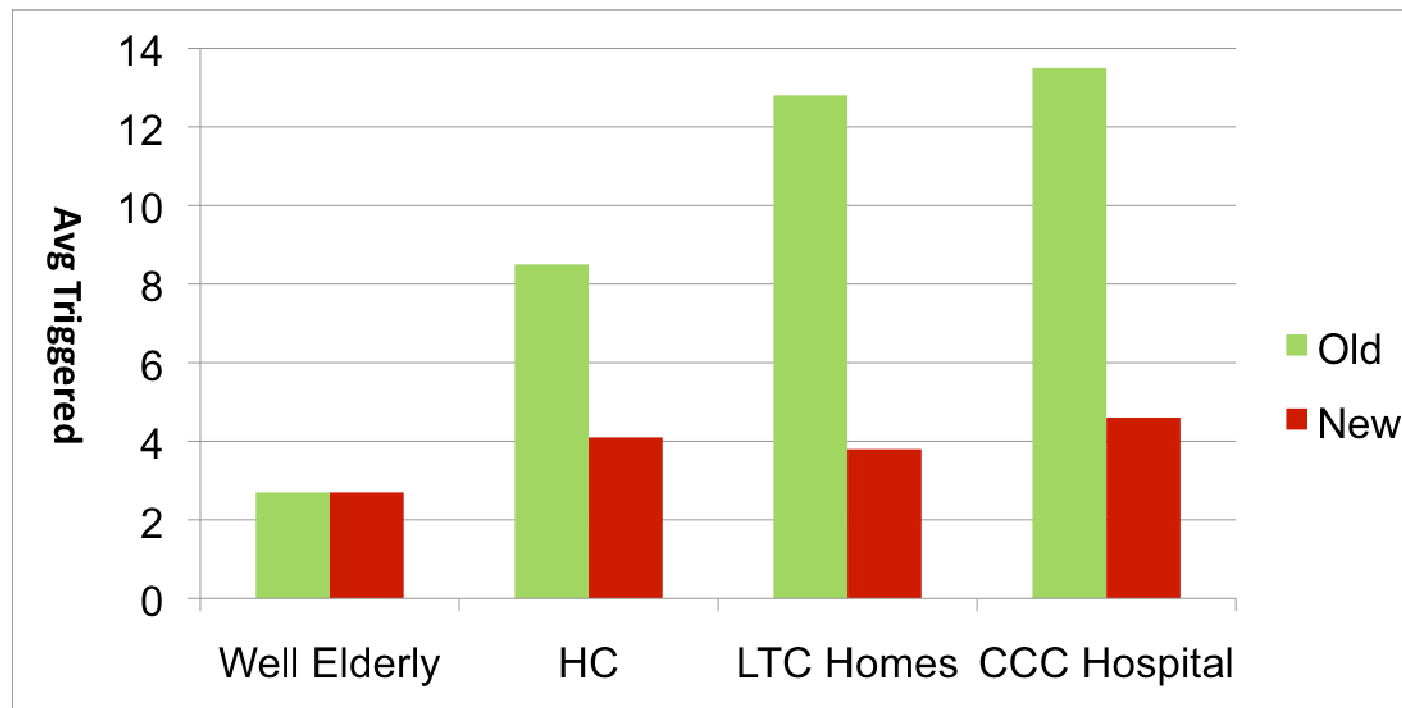


## Clinical Assessment Protocols (CAPS)

- 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



## Rates of CAPs Triggered by Service Setting



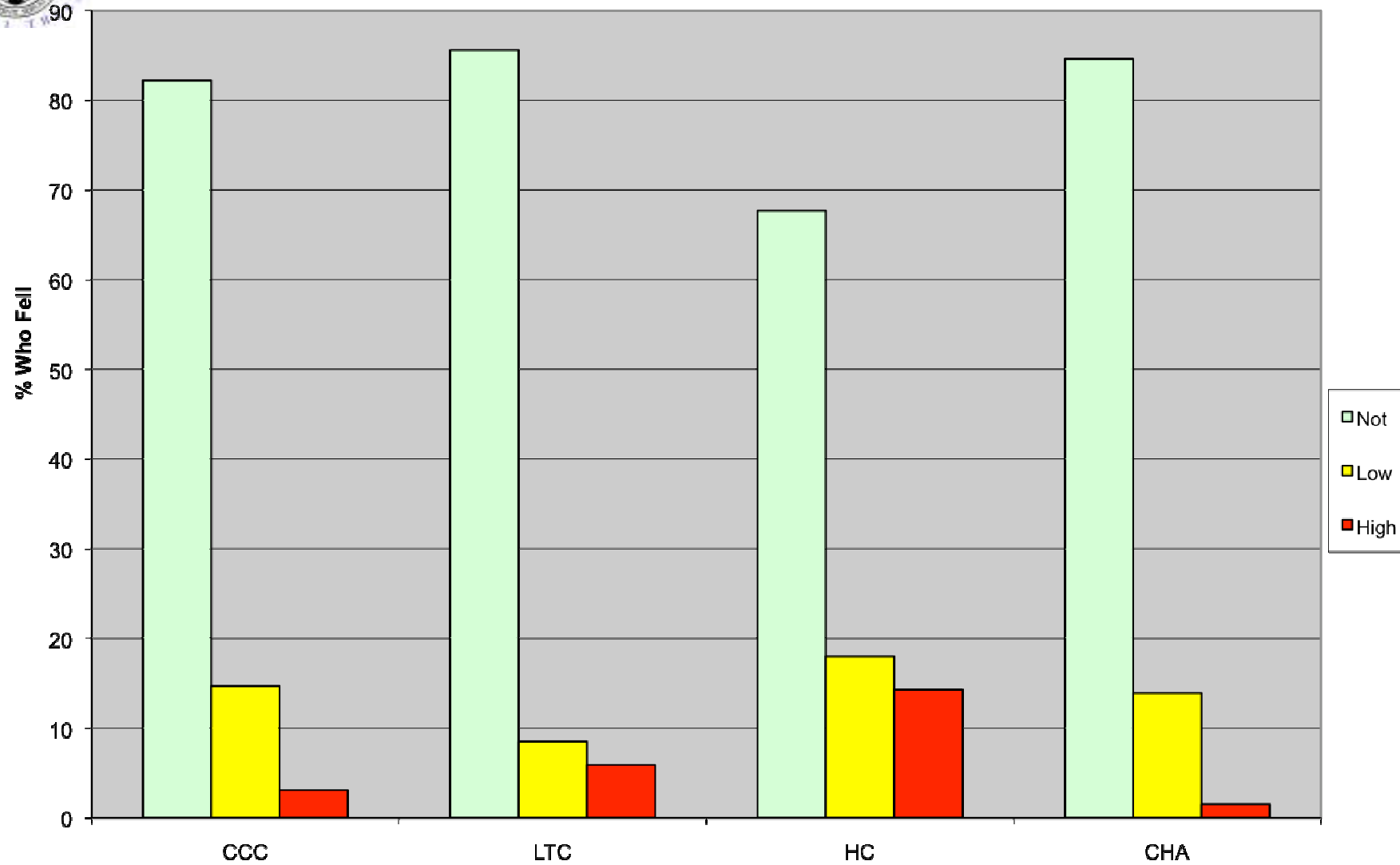


## “triggered” CAPS require action

- 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

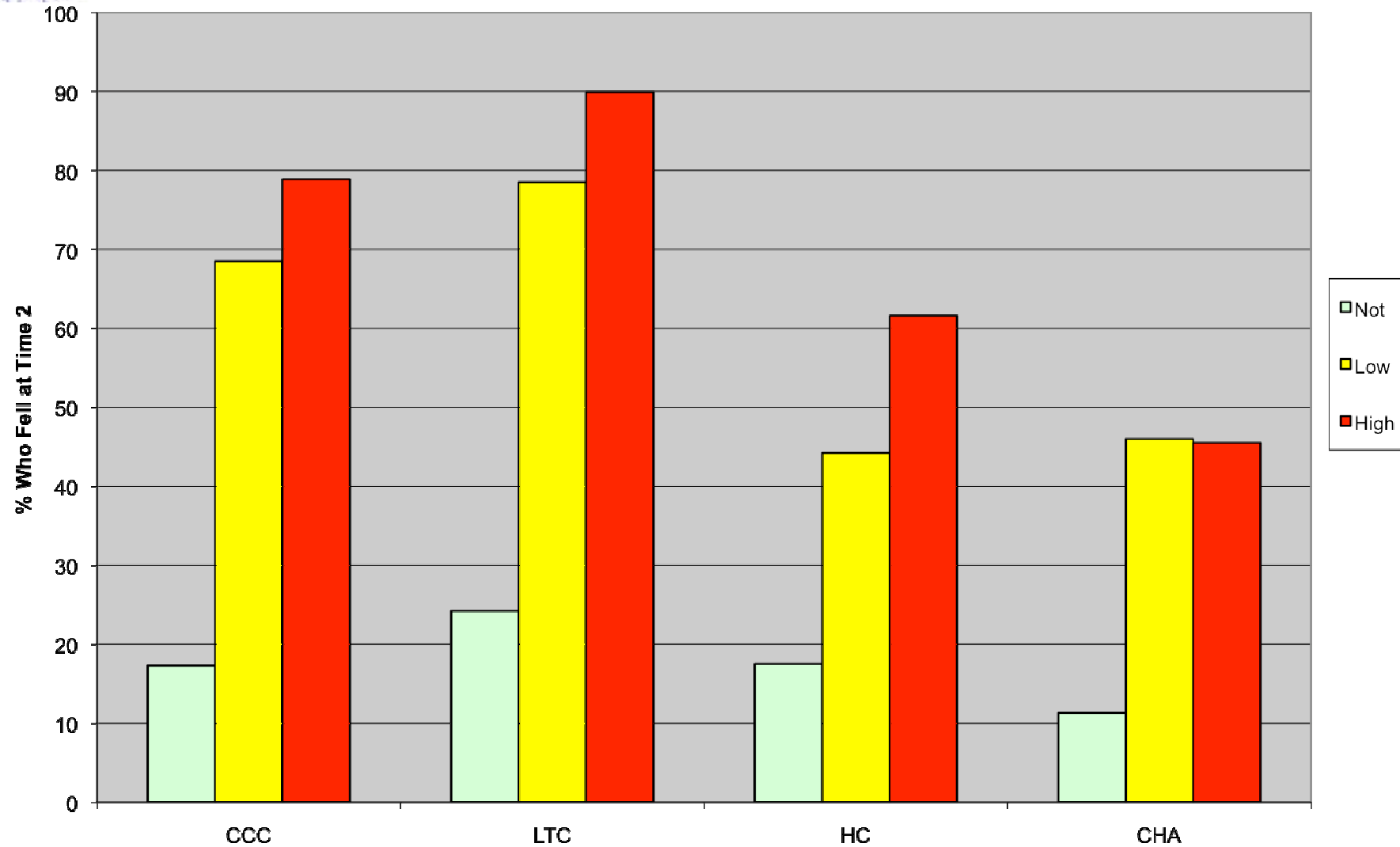


### Distribution of Fall risk Groups across settings





### Percentage within Fall Risk Groups Who Fall at Time 2





## 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

- **Original reference: Morris, Fries, Morris. Scaling ADLs Within the MDS. Journal of Gerontology: Medical Sciences 54A(11): M546-M553,1999**
- **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)



	<b>ADL Scales</b>					
	<b>Short (0-16)</b>		<b>Long (0-28)</b>		<b>Hierarchy (0-6)</b>	
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>
<b>Acute Care Premorbid</b>	3.0	5.1			1.3	2.0
<b>Acute Care Admission</b>	6.1	5.9	8.0	7.5	2.2	1.9
<b>Post Acute Care (suite)</b>	4.2	4.0	8.1	7.3	2.2	1.8
<b>Community Health (CHA)</b>	0.0	0.5	0.1	0.7	0.0	0.3
<b>Complex continuing Care</b>	9.7	5.0	17.3	8.8	3.8	1.8
<b>Home Care (HC)</b>	2.0	3.7	3.8	6.5	1.0	1.5
<b>HC (suite)</b>	2.4	3.7	5.3	7.6	1.2	1.6
<b>Long Term Care Facility (suite)</b>	8.0	5.2	14.0	9.0	3.5	1.9
<b>LTC- Ontario</b>	9.2	5.2	16.5	9.3	3.5	1.8
<b>Palliative Care (suite)</b>	12.2	5.4			4.7	1.9
<b>Mental Health (at admission)</b>	0.7	2.3			0.4	1.0
<b>Community Mental Health</b>	0.3	1.5			0.2	0.8
<b>Intellectual Disability</b>	9.2	5.5			3.8	1.7

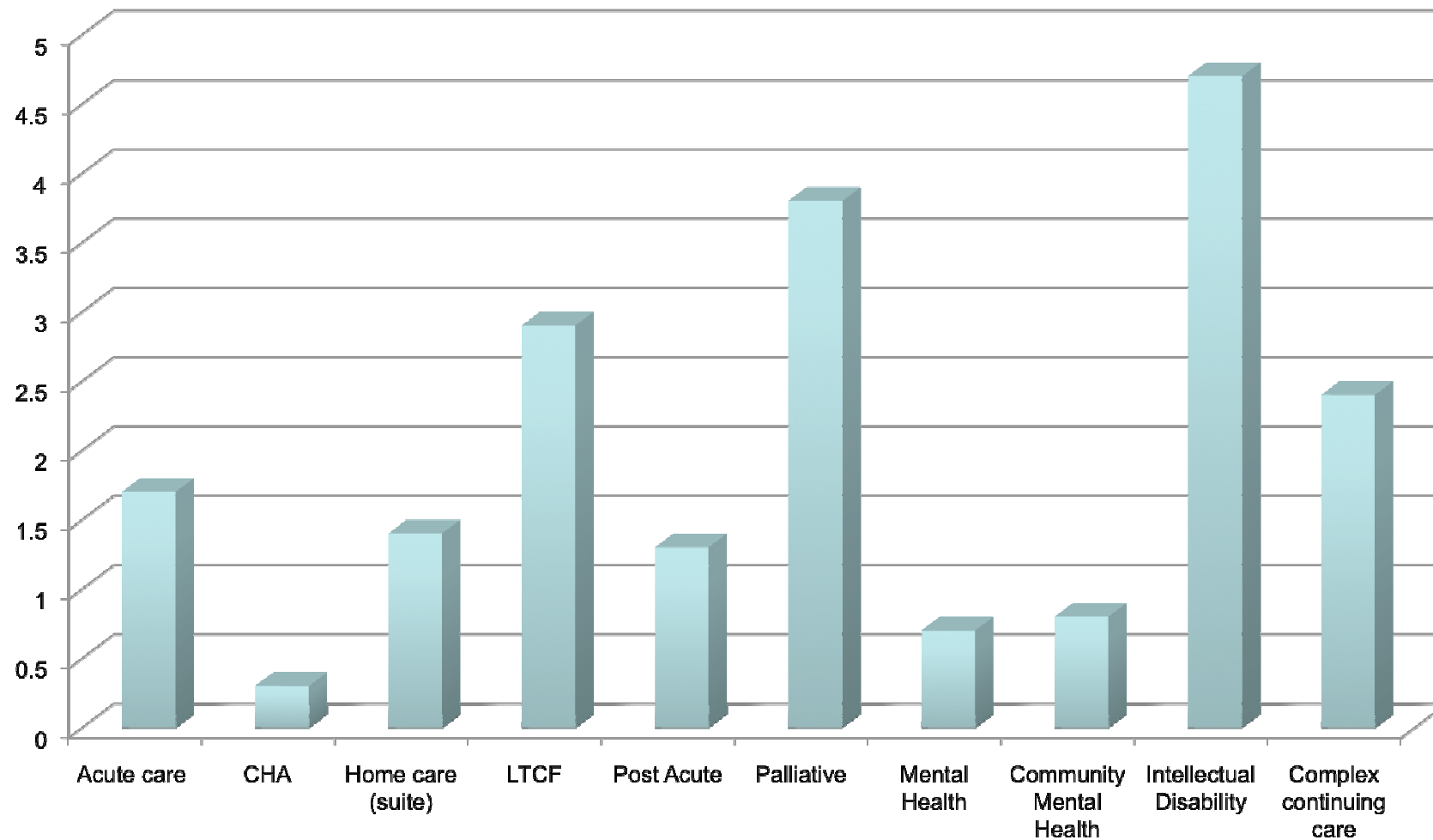


## CPS Validation

- 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.



# CPS





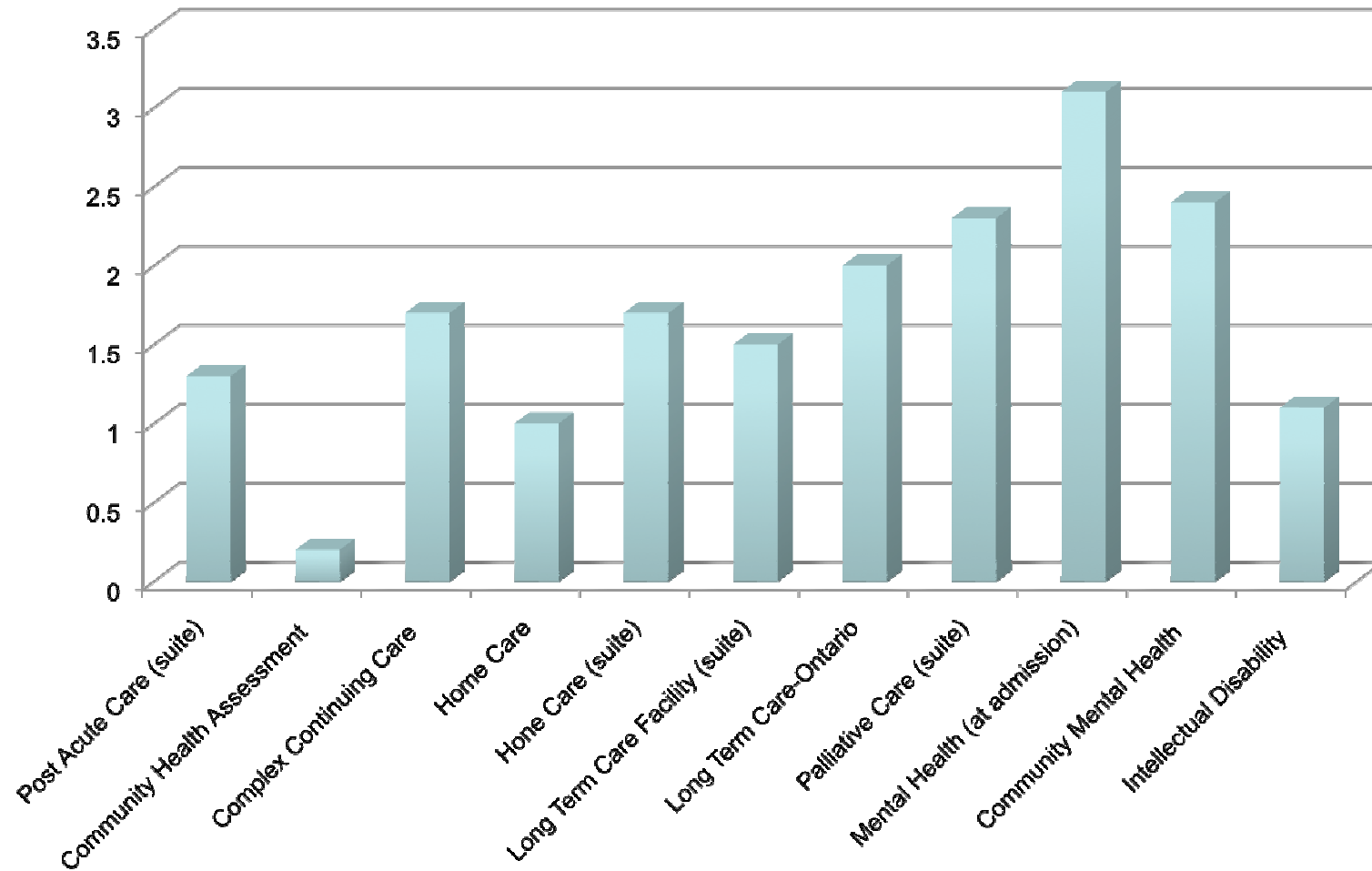


## Depression Rating Scale (DRS)

- Clinical screen for depression if score of 3 or greater/14.
- Original reference: Burrows A, Morris JN, Simon S, Hirdes JP, Phillips C. (2000) Development of a Minimum Data Set-based Depression Rating Scale for Use in Nursing Homes. *Age and Ageing* 29(2): 165-172.



# Depression Rating Scale





## 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.

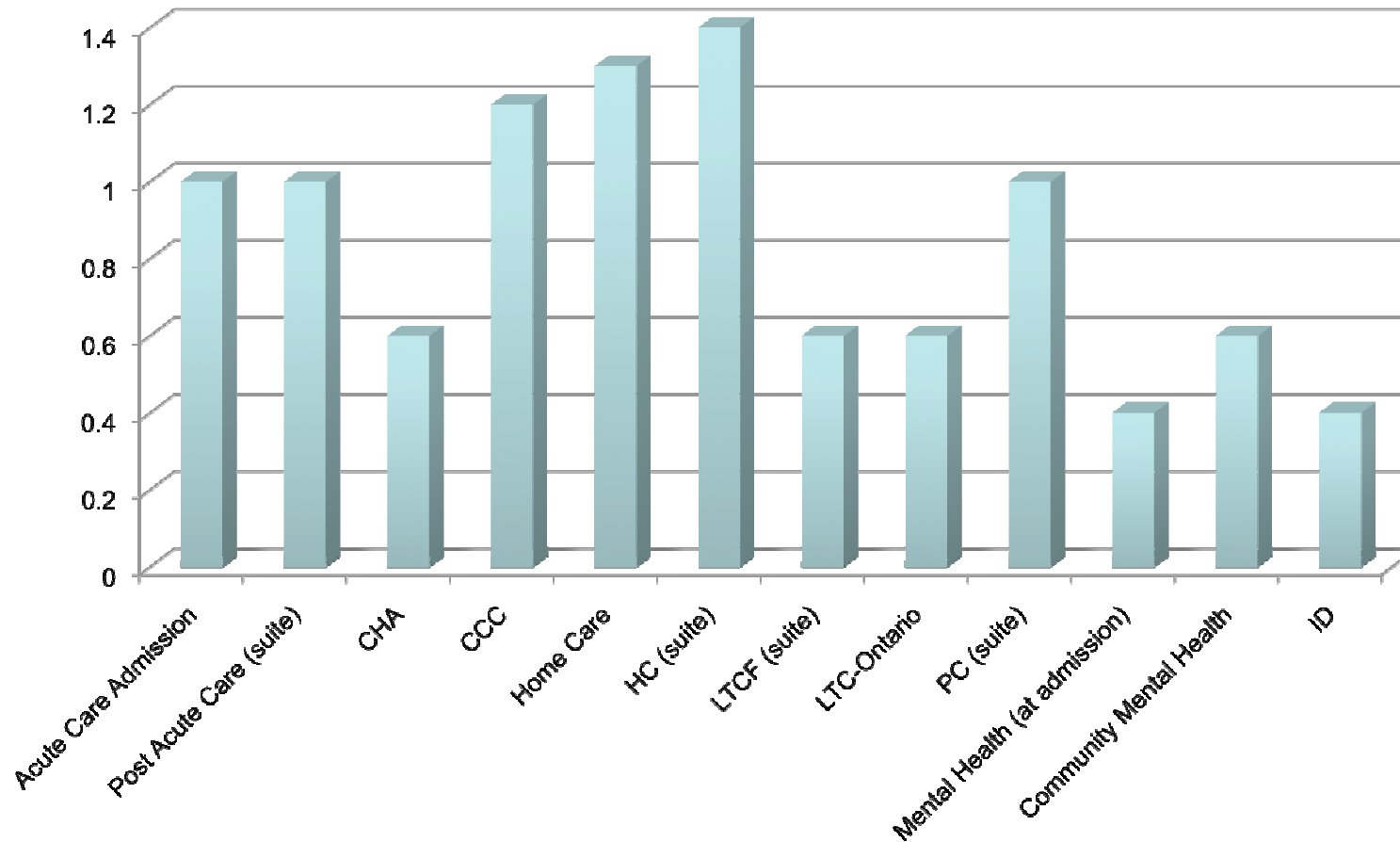


## Pain Scale

- 4 category pain scale
- Original development:
- Fries BE, Simon SE, Morris JN, Flodstrom C, Bookstein FL. “Pain in US Nursing Homes: Validating a Pain Scale for the Minimum Data Set” *Gerontologist* 41(2):173-179, 2001



# Pain Scale





## IADL Performance

Home Care	11.6 (6.0)
Community Health (CHA)	3.1 (6.9)
Intellectual Disability (ID)	20.1 (1.8)
Community Mental Health	4.7 (6.5)



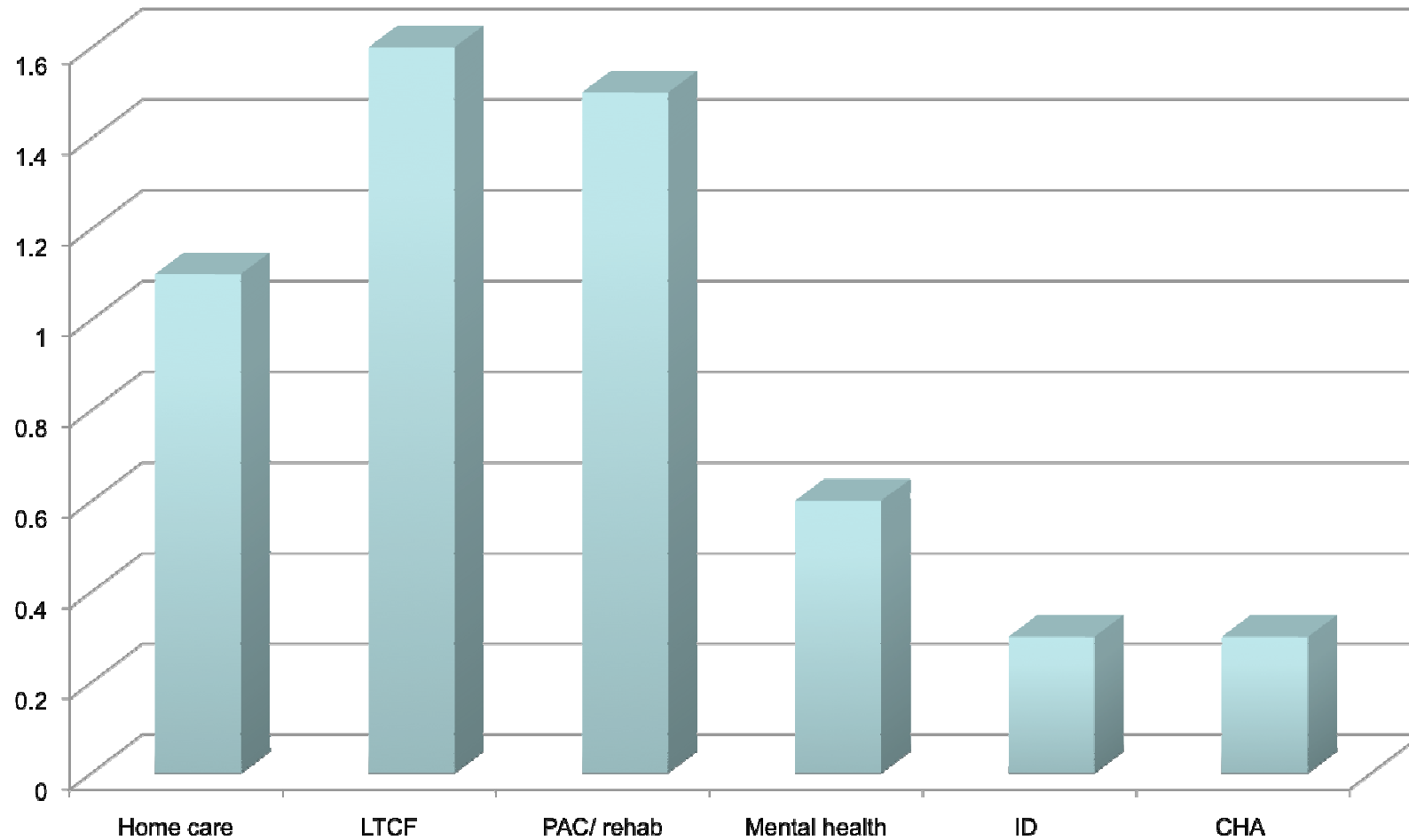
# CHES

## (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.
- Original reference: Hirdes JP, Frijters D, Teare G. (2003) The MDS CHES Scale: A New Measure to Predict Mortality in the Institutionalized Elderly. *Journal of the American Geriatrics Society* 51(1): 96-100.



# CHES







## 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

