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Vision Impairment and Multiple Chronic Conditions:

Findings from the 2002, 2008 National Health Interview Survey

Improving the Nation's Vision Health

A Coordinated Public Health Approach



Vision Impairment and Multiple Chronic Conditions: Findings from the 2002, 2008 National Health Interview Survey

**John E. Crews, DPA
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**Focus on Eye Health:
A National Summit
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A Driving Force in Multiple Chronic Conditions

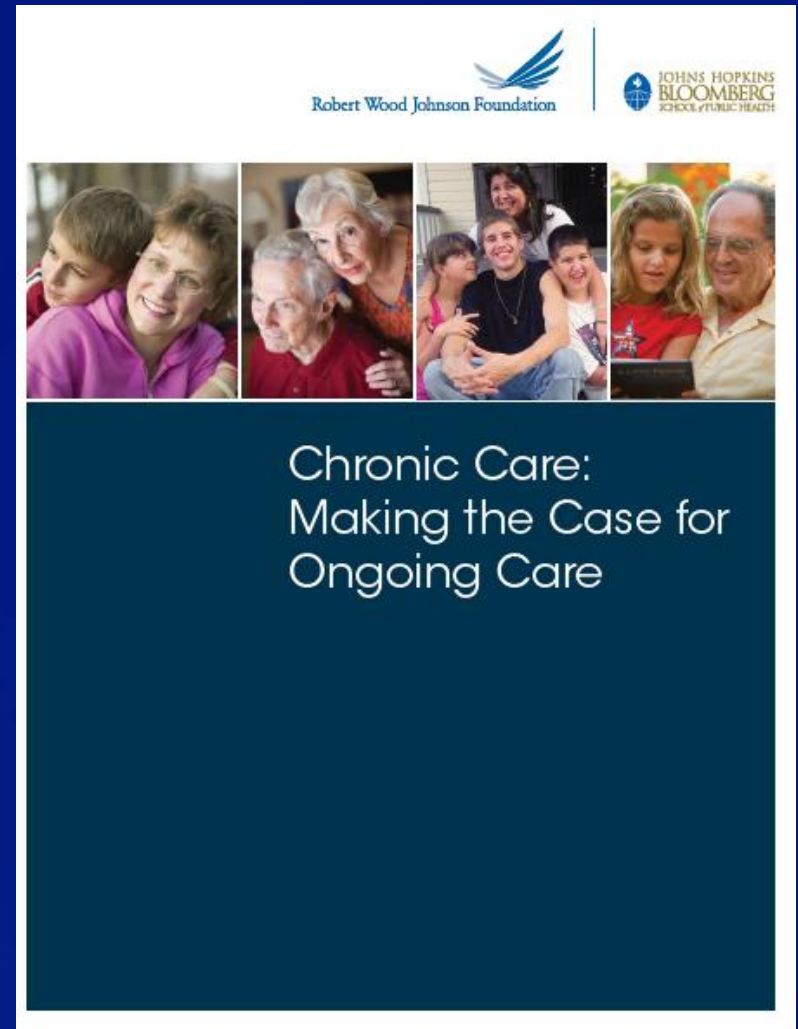
Gerald Anderson, PhD

Published 2010

Uses MEPS data

Defines dimensions of MCCs
in terms of prevalence, cost,
impacts

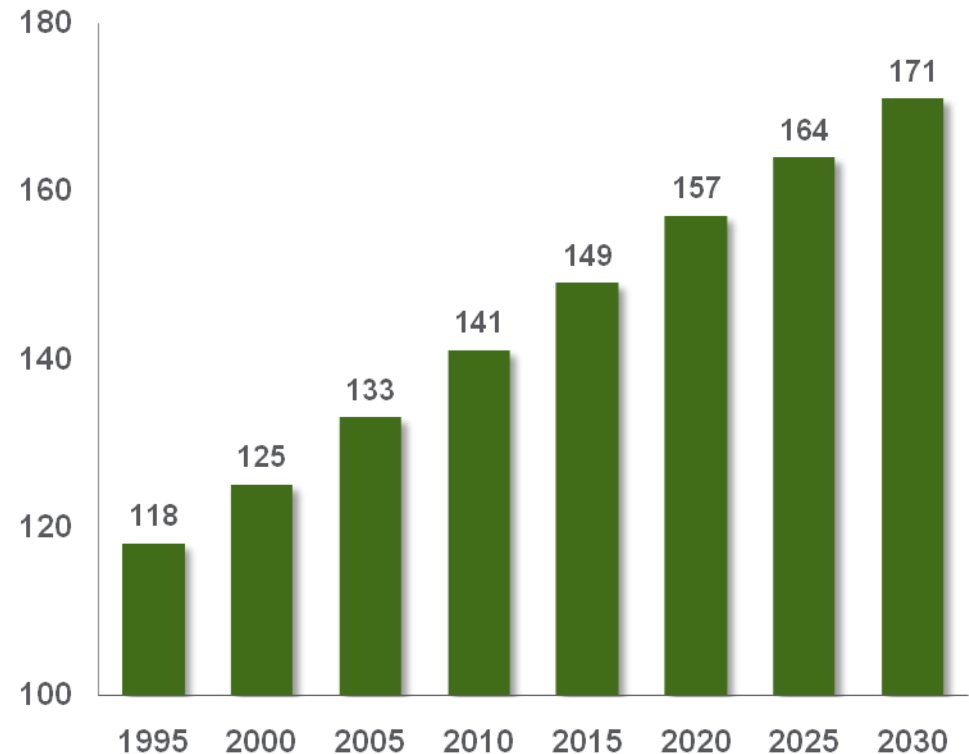
Document guides HHS
planning



The Number of People With Chronic Conditions Is Rapidly Increasing

- In 2000, 125 million Americans had one or more chronic conditions.
- Between 2000 and 2030 the number of Americans with chronic conditions will increase by 37 percent, an increase of 46 million people.

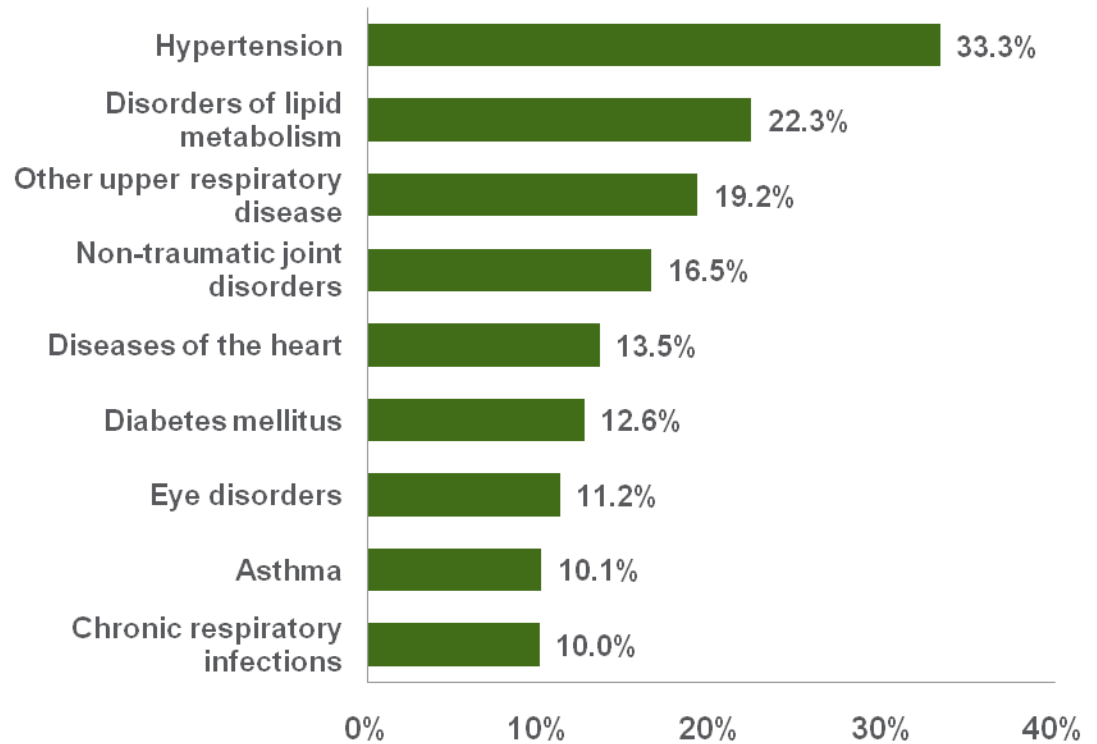
Number of People With Chronic Conditions (in millions)



Eye Disorders Rank 7th among Common Chronic Conditions

- Leading chronic conditions vary among age groups.
- The leading chronic conditions among people ages 65 and older are: hypertension (60%), cholesterol disorders (41%), arthritis (28%), heart disease (25%), and **eye disorders (23%)**.

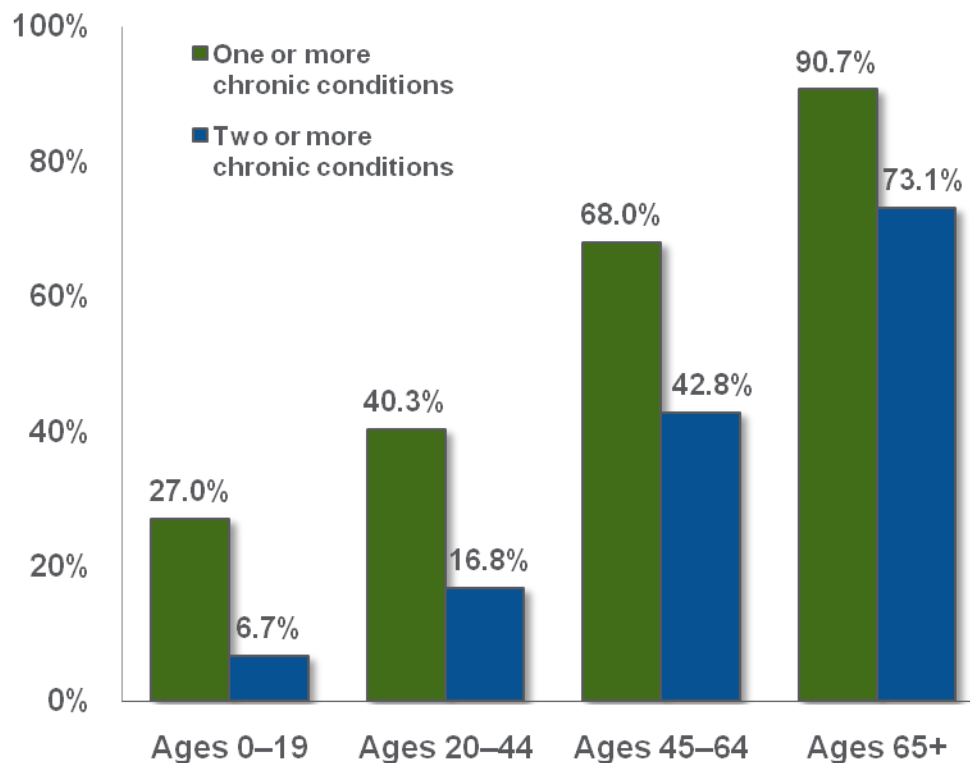
Percentage of Non-Institutionalized People With Specific Chronic Conditions



Older Adults Are More Likely to Have Multiple Chronic Conditions

- The prevalence of multiple chronic conditions increases with age.
- One in 15 children have multiple chronic conditions.
- Almost three out of four people ages 65 and older have multiple chronic conditions.

Percentage of Population With Chronic Conditions

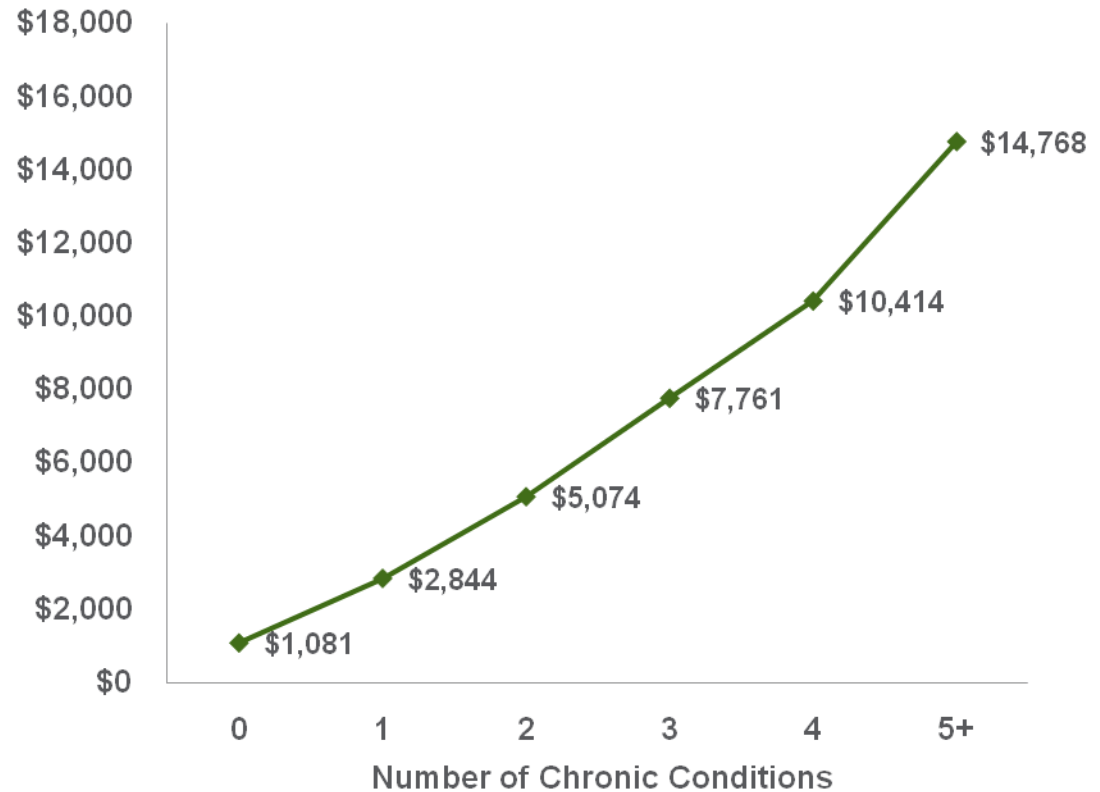


Health Care Spending Increases With the Number of Chronic Conditions

Compared to individuals with no chronic conditions:

- Spending is almost three times greater for someone with a chronic condition
- Spending is over seven times greater for someone with three chronic conditions
- Spending is almost 15 times greater for someone with five or more chronic conditions

Average Per Capita Health Care Spending



Source: Medical Expenditure Panel Survey, 2006

HHS Approach to the Challenges of MCC

Multiple Chronic Conditions: A Strategic Framework

**Optimum Health and Quality of Life
for Individuals with Multiple Chronic Conditions**



U.S. Department of Health & Human Services
December 2010

Some Directions for Inquiry

- What is the place of vision and eye health in the ongoing inquiry into Multiple Chronic Conditions?
- Are people with vision impairment more likely to experience MCCs?
- What is the prevalence of vision impairment among those who have common chronic conditions?
- What is the effect of chronic conditions and vision impairment?
- Who owns the problem?

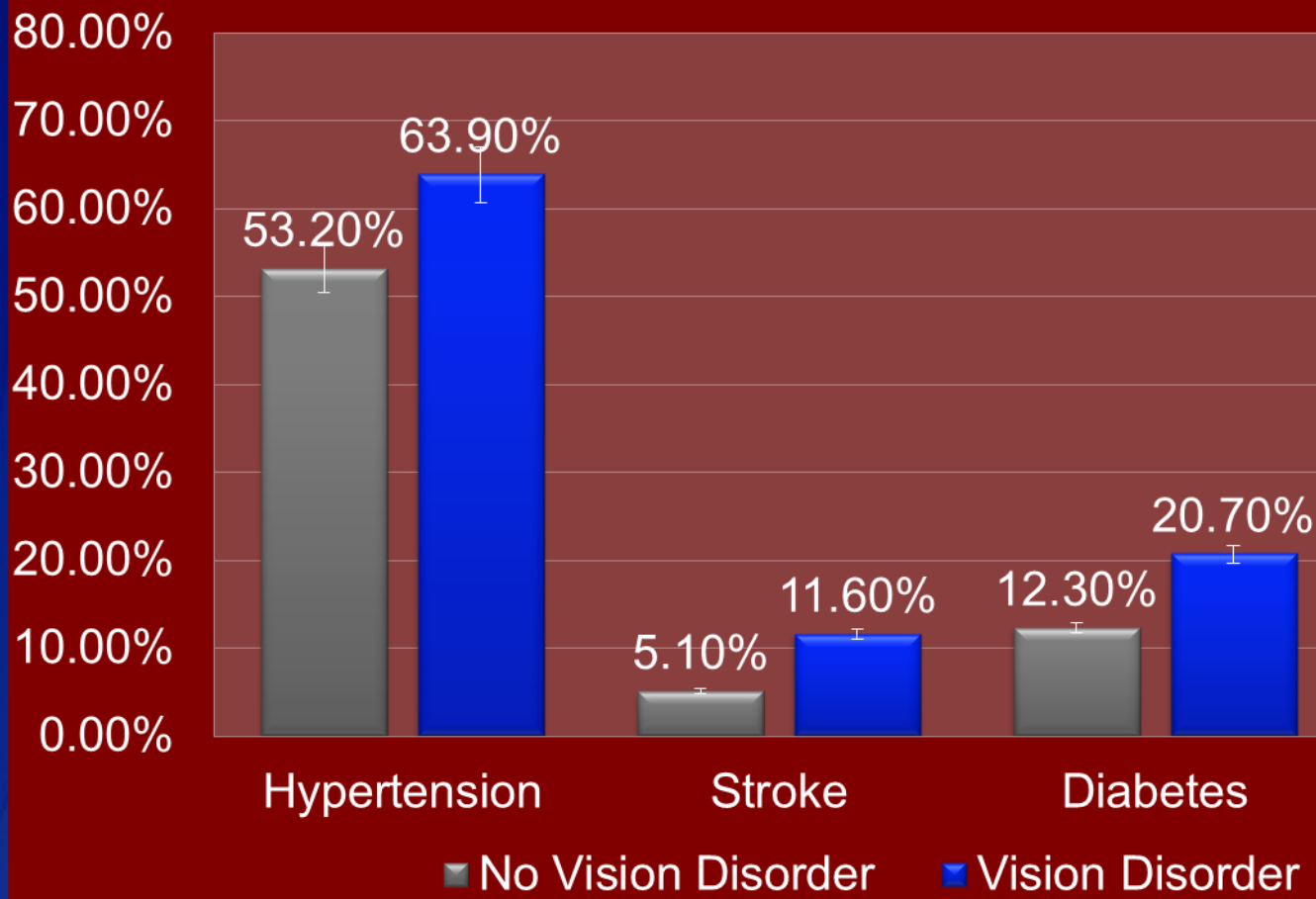
Who owns the problem?

- Tend to think about people who have acquired vision loss and their circumstances, trajectory, and quality of life.
- Point of view

Percent of people ≥ 65 years with and without vision disorders reporting chronic conditions, 2002, 2008 Health Interview Survey

Condition	No Vision Disorder		Any Vision Disorder	
Hypertension	53.2%	(51.5, 54.9)	63.9%	(62.5, 65.4)
Coronary Heart Disease	11.0%	(9.9, 12.2)	17.6%	(16.3, 18.9)
Stroke	5.1%	(4.4, 6.0)	11.6%	(10.7, 12.6)
Arthritis	82.6%	(78.4, 86.1)	86.1%	(83.9, 88.0)
Cancer	18.4%	(17.0, 19.8)	25.0%	(23.7, 26.3)
Chronic Kidney Disease	2.1%	(1.6, 2.7)	4.8%	(4.1, 5.5)
Diabetes	12.3	(11.2, 13.6)	20.7	(19.6, 21.9)

Percent of people ≥ 65 years with and without vision disorders reporting Hypertension, Stroke, & Diabetes, 2002, 2008 Health Interview Survey



Who else might own the problem?

- What about those concerned about chronic conditions, including stroke, diabetes, hypertension, etc?

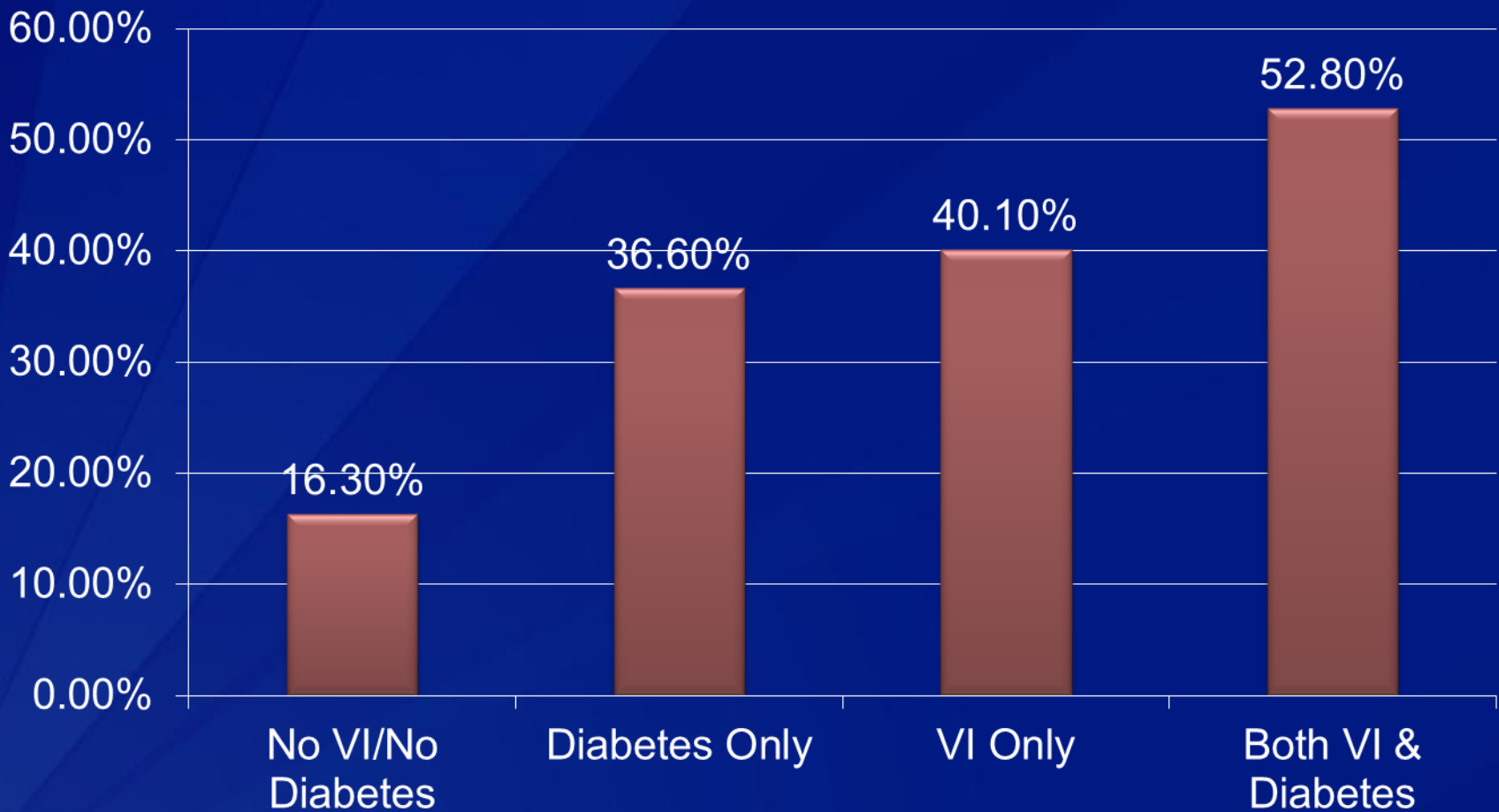
Percent of people ≥ 65 years with chronic conditions reporting trouble seeing, 2002, 2008 Health Interview Survey

Condition	Percent	95% CI
Hypertension	19.4	18.2, 20.5
Coronary Heart Disease	23.8	21.1, 26.6
Stroke	30.9	27.5, 34.4
Arthritis	22.1	20.0, 24.4
Cancer	19.7	17.8, 21.6
Chronic Kidney Disease	34.8	29.3, 40.8
Diabetes	23.6	21.5, 26.0

Percent of people ≥ 65 years with Hypertension, Stroke, & Diabetes reporting trouble seeing, 2002, 2008 Health Interview Survey

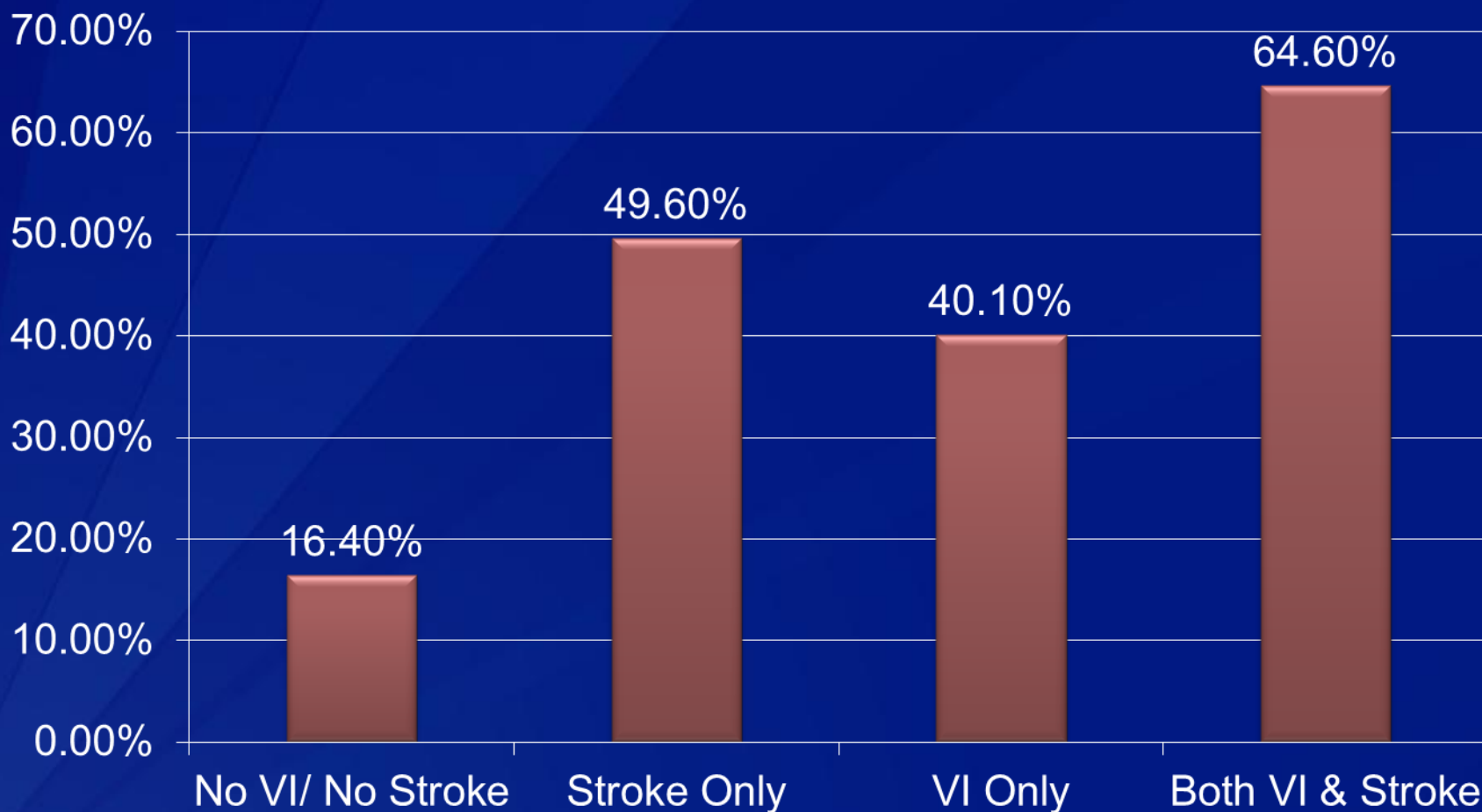


Self-reported difficulty walking one-quarter mile among people \geq 65 years with & without diabetes & vision impairment, 1997-2004 National Health Interview Survey



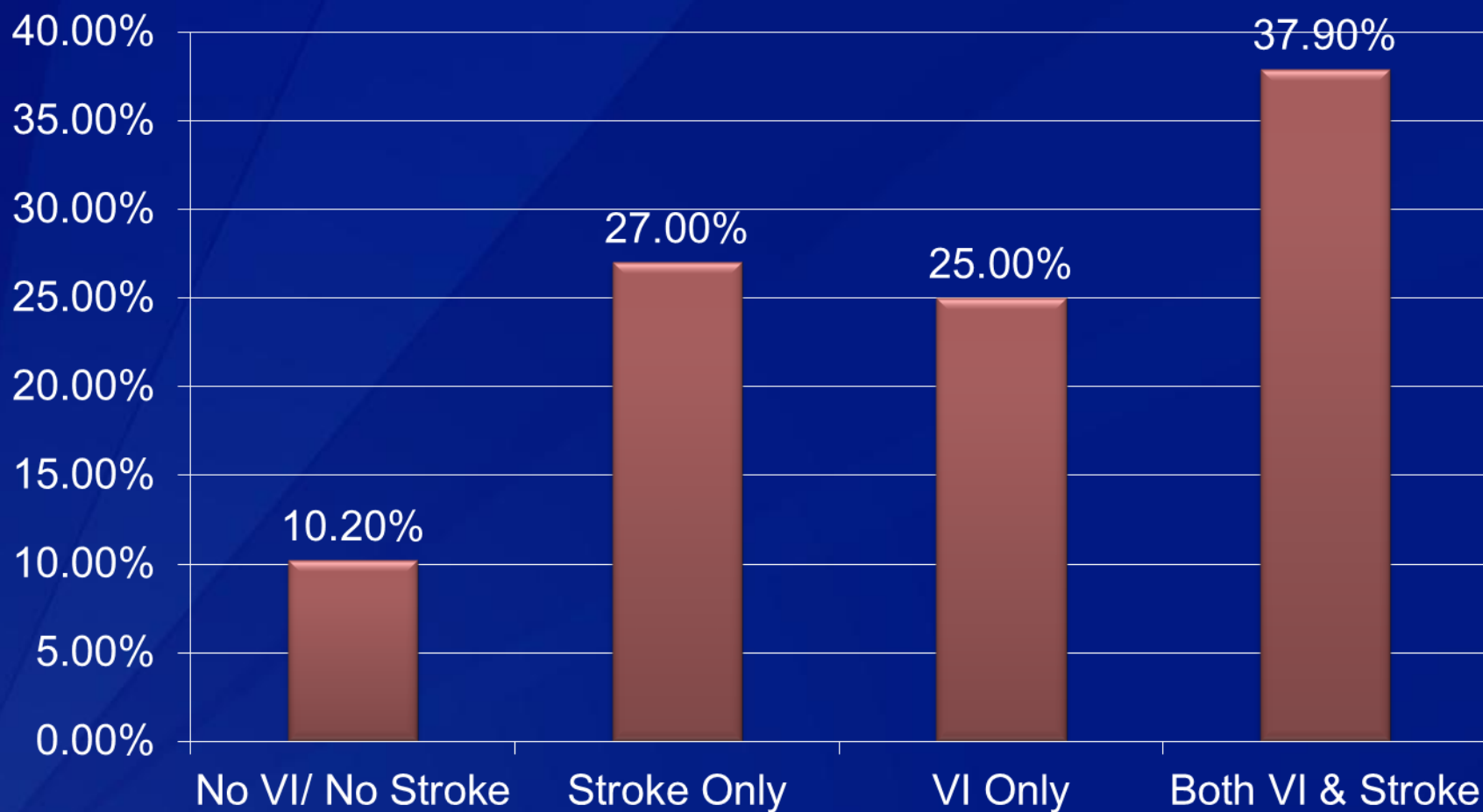
Crews, Jones, & Kim, 2006

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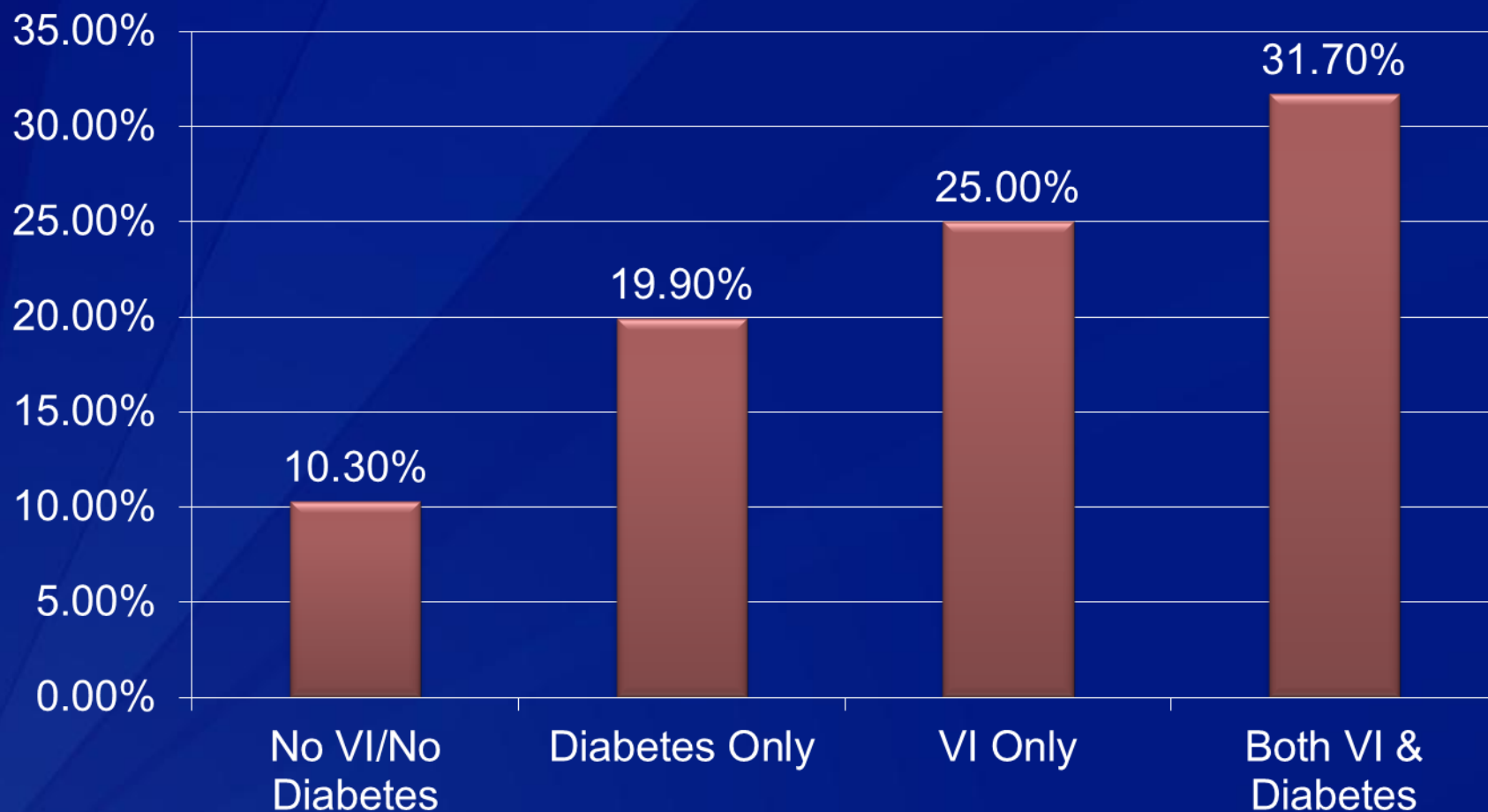
Crews, Jones, & Kim, 2006

Self-reported worse health in past year among people ≥ 65 years with & without stroke & vision impairment, 1997-2004 National Health Interview Survey



Crews, Jones, & Kim, 2006

Self-reported worse health in past year among people
≥ 65 years with & without diabetes & vision impairment,
1997-2004 National Health Interview Survey



Crews, Jones, & Kim, 2006

Comorbid Chronic Conditions Among Women aged 65+

Rank	Diseases Present	% w/ both
1	Arthritis, visual impairment	44
2	Visual impair, high blood pressure	40
3	Arthritis, high blood pressure	34
4	Any heart disease, visual impair	17
5	Visual impairment, hearing loss	15
6	Any heart disease, hearing loss	14
7	Any heart disease, HBP	13
8	Arthritis, hearing loss	12
9	Diabetes, visual impairment	12
10	Cancer, visual impairment	10

Fried, at al, 1999

Conclusions

- The population of people with vision impairment is large, growing, and has great social and economic cost
- Multiple chronic conditions is emerging topic of national concern largely because of the same reasons
- People with vision impairment report higher prevalence of comorbid conditions
- Among people who have chronic conditions, 20 to 35% report vision impairment.

Moreover....

- Vision impairment combined with other chronic conditions compromises function
- And compromises self-reported health status.

What to do about it.

- At national level, the importance of vision & MCCs must be recognized
- In research, we need to better understand the prevalence & effects of MCCs
- At the community level, prevent the onset of vision impairment
- Improve access to vision & eye care to address eye disease and refractive error
- Develop and target evidence based interventions to improve health, health behaviors, and health outcomes for people with vision impairment

- Embed efforts to include people with vision impairment into chronic conditions health promotion activities
- Larger print
- Less cluttered visual presentation of materials
- Better illumination
- Better use of contrast

- Thank you.

Disclaimer

- The findings and conclusions in this presentation are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

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