

How Urban Economically Disadvantaged People Receive Weather Information in Milwaukee, Wisconsin



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Motivation

- **Building a Weather-Ready Nation**
- **What if all of the public are not able to make the same fast, smart decisions because of impacts of their income level?**
- **How are we able to better communicate with lower income populations?**
- **What technologies are available to them?**
- **What are they currently using?**
- **What weather is a high impact to them?**



Background/Goals

- **(2014) Consulted with Vankita Brown, Ph.D, Social Scientist at NWS Headquarters**
 - **Urban, rural and elderly poor**
- **(2016) Work with Deidre Peroff, Ph.D, Social Scientist at University of Wisconsin Sea Grant**
- **Identify strategies to better reach the economically disadvantaged w/routine and critical weather information.**

Risk Communication Survey

- **129 surveys completed by UW Sea Grant and UW-Milwaukee Atmospheric Science students:**
- **Performed at St. Ben's Community Meal and Open Door Cafe**
- **Had 7-15 respondents per visit**
- **Milwaukee Point-in-Time Count of sheltered/unsheltered homeless:**
- **2016: 1398 (9%)**

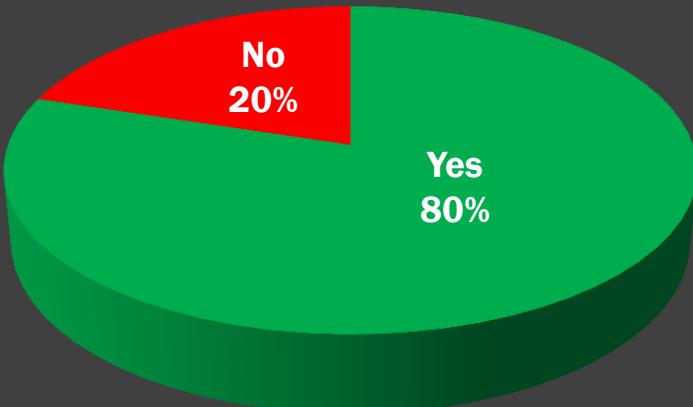


Survey: Cell Phones

- **Do you have a cellular phone?**

Yes: 103 (80%)

No: 26 (20%)

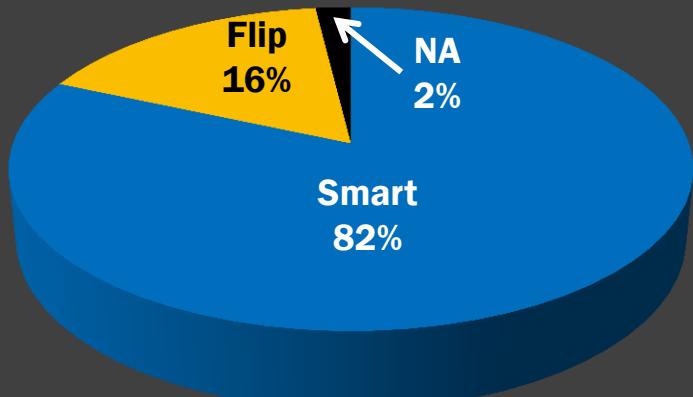


- **If yes, smart or flip phone?**

Smart: 84 (82%)

Flip: 17 (16%)

NA: 2 (2%)



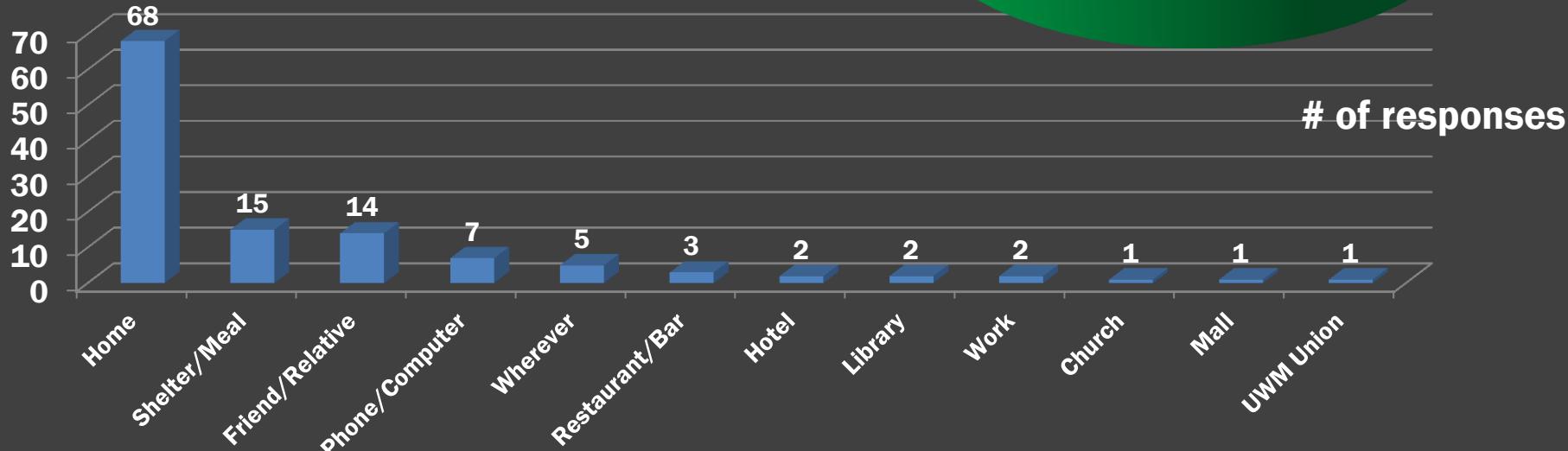
Survey: Television

- **Do you watch TV?**

Yes: 105 (81%)

No: 24 (18%)

- **If yes, where do you watch TV?**



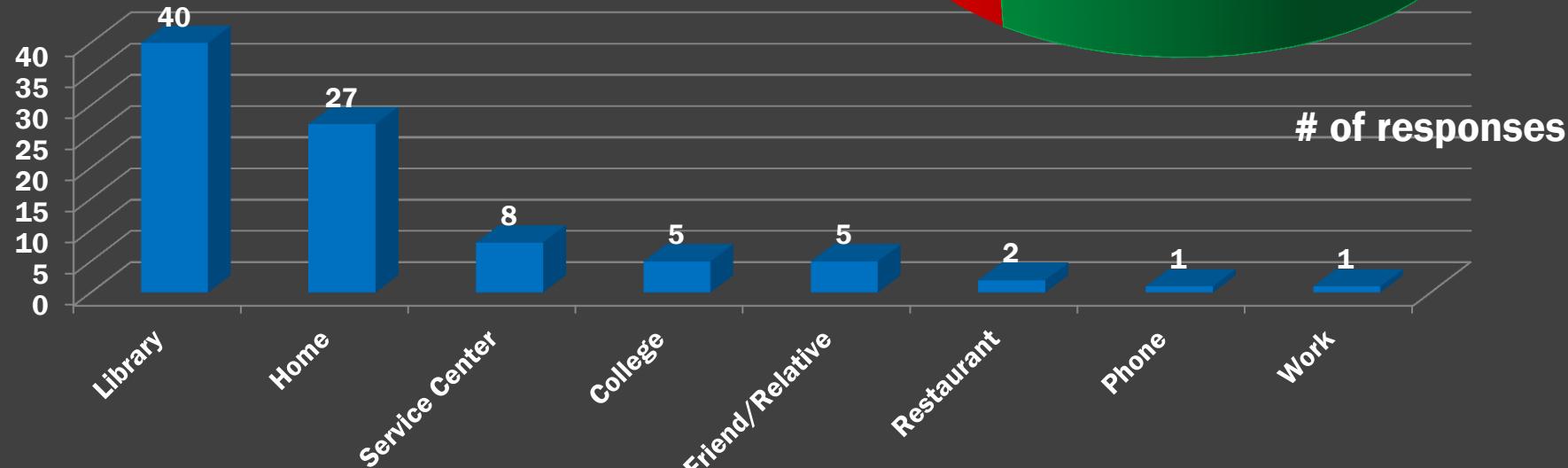
Survey: Computer with Internet

- Do you use a computer w/internet?

Yes: 76 (59%)

No: 53 (41%)

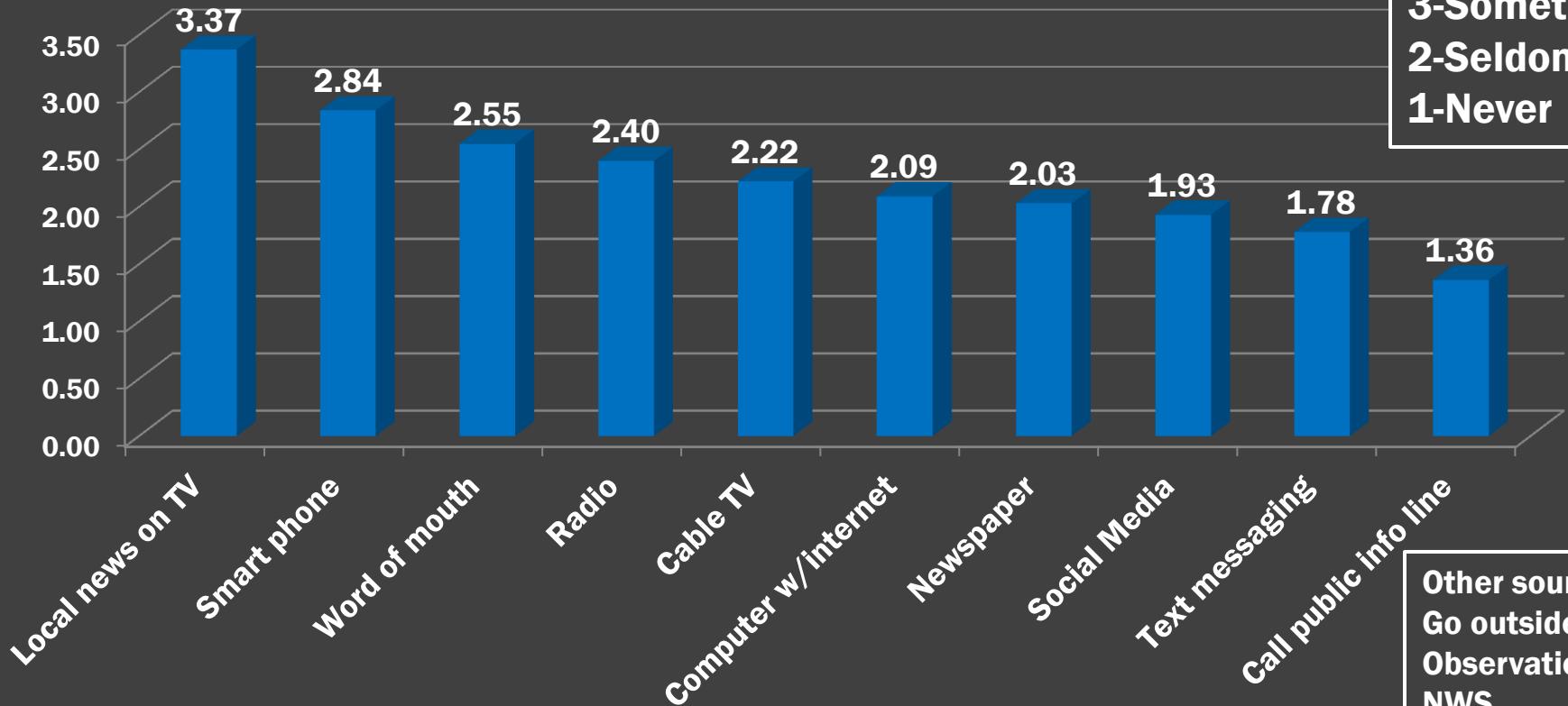
- If yes, where do you use it?



How frequently do you use the following sources to learn about weather forecasts?

Average Values

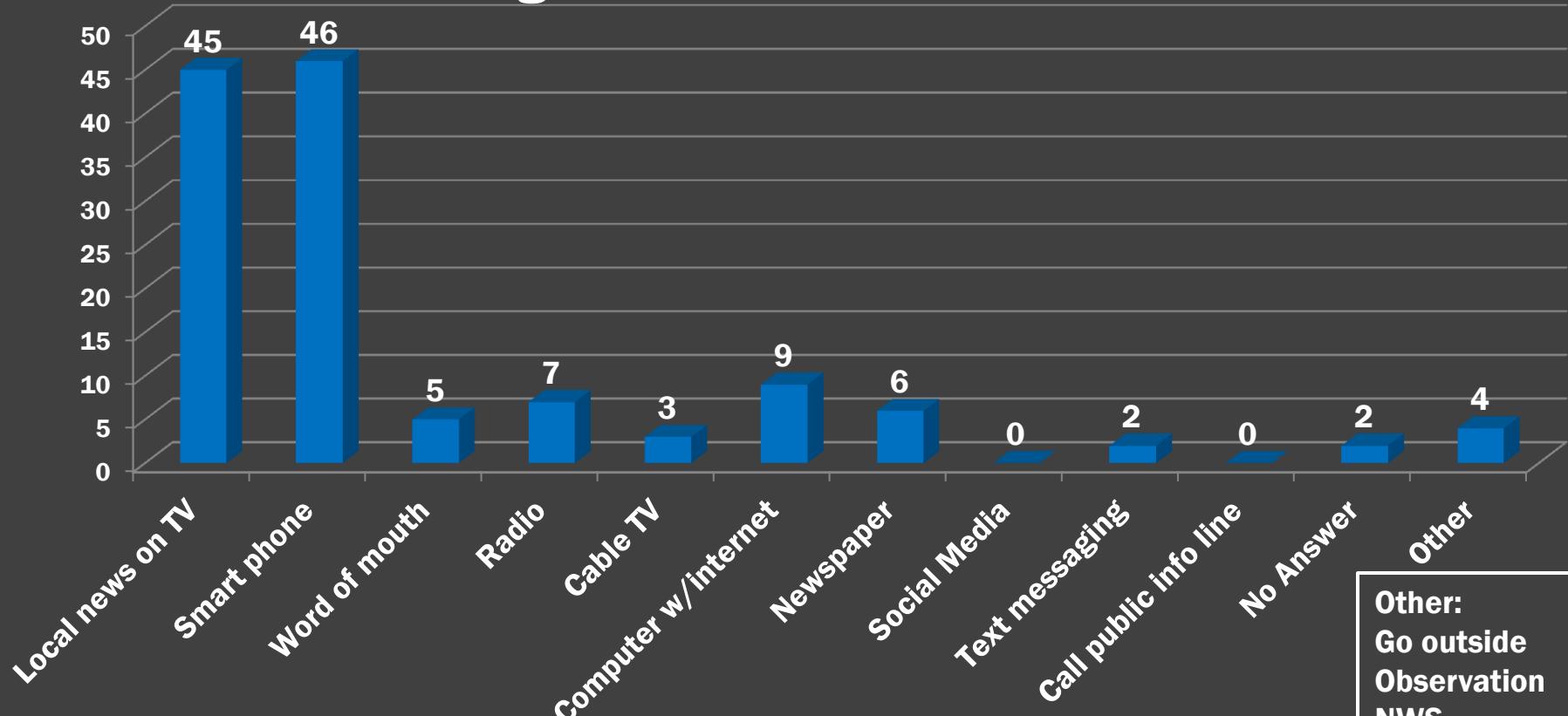
4-Often
3-Sometimes
2-Seldom
1-Never



Other sources:
Go outside
Observation
NWS

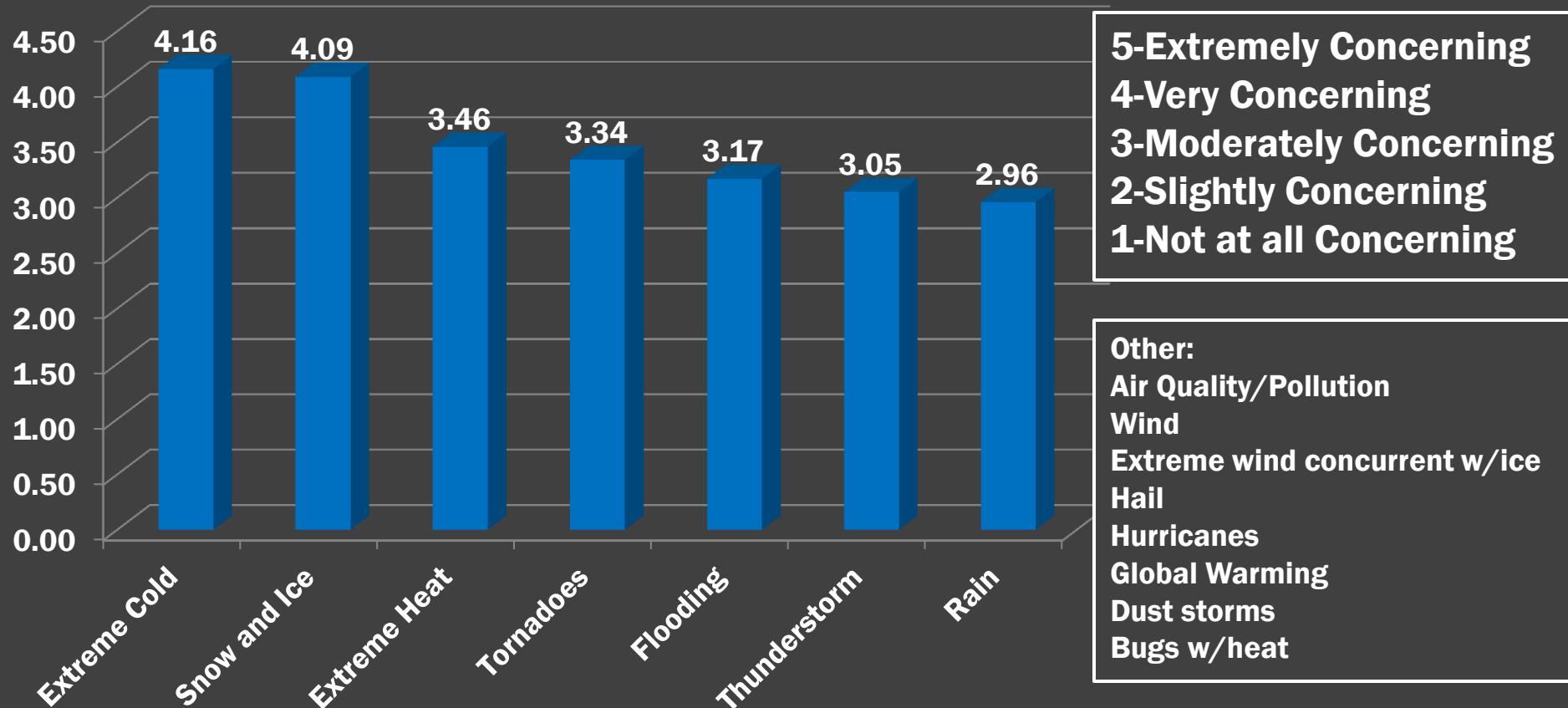


Which of those sources would you say you use the MOST OFTEN to get weather forecasts?



Other:
Go outside
Observation
NWS

How concerning are the following weather scenarios to you?



Key Findings: Survey

- **Top sources for weather forecast/information:**
 - Local news on TV
 - Smart phone apps/internet
 - Little to no use of public weather information phone line
- **Top weather concerns for low income/homeless**
 - Extreme cold, snow/ice, extreme heat
- **Most have cell phones, but it's unreliable**
 - High turnover: Theft, lost, no access to charger, batteries don't handle cold weather well (Apple: 32F, Others down to -4F in operating mode)
 - Government phone: 1 new one/year, limited minutes (200/month), text messaging?
 - Should have specifically asked which apps they're using for weather

Current Outreach Efforts

- Milwaukee County Homeless Outreach Team
- Impact 2-1-1
- NWS Milwaukee
- Weather-Ready Nation Ambassador Program
- Warming Shelter Decision Makers



Warning Signs of Hypothermia



Confusion



Shivering



Difficulty
Speaking



Sleepiness



Stiff
Muscles

Medical attention is needed immediately!

Watching for Frostbite

- Typically on fingers, toes, nose and ears.
- Any exposed skin.
- If skin turns blue or grey, is very swollen, blistered or feels hard and numb, then seek medical attention immediately!

Temperature/Frost Bite Times:

10F: 30 minutes or more for Frost Bite

Below 0F: 5 to 30 minutes for Frost Bite

The windier it is, the faster it will occur.

Frostbite First Aid

Get indoors as quickly as possible!

- Once indoors, **SLOWLY** re-warm.
- Avoid hot stoves, heaters, fire.

Until you can get indoors/shelter:

- **Don't rub/massage cold body parts.**
- **Put your hands in your armpits.**
- **Drink warm liquids.**
- **Get extra layers of clothes/blankets.**
- **Remove rings, watches and any other tight jewelry or related items.**

What if all of the public are not able to make the same fast, smart decisions because of impacts of their income level?

Fond du Lac woman's death caused by cold temperatures

Medical examiner: Men ages 51, 34 found dead, possibly from hypothermia, on New Year's Eve

POSTED 11:29 PM, JANUARY 7, 2013 BY [SCOTT ANGUS](#) / UPDATED AT 05:54 PM, JANUARY 7, 2013

Extreme cold weather tied to 3 deaths in Madison area, causes water main breaks

News

Police investigate how 84-year-old woman found dead got outside of assisted living facility

0 of the 7 deaths were related to being homeless.

Next Steps

- **More Research Groups**
 - Rural (Mennonite, Amish)
 - Elderly
- **More Outreach**
 - Community groups/organizations
 - Local government/decision-makers
 - Weather Information/Awareness meetings/presentations
 - Bus is most common form of transportation. Advertising?



Questions?

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