Use of HC Data by U.S. States to Influence Public Policy

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President, interRAI
Professor, University of Michigan

Day After the Big Election, 2008

Agenda

- Introduction to interRAI assessments
- Policy Applications
  - Profiles
  - Eligibility Determination
  - Case Mix Payment
- Conclusions

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Who are We?

- Non-profit organization
- Meets every 9-10 months
- 57 members from 29 nations
- Key interests:
  - Science (e.g., cross-national comparisons)
  - Instrument development
  - Support implementation in other nations
- Holds copyright to RAI assessment instruments
- Grants royalty-free licenses to governments and care providers
- www.interrai.org

interRAI

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interRAI Members and Activities

Europe

Iceland, Norway, Sweden, Denmark, Finland Netherlands, Germany, UK, Switzerland, France, Poland, Italy, Spain, Belgium, Estonia, Czech Republic, Lithuania, Austria, Portugal,

North America

Canada, USA, Mexico, Belize, Cuba

Middle East/Asia

Israel, India

South America

Chile, Brazil, Peru

Far East/Pacific Rim

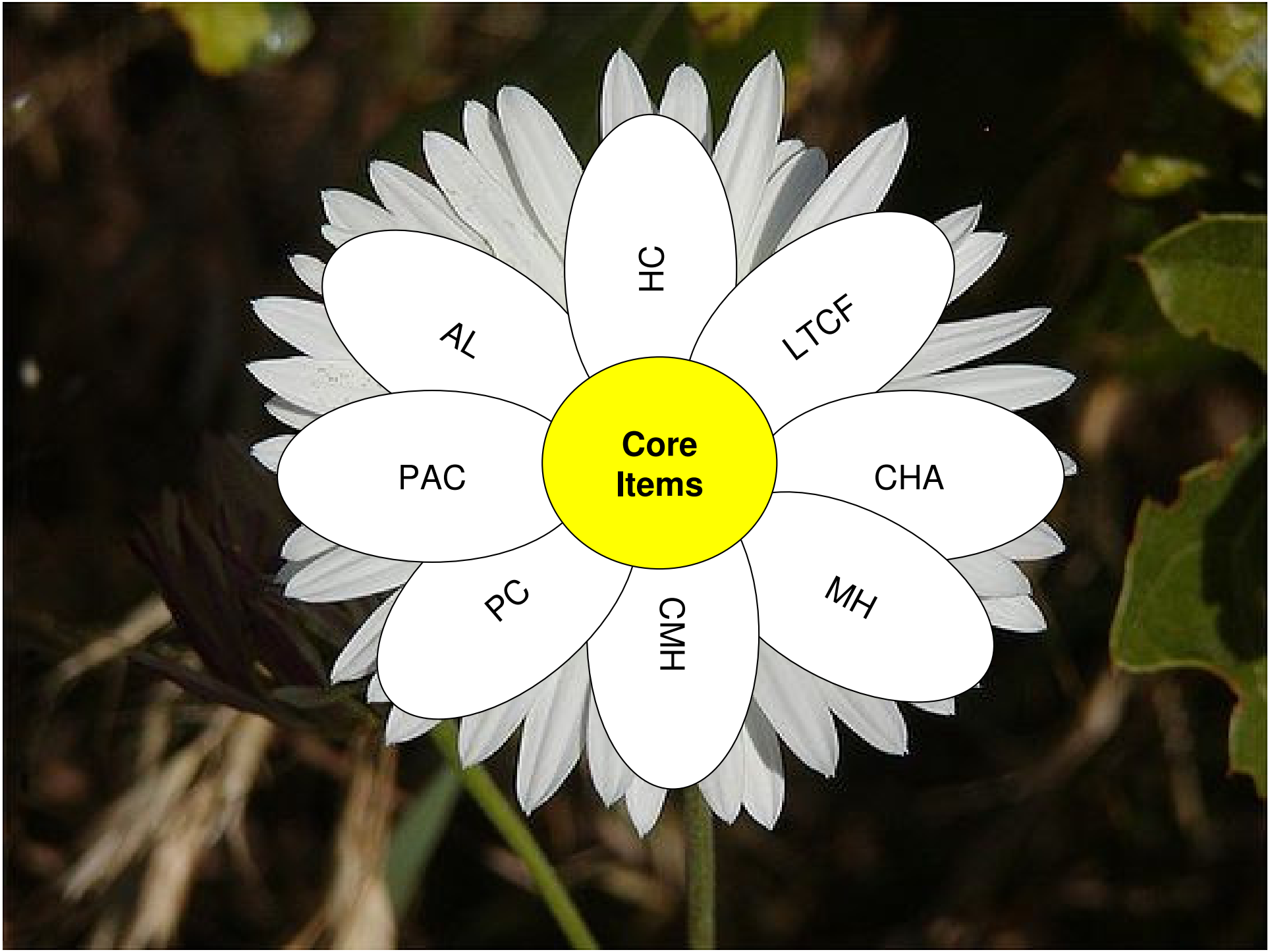
Japan, South Korea, Taiwan, China, Hong Kong, Australia, New Zealand

interRAI "Suite"

- Well Elderly
- Home Care
- Assisted Living
- Nursing Home
- Post-acute Care
- Palliative Care
- Acute Care
- Inpatient Mental Health
  - Forensic supplement
- Community Mental Health
- Intellectual Disabilities

In Development:

- Persons with Disabilities
- Pediatric Care


HC
LTCF
CHA
MH
CMH
PC
PAC
AL
Core Items

interRAI

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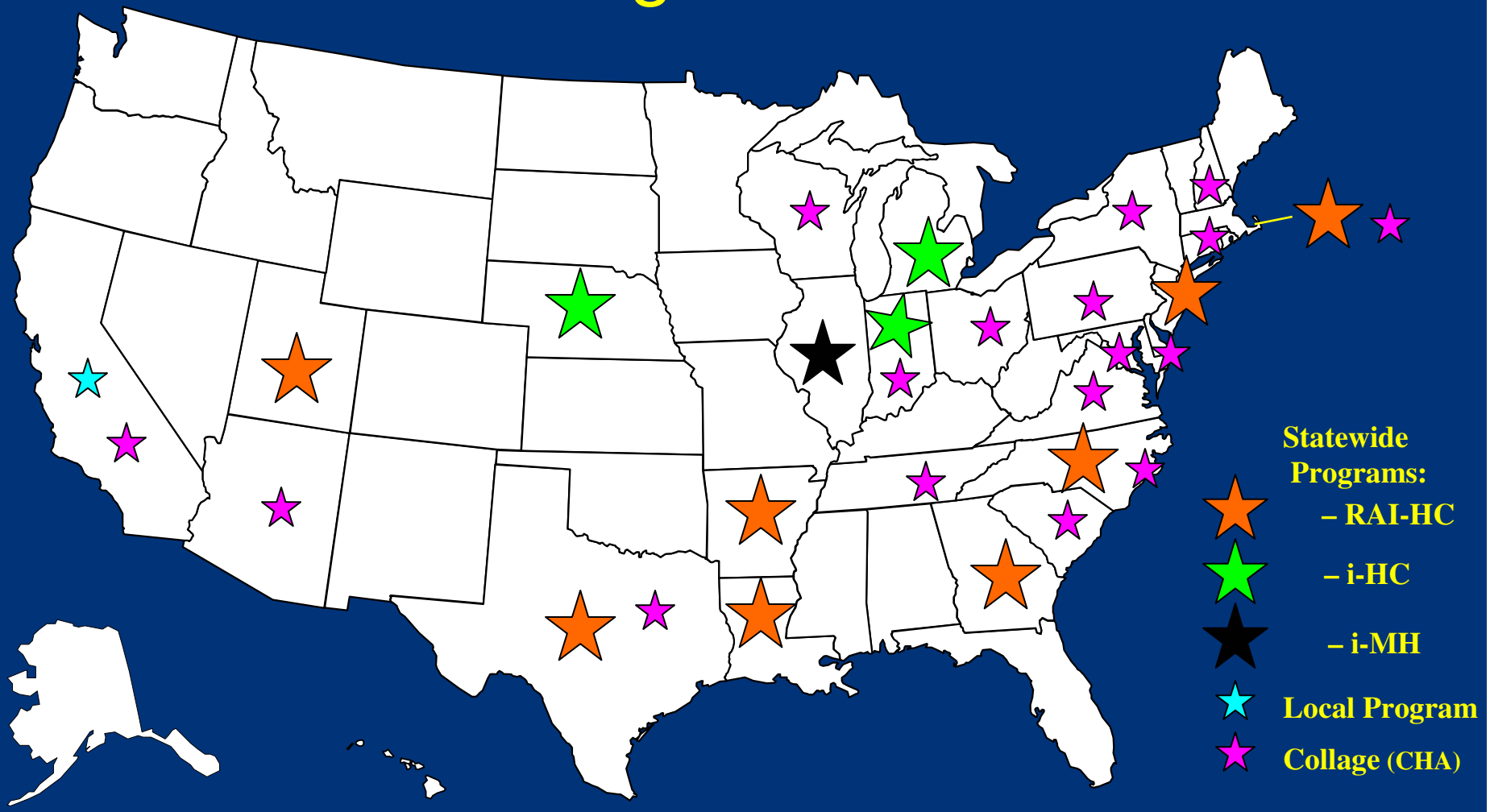
US States Using interRAI Instruments



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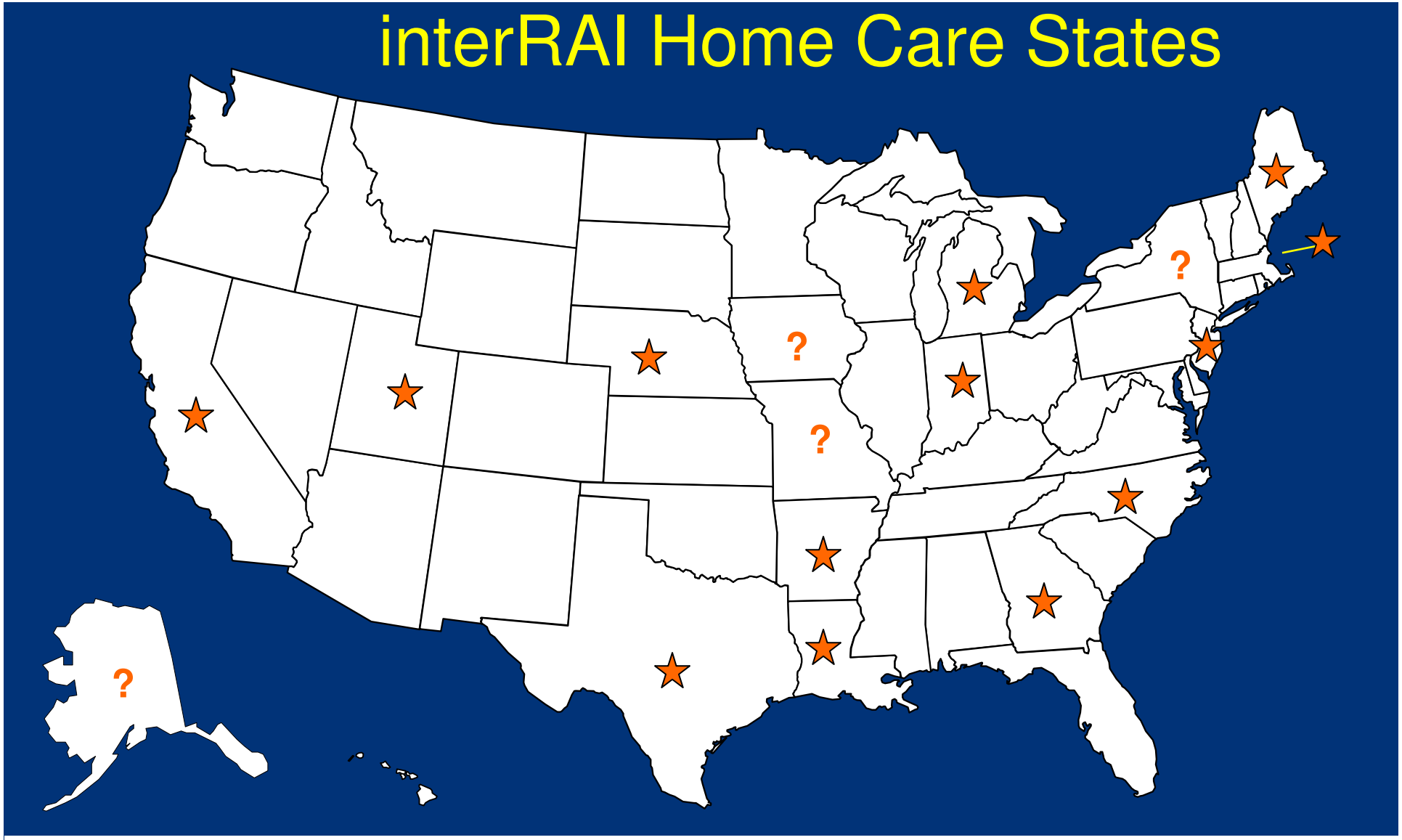
interRAI Home Care States



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State Uses for HC Data

	AR	GA	LA	MA	ME	MI	NC	NJ	TX	UT
Screening/LOC	✓		✓	✓	✓	✓		✓	✓	
Assessment	✓	✓	✓	✓	✓	✓	✓	✓		✓
Care Planning	✓	✓	✓		✓	✓	✓	✓		✓
Quality Improvement					✓	✓				✓
Case Mix Reimbursement	✓		✓							
Program Administration			✓		✓	✓		✓		✓
Research	✓		✓		✓	✓				
Policy	✓		✓	✓	✓	✓		✓		✓

January 2006

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Population Profiling

- Concept: Personal-level data is accumulated to provide overview of persons served across different programs

SUMMARY STATUS MEASURES

	EDA	PCA	LTCPCS	NH Adm	NH Prev
ADL Hierarchy					
Independent	27%	36%	32%	8%	9%
Supervision	8%	3%	8%	7%	8%
Limited Assistance	16%	18%	14%	21%	18%
Extensive Assistance I	17%	19%	20%	15%	18%
Extensive Assistance II	12%	9%	9%	10%	9%
Dependent	10%	10%	11%	24%	19%
Total Dependence	10%	5%	7%	15%	18%
Cognitive Performance Scale					
Intact	41%	44%	31%	29%	21%
Borderline Intact	18%	17%	18%	15%	13%
Mild Impairment	9%	13%	14%	15%	15%
Moderate Impairment	15%	17%	19%	22%	25%
Moderately Severe Impairment	3%	5%	3%	6%	7%
Severe Impairment	7%	3%	9%	5%	7%
Very Severe Impairment	7%	2%	6%	8%	13%
Communication Scale					
Clear	52%	60%	44%	54%	45%
Adequate	13%	11%	14%	12%	13%
Minimal Difficulty	19%	19%	26%	14%	16%
Somewhat Difficulty	5%	3%	6%	4%	6%
Moderate Difficulty	6%	6%	5%	8%	10%
Highly Impaired	2%	1%	3%	2%	3%
Severely Impaired	3%	1%	2%	4%	6%
Pain					
No Pain	34%	34%	33%	55%	63%
Mild Pain	21%	10%	11%	22%	20%
Moderate Pain	26%	20%	21%	19%	15%
Severe Pain	19%	36%	35%	3%	2%
Depression Rating Scale					
No Depression	61%	29%	36%	60%	52%
Mild Depression	21%	21%	23%	27%	31%
High Depression	14%	40%	33%	13%	17%

One page from Program Profile for State of Louisiana

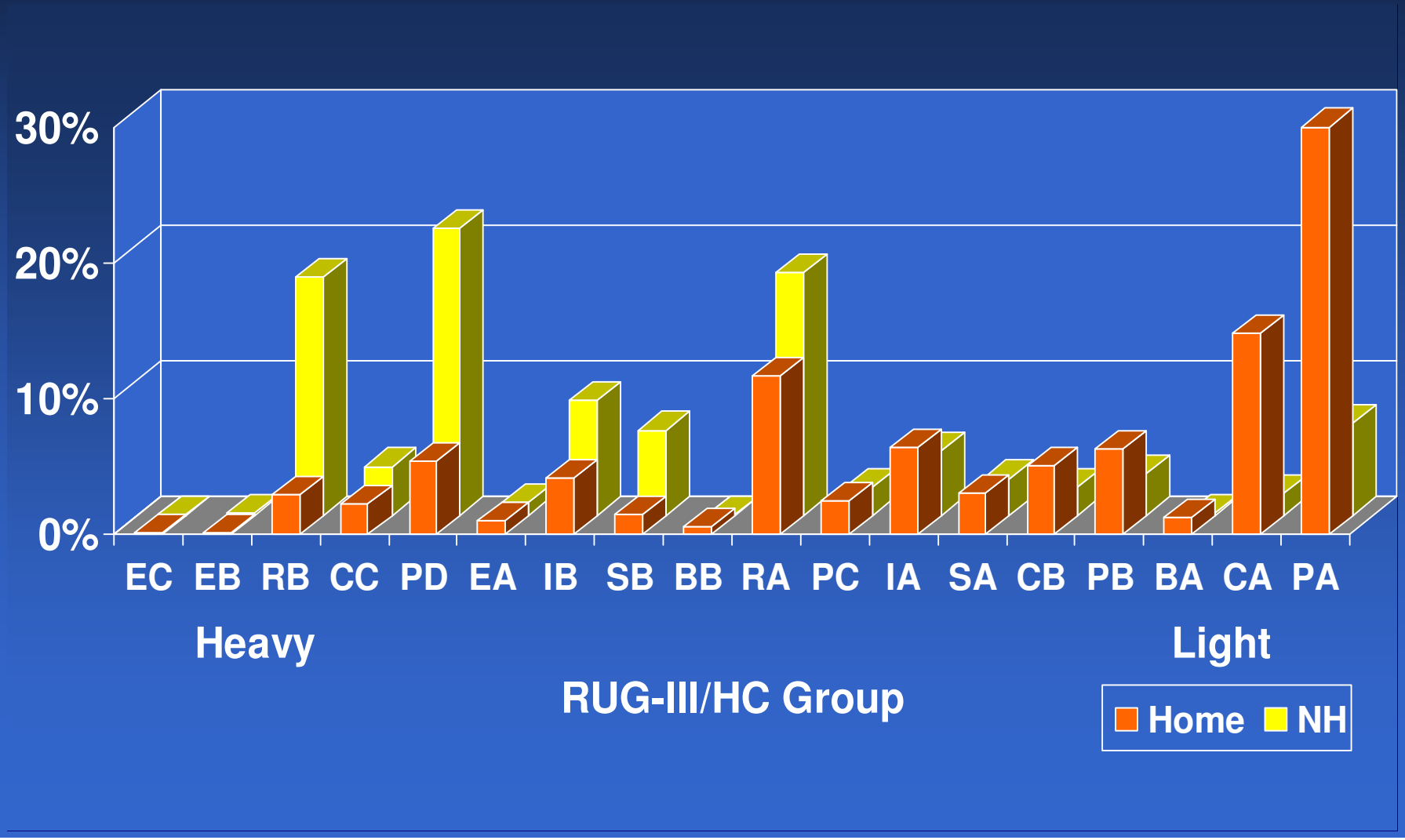
Opportunities: Population Profiling/Program Evaluation

- Within-program comparisons
  - Subpopulations
  - Same programs
  - Different programs
- Assess impact of policy changes
- Evaluate effects of training

Cross-Sector Compatibility

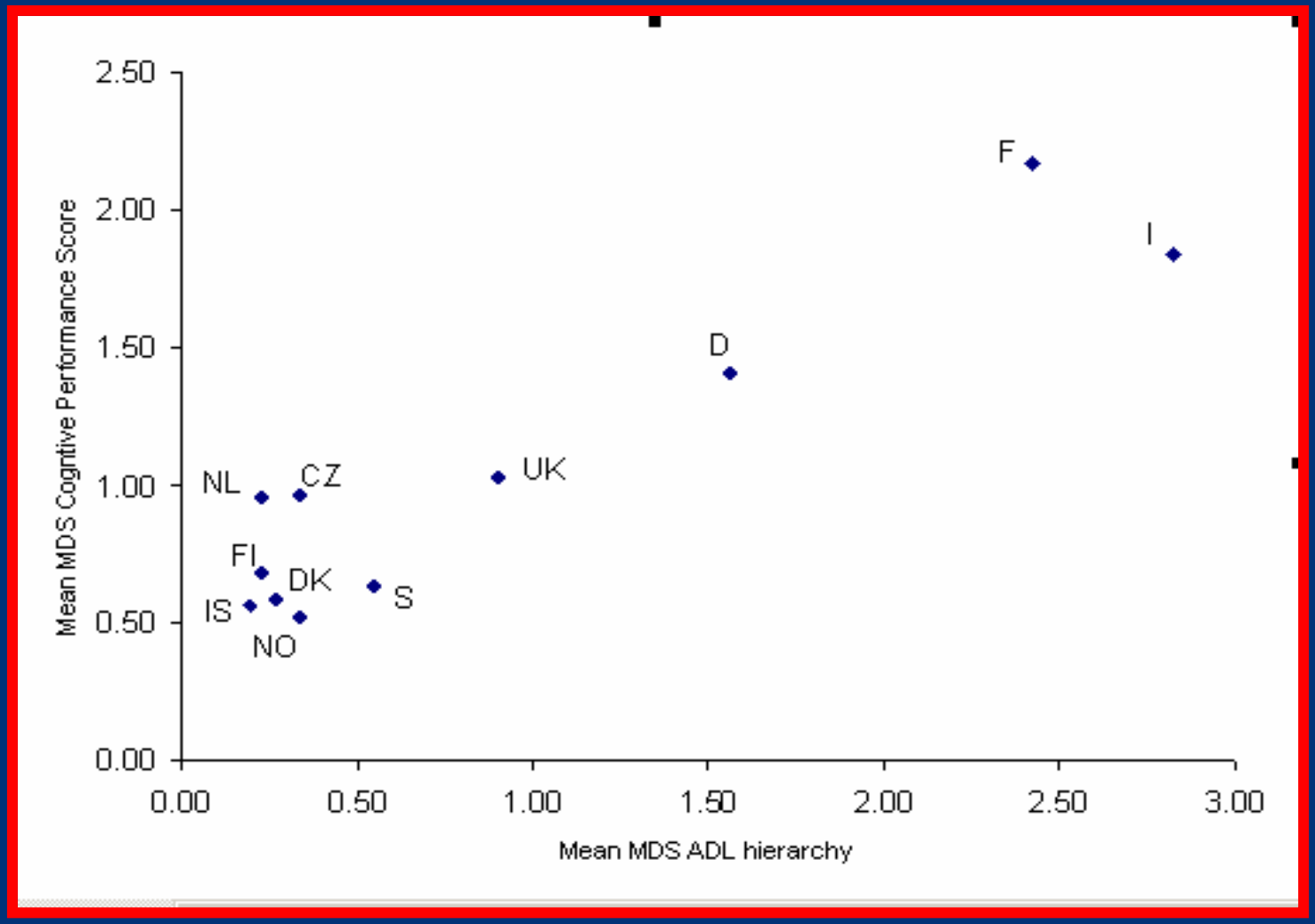
- Goal of new interRAI "Suite"
  - Assessment items consistent across instruments
  - Common structure for all databases
- Allows comparisons between sectors
- Effective items used across sectors

Comparing Persons Served in Two Michigan Settings



Cross-National Comparisons

- Practical experience from use in multiple nations
- Cross-national comparisons provide more accurate standards
  - Only possible with standardized assessment



Carpenter I et al, Aging Clin Exp Res 2004;16:259-269

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Eligibility/Appropriate Placement

- Using “screeners” of interRAI data for:
  - Eligibility for nursing home “level of care”
    - Michigan
    - Louisiana
    - New Jersey
  - Appropriate program placement
  - Target individuals in nursing homes for discharge

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Michigan's Nursing Facility Level of Care Screen

Science

- Use RUG-III case-mix measurement to identify individuals
  - Federal system for Medicare
  - Substantial research base
  - Permits future alternatives
- Use existing data to determine impact of alternative approaches
  - Nursing home (MDS)
  - Home care (MDS-HC)

DCH Decision: Target Lightest-Care RUG-III Group

- No Rehabilitation therapies
- Few or No Late-loss ADL impairments
- No Major/unstable medical conditions, treatments
- Less impaired cognition/decision-making
- Little/No challenging behavior

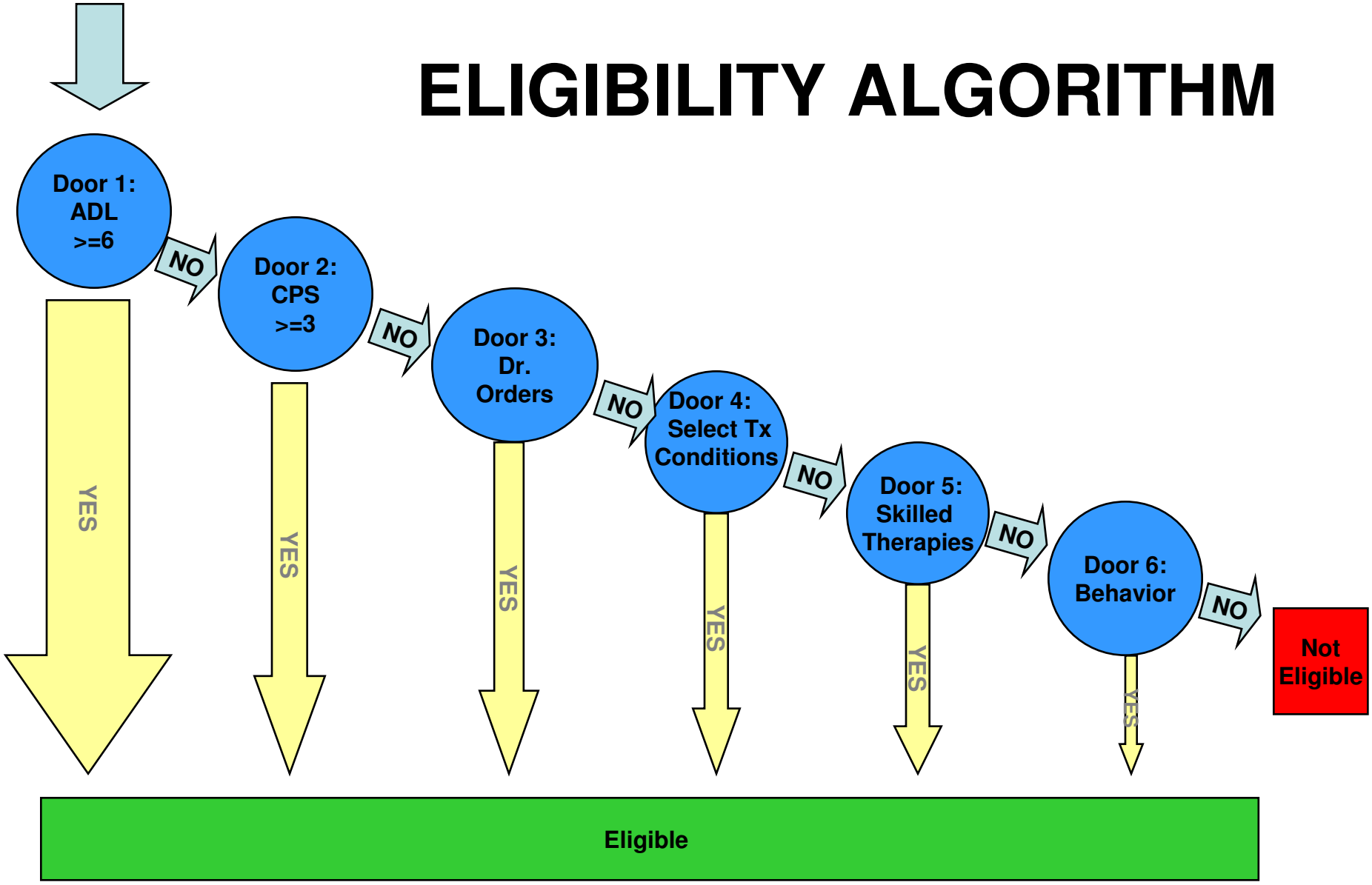
DCH Plan: Use Doors

- Simplify screen by using series of general questions
  - “YES” opens the door; specific MDS items follow
  - “NO” skips to next door

Door Questions

- Does the person need any help with ADLs?
- Does the person have problems with memory or making decisions?
- Is the person under the care of a physician for treatment of an unstable medical condition?
- Is the person currently receiving any health treatments or conditions?
- Is the person currently receiving any skilled therapies?
- Does the person display any challenging behaviors?

ELIGIBILITY ALGORITHM



Specific interRAI Items Needed Inside Doors

- ADL door: 4 items
- Cognition/Decision-making door: 3 items
- MD orders/visits door: 2 items
- Medical Conditions/TX door: ?? items
- Therapy door: 3 items
- Behavior door: 7 items

Screen Operation

- Before admission
  - Most people will be asked 5 items, could be more
- After admission
  - derive eligibility screen from quarterly assessment data
  - Waiver and NF IT vendors can add software to automate

Projections vs. Performance: HC

	LOCD Door	Estimate	LOCD Screen
1.	ADLs	37%	69%
2.	Cognition	6%	14%
3.	Physician orders/visits	Na	2%
4.	Conditions/treatments	11%	9%
5.	Skilled Therapies	1%	2%
6.	Behavior	1%	1%
7.	Service Dependency	na	2%
	TOTAL ELIGIBLE	55%	97%
	TOTAL INELIGIBLE	44%	3%

Triggered Doors: Nursing Facility vs. Home Care Waiver

LOCD Door	NF	HC
1. ADLs	84%	60%
2. Cognition	50%	31%
3. Physician orders/visits	46%	Na
4. Conditions/Treatments	58%	32%
5. Skilled Therapies	61%	22%
6. Behavior	11%	18%
7. Service Dependency	2%	19%
Total	99.6%	97.4%

Eligibility/Appropriate Placement

- Using “screeners” of interRAI data for:
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    - Louisiana
    - New Jersey
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Case Mix

- Relative measure of cost of caring for an individual person
- Accumulated to any group of persons

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interRAI Case-Mix Systems

- Nursing Facilities – RUG-III
- Home Care – RUG-III/HC
- Inpatient Psychiatric Care – SCIPP
- Intellectual Disabilities – RUG-III/ID

Uses of Case Mix

- Payment
- Comparing organizations
- Management
- Monitoring temporal changes in admission status, populations
- Measuring outcomes

Home Care Case-Mix Payment

- New 'hot' issue in the US
- Increasing attention to home care
- Increasing focus on getting people out of or preventing people going into nursing homes
- Interest in systems that support choice in the selection of services

➔ increasing concern about controlling home care costs

➔ increasing issue of rationality in payment system

A (Short) Guide to Payment Systems

- Cost reimbursement
  - Concept: reimburse provider costs
  - Pro: simple, encourages provision of service, fully pays for all services
  - Con: Inflationary, need external control of services

A (Short) Guide to Payment Systems

- Negotiated rates (e.g., fee-for-service)
  - Concept: Set a “fair price”
  - Pro: providers know what they will be paid
  - Con: No control of service volume

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A (Short) Guide to Payment Systems

- Needs-based
  - Concept: determine care needs and predict resources required
  - EXAMPLE: Louisiana Daily Level of Service

CURRENT DAILY LEVEL OF SERVICE GUIDE

ADL Activities	Independent	Limited	Extensive	Total
Eating (based on 3 meals/day)	0	Up to 30 min./day	Up to 1 hr./day	Up to 1 hr.30 min./day
Bathing	0	Up to 30 min./day	Up to 45 min./day	Up to 1 hr./day
Dressing	0	Up to 15 min./day	Up to 30 min./day	Up to 1 hr./day
Grooming	0	Up to 15 min./day	Up to 15 min./day	Up to 15 min./day
Transferring	0	Up to 30 min./day	Up to 45 min./day	Up to 1 hr./day
Ambulation	0	Up to 15 min./day	Up to 30 min./day	Up to 30 min./day
Toileting	0	Up to 30 min./day	Up to 45 min./day	Up to 1 hr./day

IADL Activities	Maximum Time
Light housekeeping	Up to 1 hour/week
Food preparation and storage	Up to 30 minutes/meal
^Grocery shopping	Up to 2 hours/week
Laundry	Up to 1 hour/week
Medication reminders	1 hour/month
Assist with scheduling medical appointments	15 minutes/month
Assist recipient with accessing medical transportation	15 minutes/month
^^Accompany to medical appointments when necessary due to recipient's frail condition	Up to 3 hrs. 30 min./month

A (Short) Guide to Payment Systems

- Needs-based
  - Concept: determine care needs and predict resources required
  - EXAMPLE: Louisiana Daily Level of Service
  - Pro: Relates directly to needs for care
  - Con: Inaccurate at person level, difficult to develop overall budget, does not address informal care

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A (Short) Guide to Payment Systems

- Case-mix adjusted payment
  - Concept: amount paid is relative to overall care needs (based on characteristics of person)
  - Pro: scientifically determined, evaluates total care needs
  - Con: complexity, does not address informal care

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Status of Home Care Case-Mix

- Choosing a case-mix system
- Designing a payment system
- Role of informal ("natural") supports

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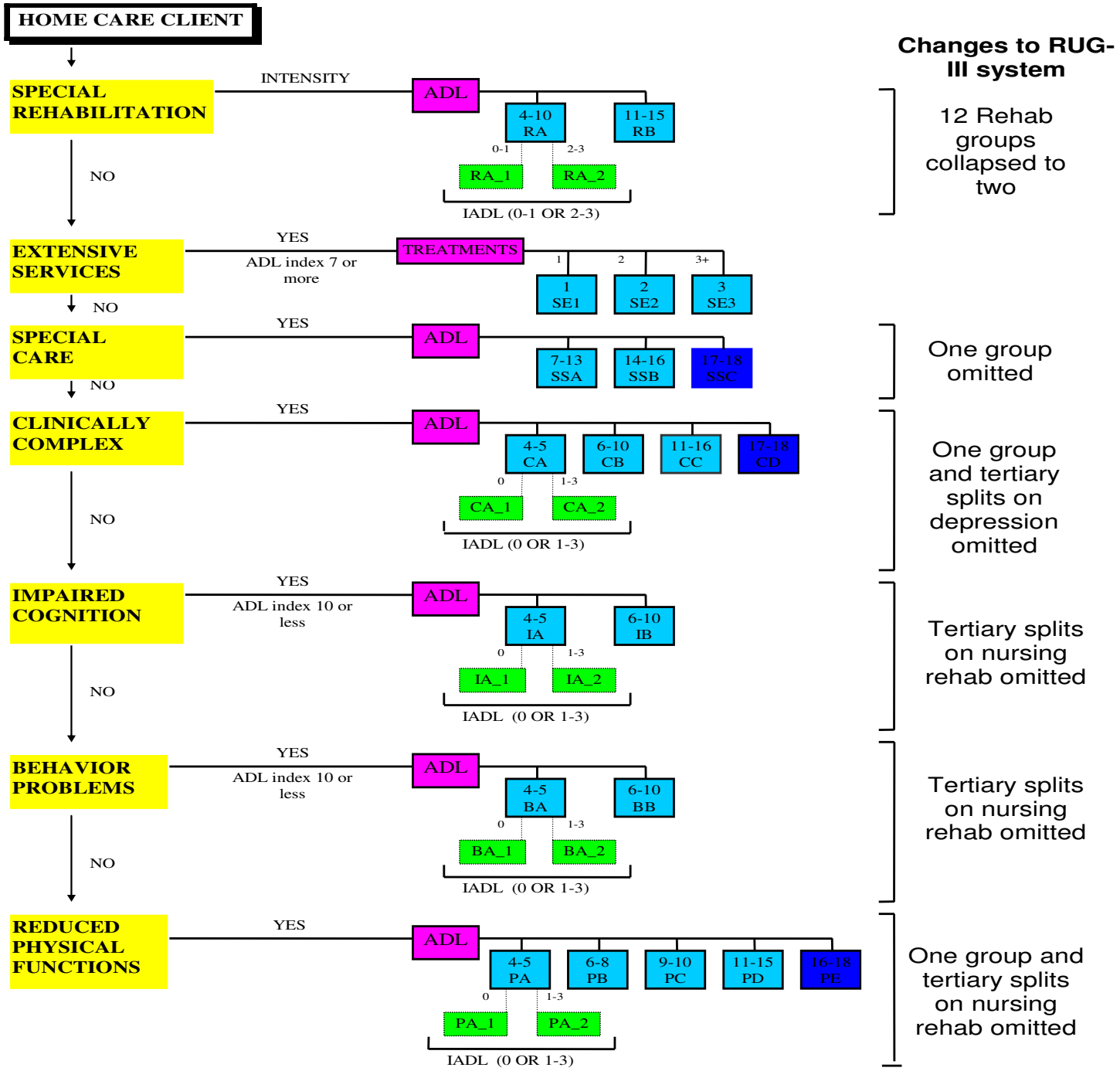
Measuring Case Mix in Home Care

- Basis: interRAI's Home Care assessments (MDS-HC)
- Desirable if integrates with institutional case-mix measure (RUG-III)
  - Basis for federal Medicare payment and many state Medicaid payment systems
  - Many people get home care as a substitute for nursing home care

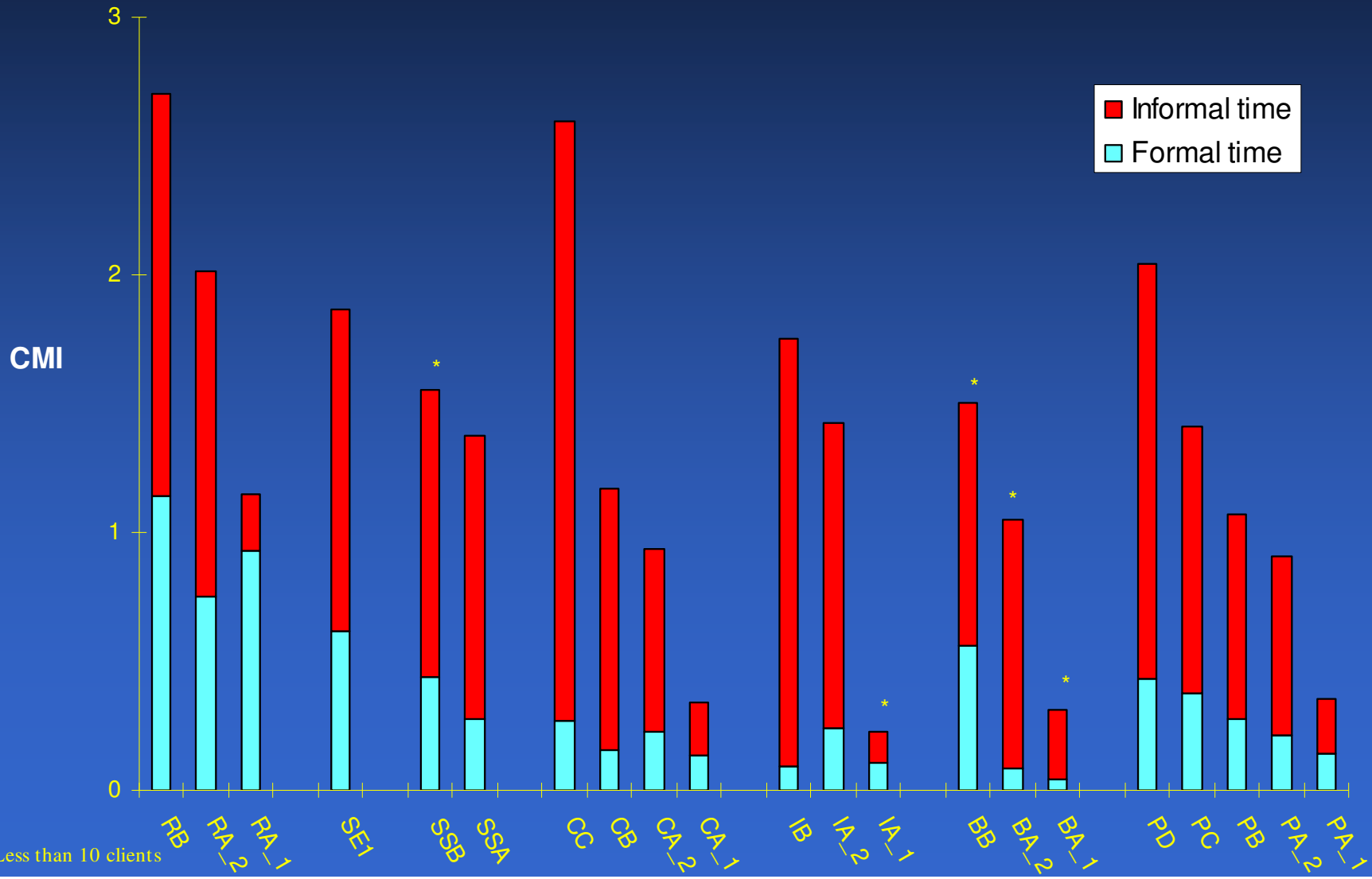
➔ RUG-III/HC

Derivation/Validation of RUG-III/HC

- Derivation:
  - Michigan MI Choice Waiver (N=804)
  - Predict: estimated formal + informal time, costed
  - Variance explanation: 33.7%
  - *Björkgren, Fries, Shugarman, 2000*
- Validation
  - Ontario Continuing Care Access Center (N=29,921)
  - Predict: billed formal + estimated informal time, costed
  - Variance explanation: 37.3%
  - *Poss, Hirdes, Fries, McKillip, Chase, 2007*

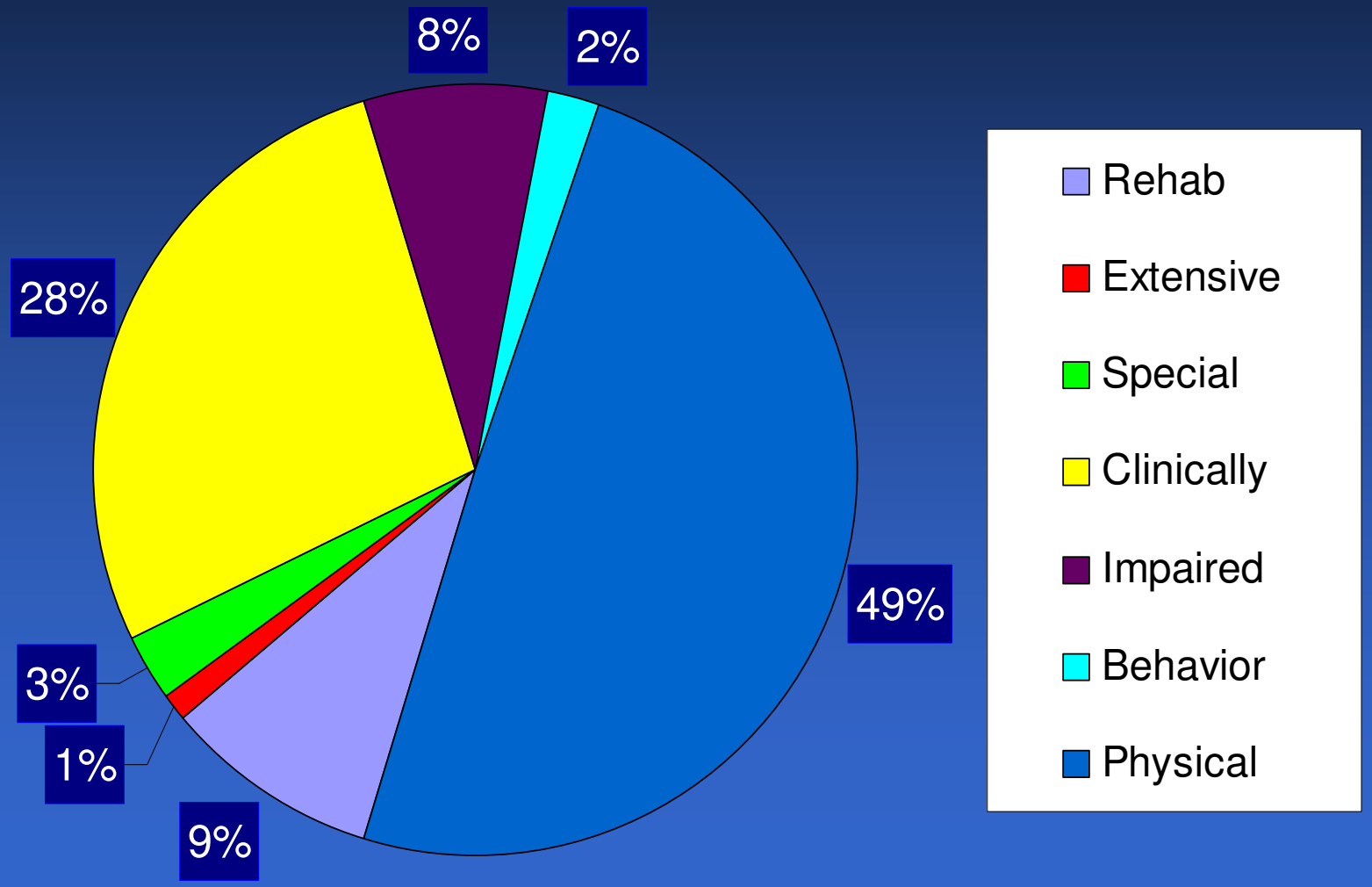

HOME CARE CLIENT
SPECIAL REHABILITATION
INTENSITY
ADL
4-10 RA
11-15 RB
0-1
2-3
RA_1
RA_2
IADL (0-1 OR 2-3)
NO
EXTENSIVE SERVICES
YES
ADL index 7 or more
TREATMENTS
1
2
3+
1 SE1
2 SE2
3 SE3
NO
SPECIAL CARE
YES
ADL
7-13 SSA
14-16 SSB
17-18 SSC
NO
CLINICALLY COMPLEX
YES
ADL
4-5 CA
6-10 CB
11-16 CC
17-18 CD
0
1-3
CA_1
CA_2
IADL (0 OR 1-3)
NO
IMPAIRED COGNITION
YES
ADL index 10 or less
ADL
4-5 IA
6-10 IB
0
1-3
IA_1
IA_2
IADL (0 OR 1-3)
NO
BEHAVIOR PROBLEMS
YES
ADL index 10 or less
ADL
4-5 BA
6-10 BB
0
1-3
BA_1
BA_2
IADL (0 OR 1-3)
NO
REDUCED PHYSICAL FUNCTIONS
YES
ADL
4-5 PA
6-8 PB
9-10 PC
11-15 PD
16-18 PE
0
1-3
PA_1
PA_2
IADL (0 OR 1-3)
Changes to RUG-III system
12 Rehab groups collapsed to two
One group omitted
One group and tertiary splits on depression omitted
Tertiary splits on nursing rehab omitted
Tertiary splits on nursing rehab omitted
One group and tertiary splits on nursing rehab omitted

RUG-III/HC CASE-MIX INDEX

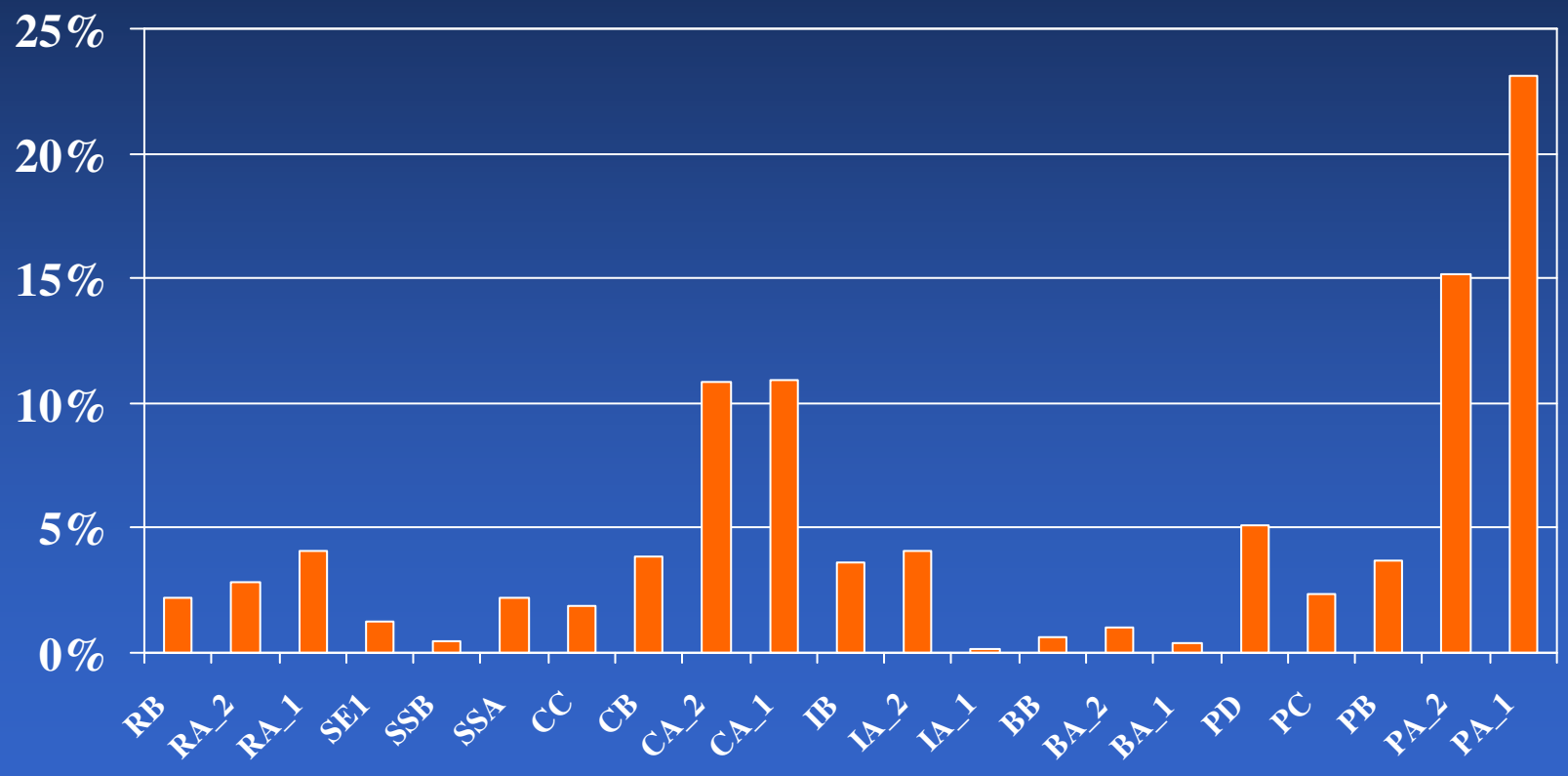


* Less than 10 clients

Major RUG-III/HC Categories



RUG-III/HC Distribution (Michigan Waiver Program)



Issues in Designing a Home Care Payment System

1) Payment design
   - Traditional (nursing home) – pay price or adjust cost limits on per-patient basis
- Other options in home care:

Options for Alternative "Payment" Design

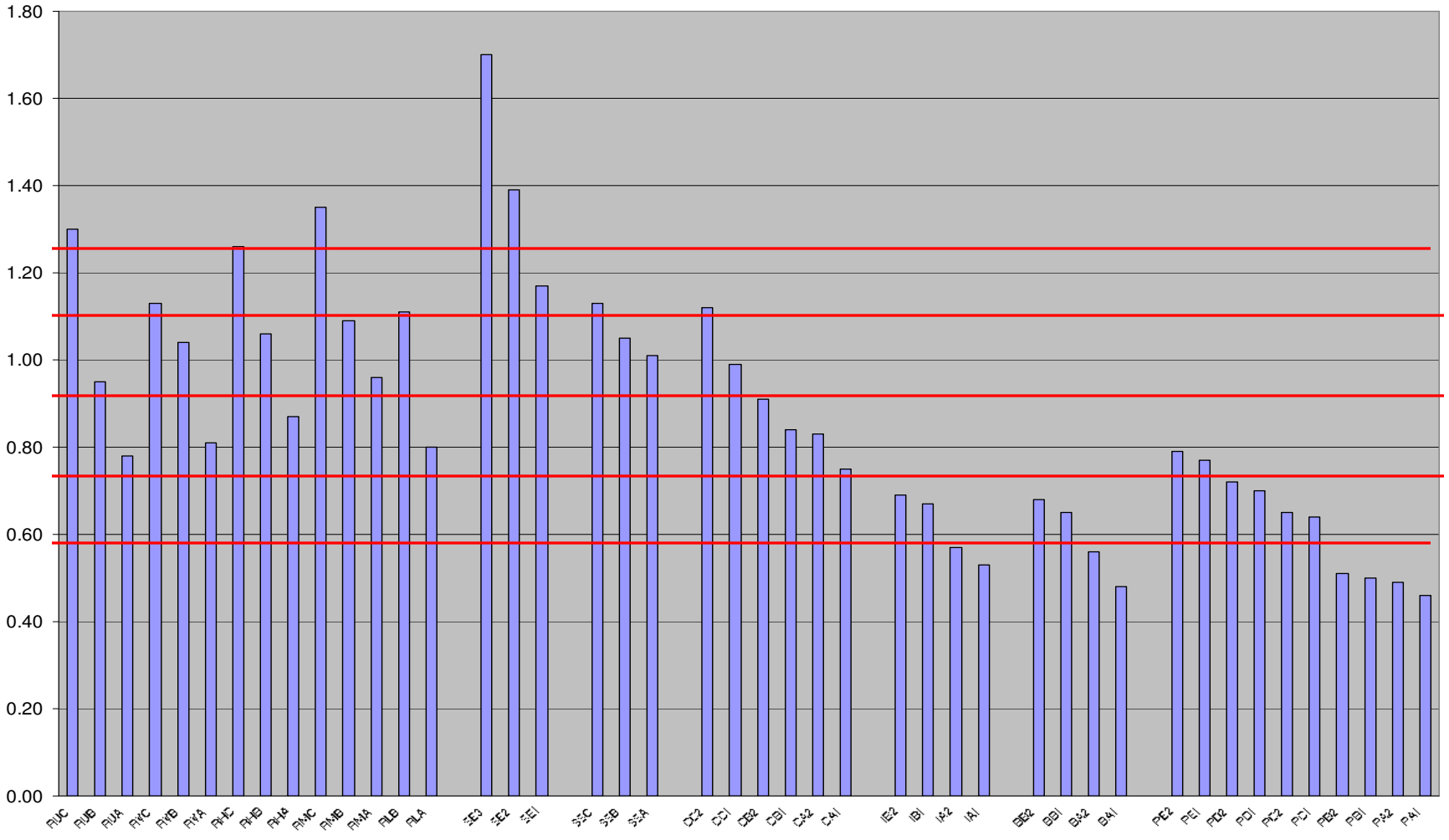
- Some Options (could be combined, too)
  - Individual level
    - Within range, weighted average = payment amount
    - Allow payments anywhere within range
    - Top (extensive need) group could work differently, e.g., be negotiated individually
  - Program level
    - Average of all payments in a range must equal average group payment
    - Provide budget based on case-mix adjustment, but do not control individual payments

Issues in Designing a Home Care CM System

2) Determining CMIs

- Have CMIs from Canada and US Study but:
  - Desire for “simpler” system

PaPas


1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
AUC
AUB
AUA
AVC
AVB
AVA
AHC
AHB
AHA
AMC
AMB
AMA
ALB
ALA
SE3
SE2
SE1
S3C
S3B
S3A
DC2
DC1
DB2
DB1
DA2
DA1
IE2
IB1
IA2
IA1
BE2
BB1
BA2
BA1
PE2
PE1
PD2
PD1
PC2
PC1
PB2
PB1
PA2
PA1

Example – Daily Payment

PaPa	Range	Avg	Single Payment
A	.46-.57	0.48	$46.82
B	.58-.72	0.68	$66.94
C	.73-.91	0.77	$75.90
D	.92-1.09	1.02	$100.05
E	1.10-1.25	1.14	$112.22
F	1.26-1.70	1.46	$143.48

Average payment $70.00

Average NCMI 0.711

Issues in Designing a Home Care CM System

2) Determining CMIs

- Have CMIs from Canada and US Study but:
  - Desire for "simpler" system
  - Different jurisdictions provide different services

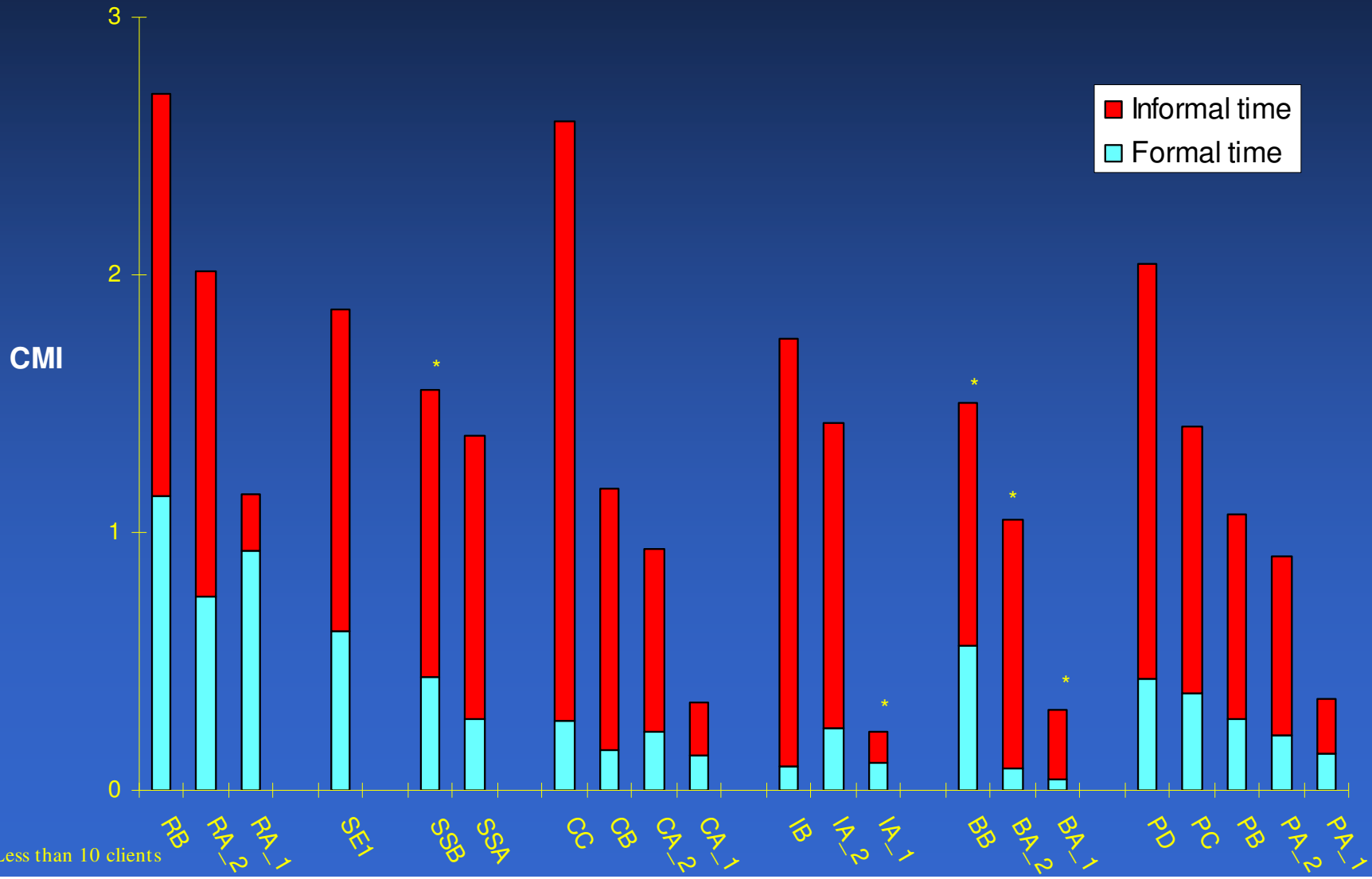
    ➔Need to calculate CMIs (feasible as cost data usually available)
  - May be opportunity to adjust size of "pie"

Issues in Designing a Home Care Payment System

3) Support services (informal care)

- Handled in several ways in prior research:
  - Ignored (look only at formal care time/costs)
  - As explanatory (dependent) variable
  - As a cost variable
- Last option is most successful
  - Best explanation of cost

RUG-III/HC CASE-MIX INDEX



* Less than 10 clients

Suggested Approach

- Payment based on RUG-III/HC with

  CMI = formal + informal
- Determine availability of natural supports and reduce payment accordingly
- Issues:
  - Determining amount of natural supports
  - Incentives to under-report natural supports
  - Incentives for natural supports to withhold
  - NONE INSURMOUNTABLE

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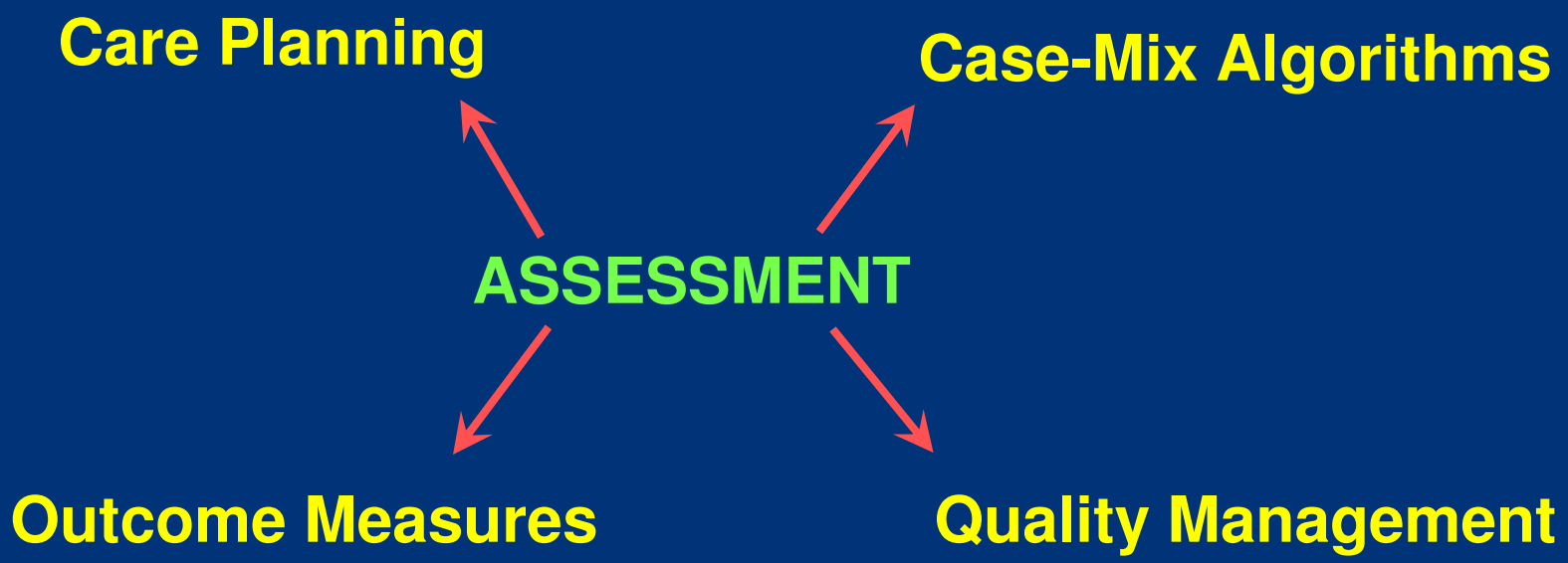
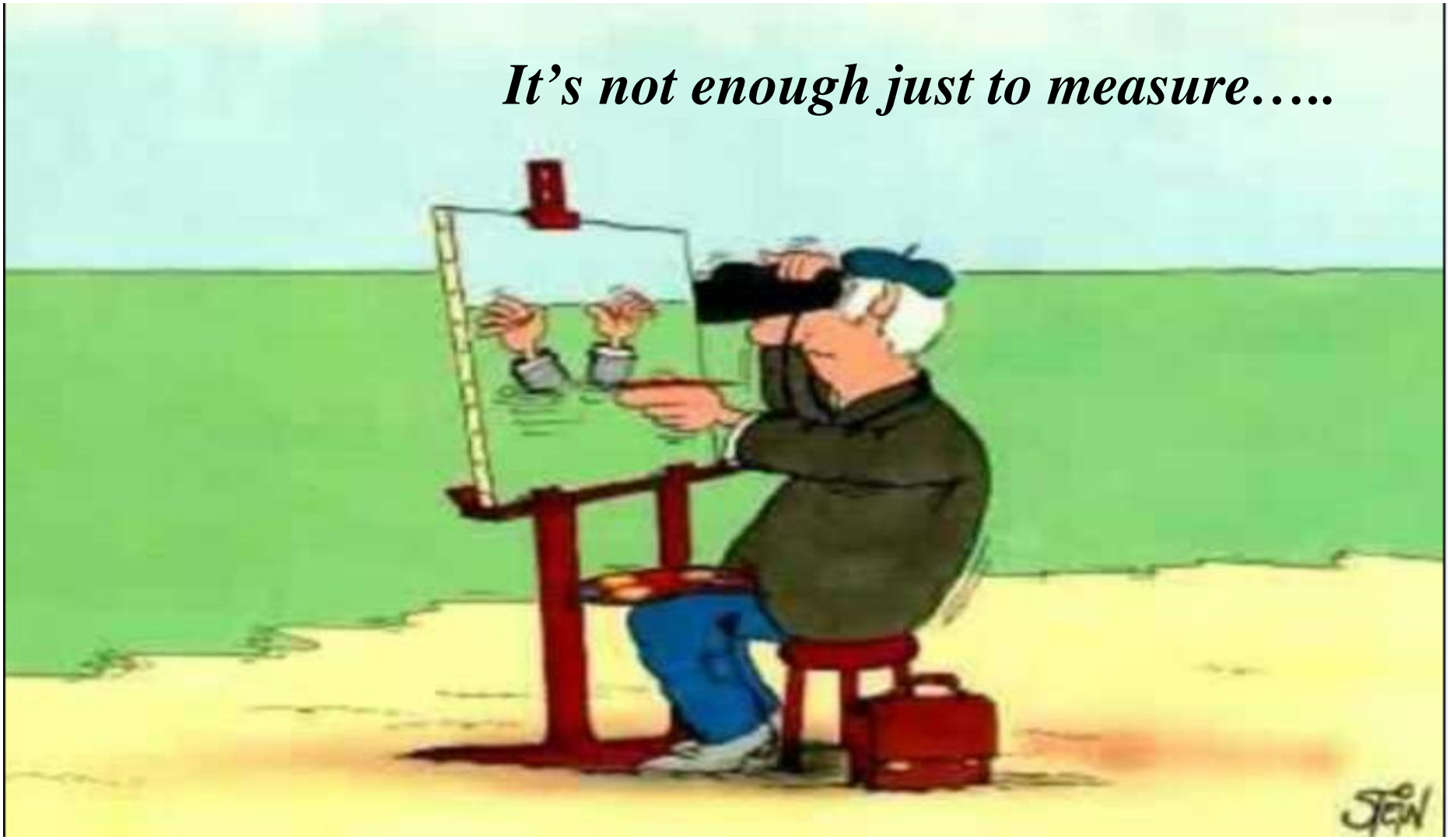
Applications of interRAI Data



Multiple Uses of Data

- Efficient--only collect once
- Focuses attention on proper assessment
- Offsetting incentives encourage accuracy


It’s not enough just to measure…..

Lessons for COLLAGE

- Use interRAI data already collected for clinical purposes
- Some applications already developed
  - Case mix
  - Quality of Care
  - Placement?
- Other applications can be developed
  - Placement
  - Planning
  - ????