

Identifying Vulnerable Seniors: An “in-the-field” Dementia Screening Tool for Police Officers

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Providence
Care



Goals of Today's Session

By the end of the presentation you will...

- **Recognize common police situations** involving seniors with **dementia**
- **Understand** how **the screening tool works** and the **minimal police training** requirements
- **Identify current & potential police applications** of this tool based on Kingston Police data

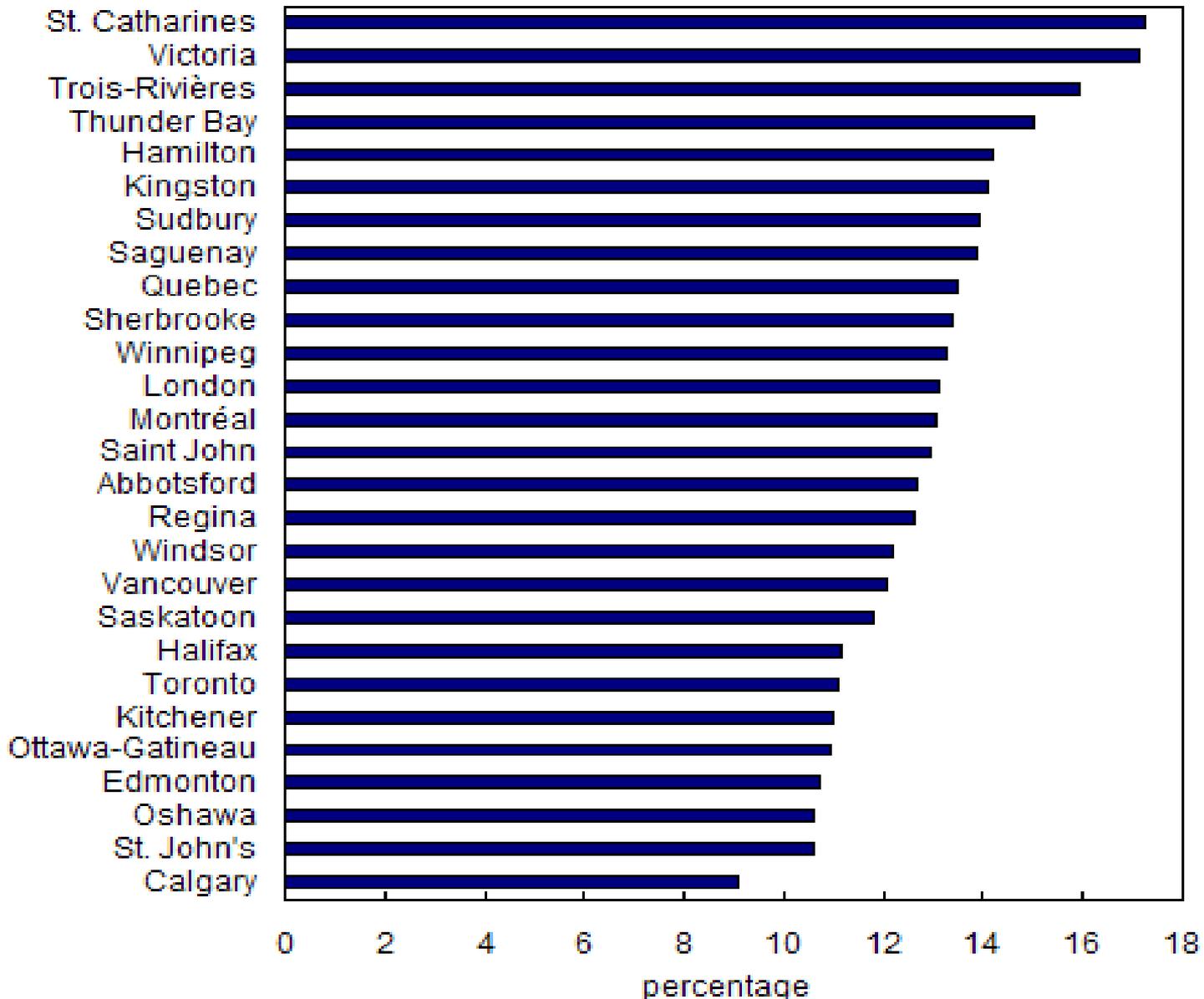
CSHA* Study of Dementia Rates

AGE	Dementia Rate
65-69	1.5%
70-74	3.4%
75-79	8.0%
80-84	16.2%
85-89	28.3%
90+	51.8%

Impact of Growing Senior Population...

- How many of your calls/referrals are from seniors?
- How many of your repeat calls are from seniors?
- How much time do you spend on an average call when it involves a senior?
- What resources will you require to respond to senior needs?
 - What portion of your budget does this account for?
 - What portion of your budget WILL it account for?

Percentage of population comprised of seniors, Census metropolitan areas, 2004



At-risk Individuals with Dementia: Typical Police Scenarios involving Seniors

- 1. Driving**
- 2. Victimization**
- 3. Theft / Fraud**
- 4. Wandering**
- 5. Welfare Checking**
- 6. Sexually inappropriate behaviour /
exposing self**

Driving



Special Geriatric Psychiatry Section

Driving and Dementia in Ontario: A Quantitative Assessment of the Problem

Robert W Hopkins, PhD¹, Lindy Kilik, PhD¹, Duncan JA Day, PhD¹, Catherine Rows, RPN², Heidi Tseng, BSc³

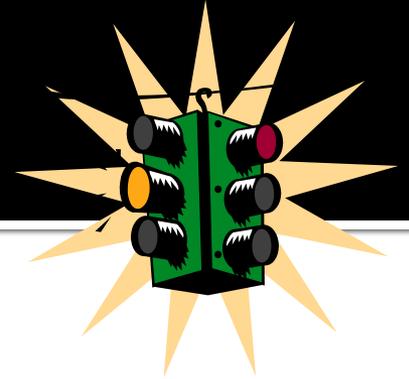
Background: The population is becoming increasingly aged, and concomitantly, the prevalence of dementia is steadily rising. Persons aged 65 years and over are likely to continue driving for many years and often well into the dementia process.

Methods: Ontario Ministry of Transportation driving data, census data, and dementia prevalence data were combined to determine the number of persons with potential dementia who are driving, both now and in about 25 years' time.

Results: Actual and projected Ontario figures show that the number of senior drivers will increase markedly from just under 500 000 in 1986 to nearly 2 500 000 in 2028. Similarly, the number of drivers with dementia is also increasing. Although not all drivers with dementia are necessarily dangerous, most are estimated to continue driving well into the disease process. By combining the above-mentioned data sets, a best estimate of the number of drivers with dementia in Ontario was derived. It is estimated that this group has grown from just under 15 000 in 1986 to about 34 000 in 2000 and will number nearly 100 000 in 2028.

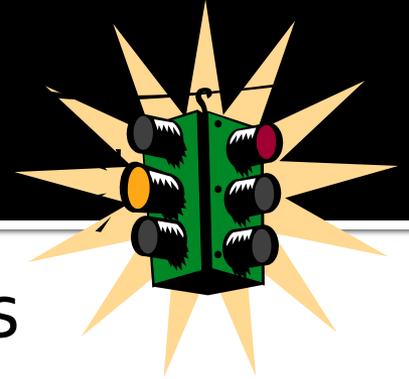
Interpretation: Increasingly, the responsibility for identifying drivers with dementia has

Typical Errors made by Drivers with Dementia



1. Mild “fender-benders”
2. Getting lost while driving to familiar places
3. Forgetting where you are going
4. Near misses without noticing them
5. Running stop lights or stopping at green lights without realizing it

Errors...2



7. Confusing the gas and brake pedals
8. Merging without looking
9. Receiving traffic citations for: speeding, driving too slowly, improper turns
10. Unable to navigate through complex intersections
11. Going the wrong way against traffic

The Driving record of demented Seniors- What the research tells us

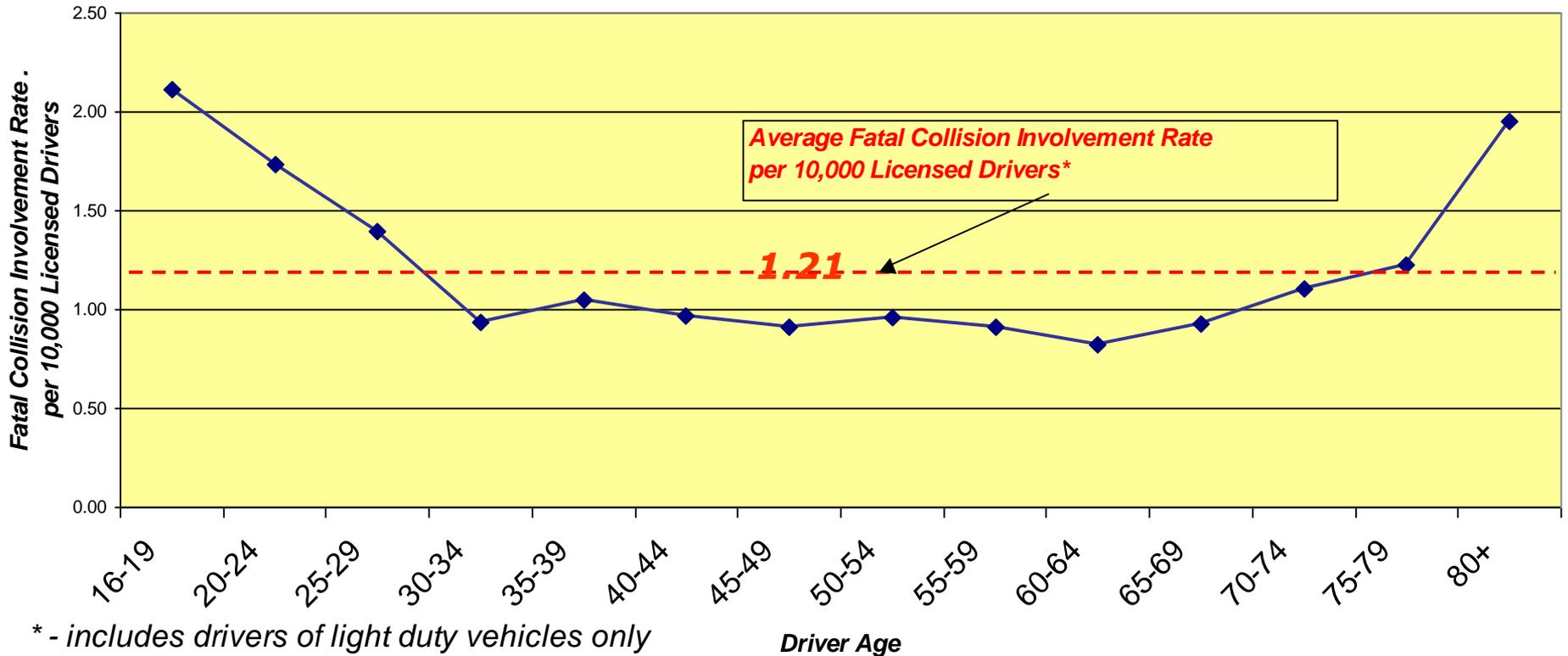
- On average, people continue to drive for the first 4 years into the disease
 - Average length of disease = 10 years
- Collision rates for seniors with a dementia are 5X that of normal senior drivers



Fatal Collision Involvement

Drivers aged under 30 and drivers aged 80 and over have higher than average rates.

Five Year Average: 2001-2005

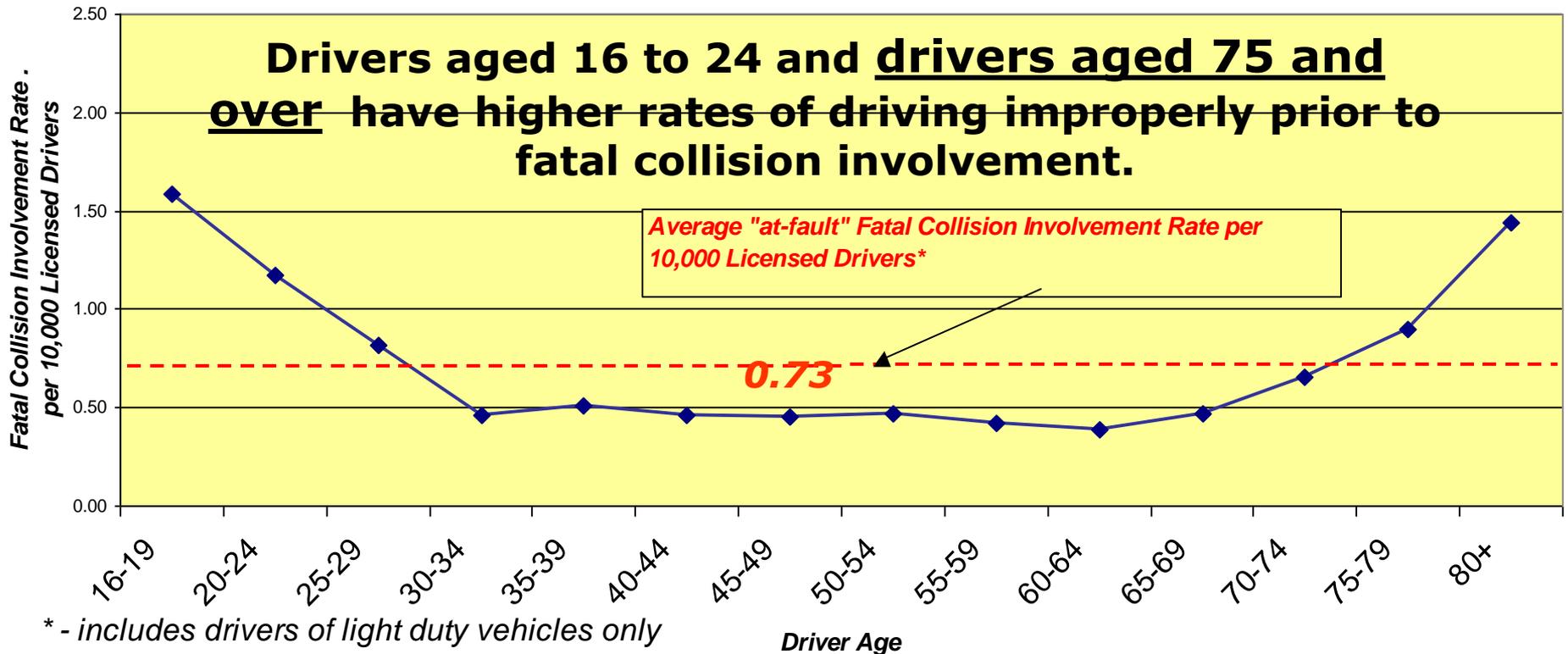


Source: Aging Drivers Mobility Forum, Dr. L. Tasca, MTO

Fatal Collision Involvement Rate

Collisions where driver action coded as "improper."

Five Year Average: 2001-2005



VICTIMIZATION

- The senior reporting a possible intruder outside the home
- Elder Abuse
 - Physical
 - financial

THEFT / Fraud

- By a family member/friend
- By a caregiver (paid/volunteer)
- By the senior
 - In a store
 - Driving away from a gas pump
- Criminal Opportunists

Welfare check-in

- Individual not seen or heard from and this is out of character
- Neighbour/relative/friend concern regarding state of individual
- Slippery slope of seemingly “plausible” explanations for their current state of affairs that, together, don’t add up

Sexually Inappropriate Behaviour / exposing self

- Inappropriately dressed (wandering outside with few/no clothes on)
- With family members
- With care providers

- With strangers
- Misidentifications
- Disinhibition (frontal lobe)

WANDERING

- From home
- From a care centre
 - LTC facility
 - Retirement home
- Getting lost
 - On foot
 - In a vehicle

An In-the-field Dementia Screening Tool for Police Officers

How the Project Began

- Pilot study to address growing police concern about improving the ability of officers to recognize dementia in common police situations involving seniors.

Research Questions

1. Is there a brief dementia screen that can be easily used in the field?
2. Is there a field screen that detects cognitive impairment at a level consistent with that of commonly used clinical screens?
3. Can police officers be trained to administer and score a screen at a level of accuracy that was comparable to that of a seasoned clinician?

Research Design

- Two male officers with at least 5 years experience
- Officers completed training in administering/ scoring the dementia screening tool
- Tested 32 individuals with/without dementia living in the community using the screening tool
- A clinician (nurse) with >15 yrs. experience tested the same individuals on a separate occasion

Requirements of a police screening tool for dementia

- One that **DOESN'T**
 - require special equipment and is portable
 - require specialized training in psychometric assessment
 - have complex scoring systems
 - take a lot of time to administer

Results

Question #1:

Is there a brief dementia screen that can be easily used in the field?

■ **YES!!** Tool Selected:

The Short Orientation Memory and Concentration Test (SOMCT)

(Katzman et al., 1983)

The Short Orientation Memory Concentration Test (SOMCT)

- A screen – NOT a Diagnosis
- 7 quick questions to determine whether a senior may have a dementia
- Literally takes a few minutes
- Consists of:
 - Orientation questions (e.g., year, time)
 - Attention/concentration questions (count backwards)
 - Memory (repeat and later recall an address)

SOMCT description

- The screen is completely voluntary
- Designed to aid the officer in providing the most relevant type of assistance when a senior is in distress
- A certain number of points are allotted for each question.
- A **POSITIVE SCREEN** (i.e., evidence of cognitive impairment) is a score that is **LESS THAN 18**

Sample Questions From SOMCT

▶ What is the year now?	4 or 0	
<i>Response:</i>		
	3 or 0	
<i>Response:</i> _____		
▶ Repeat this address:	Did the person Yes or No	Do not score
▶ Say the months in reverse order.	Perfect	
December, November, October, September, August, July, June, May, April, March, February, January	One error: 2 more than 1 error: 0	

Question #2.

Is there a field screen that detects cognitive impairment at a level consistent with that of commonly used clinical screens?

Did the screen accurately identify those with and without cognitive impairment?

YES! ...

Percent of Participants **Correctly Classified** as either with/without cognitive impairment:

90.6%

(3 cases of early cognitive impairment missed)

Comparison with MMSE

- The most widely-used clinical screening tool for dementia by physicians
- (not specifically designed for dementia)
- The selected measure had to be at least as effective as the MMSE

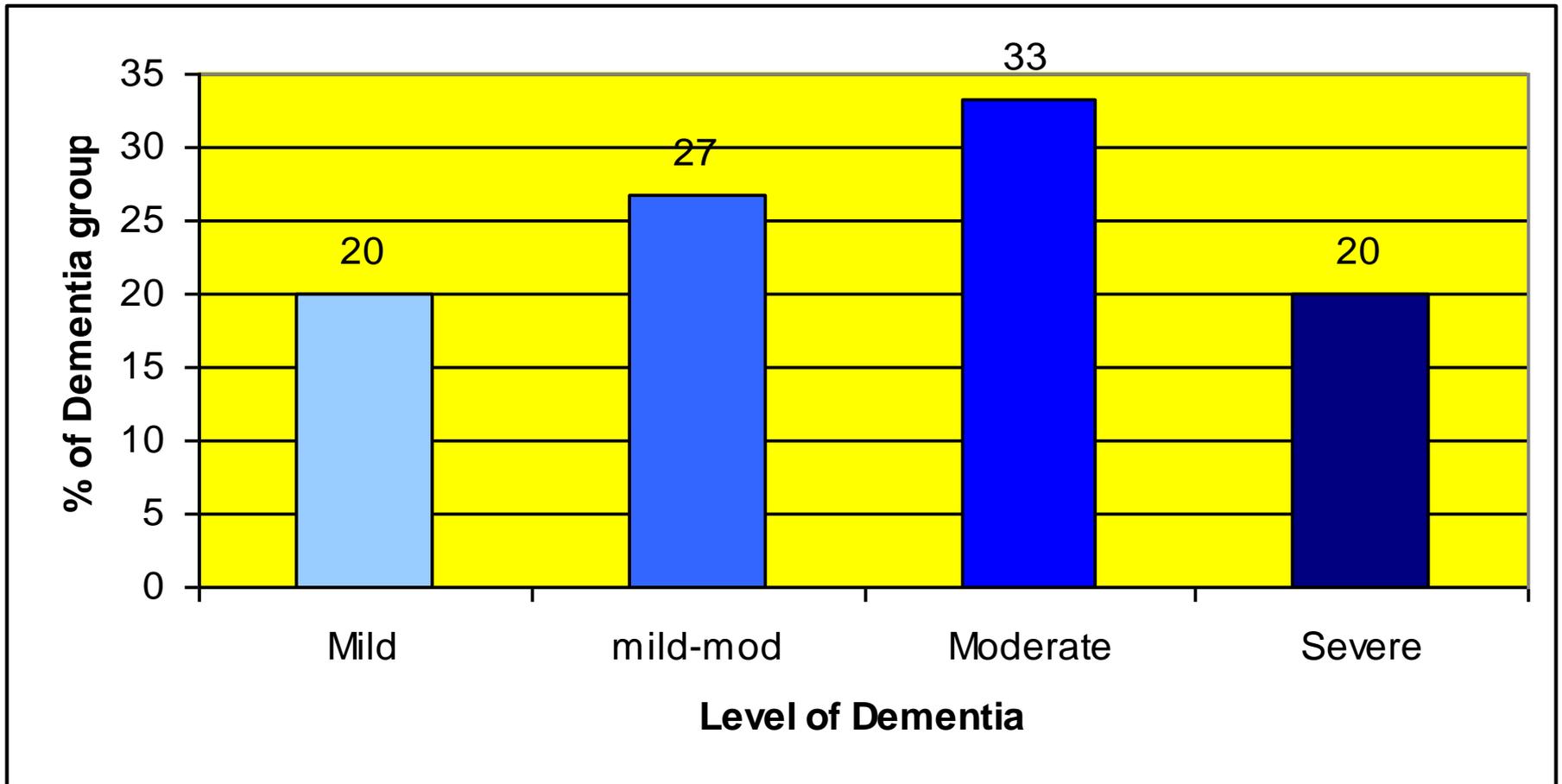
MMSE

Performance benchmarks...

- A search of MMSE statistics shows:
 - **sensitivity**
 - 64.8 – 92.0
 - **specificity**
 - 56.0-96.0

	Screen Result: Cognitive Impairment	Screen Result: No Cognitive Impairment
Diagnosis: Cognitive Impairment	True Positive (Sensitivity) 75%	False Negative 25%
Diagnosis: No Cognitive Impairment	False Positive 0%	True Negative (Specificity) 100%

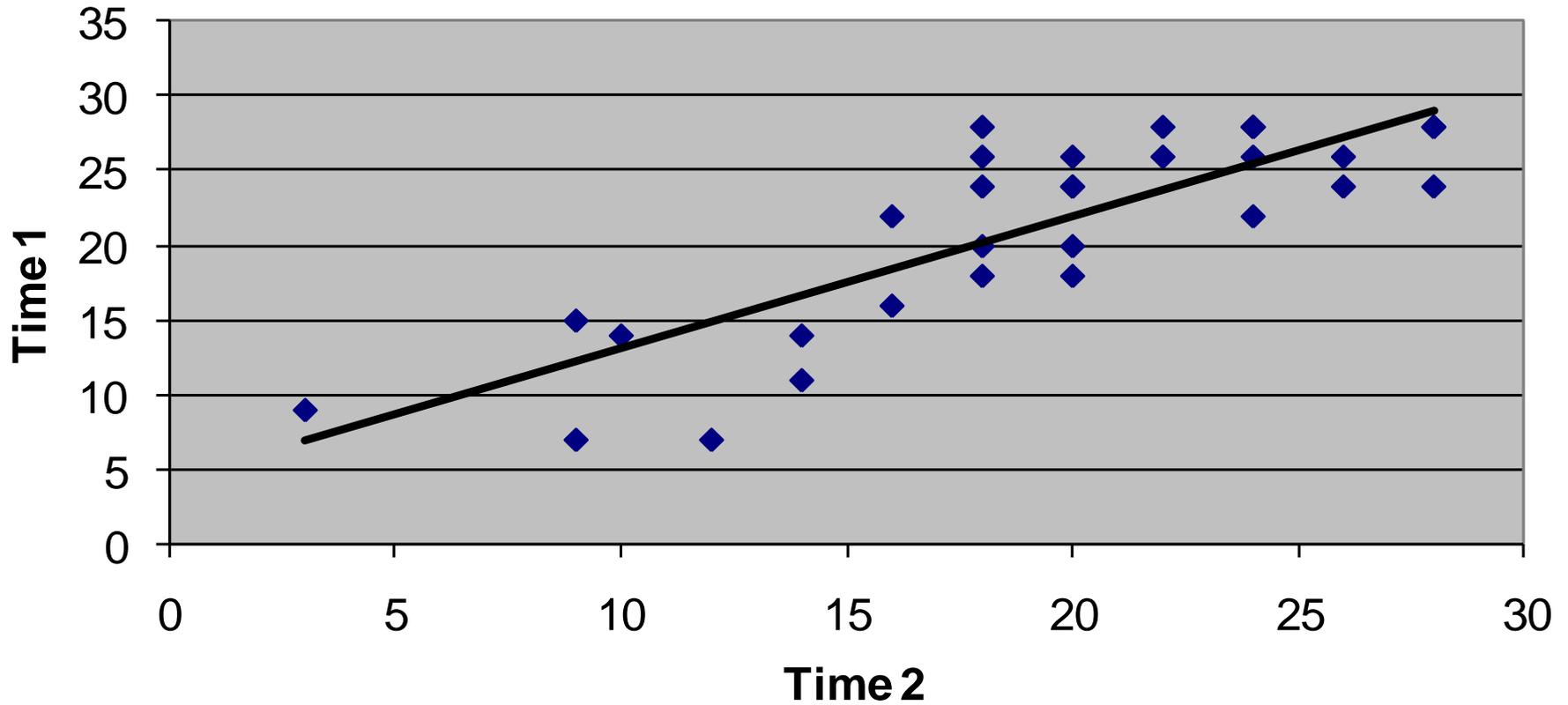
Distribution of Dementia Levels



Question #3:

Can trained police officers administer/score the tool with the same accuracy as experienced clinicians?

Time1 X Time2 SOMCT Total Scores



Question #3:

Can trained police officers administer/score the tool with the same accuracy as experienced clinicians?

Did the scores match?

Correlations between time₁ & time₂

$$r_{12} \text{ (CLINICIAN)} = 0.89$$

$$r_{12} \text{ (POLICE OFFICER)} = 0.85$$

ANOVA Main effect of First tester:

$$F(2,2)=10.64 \text{ } p=.09 \text{ (NSD)}$$

YES!

Benefits of Using a Dementia Screening Tool

1. Early detection of cognitive impairment / possible delirium (i.e., medical emergency) in seniors living in community
2. Increases the likelihood of the individual obtaining the help they need more efficiently, thereby reducing distress
3. Decreases victimization
4. Decreases repetition of calls

Benefits...2

5. Increased resources in community to avert initial (and repeat) trips to EMERG
6. Provide a consistent language by which police officers & EMERG staff communicate
7. To facilitate/lighten EMERG cognitive assessment
8. To allow police officers to transfer responsibility of patient more efficiently and quickly

Benefits...3

9. Increasing skill & knowledge base of community agencies involved with seniors
10. Increased coordination of services to decrease duplication or inefficiencies

Phase Two: Building Community Partnerships

Community Partners-Kingston

- Kingston Police
- Frontenac Community Mental Health Service
- Emergency Departments
- Providence Care Geriatric Psychiatry
Specialty Outreach Team
- Alzheimer's Society Kingston
- Community Care Access Centre
- Ministry of Transportation

Phase Three: Police Field Training in the use of the SOMCT

Police Officer Training...

- Duration of training session:
 - 45-60 minutes.
- Protocol:
 - Introduction to Screening Tool
 - Distribution of Manual (developed for project)
 - Training in Administration of Tool
 - Observation of Clinician's Administration of Screen
 - Review of Scoring procedures
 - Officer Practice:
 - 2 practice cases
 - Mock Assessments, Scoring & Review

Phase Three:

Analysis of Field Screens (Underway)

- What police scenarios are most/least frequently resulting in use of the SOMCT screen?
- What proportion of administered screens are positive?
- What are the time-of-day patterns for calls?
- What is the gender distribution for calls and does this differ for the particular scenarios?
- To what degree have community partners been involved in the individual incidents?

Challenges / Future Directions

- Getting regular administration of the screen
 - Whose job is it?
- Need for ongoing training for new officers
- Need for more completed screens to evaluate effectiveness in applied scenarios:
 - Driving – usefulness in MTO reports
 - Reduction of repeat calls

Take Home Points...

- Recognition of growing senior demographic and the resulting impact on policing and the community as a whole
- A screening tool has been developed to assist police with detection/decision making in situations involving seniors with possible dementia
- Recognition of the importance for community partnerships to be cultivated

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