

# **Associations Between Being Up-To-Date On Colorectal Cancer Screening and Diabetes, 2012**

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**CANCER PREVENTION  
& CONTROL PROGRAM**  
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# Purpose

- 1) Examine the prevalence of individuals 50-75 years of age with diabetes who are up-to-date on their CRC screenings
- 2) Examine the association between self-reported type 2 diabetes and being up-to-date on CRC screening
- 3) Examine predictors of being up-to-date on CRC screening among respondents of a large national cross-sectional survey



# Background & Significance: CRC Risk & Diabetes

- Meta-analysis done by Larsson et al. found a **30% increased risk of CRC** for persons with diabetes
- Within the Nurse's Health Study, Hu et al. found that women who have diabetes have a **43% increased risk of CRC**



# How are they connected?

- Type 2 diabetes and CRC share many of the same lifestyle and environmental risk factors
- Biologic Mechanisms:
  - Hyperinsulinemia increases the risk of colon cancer
    - Insulin stimulates cell proliferation through pathways that increase the free and bioavailable insulin-like growth factors (IGF-1)
  - Slower bowel transit times may increase exposure to potential carcinogens



# CRC Screening

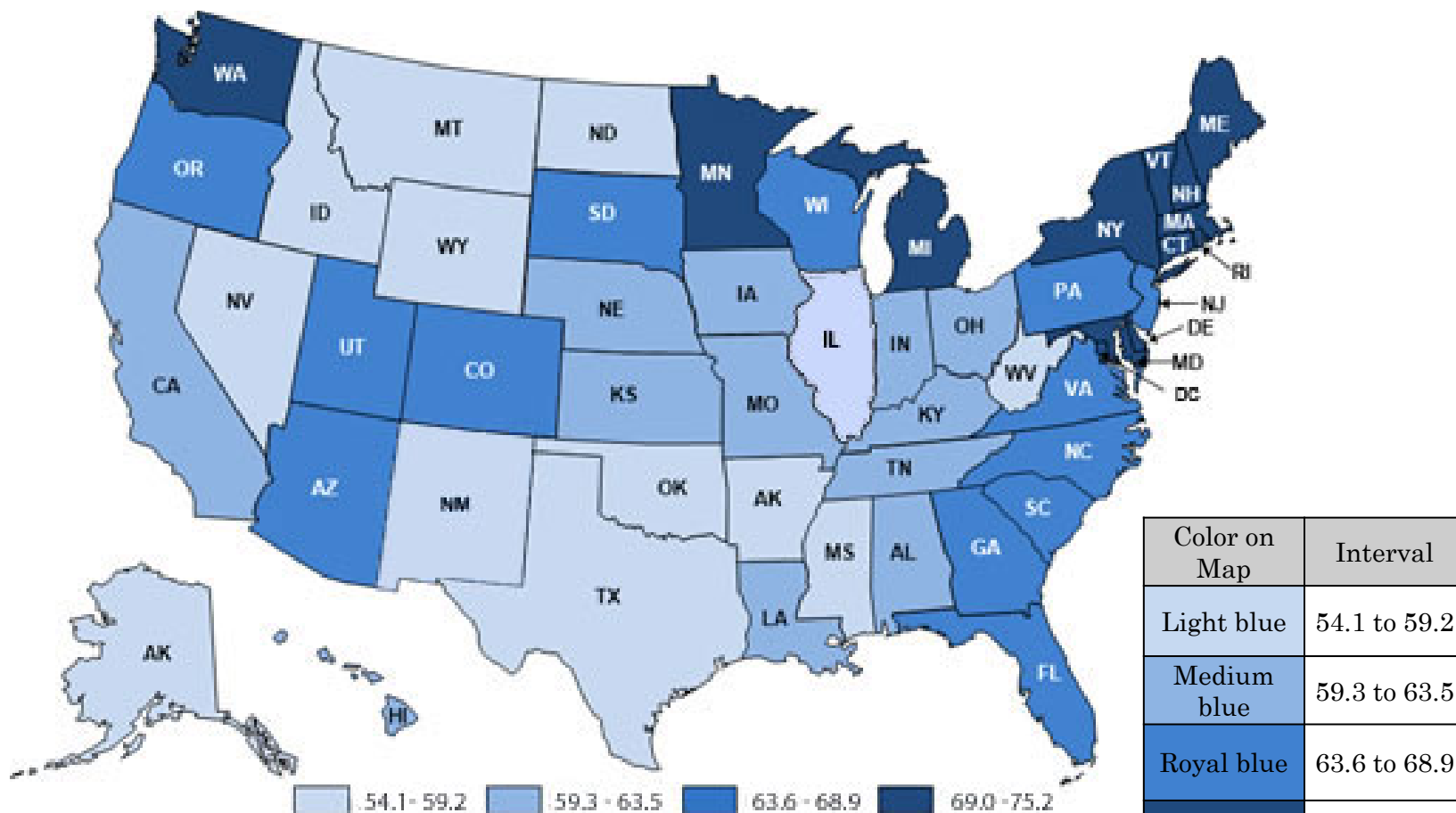
- 22 million Americans who are not up-to-date with CRC screening
- Criteria for being up-to-date:
  - FOBT within 1 year
  - Sigmoidoscopy within 5 years & a FOBT within 3 years
  - Colonoscopy within 10 years



For more information on the different ways you can be tested, call 1.800.227.2345 or visit [www.cancer.org/NYNJ](http://www.cancer.org/NYNJ).



# Percentage of Adults Aged 50–75 Years Who Reported Being Up-to-Date with Colorectal Test Screening, by State Behavioral Risk Factor Surveillance System, United States, 2010



Color on Map	Interval
Light blue	54.1 to 59.2
Medium blue	59.3 to 63.5
Royal blue	63.6 to 68.9
Dark blue	69.0 to 75.2



# Study Rationale

- Persons with chronic diseases, especially diabetes, are frequently under screened, despite more health care visits
- Doctor office visits are more focused on chronic disease management rather than preventive measures



# Methods

- Data Source:
  - BRFSS survey data from 2012
    - BRFSS is the world's largest on-going telephone health survey system
- Data Analysis:
  - SAS Survey Procedures
  - Logistic Regression

Variables		
Diabetes	Age	Education level
General Health	Sex	Race/Ethnicity
Time Since Last Routine Dr. Visit	Income	Marital Status





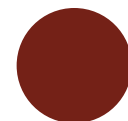
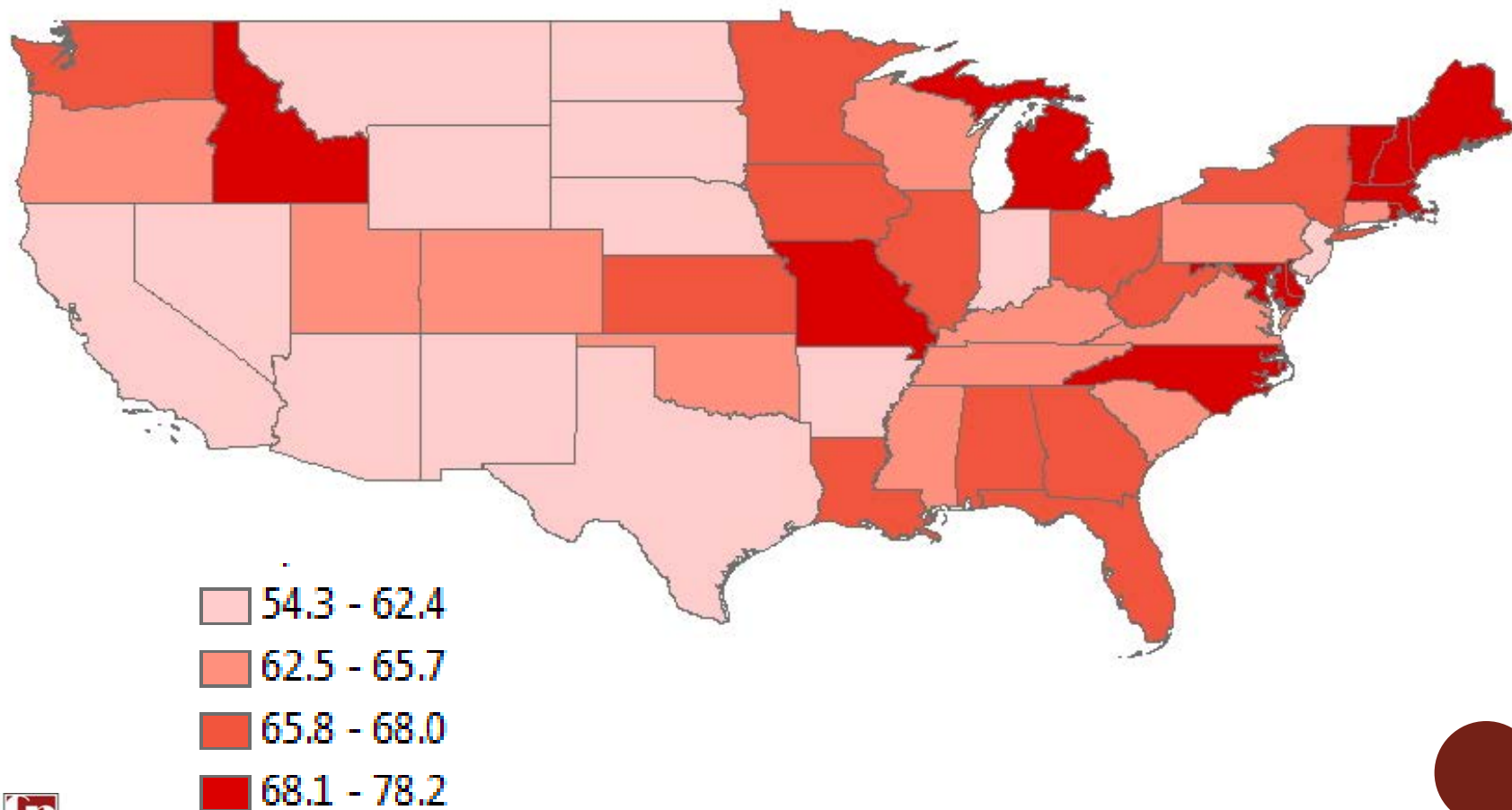
# % Up-To-Date on CRC Screening

	Up-to-Date
All Persons 50-75 years old	60.5%
Persons with diabetes	63.5%
Persons without diabetes	59.9%

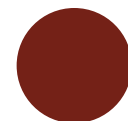
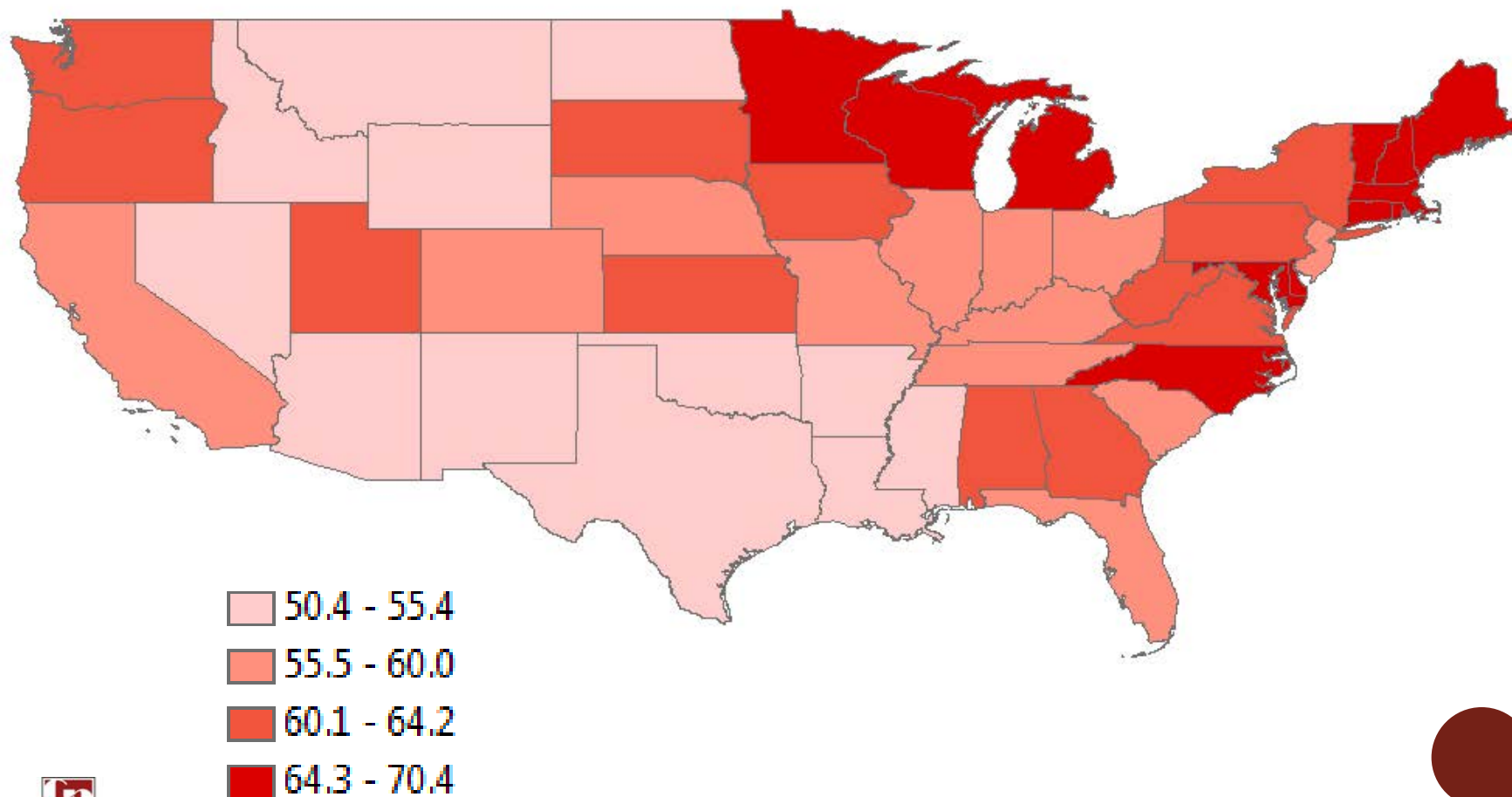
- 80% Up-To-Date by 2018!!
  - Effort launched by the National Colorectal Cancer Round Table yesterday



# Percentage of Adults With DIABETES Aged 50-75 Years Who Reported Being Up-To-Date with CRC Screening, by State BRFSS, 2012



# Percentage of Adults Aged 50-75 Years Who Reported Being Up-To-Date with CRC Screening, by State BRFSS, 2012



# Univariate Analyses

	<b>OR (95% CI)</b>
<b>Diabetes:</b> Diabetic vs. Non	1.166 (1.111, 1.224)
<b>Sex:</b> Males vs. Females	0.883 (0.853, 0.915)
<b>Income</b>	
25K-50K vs. >50K	0.744 (0.709, 0.779)
< 25K vs. >50K	0.443 (0.423, 0.463)
<b>Race</b>	
Black NH	0.857 (0.806, 0.912)
Hispanic	0.478 (0.444, 0.514)
Other NH	0.693 (0.621, 0.773)
<b>Marital Status:</b> Not Married vs. Married	0.665 (0.642, 0.690)
<b>Time Since Last Routine Checkup</b>	
1-5 years vs. <1 year	0.409 (0.390, 0.429)
>5 years vs. <1 year	0.142 (0.131, 0.153)
<b>General Health</b>	
Good vs. Very Good/Excellent	0.858 (0.823, 0.894)
Fair/Poor vs. Very Good/Excellent	0.747 (0.714, 0.781)

# Discussion

- Persons with diabetes are 17% more likely to be up-to-date on CRC screening than persons without diabetes
- Persons who have not had a routine doctor visit in more than 5 years are 86% less likely to be up-to-date than persons who have been within the past year
- Next Steps:
  - Determine predictors for being up-to-date on CRC screening
  - Other covariates of interest?



# Contact Information

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