

Screening for Dementia

Soo Borson MD

Professor of Psychiatry and Behavioral
Sciences

Director, Memory Disorders Clinic
University of Washington



Disclosures

- Consulting/advisory relationships
 - Myriad, Pfizer, Janssen, Novartis, Forest
- Data monitoring board
 - Eisai (rasagiline for AD)
- Investigator-initiated research grants
 - Pfizer, Janssen/Ortho McNeil, Forest
- Use license/fee recipient
 - Forest Labs (for use of Mini-Cog™)
- Current speakers' bureaus
 - Pfizer, Novartis, Forest
- Clinical trials
 - None

Basic Concepts: When Does Screening Make Sense?

- Condition is prevalent
- Condition has consequences
- Screens improve case finding
- Interventions improve outcomes

Does Dementia Meet This Standard?

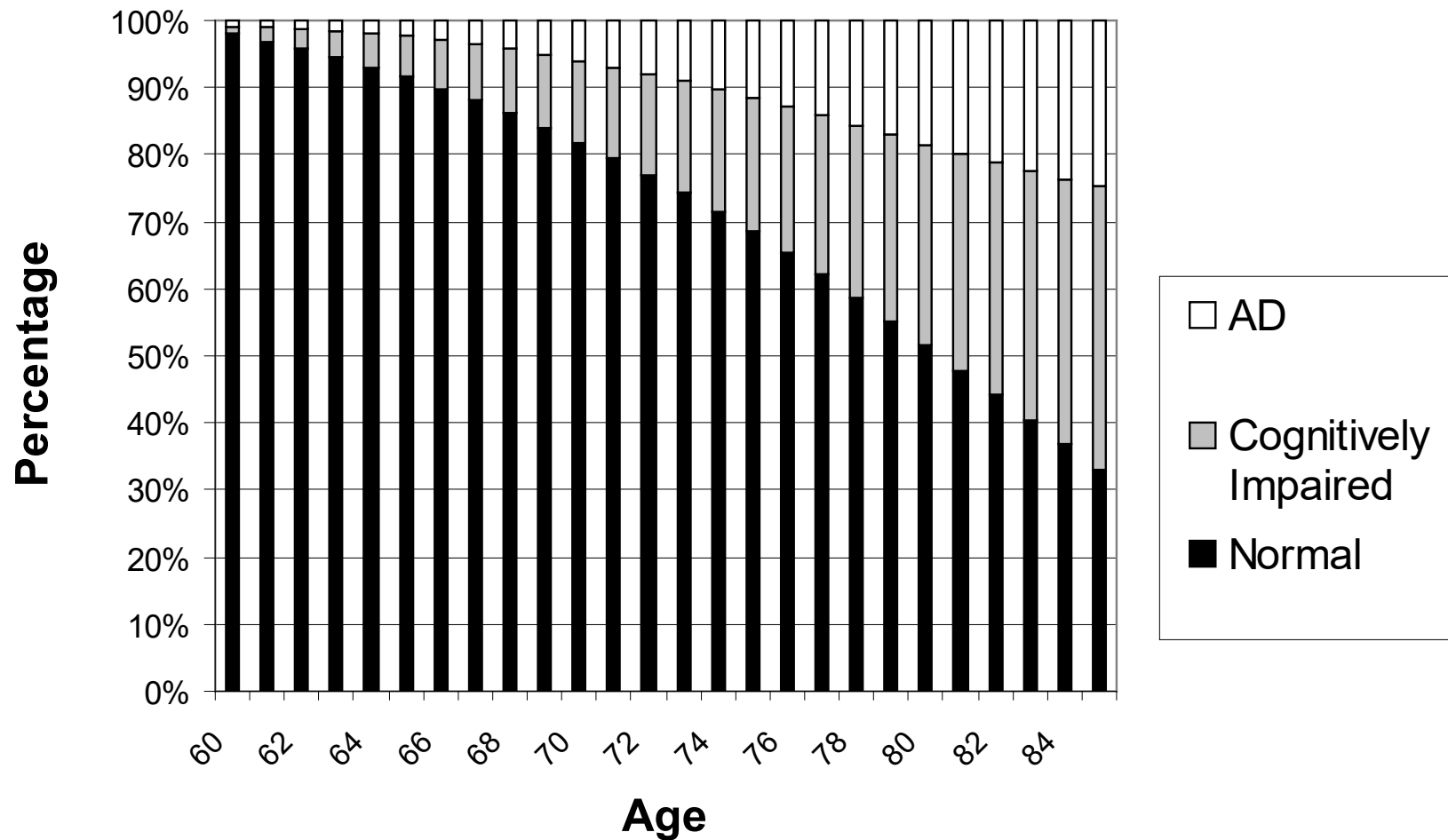
- Prevalence
- Consequences
- Screens
- Interventions

Prevalence

Projected Prevalence of Alzheimer's Disease (~ 60% of all dementia)



Diminishing Prevalence of Normal Cognition in Aging Populations



Yesavage et al 2002

Consequences

Consequences of Dementia

- For patients
- For caregivers
- For health systems

Consequences for Patients

Dementia Shortens Survival (n=521)

MMSE	Median Survival (years)	Maximum Survival (years)
25-30	~ 7	>15
22-24	5.5	>13
18-21	5	~13
≤17	4	~10

Dementia Patients Have Other Chronic Conditions

Dutch National Survey of General Practice, 2001(n=528)

Condition	%
Heart Disease	31.0
Arthritis	23.3
Hypertension	25
Diabetes mellitus	16.5
Poor vision	11.7
Respiratory diseases	11.0
Cancer	10.2
Depression	8.9
Stroke	8.3
Parkinson Disease and Parkinsonism	4.2

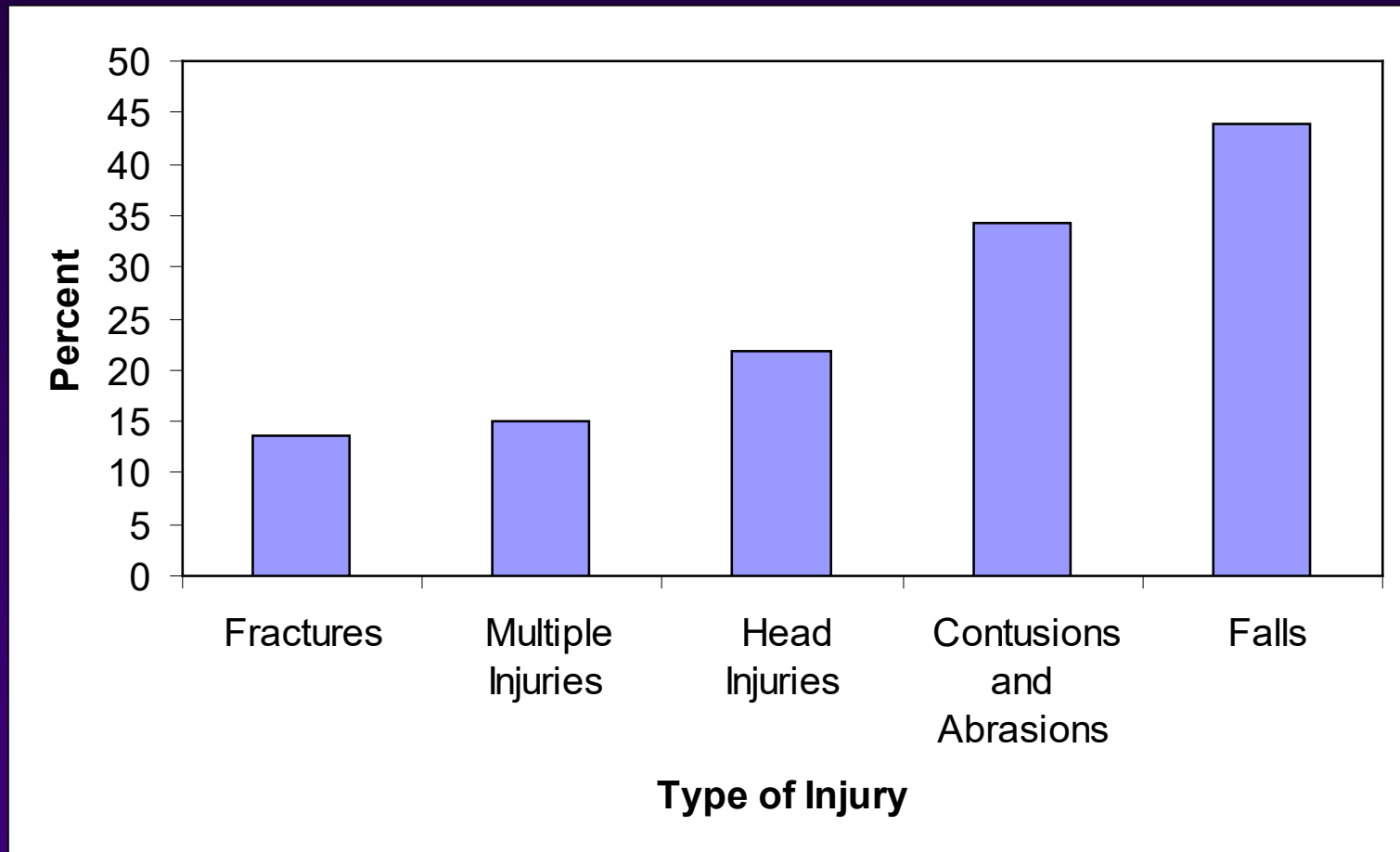
Dementia Creates Emergencies

n=139, 18 month follow up

Failure to... (n)	Emergency (n)	Emergency Help (n)
Eat/ drink (9)	Dehydration (5); infection (2); delirium (1); hip fracture (1)	Ambulance/ ED (8); police (1)
Report medical problem (5)	Delirium (1); infection (1); late effect of neglected injury (1)	Ambulance/ ED (4); urgent MD home visit (1)
Use assistive devices (5)	Contusion (2); bone fracture (1); skin laceration (2)	Ambulance/ ED (5)
Maintain hygiene (4)	Infection (4)	Urgent MD home visit (4)
Use meds properly (4)	Delirium (1); cardiac complications (1); edema (1)	Ambulance/ ED (2); police (1)
Recognize environment (2)	Struck another (1); psychosis with COPD exacerbation (1)	Ambulance/ ED (2)
Turn off stove (1)	Smoke damage	Fire and ambulance
Protect resources (1)	Financial fraud	Police

Injuries in Alzheimer's Disease

N=281, 43% injured over one year



Dementia and Driving: Role of Cognitive Screening

- AMA recommends brief cognitive screens as part of evaluation of all older drivers
- Scores of concern
 - Trail Making B – > 180 sec
 - Clock drawing – > 2 on 7 point error scale
- Poor scores correlate with driving hazard (accidents, impaired simulator performance)

Consequences for Families

Caregiving Burden

- Time
 - 40-100 hours/week
- Emotions
 - 90% of caregivers feel frustrated, drained
 - 75% feel depressed; 66% have clinically significant depression
 - 50% have no time for themselves and experience strained family relations

- Finances
 - 64% of caregivers worry about conserving enough money to pay for their own needs
 - 49% have sacrificed to provide better care
- Work
 - Employed caregivers missed an average of 17 work days in a year due to care giving duties
 - 35% reduced their work hours or felt less effective at work

Caregiver Health Problems

Condition	Percentage with condition*	Percentage with condition taking medication
Backaches/pain	60	26
Arthritis	49	34
Sleep disturbances	46	20
Indigestion/ulcers	40	42
Anxiety	37	25
Depression	36	37
High blood pressure	32	86
High cholesterol	31	33
Migraine	18	44
Other heart trouble	18	65
Respiratory diseases	14	62
Osteoporosis	11	39
Diabetes	9	67
Cancer	6	24

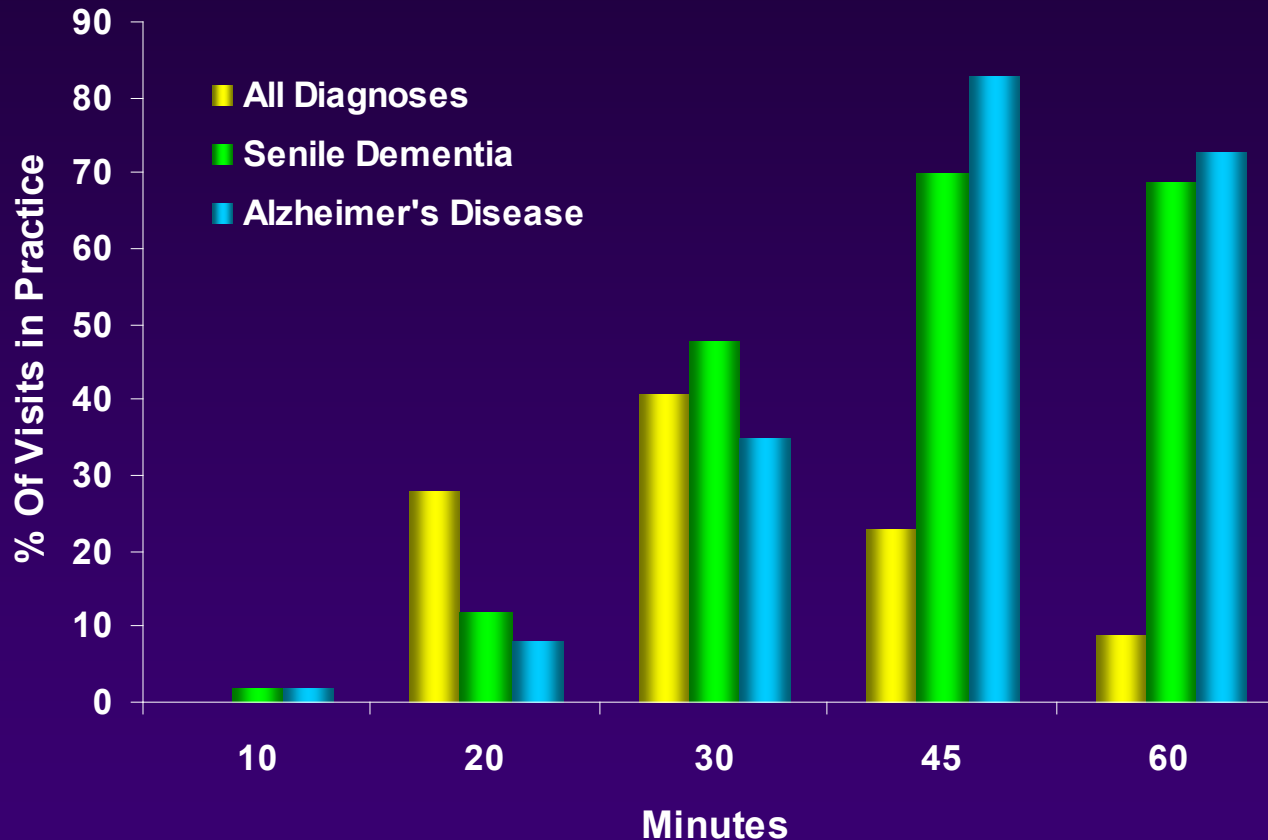
CHS Alzheimer's Disease Caregiver Project: Wave 6, 2000.

* Percentage based on total sample (n = 3,176). Caregivers may have more than 1 comorbid condition.

Consequences for Health Systems

Dementia Prolongs Primary Care Visits

Time Spent With New Patients



*CPT Codes: 10 min (99201), 20 min (99202), 30 min (99203), 45 min (99204), 60 min (99205).

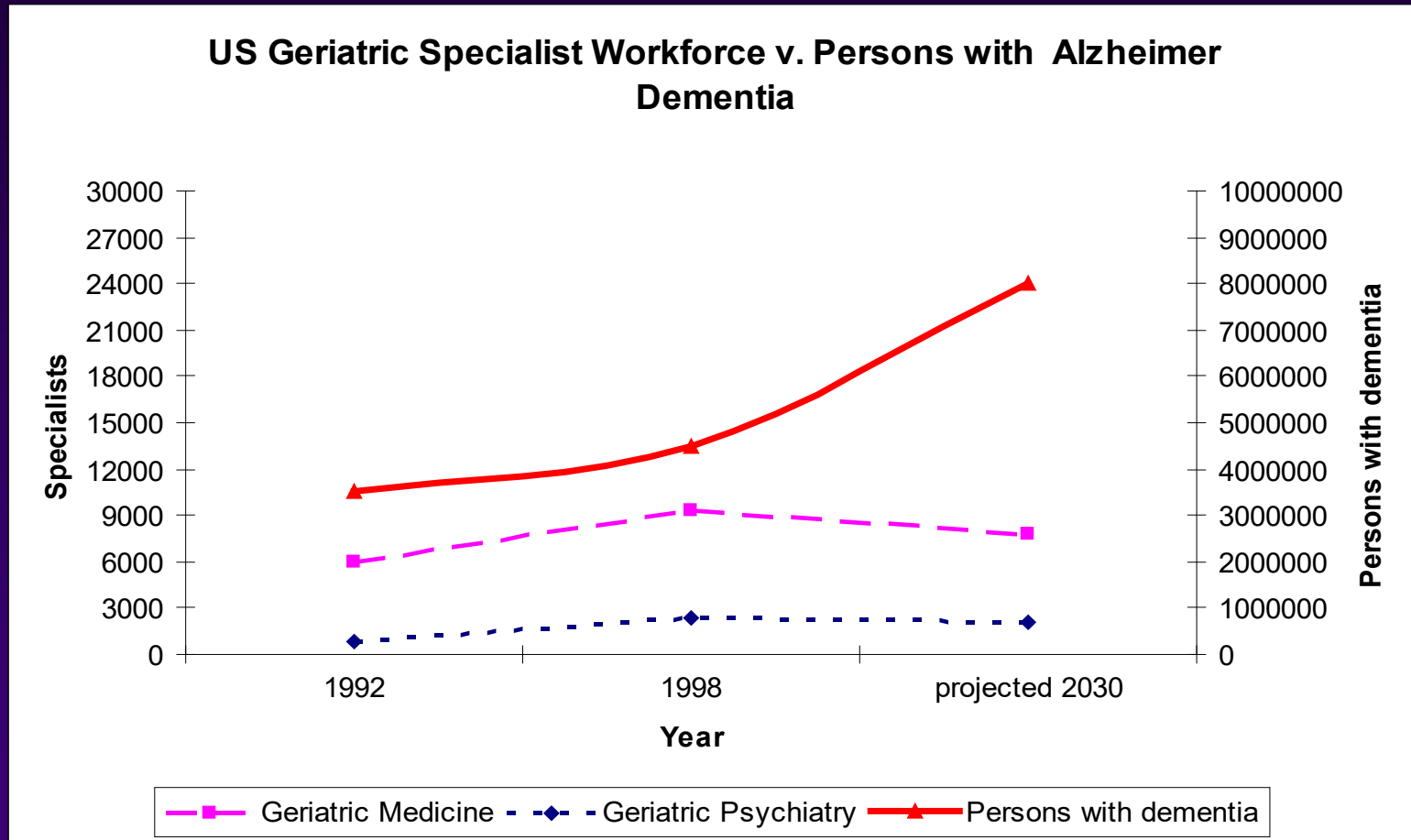
Dementia Leads to Potentially Preventable Hospitalizations

Comorbidity Stratum	Ambulatory Care Sensitive Hospitalizations
# Chronic Conditions	Adjusted OR Due to Dementia* (95%CI)
0	6.58 (5.73-7.54)
1	2.89 (2.66-3.15)
2	2.77 (2.30-2.95)
3	2.19 (2.07-2.31)
4	1.68 (1.59-1.78)
5	1.49 (1.41-1.58)

* Adjusted for age, sex, ethnicity, occurrence of death.

Managing Dementia Must Start in Primary Care

Specialists Cannot Meet the Need



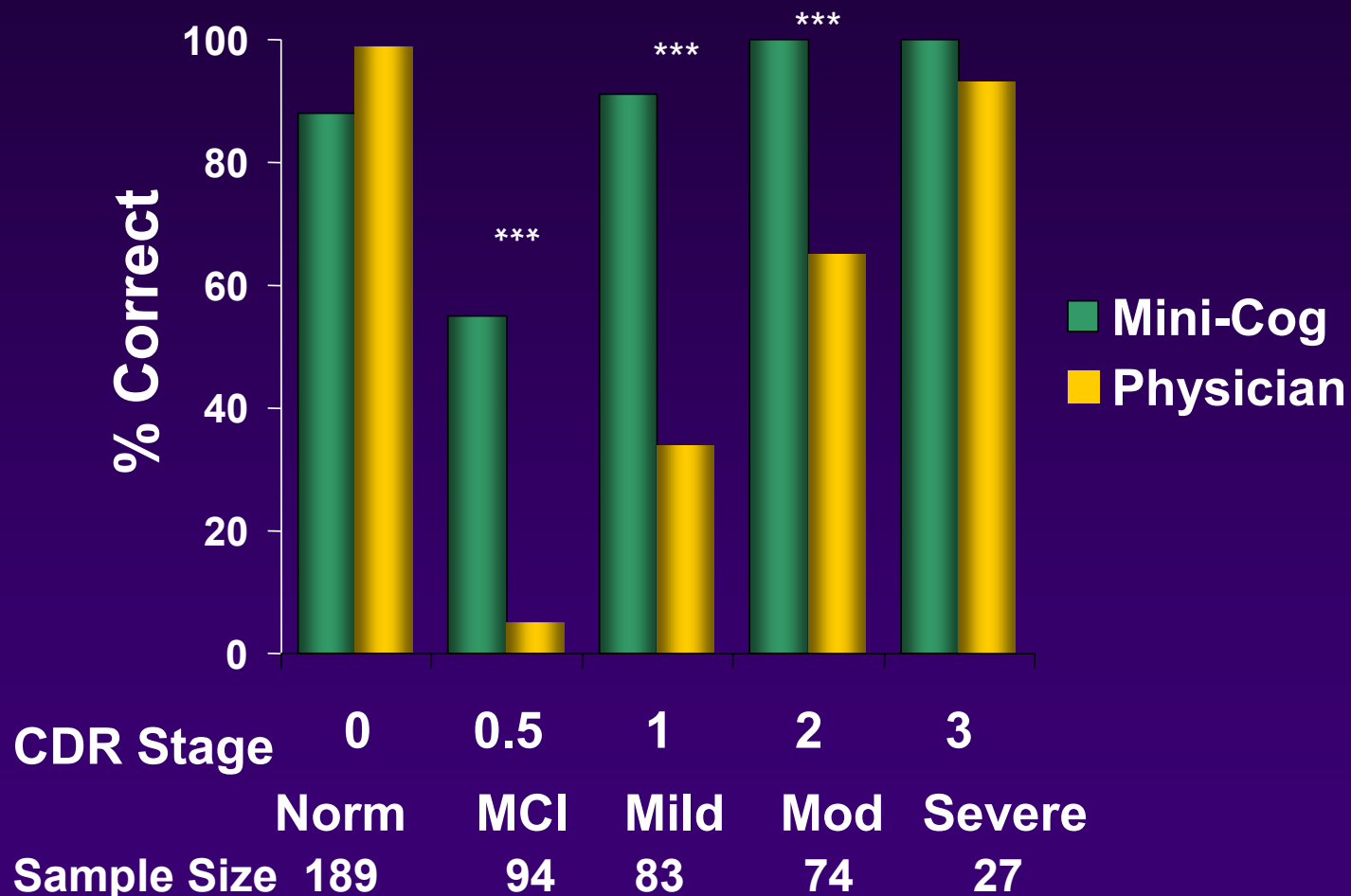
What Isn't Measured Can't Be
Managed, and
Measurement Starts with
Screening

Everyday Utility of Dementia Screens

<u>Test</u>	<u>Time</u>	<u>Upset</u>	<u>Sens</u>	<u>Spec</u>	<u>Educ</u>	<u>Lang</u>
MMSE	X	X	+	+	X	X
CASI	X	X	+	+	X	X
7-Min	X	?	+	+	X	X
T & C	+	+	X	X	+	X
Animals	+	+	+	+	?	X
Orient	+	X	X	+	+	+
Clock	+	+	X	+ (X)	+	+
Mini-Cog	+	+	+	+	+	+

Screening Improves Casefinding

Screening Could Improve Detection



Physicians' Response to Positive Screens Needs Improvement

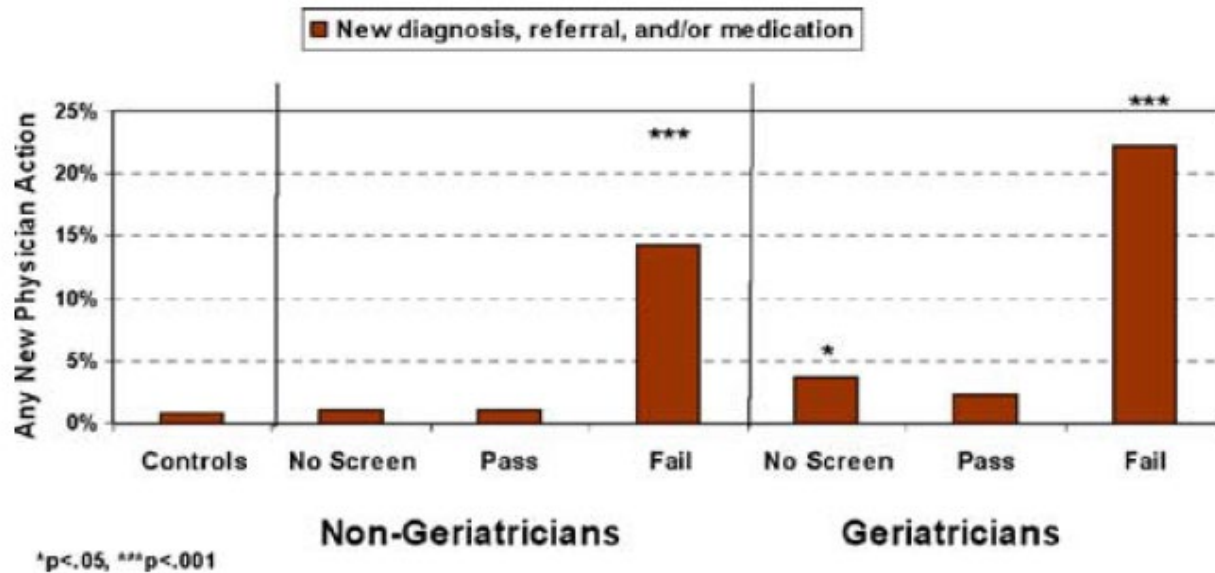


Figure 3. Impact of screening: patients without previous dementia indications

What Needs to Happen Next

Examine Two Competing Perspectives

- Dementia as a consequence of specific disease states and brain events
 - Largely defines course and prognosis
- Dementia as a geriatric syndrome
 - Influences risk, management and outcome associated with other diseases

Rethinking the Meaning of Quality Dementia Care

- Who should decide?
 - Pharmaceutical industry
 - Medicare/Medicaid, other insurers
 - Health system managers
 - Professional providers
 - Patients and families
 - Researchers

Applying Quality Indicators to Dementia Care: ACOVE-3

- Workup: simple, specified diagnostic approach
- Pharmacological treatment
 - If AD, VaD, DLB (or PDD), consider AChEI
- Evaluate and address behavioral symptoms
- Identify and manage vascular risks
- Assess and support caregivers
- Query and address issues in patient safety (driving, fall risk, wandering/getting lost, safe medication management)

The Leading Edge of Quality

- Making values explicit
 - E.g. the case of advanced dementia
- Weighing burden of interventions vs aims and goals
 - Burden – low, medium, high
 - Aims and goals – short and intermediate range
 - Symptoms
 - Risk reduction

Adapted from N. Wenger and the ACOVE Workgroup

What We Need Now

- Management tools for primary care
 - Simple, practical, stage-specific, longitudinal
- Evidence that management tools
 - Will be used
 - Improve relevant outcomes
- Consensus on outcome domains that matter
 - Patients: safety, prevention of avoidable complications, control of BPSD
 - Caregivers: reduce unmet needs, increase satisfaction and lower burden
 - Health systems: population-based commitment to cost-appropriate care