

# Chronic Disease Prevention Partners Meeting

May 23, 2023



WISCONSIN COVERDELL  
STROKE PROGRAM

# Outline

- What is stroke?
- What is Coverdell?
- What do we (Coverdell) do?



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# What is a stroke?

- Two primary types of stroke
  - Ischemic Stroke
  - Hemorrhagic Stroke
- Also transient ischemic attack (TIA) – referred to as a “mini-stroke”

# Ischemic Stroke

- Blood supply to part of the brain is reduced or fully interrupted.
  - Prevents brain from receiving oxygen, leading to brain cell death in a matter of minutes
- Accounts of ~87% of all strokes
  - Thrombotic (clots form in brain) – most common
  - Embolic (clot forms elsewhere)

# Hemorrhagic Stroke

- Type of stroke resulting from ruptured blood vessel
- ~13% of all strokes
  - Intracerebral hemorrhage (bleeding in brain)
  - Subarachnoid hemorrhage (bleeding occurs between the brain and membranes)

# Stroke Statistics

- Fifth leading cause of death in the United States
- Nearly 800,000 strokes per year in U.S.
- 137,000 annual deaths from stroke
- Roughly 77% are first strokes
- Approximately 28% of people will have another stroke within five years

# Stroke Prevention

- It is estimated that ~80% of strokes are preventable
- Prevention efforts reflect many other chronic diseases and events



# Stroke Prevention

- Health behaviors with largest population attributable risk towards stroke:
  - Tobacco product use
  - High blood pressure
  - Alcohol consumption
  - Physical inactivity

# Disparities in Stroke

- **Racial Disparities** – African American adults are 50% more likely to have a stroke compared to white adults.
  - Gardener, H., Sacco, R. L., Rundek, T., Battistella, V., Cheung, Y. K., & Elkind, M. S. (2020). Race and ethnic disparities in stroke incidence in the Northern Manhattan Study. *Stroke*, 51(4), 1064-1069.
- **Urban/Rural** – Stroke mortality rates are higher among rural patients (18.6%) compared to urban (16.9%)
  - Georgakakos, P. K., Swanson, M. B., Ahmed, A., & Mohr, N. M. (2022). Rural stroke patients have higher mortality: An improvement opportunity for rural emergency medical services systems. *The Journal of Rural Health*, 38(1), 217-227.
- **Gender** – Lifetime risk of stroke is higher among women (20%-21%) than men (14%-17%)
  - Rexrode, K. M., Madsen, T. E., Yu, A. Y., Carcel, C., Lichtman, J. H., & Miller, E. C. (2022). The impact of sex and gender on stroke. *Circulation research*, 130(4), 512-528.



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# What is Coverdell?

- Paul Coverdell National Acute Stroke Program (PCNASP)
- Named after Senator Paul Coverdell (GA), who died in office in 2000
- Wisconsin has been funded since 2012 under the PCNASP

# Coverdell

- Goal is to reduce the burden of stroke in Wisconsin
- Address stroke throughout the entire continuum of care

## Care Continuum

Pre-hospital ..... In-hospital ..... Post-hospital



Community



Emergency  
Medical Services



Emergency  
Department



In-patient



Discharge  
Coordination



Community

- Promote public prevention messages
- Improve EMS care and transitions

- Improve hospital care and transitions

- Improve post-discharge care
- Educate/facilitate home support systems

Coordinate partnerships,  
recruitment, and engagement

Integrate, analyze, and  
use data

Sustain improvements

## Short-term goals:

- Increase public awareness and recognition of stroke symptoms and the importance of calling 9-1-1
- Linking and monitoring data across transitions of care
- Improving care coordination throughout the care continuum





## Longer Term Goals:

- Reduce the burden of stroke in Wisconsin
  - Reduced mortality
  - Improved outcomes for stroke survivors
  - Reduced rates of subsequent strokes





## Data

Track and monitor clinical measures to improve data infrastructure across stroke systems of care

## Health Equity

Implement a team-based approach to enhance quality of care for those at highest risk for stroke events and stroke patients across systems of care

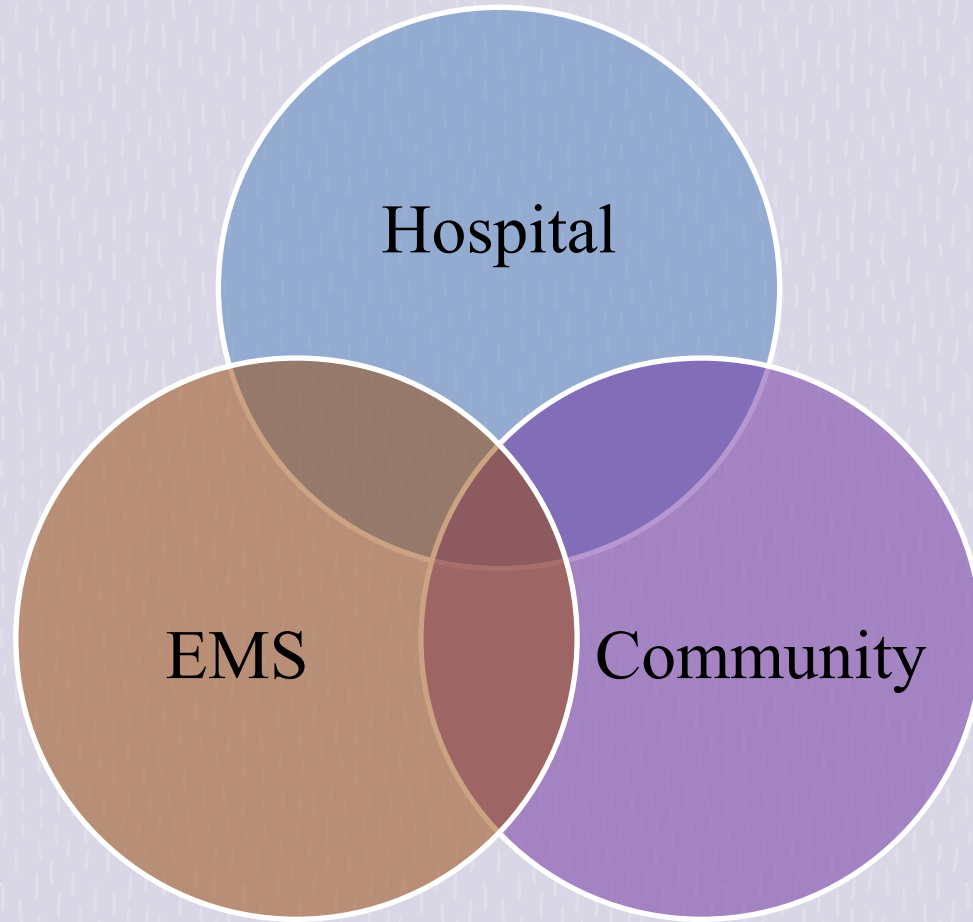
## Community

Link community resources and clinical services that support those at highest risk for stroke events and stroke patients across systems of care



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**What do we (Coverdell) do?**



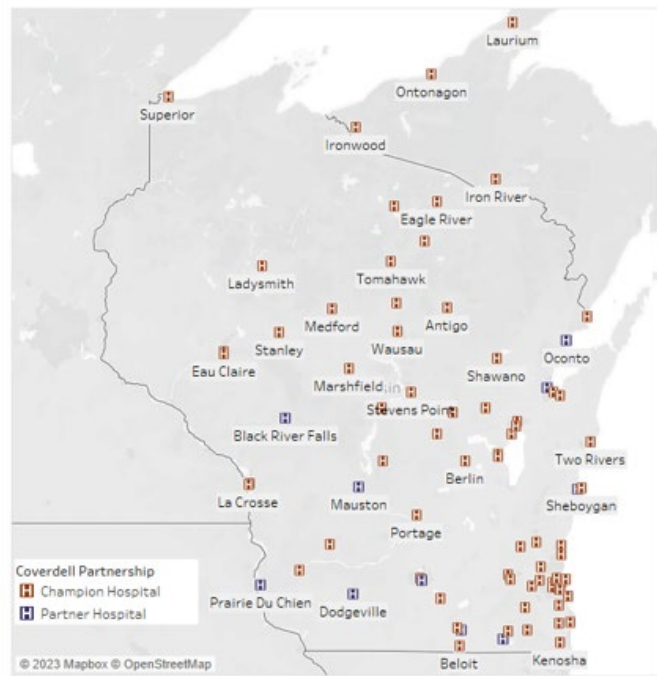
# Hospitals



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# Partnering with 83 hospitals

## Wisconsin Coverdell Program Hospitals



Source: Coverdell Stroke Program,  
Wisconsin Department of Health  
Services, February 2023.



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# Hospitals

- Participate in:
  - Quarterly Coverdell Learning Collaborative (CLC) meetings
  - Bi-annual Wisconsin Stroke Coalition (WSC) meetings
  - Involved in ad-hoc projects to address needs
- Become part of a Community of Practice

# Ongoing Projects

- Telestroke Task Force
- Speed & Efficiency Task Force
- Interventional Radiology Patient Education Resources Committee

# Hospitals

- **Coverdell Champions** submit stroke data through *Get with the Guidelines*
- Helps to inform data-driven decision making
- Identify gaps



# Hospital Report Card

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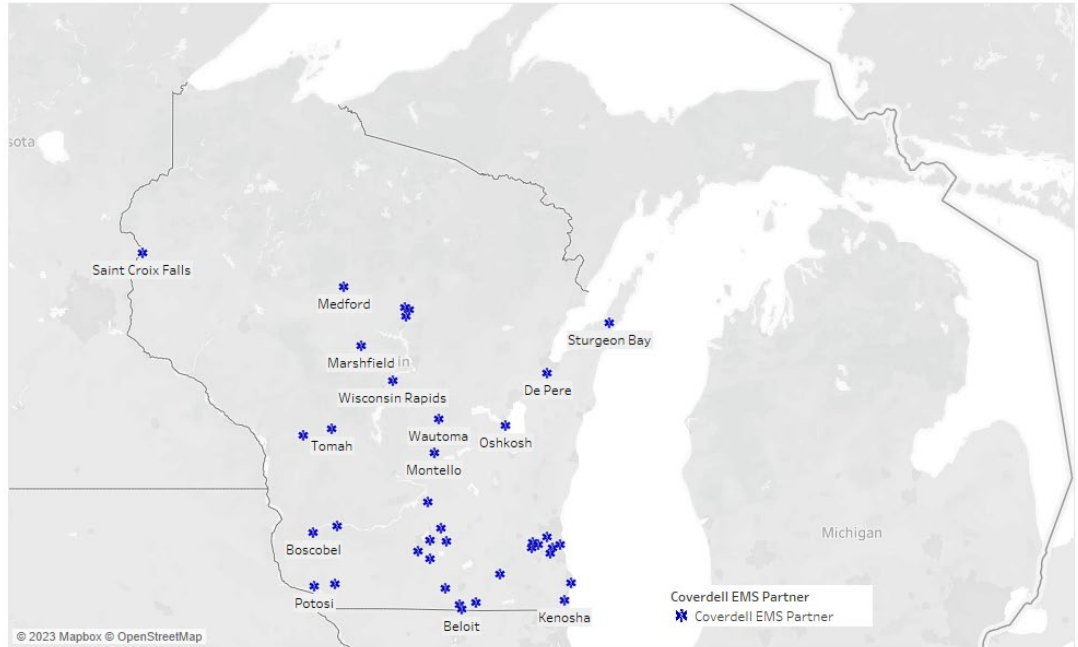
# EMS



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# Partnering with 38 EMS Agencies

## Wisconsin Coverdell Program Emergency Medical Services (EMS)



Source: Coverdell Stroke Program, Wisconsin Department of Health Services, March 2023.



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# EMS

- **Participate in quarterly EMS meetings**
  - *Review stroke performance data gathered through Wisconsin Ambulance Run Data System (WARDS)*
- Helps to inform data-driven decision making
- Identify gaps

# EMS Report Card

| Wisconsin Coverdell EMS Partner Report Card  |        |        |                           |        |      |       |       |       |                                  |                            |            |                    |       |       |                     |
|--|--------|--------|---------------------------|--------|------|-------|-------|-------|----------------------------------|----------------------------|------------|--------------------|-------|-------|---------------------|
| EMS Name   |        |        |                           |        |      |       |       |       |                                  |                            |            |                    |       |       |                     |
| Quarter X  | Goal % | Agency | WI Coverdell EMS Agencies |        |      |       |       |       |                                  |                            |            |                    |       |       | All WI EMS Agencies |
|  |        |        | Total                     | Female | Male | White | Black | Asian | American Indian or Alaska Native | Hawaiian/ Pacific Islander | Other Race | Hispanic Ethnicity | Rural | Urban |                     |
| Measures including all stroke runs   |        |        |                           |        |      |       |       |       |                                  |                            |            |                    |       |       |                     |
| Number of stroke patients identified via primary or secondary impression   |        | 58     | 1090                      | 501    | 589  | 701   | 89    | 13    | N/A*                             | N/A*                       | 21         | 18                 | 403   | 687   | 3002                |
| EMS on-scene time recorded <sup>1</sup>  | 85%    | 89%    | 85%                       | 84%    | 80%  | 92%   | 96%   | 100%  | N/A                              | N/A                        | 100%       | 89%                | 91%   | 95%   | 89%                 |
| Stroke screening (e.g., CPSS) performed and documented as a vital sign   | 85%    | 84%    | 90%                       | 87%    | 87%  | 89%   | 96%   | 84%   | N/A                              | N/A                        | 94%        | 100%               | 76%   | 90%   | 82%                 |
| Neuro exam, stroke screening, or Glasgow Coma Scale performed and documented as a vital sign                           | 85%    | 98%    | 99%                       | 97%    | 86%  | 98%   | 100%  | 98%   | N/A                              | N/A                        | 94%        | 83%                | 97%   | 99%   | 97%                 |
| Percent of runs transported to a designated stroke center  | 85%    | 79%    | 76%                       | 74%    | 88%  | 80%   | 95%   | 67%   | N/A                              | N/A                        | 90%        | 89%                | 72%   | 90%   | 72%                 |
| Measures excluding transfers/transport   |        |        |                           |        |      |       |       |       |                                  |                            |            |                    |       |       |                     |
| Number of stroke runs excluding transfers/transport  |        | 27     | 816                       | 387    | 403  | 533   | 87    | N/A*  | N/A*                             | N/A*                       | 14         | 11                 | 277   | 539   | 2434                |
| EMS left scene within 15 minutes of arriving to patient (of those with an on-scene time) <sup>2</sup>                  | 60%    | 63%    | 58%                       | 57%    | 59%  | 60%   | 61%   | N/A   | N/A                              | N/A                        | 61%        | 82%                | 41%   | 56%   | 61%                 |
| Situation last known well (LKW) time entered   | 60%    | 89%    | 80%                       | 81%    | 83%  | 81%   | 96%   | N/A   | N/A                              | N/A                        | 85%        | 73%                | 72%   | 87%   | 80%                 |
| Situation LKW and patient arrived at destination times were both entered   | 60%    | 74%    | 77%                       | 75%    | 80%  | 78%   | 84%   | N/A   | N/A                              | N/A                        | 85%        | 73%                | 64%   | 79%   | 67%                 |
| Percent of stroke patients arrived at hospital within 3.5 hours of time LKW <sup>3</sup>                               | 60%    | 85%    | 67%                       | 62%    | 64%  | 65%   | 63%   | N/A   | N/A                              | N/A                        | 90%        | 55%                | 87%   | 74%   | 67%                 |
| Blood glucose obtained and documented as a vital sign  | 85%    | 93%    | 96%                       | 86%    | 94%  | 95%   | 96%   | N/A   | N/A                              | N/A                        | 96%        | 91%                | 73%   | 93%   | 89%                 |
| Records complete with blood glucose, stroke scale (neuro, stroke scale list, or Glasgow Coma Scale), and on-scene time | 85%    | 89%    | 80%                       | 78%    | 83%  | 83%   | 90%   | N/A   | N/A                              | N/A                        | 96%        | 91%                | 88%   | 89%   | 76%                 |

# Community



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# Coverdell Community Stroke Partner

- 21 partner CBOs
- Meet bi-annually



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# Goals

- Prevent stroke and increase awareness of the signs and symptoms
- Better reach populations who are impacted by stroke and poor stroke outcomes at disparate levels
- Distribute stroke community education materials



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# Goals Continued

- Gather community input for stroke campaign materials
- Create a space for partners to engage with one another specifically on stroke prevention and post-stroke care



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# Activities and Benefits

- Free stroke community education materials
- Networking and community of practice opportunities with other Coverdell Partners
- Technical assistance to answer questions regarding stroke and stroke prevention as needed
- Invitations to stroke education opportunities
- Recognition on the Wisconsin Coverdell Stroke Program website



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# Community Education

Know the signs of a stroke!

## BE FAST

### BALANCE

Sudden loss of coordination or balance

### EYES

Sudden change in vision

### FACE

Sudden weakness on one side of the face or facial droop

### ARM

Sudden arm or leg weakness or numbness

### SPEECH

Sudden slurred speech, trouble speaking, trouble understanding speech

### TERRIBLE HEADACHE

Sudden onset of a terrible headache



**TIME TO CALL 9-1-1**  
Every second counts!

¡Reconozca los síntomas de un derrame cerebral!  
**PIENSE RÁPIDO (BE FAST)**

### BALANCE (EQUILIBRIO)

Pérdida repentina del equilibrio y la coordinación

### EYES (OJOS)

Cambios repentinos en la visión

### FACE (CARA)

Débilitad repentina en las partes de la cara o parálisis facial

### ARM (BRAZOS)

Debilidad o entumecimiento repentino de un brazo o una pierna

### SPEECH (HABLA)

Habla entrecortada, dificultad para hablar, dificultad para entender lo que le dicen

### TERRIBLE HEADACHE (UN TERRIBLE DOLOR DE CABEZA)

Inicio repentino de un terrible dolor de cabeza



**HORA DE LLAMAR AL 9-1-1**  
¡Cada segundo cuenta!

Paub cov yam ntxwv mob hlab ntsha tawg!  
**UA TAU CEEV (BE FAST)**

### BALANCE (LUB CEV KHOV KHO)

Cia li ua rau tsis hnov qab los sis lub cev tsis kho li lawm

### EYES (QHOV MUAG)

Cia li ua rau tsis pom kev zoo lawm

### FACE (NTSEJ MUAG)

Cia li ua rau ib ntxwv muag tsis muag zog los sis ua rau ntsej muag qhuav

### ARM (TXHAIS NPAB)

Cia li ua rau ib txhais npab los sis txhais cev tsis muag zog los sis loog tag

### SPEECH (KEV HAIS LUS)

Cia li ua rau hais lus tsis meej, hais lus tau nyuaj, ntxwv saib nyuaj cov lus hais

### TERRIBLE HEADACHE (MOB TAUB HAU HEEV)

Cia li ua rau mob taub hau heev



**NRHIAV SIJHAWM HU RAU 9-1-1**  
Txhua lub sijhawm chib yeej tseem ceeb heev!

What is a **TIA?**

A TIA (transient ischemic attack) is a warning of an impending stroke. It occurs when a blood vessel in the brain is blocked for a brief period of time, causing stroke symptoms that recover quickly, usually within one hour. Symptoms that last longer may be a stroke, even if they resolve.

### WHY SEEK EMERGENCY CARE FOR A TIA?

Studies show up to 40% of people with a TIA will go on to have a stroke. Early evaluation and treatment can decrease the risk of stroke in the first two days after a TIA by up to 85%.

### WHAT ARE COMMON STROKE AND TIA SYMPTOMS?

#### BALANCE

Sudden loss of coordination or balance

#### EYES

Sudden change in vision

#### FACE

Sudden weakness on one side of the face or facial droop

#### ARM

Sudden arm or leg weakness or numbness

#### SPEECH

Sudden slurred speech, trouble speaking, trouble understanding speech

#### TERRIBLE HEADACHE

Sudden onset of a terrible headache



### WHAT ARE SOME RISK FACTORS FOR STROKE AND TIA?

- High blood pressure
- Diabetes
- High cholesterol
- Heart disease
- Atrial fibrillation
- Carotid stenosis
- Smoking
- Inactivity
- Heavy alcohol use
- Stroke in the family

**TIME TO CALL 9-1-1.** Every second counts, and quick evaluation could prevent a stroke

PLACENTIA, ILLINOIS

# Community Education

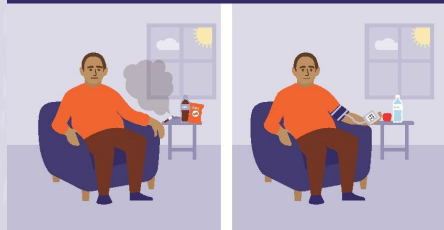




# Community Education

## It's No Joke...

You can **REDUCE YOUR RISK** of Stroke



### IT'S NO JOKE.

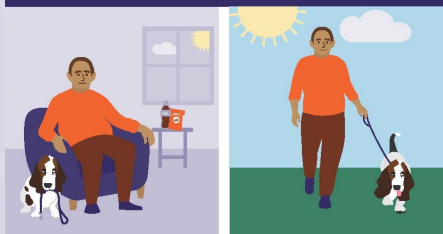
High blood pressure increases your risk of stroke.

### KNOW YOUR NUMBERS.

High blood pressure? Controlling it will reduce your risk of stroke.

## It's No Joke...

You can **REDUCE YOUR RISK** of Stroke



### IT'S NO JOKE.

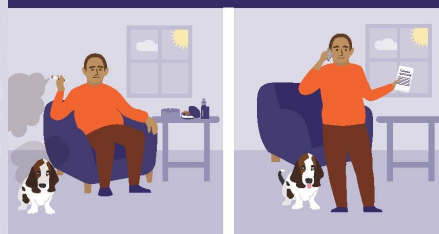
Physical inactivity increases your risk of stroke.

### MOVING MATTERS!

Regular physical activity reduces your risk for stroke.

## It's No Joke...

You can **REDUCE YOUR RISK** of Stroke



### IT'S NO JOKE.

Commercial tobacco use increases your risk of stroke.

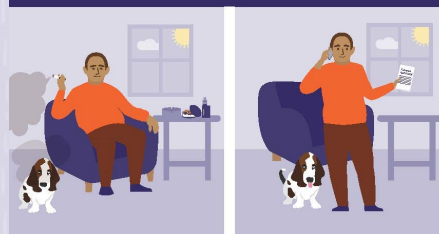
### FIVE YEARS OF NO SMOKING?

Your risk may equal someone who never smoked.

World Health Organization, 2010

## It's No Joke...

You can **REDUCE YOUR RISK** of Stroke



### IT'S NO JOKE.

Regular use of tobacco products increases your risk of stroke.

### FIVE YEARS OF NO SMOKING?

Your risk may equal someone who never smoked.

World Health Organization, 2010



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P-05402 (1/16/2019)

**REDUCE YOUR RISK.**

Learn More →



[dhs.wisconsin.gov/coverdellcommunity.htm](https://wisconsin.gov/coverdellcommunity.htm)



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**REDUCE YOUR RISK.**

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**WISCONSIN TOBACCO QuitLine**  
800-QUIT-NOW

**REDUCE YOUR RISK.**

Learn More →



[dhs.wisconsin.gov/coverdellcommunity.htm](https://wisconsin.gov/coverdellcommunity.htm)



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**Questions?**