Assessment and Activity Promotion to Advance Healthy Aging: Using data to inform practice

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Evidence to support decisions

- Effectiveness across continuum
- Assessments that signal the need for action
- Information on all persons – beyond the limitations of Randomized Clinical Trials
- Computerized information that can be aggregated to answer other questions
- Data to support resource allocation decisions and policy decisions

interRAI approach

- Comprehensive assessment
- Action alerts
- Service/care plan but secondary uses include resource allocation, outcomes, quality indicators
- Integrated system across continuum
- Community health, acute care, post acute, home care, long term care, palliative, mental health
- Reports eg personal health profiles
- Screeners and algorithms eg Contact assessment (incl. home care priority, ER, AC, Health providers)

Collage

- Community Health Assessment- CHA
- Links to functional supplement, mental health and assisted living supplements

- Well-being supplement

What are the characteristics of persons in Collage?

Cognitive Skills for Daily Decision Making

Making decisions regarding tasks of daily life – e.g., when to get up or have meals, which clothes to wear or activities to do

- **94%** - Independent – Consistent, reasonable and safe

Communication

- **93%** - Independent – Making self understood (Expression): Expressing information content – both verbal and non-verbal
- **93%** - Independent – Ability to understand others (Comprehension): Understanding verbal information content (however able; with hearing appliance normally used)

Physical Function

Independent – No help, setup, or supervision

- Meal Preparation **- 93% Capacity**
- How meals are prepared (e.g., planning meals, assembling ingredients, cooking, setting out food and utensils)

- Ordinary Housework **- 88% Capacity**
- How ordinary work around the house is performed (e.g., doing dishes, dusting, making the bed, tidying up, laundry)

- Stairs **- 86% Capacity**
- How full flight of stairs is managed (12-14 stairs)

Basic Activities of Daily Living

- Bathing **- 96% independent**
- How subject takes a full-body bath/shower. Includes how transfers in and out of tub or shower
- Dressing **- 98% Independent**
- Walking **- 95% independent**
- -How subject walks between locations on same floor indoors
- Mobility aids:
  - **74%** - Walking, no assistive device
  - **23% -** Walking, uses assistive device – e.g., cane, walker
  - **2% -** Use of wheelchair

Activity Levels

Total hours of exercise of physical activity

- None – **4.4%**
- Less than an hour – **11.2%**
- 1-2 hours – **30.5%**
- 3-4 hours – **24.2%**
- More than 4 hours – **29.7%**

Number of days went out of the house or building in which he/she lives

- No days out – **3.8%**
- Did not go out in last 3 days, but usually goes out over a 3-day period – **0.9%**
- 1-2 days – **6.9%**
- 3 or more days – **88.4%**

Change in ADL status as compared to 90 days ago, or since last assessment if less than 90 days ago

- Improved – **5.8%**
- No change – **91%**
- Declined – **3.1%**
- Uncertain – **0.2%**

Driving

- Drive a car – **67.3%**

Falls

- No falls in last 90 days – **90.8 %**
- Falls between 31-90 days – **5.2%**
- One fall in last 30 days - **4.0%**

Balance Indicators

- Dizziness – **15.2%**
- Unsteady gait – **27.3%**

Dyspnea (Shortness of Breath)

- Absence of symptom - **84.7%**
- Absent at rest, but present when performed moderate activities – **10.3%**
- Absent at rest, but present when performed normal day-to-day activities – **4.1%**
- Present at rest – **0.9%**

Fatigue: inability to complete normal activities

- No fatigue - **65.1%**
- Minimal –- Diminished energy but completes normal day-to-day activities **31.5%**
- Moderate – Due to diminished energy, unable to finish normal day-to-day activities **2.8%**
- Severe – Due to diminished energy, unable to start some normal day-to-day activities **0.5%**
- Unable to commence any normal day-to-day activities – Due to diminished energy **0.2%**

Pain : **Frequency with which person complains or shows evidence of pain**

- No pain – **62%**
- Present but not exhibited in last 3 days – **10.6%**
- Exhibited in 1-2 of last 3 days – **6.1%**
- Exhibited daily in last 3 days – **21.3%**

Hospital Use, Emergency Room, Physician Visit in last 90 days

Inpatient acute hospital with overnight stay – **4.8%**

- Emergency room visit – **6.3%**
- Physician visit – **84.5%**

Summary

- Generally independent
- Sub-groups are present that have ER use, hospital visits, recent decline, difficulty with stairs, indicators of balance problems

Wellness

Participation in Fitness/Exercise Program

Total hours of exercise or physical activity in last 3 days

- None – **19.9%**
- None, but usually participates – **3.4%**
- Less than 2 hours – **20.7%**
- Less than 3 hours – **14.7%**
- Less than 4 hours – **17.8%**
- 4 hours or more – **23.6%**

Prefers to exercise alone or with others

- Alone - **30.2%**
- In group – formal exercise class – **19.4%**
- No preference for group or alone - **36.3%**
- Does not exercise – **14.1%**

Satisfied with fitness level

- No- **36.5%**
- Yes, interested in exercise program - **39.4%**

Barriers in engaging in or adhering to an exercise program

- Functional Limitations – **28.1%**
- Lack of knowledge about how to start – **2.9%**
- Lack of motivation – **19.1%**
- Pain – **19.5%**
- Physical restrictions – **19.8%**

Activity	Preferred Not Involved	Preferred involved	Not Preferred
Biking	10.6%	12.1%	77.3%
Dancing	17.4%	9.1%	73.5%
Walking/Hiking	13.5%	63.7%	22.8%
Pilates/Yoga/Tai-Chi	10.6%	10.5%	78.9%
Swimming/Aqua Fitness	17.2%	16.7%	66.1%
Treadmill/Steppers	14.1%	17.2%	68.7%

Balance

- Closely linked to functional independence
- Lower balance scores predictive of falls and functional decline

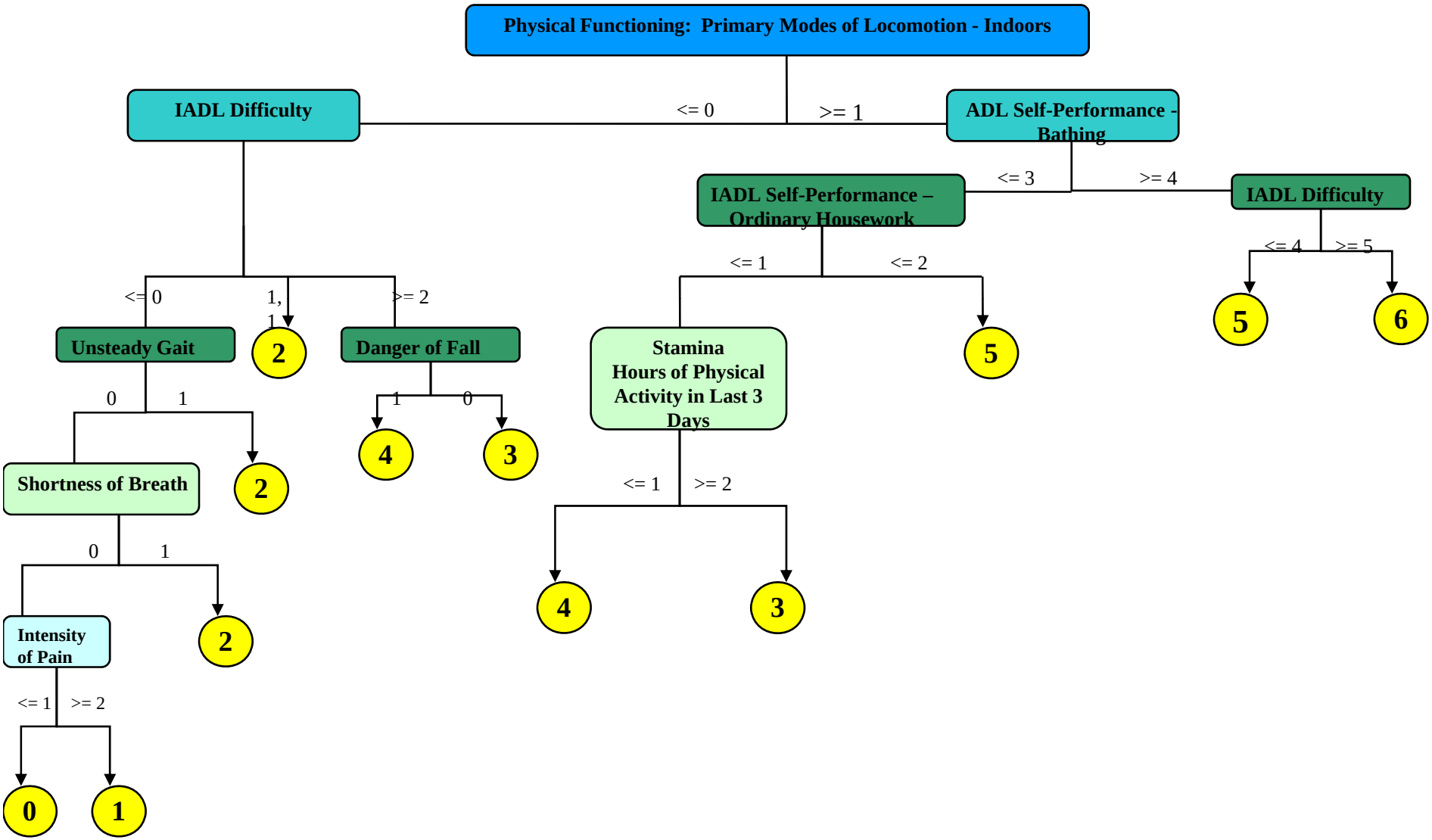
FBI (Functional Balance Index)

- Berg Balance Scale (BBS)- 14 item scale (0-56)- high reliability, multiple validation studies and widely used in geriatrics and rehabilitation for assessment and to monitor response to treatment
- FBI- 6 level approximation based on interRAI assessments

Preliminary development

- Multiple Fall Prevention Projects funded by Health Canada
- Common use of measures: BBS scale and preliminary version of interRAI CHA

713 assessments used to approximate Balance Scale scores using interRAI items


Physical Functioning: Primary Modes of Locomotion - Indoors
IADL Difficulty
<= 0
>= 1
ADL Self-Performance - Bathing
<= 3
>= 4
IADL Self-Performance – Ordinary Housework
IADL Difficulty
<= 4
>= 5
5
6
<= 1
<= 2
5
<= 0
1, 1
>= 2
Unsteady Gait
2
Danger of Fall
Stamina
Hours of Physical Activity in Last 3 Days
0
1
1
0
4
3
<= 1
>= 2
4
3
Shortness of Breath
2
0
1
Intensity of Pain
2
<= 1
>= 2
0
1

Variables used to derive 6 levels

- Mobility aids
- IADL difficulty scale
- Unsteady gait
- Bathing level of assistance
- Hours of physical activity
- SOB
- Pain

FBI levels and BBS scores

FBI Level	N	BBS Mean	(95% CI)
0	179	54.3	(53.9, 54.8)
1	72	52.7	(51.7, 53.7)
2	145	49. 6	(48.6, 50.5)
3	110	43.9	(42.4, 45.4)
4	85	36.3	(34.0, 38.7)
5	89	27. 5	(24.8, 30.1)
6	33	17.9	(13.6, 22.1)

Validity

- Related to fall risk in original sample independent of ADL, cognition and mood.

- Next step to assess performance of index in Ontario Home Care database

Any Fall reported (one year prevalence from Ontario)				
scale	N Obs	Mean	Lower 95% CL for Mean	Upper 95% CL for Mean
0	3830	0.08	0.07	0.09
1	1399	0.10	0.08	0.11
2	10810	0.18	0.17	0.18
3	34855	0.20	0.20	0.21
4	29622	0.33	0.32	0.34
5	44941	0.36	0.35	0.36
6	34967	0.41	0.41	0.42

Functional decline in 6 months				
scale	N Obs	Mean	Lower 95% CL for Mean	Upper 95% CL for Mean
0	6100	0.41	0.35	0.47
1	2558	0.38	0.30	0.46
2	28299	0.44	0.42	0.47
3	88453	0.95	0.93	0.98
4	82210	0.85	0.82	0.87
5	127308	1.04	1.02	1.07
6	78259	0.61	0.58	0.64

Home Care database

- Cross sectional relationship with falls, ADL, mood
- Longitudinal relationship with functional decline and falls
- Fall History is a stronger predictor

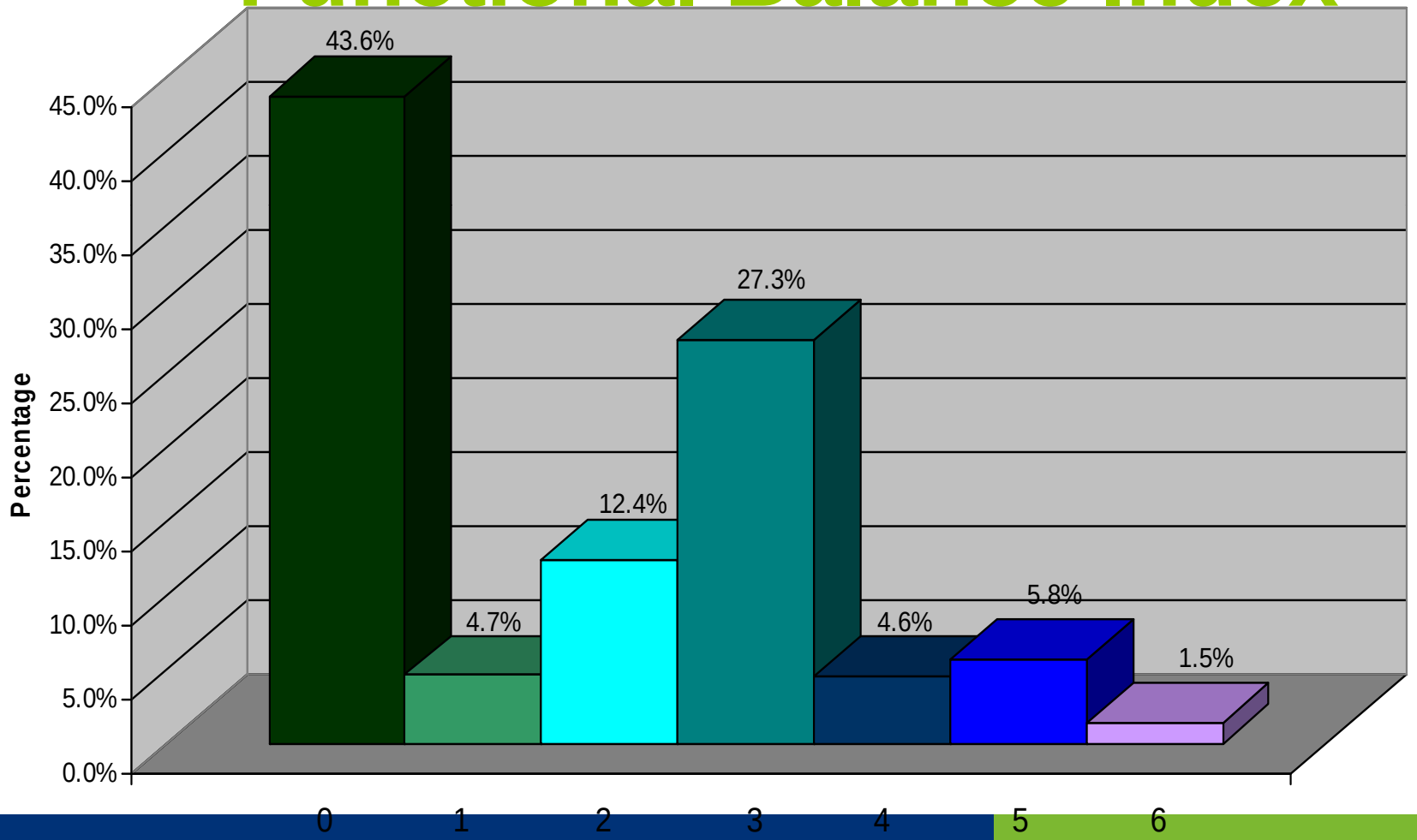
Persons who did not fall in previous period

Scale	New	faller	Non	faller
	n	%	n	%
0	661	11.9	4877	88.1
1	277	12.1	2004	87.9
2	3579	15.4	19611	84.6
3	11816	16.5	59662	83.5
4	11032	19.1	46612	80.9
5	17185	20.0	68842	80.0
6	8486	16.3	43437	83.7

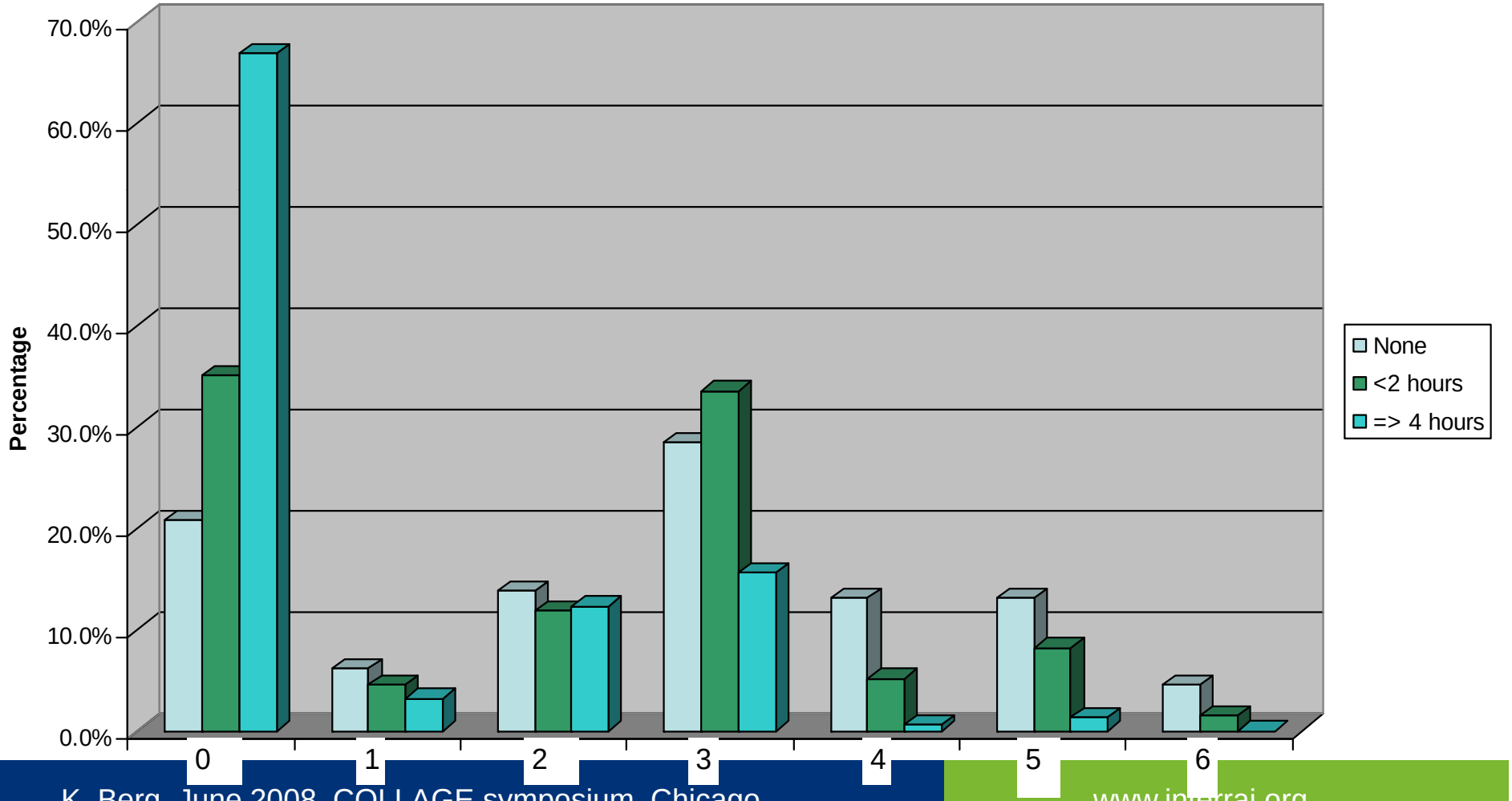
Index shows promise

- Possible to approximate balance scores from interRAI assessments
- Validation of the content of interRAI instruments
- Facilitate sharing of information across professionals

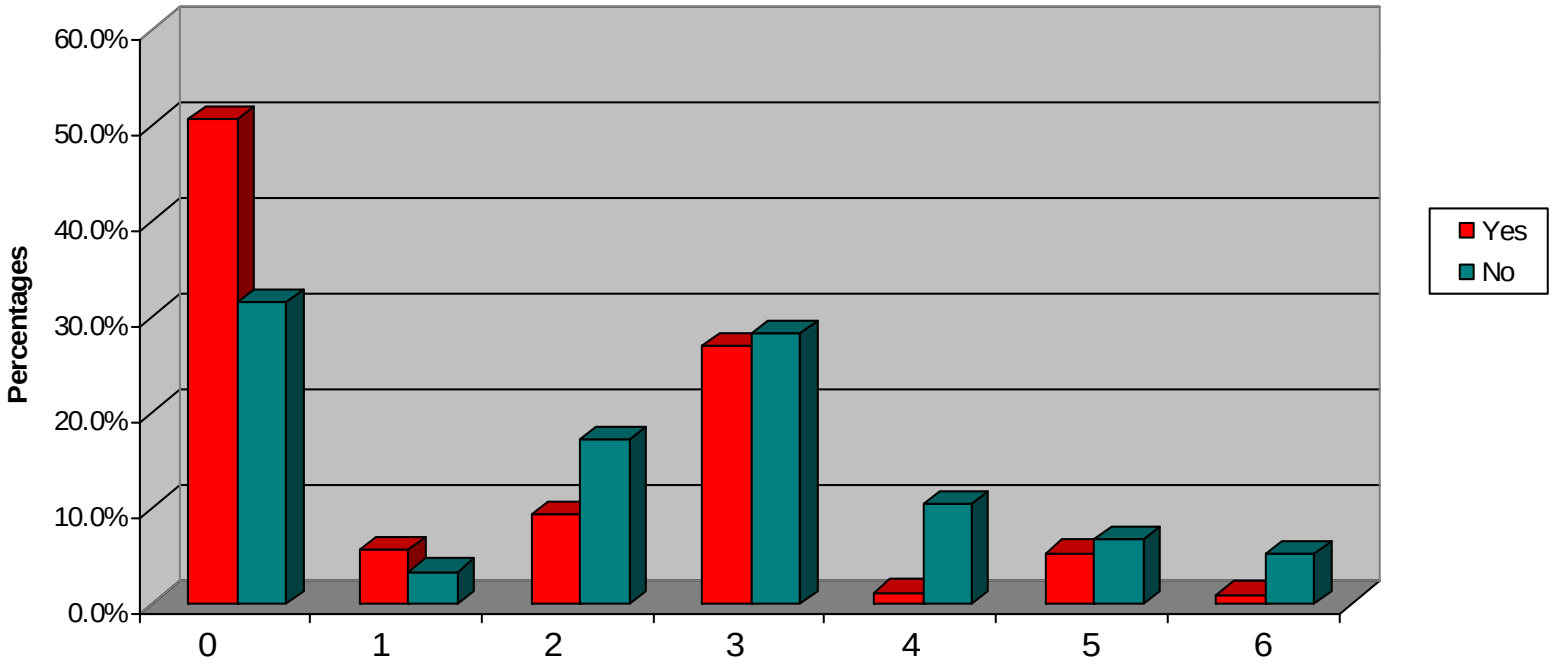
Functional Balance Index



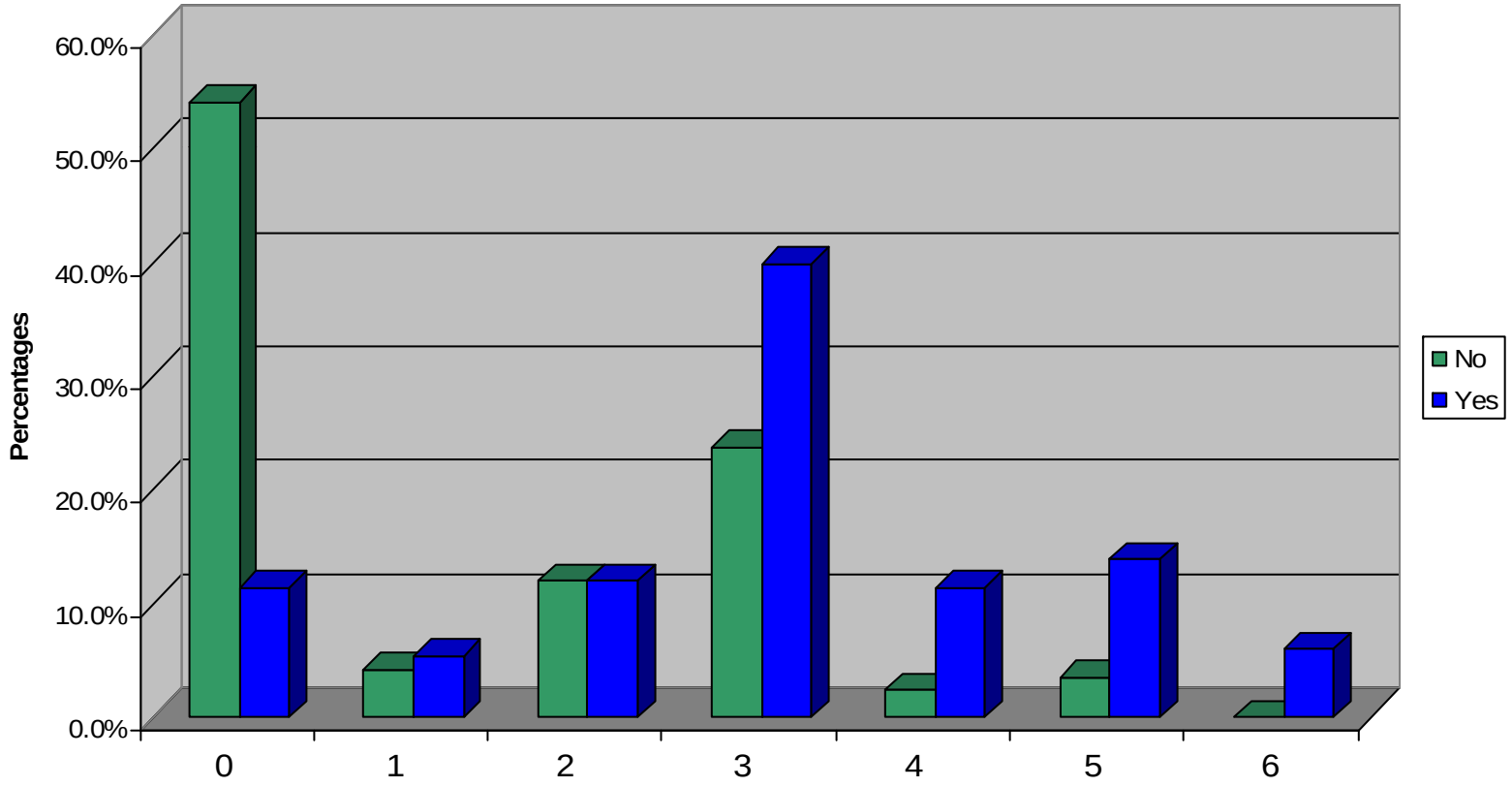
Participation in Fitness (see note below)



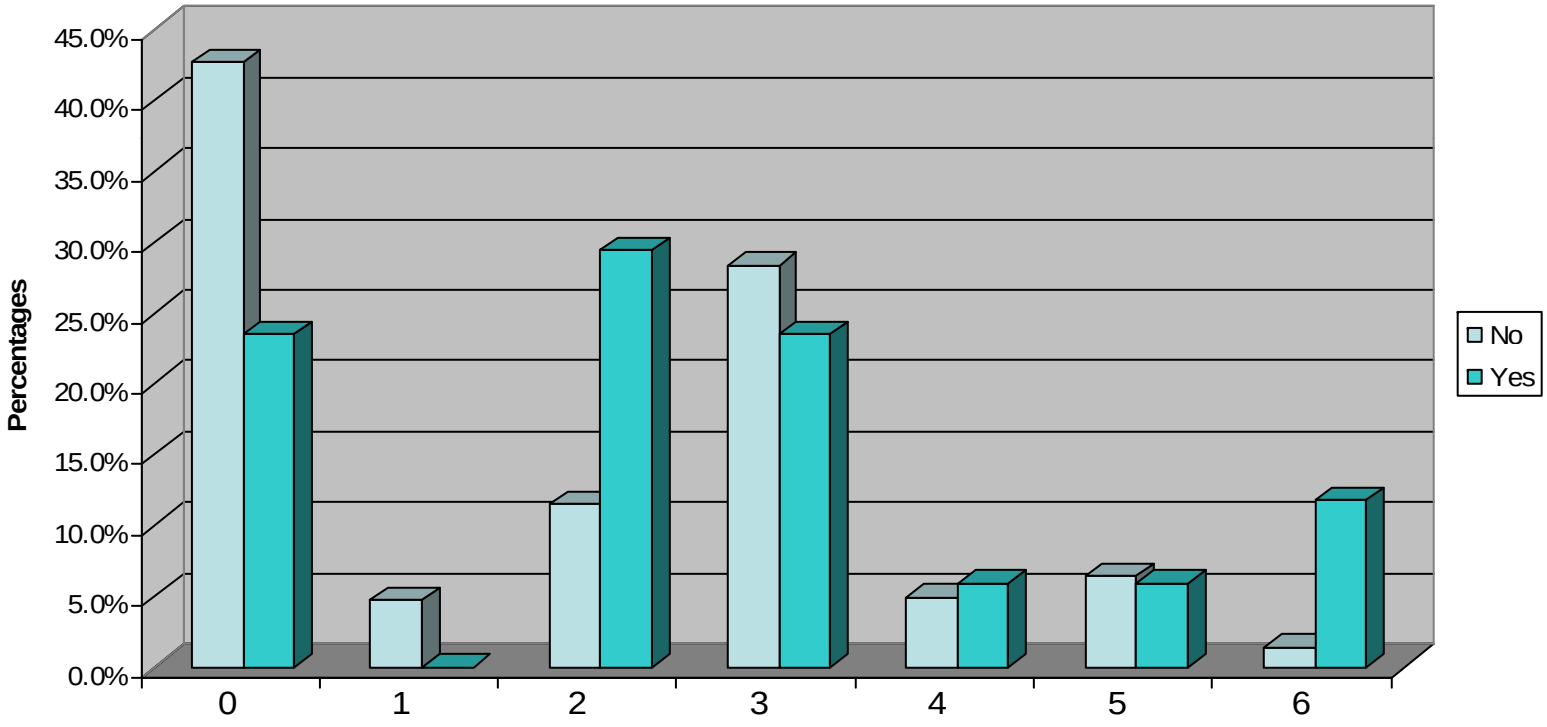
Fitness Level Satisfaction (see note below)



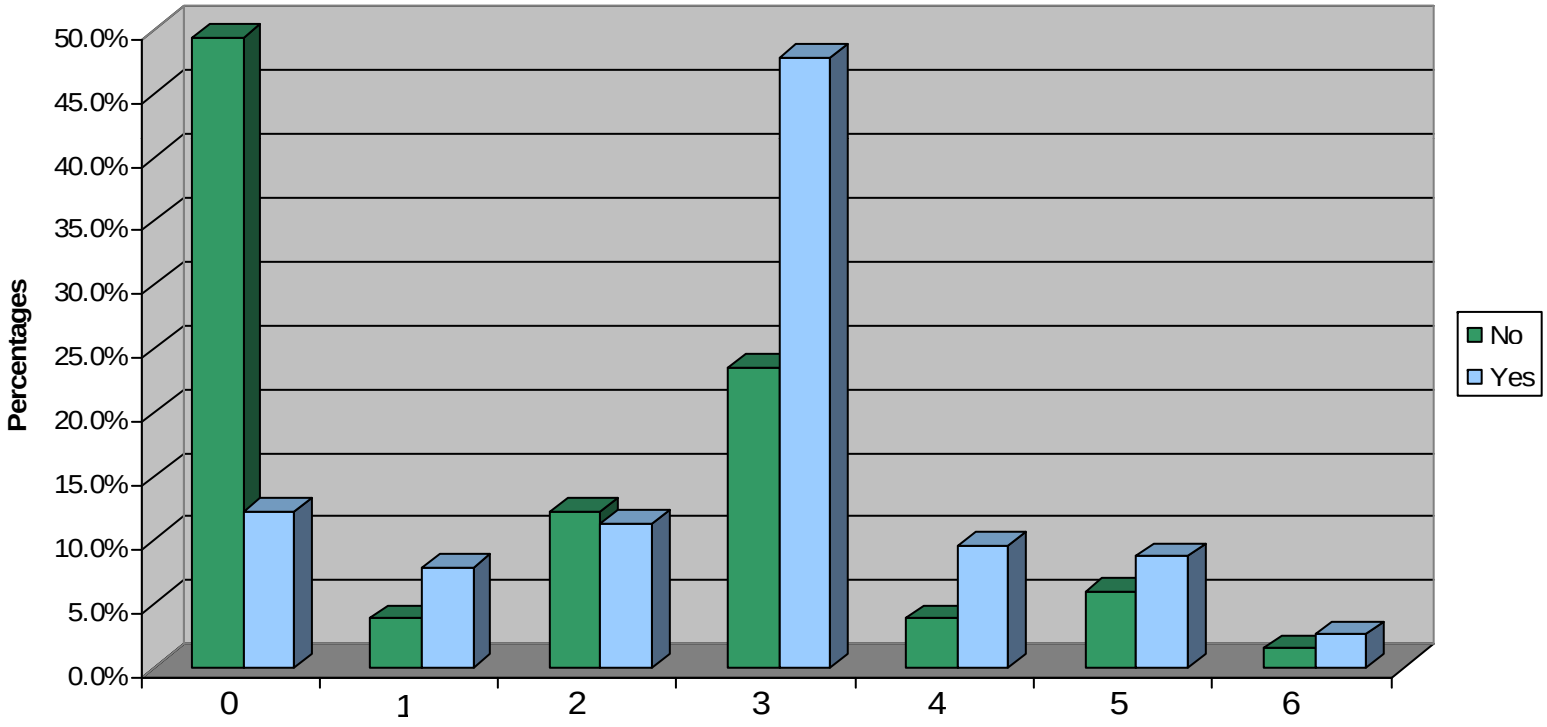
Functional Limitations (see note below)



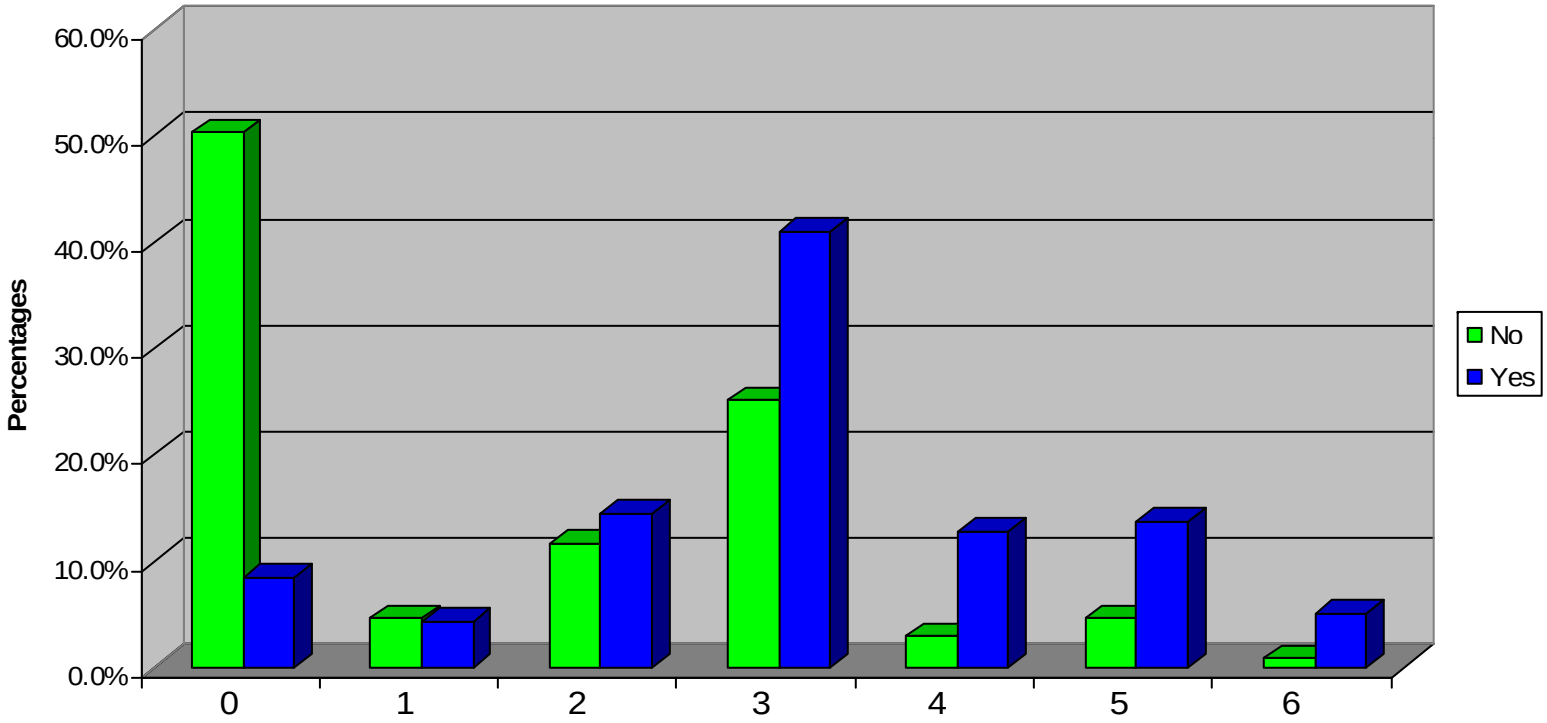
Lack of Knowledge (see note below)



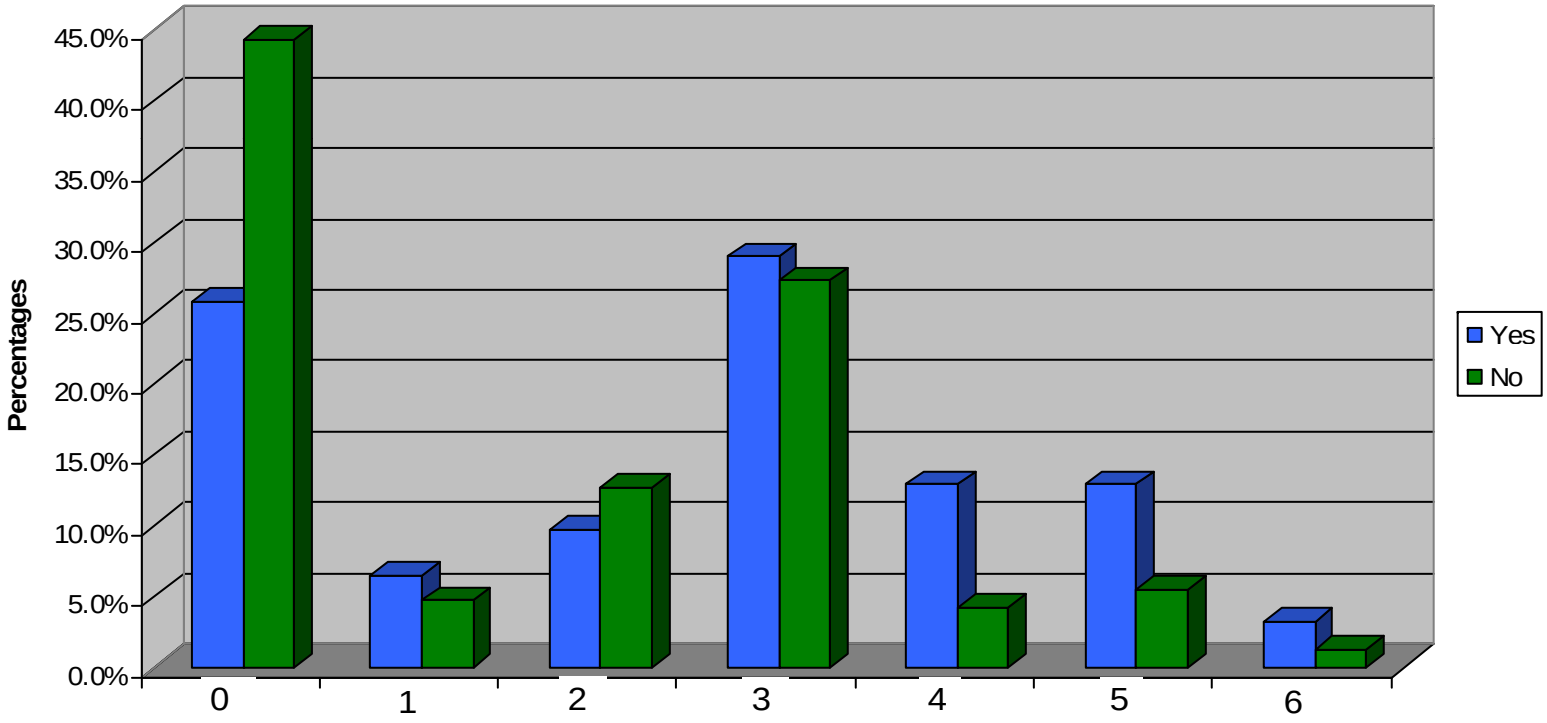
Pain (see note below)



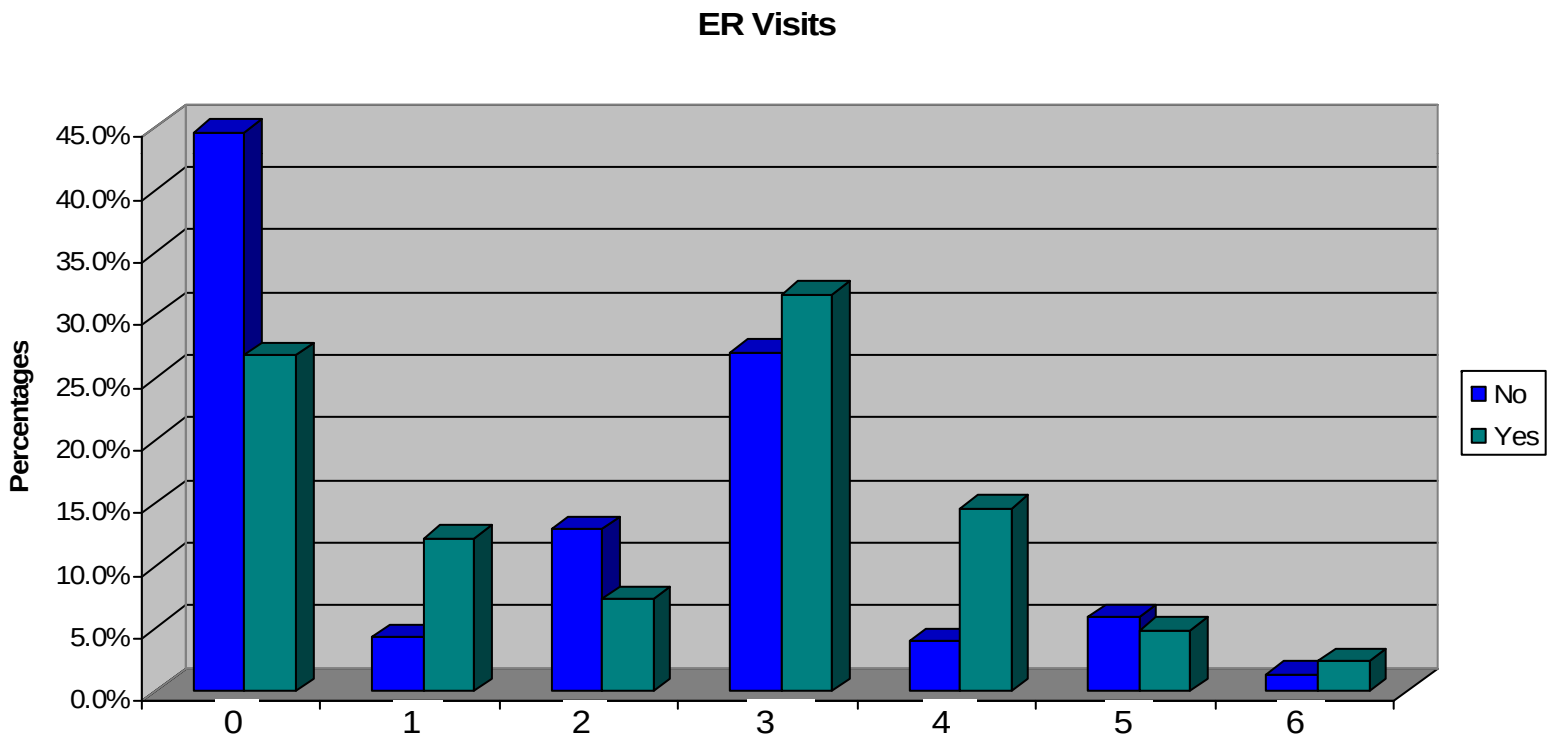
Physical Restriction (see note below)



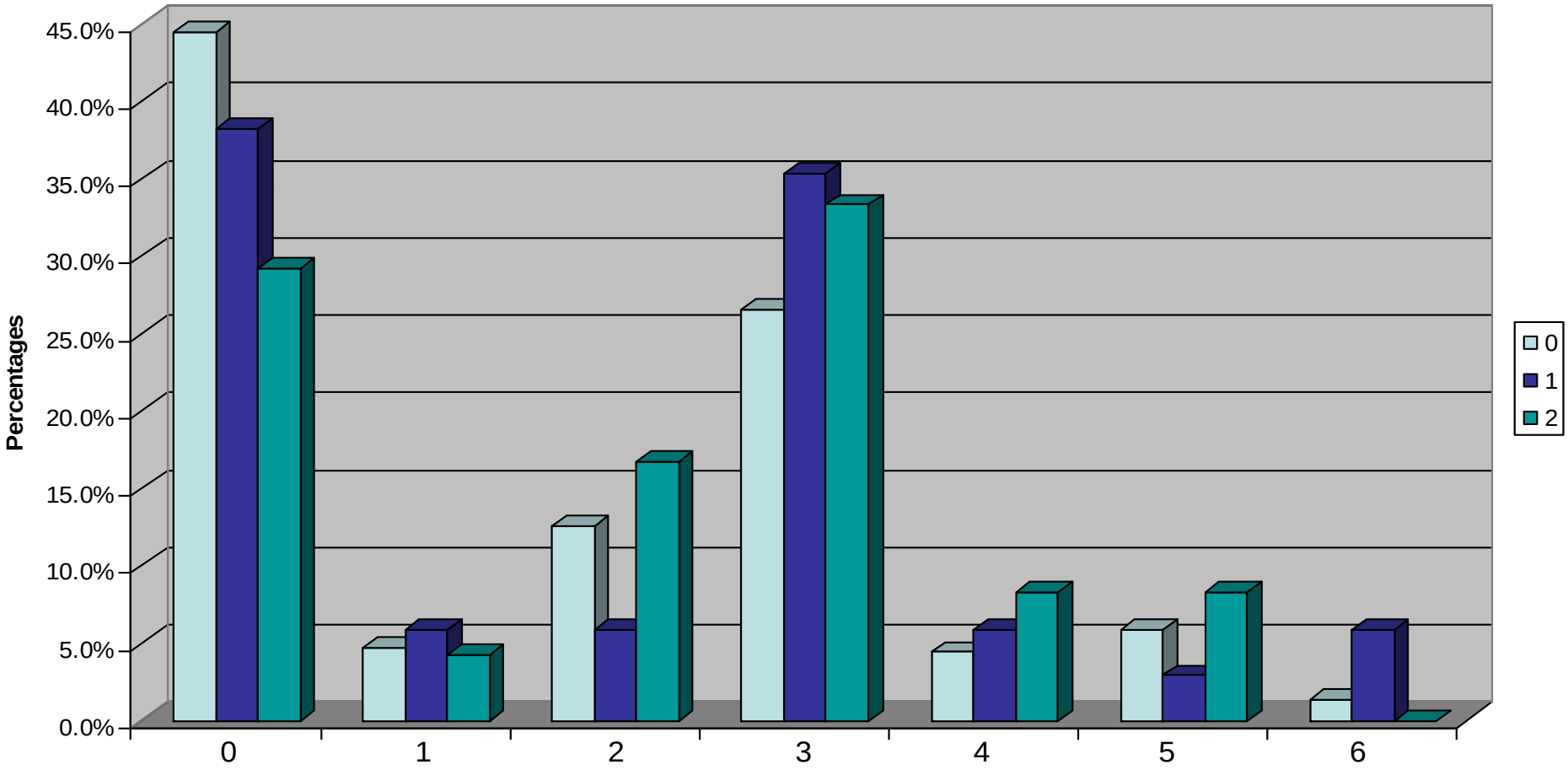
Hospital Visits (see note below)



ER Visits (see note below)



Recent Falls (see note below)



Scales embeded in the CHA

- IADL Performance
- IADL Capacity
- Depression Rating Scale (DRS)
- Pain Scale
- Chess (frailty)
- Cognitive performance scale (CPS)
- ADL Long, ADL Short, ADL Hierarchy

Fall CAP

- A fall is defined as an unintentional change in position where the person ends up on a lower level (e.g. floor, ground or seat).

History of falls strongest predictor of future falls

- High risk: multiple falls in past 3 months
- lower risk: single fall in past 3 months
- Not triggered

Fall CAP: OVERALL GOALS OF CARE

- Identify and change underlying risk factors for falls.
- Promote activity in a safe manner and in a safe environment.
- Recognize common pathways among falls, incontinence, and functional decline such that fall prevention is not an isolated goal but part of a larger objective of promoting physical activity and improved quality of life.

Assess contribution of modifiable risk factors

- Physical function limitations: Balance, gait, strength, and endurance
- Visual problem
- Cognitive problem
- Postural hypotension
- Cardiac arrhythmia
- Medications
- Environment factors
- Low levels of physical activity
- Pain from osteoarthritis and other conditions

Empirical analyses informed the triggers

	NH %	Fall time 2	HC %	Fall time 2	CHA %
low	15	25	15	40	10
high	7	40	12	65	3

- Complex Continuing Care 1996-2008
  N= 32,700
- Home Care 2002-2007 N=153,700
- Long Term Care 2005-2007 N= 13,095
- Community Health Assessment N= 721

Fall risk groups and subsequent fall rates

	CCC %	CCC Time 2	LTC %	LTC Time 2	HC %	HC Time 2	CHA %	CHA Time 2
Not	82.2	17.3	85.6	24.2	67.7	17.5	84.6	11.3
LOW	14.7	68.5	8.5	78.5	18.0	44.2	13.9	46.0
HIGH	3.1	78.9	5.9	89.9	14.3	61.6	1.5	45.5

	CCC	LTC	HC
Sensitivity	46.8	36.7	58.6
Specificity	92.8	96.4	78.2
% correct prediction	80.5	76.8	72.6

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
- CHA 14.6% trigger physical activity

Summary

- Fall CAP more specific
- CAPS including ADL, IADL, Physical activity address similar issues
- Low and High Risk Fall groups demand action

Personal Health Profiles and Educational Brochures:

Enhancing health promotion by home care & primary care

Personal Health Profiles

- RAI-HC
  - Comprehensive assessment designed to support care planning and outcome measurement for home care professionals
  - About 300 items covering broad range of functional, medical, social, psychological and environmental issues

Personal Health Profiles (PHPs)

Short summary of key findings from RAI-HC assessment

- Abstract of subset information that will be of particular interest to specific target audience from external agencies
  - Primary care
  - Home care provider agencies
  - Long term care
- Aim is to improve communication, reduce assessment burden, and increase continuity of care

Personal Health Profile for Primary Care

Personal Health Profile for Primary Care Clinicians

See PHP key for information on scoring; terms in square brackets refer to MDS-HC assessment items.

Name: Jane Doe
Assessment Reference Date: January 26, 2005
Age: 92
Lives alone (CC6): Alone
Health Card Number: xxxxxxxxxx
Date PHP Printed: June 13, 2007
Sex: Female

Health Profile	
Medical Conditions	
CHESS Score (medical complexity)	2 out of 5
Cognitive Performance Scale (CPS)	3 out of 6 / moderate impairment
Depression Rating Scale (DRS)	6 out of 14/ possible depression
Diarrhea or vomiting [K2a or K2e]	no
Difficulty urinating, or urinating 3+ times a night [K2b]	no
Chest pain/pressure at rest or on exertion [K3a]	no
Constipation (No bowel movement in 3 days) [K3b]	no
Dizziness or light-headedness [K3c]	no
Edema [K3d]	no
Shortness of breath [K3e]	no
Experiences hallucinations or delusions [K3f or K3g]	no
Preventive Health Measures	
Potential problem related to emotional well-being	no
Potential problem related to falls	yes
Falls frequency [K5]	3 falls in the last 90 days
Flu shot in last 2 years [K1b]	no
Breast health screening in last 2 years (if female) [K1d]	yes
Medication review in last 6 months [Q3]	yes
Physical Functioning (Physical and Mental Status / Health Status)	
Pain Scale	3 out of 3 / excruciating pain
ADL long form scale	9 out of 28
Potential for improvement in ADLs	yes
Potential problem related to alcohol dependence	no
Potential problem with skin or foot conditions	no
Cognitive decline [B2b]	yes
Sudden or new onset/change in mental function [B3a]	yes
Severe agitation or disorientation [B3b]	no
Vision [D1]	impaired
Hearing [C1]	minimal difficulty
Concern with caregiver distress [G2a or G2b or G2c]	yes
ADL decline [H3]	yes
Bladder Continence [I1]	usually continent
Bowel Continence [I3]	usually continent
Smoked or chewed tobacco daily [K7c]	no
Unintended weight loss [L1a]	no
Noticeable decrease in amount of food or fluids consumed [L2b]	yes
Pressure or stasis ulcer present [N2a or N2b]	no
Emergency Care (in last 90 days)	
Emergency Room (without overnight stay) [P4b]	1 visit(s)
Emergent Care [P4c]	3 visit(s)
Medications	
Managing medications [H1da]	some help
Compliance with medications [Q4]	less than 80% compliant
Receipt of psychotropic medication [Q2a or Q2b or Q2c or Q2d]	yes
Medications list: Verapimil, Slow- K, Oxycocet, Clonazepam, Baclofen, Zestril, Prednisone, Tenormin, plaquenil, lasix, VitD	

Version 1.0 May 2005

Personal Health Profile Key for Primary Care Clinicians

CHESS Score: Changes in Health, End-stage disease and Signs and Symptoms

Scores range from 0 to 5. CHESS measures medical complexity and health instability, based on: vomiting, dehydration, leaving food uneaten, weight loss, shortness of breath, edema, end-stage disease, and decline in cognition and ADL. Higher scores indicate higher levels of medical complexity.

Cognitive Performance Scale (CPS)

Scores range from 0 to 6. Scores are based on skills for daily decision-making, making self understood, and short-term memory recall. "Eating impairment" differentiates a score of 5 or 6. Higher scores indicate a greater degree of cognitive impairment.

Score	Description	Equivalent Average MMSE
0	Intact	25
1	Borderline intact	22
2	Mild impairment	19
3	Moderate impairment	15
4	Moderate/severe impairment	7
5	Severe impairment	5
6	Very severe impairment	1

Depression Rating Scale (DRS)

Scores range from 0 to 14. The DRS is based on 7 MDS-HC items: negative statements, persistent anger, expressions of unrealistic fears, repetitive health complaints, repetitive anxious complaints, sad or worried facial expression, and tearfulness. A score of 3 or greater suggests possible depression.

Potential problem related to Emotional Well-Being: Identifies community dwelling people who may suffer from the symptoms of anxiety or depression.

Potential problem related to Falls: Identifies those for whom falls have occurred recently and if there is a risk of falling. Potential problem based on: history of falls, dementia, Parkinsonism, unsteady gait, does not limit going outdoors, change in mental function.

Pain Scale

Scores range from 0 to 3. Scores are based on two pain questions: pain frequency and pain intensity

Score	Description
0	No pain
1	Mild pain – pain less than daily
2	Moderate pain – daily pain that is mild or moderate
3	Excruciating pain – daily pain that is severe or horrible

ADL Long Form Scale

Scores range from 0 to 28. The Activities of Daily Living (ADL) Long Form is a summative scale capturing 7 of the activities of daily living items: bed mobility, transfer, locomotion, eating, toilet use, personal hygiene, and the more dependent of dressing upper and lower body. Each item is given a value from 0 "Independent" or "Setup help only" to 4 "Total dependence" or "Activity did not occur". Higher scores indicate a more dependent individual.

Potential for Improvement in ADLs: Identifies potential for either greater independence in self-care or prolonged periods in which the risk of decline is lessened. Potential problem based on: ADL deficit is present, the client can understand others, and either a decline has occurred or a belief is present that improvement is possible.

Potential problem related to Alcohol Dependence: Identifies alcohol abuse or dependence. Potential problem based on: one or both of the alcohol-related items.

Potential problem related to Skin or Foot Conditions: Identifies those with, or at risk of developing skin or foot problems. Potential problem based on: any troubling skin conditions or changes, corns/calluses, structural problems, infections, fungi on feet, open lesions.

PHPs – Falls content

Preventive Health Measures

Potential problem related to emotional well-being	no
Potential problem related to falls	yes
Falls frequency [K5]	3 falls in the last 90 days
Flu shot in last 2 years [K1b]	no
Breast health screening in last 2 years (if female) [K1d]	yes
Medication review in last 6 months [Q3]	yes

Potential problem related to Falls: Identifies those for whom falls have occurred recently and if there is a risk of falling. Potential problem based on: history of falls, dementia, Parkinsonism, unsteady gait, does not limit going outdoors, change in mental function.

Use of Educational Pamphlets as a Health Promotion Intervention in Home Care

Study Design

- 8 participating Community Care Access Centres (CCACs → single point entry agencies)
- PHPs used with first ~250 HC assessments

  Provider PHP sent to all provider agencies 1,643 clients

  Primary Care PHP sent to clients family physician 1,569 clients

  Ministry of Health provided software to pilot sites
- Educational pamphlets given to client based on decision rules for five target areas

EXPERT OPINION on fall prevention

"Falling represents one of the few health conditions meeting all the criteria for prevention – high frequency, evidence of preventability, and heavy burden of morbidity."

— Mary Tinetti, PhD and Christianna Williams, MPH

"You can be safe from falling in your home. By working with your doctor and other health professionals, such as physiotherapists, occupational therapists and pharmacists, many falls can be prevented."

— Katherine Berg, PhD

Where can you get more information?

For more information contact:

- Your family doctor or nurse practitioner
- Other health care practitioner, such as a nurse or physical therapist

And use the Internet:

- Active Independent Aging: A Community Guide for Falls Prevention and Active Living: *www.falls-chutes.com*
- Government of Canada's Public Safety Branch: *www.safecanada.ca/seniors_e.asp*
- Health Canada's Division of Aging and Seniors: *www.hc-sc.gc.ca/seniors-aines* OR *www.phac-aspc.gc.ca/seniors-aines*
- Ministry of Health and Long Term Care: Assistive Devices Program: *www.health.gov.on.ca/english/public/public_mn.html*

for health ideas | innovations in data, evidence & applications

health information series

- Primary Health Care Transition Fund
- Homewood Research Institute, Guelph, ON
- Department of Health Studies and Gerontology University of Waterloo, Waterloo, ON

www.ideas.uwaterloo.ca/interRAI

Stay on Your Feet

Don't Fall Head Over Heels

health information series

At the time of the home visit

Case Manager completes the RAI-HC Assessment as per normal practice

Using the Educational Pamphlet Guide, review RAI-HC to determine if a trigger for one or more of the pamphlets has been cued

If a pamphlet is given:

- Provide the client the opportunity to discuss any concerns or questions
- Reassure the client
- Provide relevant educational information, including resources
- Discuss with informal care providers, if necessary

Follow-up data

- For clients who remain on service & received brochure
  - Compare with other cohorts & clients in other agencies to determine whether brochures associated with change
- Focus groups
  - Provider agencies
  - Teleconference with physicians
  - CCACs

Age and gender distribution of PHP Clients

CCAC	Female %(n)	Age Mean (SD)
HM	65.1 (2229)	74.4 (151.)
HN	67.0 (474)	77.2 (13.9)
HP	68.7 (617)	77.7 (13.5)
NY	70.8 (1391)	80.1 (11.1)
OX	68.8 (471)	77.3 (12.7)
TB	67.2 (617)	77.0 (13.6)
WA	69.1 (1092)	77.4 (13.6)
YR	66.6 (1422)	76.5 (13.8)

How many unique physicians received PHPs?

CCAC	Number of physicians sent PHPs
HM	244
HN	428
HP	129
NY	128
OX	174
TB	140
WA	147
YR	323

Percentage of Clients Who Would Trigger Brochure by Topic, Ontario

	Clients Triggering Brochure % (n)
Falls	45.3 (5576)
Breast Screening	48.1 (5916)
Influenza vaccination	24.8 (3056)
Emotional Well-being	25.0 (3083)
Medication Management	38.7 (4760)

	Not triggered & Not provided	Triggered & Provided	Triggered But Not provided	Not triggered But Provided	Triggered But Refused
Falls	56.3	32.2	4.2	5.9	1.4
Breast Screening	62.7	22.3	9.2	2.2	3.6
Influenza vaccination	67.5	17.7	8.9	3.3	2.6
Emotional Well-being	65.4	23.7	3.7	5.6	1.5
Medication Management	62.0	24.5	6.7	4.9	2.0

- Quasi experimental design
  - 8 CCACs where large majority of clients who met criteria received brochure
    - n=2770
  - Matched to other CCAC clients in regions not using brochure
    - n=5863
  - Compared subsequent outcomes using provincial RAI-HC data repository

Ontario Provincial RAI-HC Database (up to June 2006)

- RAI-HC Assessments
  - 1st 232,885
  - 2nd 107,911
  - 3rd 57,282
  - 4th 28,753
  - 5th 12,253
  - 6+ 3,994
- Assessments by year
  - 2003 68,376
  - 2004 160,727
  - 2005 193,406
  - 2006 20,569 (Partial)

- Assessments by region
  - Central East 66,312
  - Central South 56,384
  - Central West 57,171
  - Eastern 48,456
  - North 48,092
  - South West 83,697
  - Toronto 82,963

Outcomes of PHP and Brochure Pilot

- Falls intervention
  - Overall trigger rate – 46.0%
    - Experimental CCACs – 45.8%
    - Control CCACs – 47.1%
- Unadjusted rates of ***not*** triggering Falls CAP at follow-up among those who triggered it at baseline
  - Experimental CCACs – 30.3%
  - Control CCACs – 25.3%

Outcomes of PHP and Brochure Pilot

- Risk of any falls among those who triggered Falls CAP ***and*** had 1+ falls at baseline

  - **After adjusting for sex, cognitive impairment and time between assessments …**

    … the odds of falling at follow-up for clients who received the brochures and PHP was *0.82* **that of those with conventional care**

Potential benefits

- Improved communication of case manager with
  - Physicians & other primary care clinicians
  - Provider agencies
  - Client
- Enhances health promotion aspect of RAI-HC
- Further embeds RAI-HC in health care system by making it an information source for multiple organizations/professionals
- Reduced assessment burden

Potential benefits

- Dual intervention strategy
  - Provide information to physician to identify needs not previously recognized or responded to
  - Empower client & family by giving them relevant information and encouraging them to speak to their physician

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
- PHPs and education brochures are low cost additions that augment utility of interRAI instruments
- FBI is a new addition to the growing number of scales embedded in interRAI instruments

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