

# Benton County Public Health Preparedness



Benton County Human Services  
Public Health Unit

# Pandemic Influenza

## **INFLUENZA**

FREQUENTLY COMPLICATED WITH

## **PNEUMONIA**

IS PREVALENT AT THIS TIME THROUGHOUT AMERICA.

THIS THEATRE IS CO-OPERATING WITH THE DEPARTMENT OF HEALTH.

### **YOU MUST DO THE SAME**

IF YOU HAVE A COLD AND ARE COUGHING AND SNEEZING. DO NOT ENTER THIS THEATRE.

### **GO HOME AND GO TO BED UNTIL YOU ARE WELL.**

Coughing, Sneezing or Spitting Will Not Be Permitted In The Theatre. In case you must cough or sneeze, do so in your own handkerchief, and if the coughing or sneezing persists leave the theatre at once.

This Theatre has agreed to cooperate with the Department Of Health in disseminating the truth about Influenza, and thus serve a great educational purpose.

### **HELP US TO KEEP CHICAGO THE HEALTHIEST CITY IN THE WORLD**

**JOHN DILL ROBERTSON**  
COMMISSIONER OF HEALTH



# Overview

- Seasonal influenza
- Avian influenza
- Pandemic influenza
- Preparedness



# Influenza

# Seasonal Influenza

- Respiratory infection
- Spread through coughing, sneezing
- 1 to 5 days from exposure to onset of symptoms
- Spread 1 day **before illness** up to 7 days after
- Seasonal influenza traditionally occurs October through April

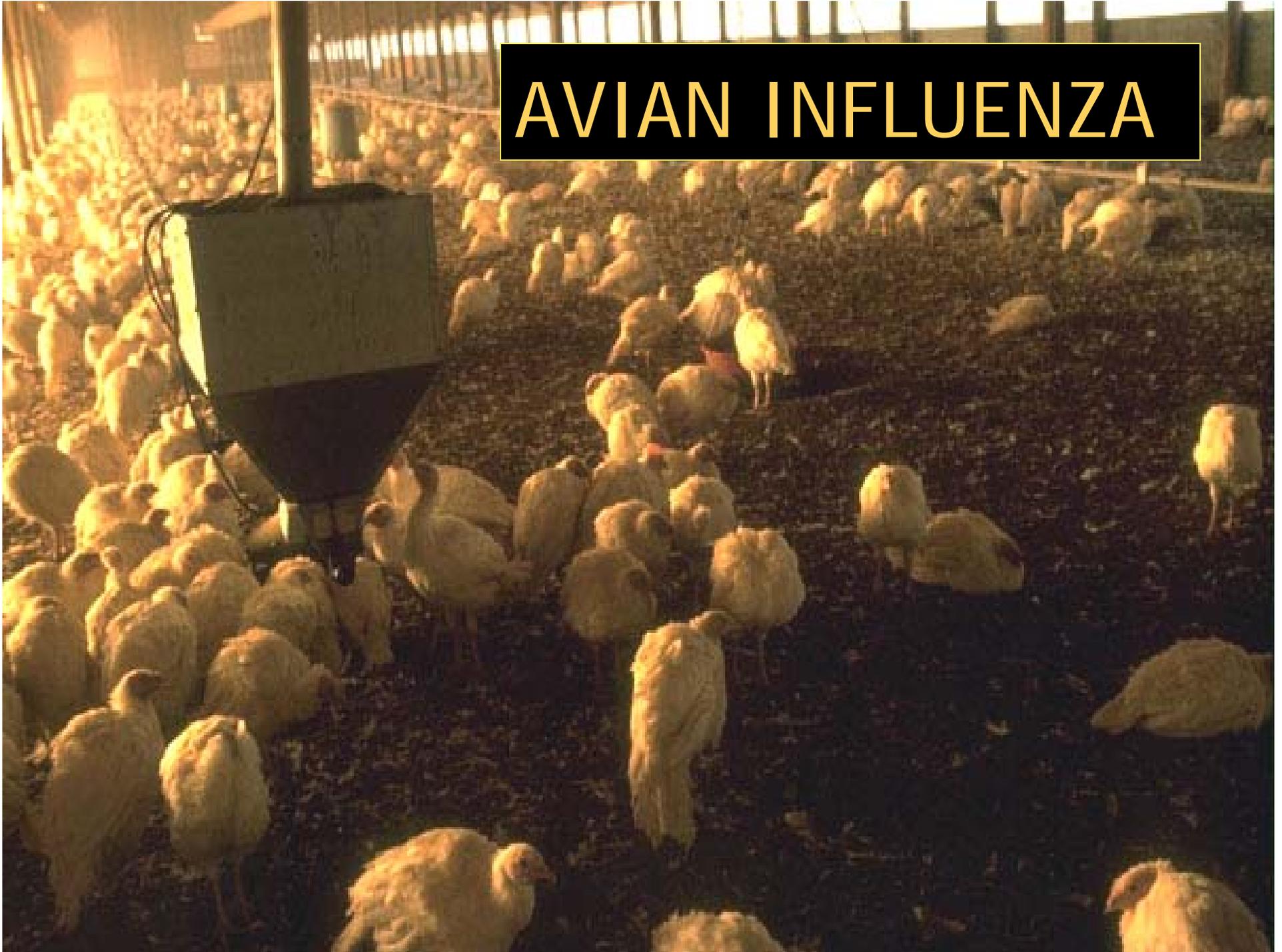
# Influenza Symptoms

- Rapid onset of:
  - Fever
  - Chills
  - Body aches
  - Sore throat
  - Non productive cough
  - Runny nose
  - Headache

# Seasonal Influenza

- 36,000 deaths nationally every year;  
800 to 1,000 in MN
- Vaccine available
- High risk for complications include:
  - Very young
  - Very old
  - Fragile immune systems
  - Pregnant women

# AVIAN INFLUENZA



# Avian Influenza ("Bird Flu")

- Birds of all species thought to be susceptible
- Two forms
  - Mild
  - Severe
- Signs and symptoms
  - Mild: ruffled feathers, reduced egg production; significant to poultry producers
  - Severe: extremely contagious between birds, rapidly fatal, about 100% of infected birds die

# Avian Influenza - H5N1 Infection in Humans

- Virus remains an avian flu strain
- Human infection – has occurred when living quarters were close to animals
- Transmission
  - Contact with manure
  - Handling chickens
  - Eating sick, undercooked chickens

# Avian Influenza - H5N1

## Why do we care?

- Spreading among birds quickly and across countries
- Jumping hosts (across animal groups)
- Large percentage of deaths in those infected (281 documented cases, 169 deaths) as of March 20, 2007 in 12 countries
- Has potential to mutate into a human strain

# Pandemic

- Epidemic
  - More than the expected number of cases within a certain period of time
- Pandemic
  - Geographically widespread epidemic of disease

# Influenza Virus

## Attaining Pandemic Status

- Must be a “new” virus transmitted to humans (no immunity within the community)
- Must be able to cause illness in humans
- Must be able to pass easily from human to human

# Influenza Pandemic of 1918-1919

- 20% of the world's population infected
- 20-40 million people died from influenza
- Highest mortality in people ages 20-40 yrs
- 675,000 Americans died of influenza
  - 43,000 U.S. serviceman died of influenza



# 6,000,000 DEATHS FROM INFLUENZA

This Is Estimate For World, For  
Past 12 Weeks:

RECALLS BLACK DEATH

'Flu' Five Times Deadlier  
Than World War.

LONDON, Dec. 19.—(Canadian Press, via Reuter's.)—The Times' medical correspondent says that it seems reasonable to believe that about 6,000,000 persons perished from influenza pneumonia during the past 12 weeks. It has been estimated that the war caused the death of 20,000,000 persons in four and a half years.

Thus, the correspondent points out, influenza has proved itself five times deadlier than war, because, in the same

# INFLUENZA DEATH RATE IN ONTARIO

London's Fatality List 326 Per 100,000  
of Population.

Statistics compiled by Dr. J. W. S. McCallough, chief officer of health for Ontario, indicate that in none of the cities in this province was the death rate from Spanish influenza and complications as great as in the United States centers. Toronto's death rate is given as 227 per 100,000. Kingston was the hardest hit in Ontario, the rate being 244 per 100,000. Winnipeg suffered the most of any Canadian city, according to the figures now available. The death rate in that city was 244 per 100,000.

Camp Sheridan, Ont., where 22,000 soldiers were encamped, had the heaviest death rate of all, it being 2,551 to 100,000 of population.

The figures, which cover an approximate period of six weeks, are

Cities	Influenza and Pneumonia, Deaths	Death Rate Per 100,000 Population
Port William	45	228
Sault Ste. Marie	41	219
Ottawa	570	248
Port Arthur	29	181
Windsor	22	108
Kingston	148	244
London	187	234
Toronto	1,200	227
St. John, N.H.	296	204
Winnipeg	268	244
Montreal	2,282	227
Halifax	122	222
Hamilton	244	222
United States Figures		
Boston	2,084	221
Pittsburg	2,204	221
Philadelphia	12,227	219
Washington	1,244	201
Camp Sheridan, O.	2,551	2,551
New York	22,700	200

# Could H5N1 Spark the Next Flu Pandemic?

- Possibly...

but so far the virus cannot pass easily from human to human

# World Health Organization Influenza Pandemic Phases

Interpandemic Period	
Novel subtypes in animals but not humans	Phase 1
Circulating subtypes in animals posing threat to humans	Phase 2
Pandemic Alert Period	
<b>Novel subtypes in humans, but no human-to-human transmission</b>	<b>Phase 3</b>
Limited human-to-human transmission	Phase 4
Localized clusters of human cases	Phase 5
Pandemic Period	
Increased and sustained transmission in the general population on a large scale	Phase 6

# United States/Minnesota Pandemic Influenza Stages

Highly Pathogenic Avian Influenza (HPAI) Outbreak	WHO Phase	U.S. Stage	Minnesota Response Phase
	Phase 1: Low risk of human cases	Stage 0: New domestic animal outbreak in at-risk country	Phase A0: HPAI outbreak nonexistent or overseas
	Phase 2: Higher risk of human cases		Phase A1: HPAI outbreak in wild animal in North America
	Phase 3: No or very limited human-to-human transmission		Phase A2: HPAI outbreak in wild animal in Minnesota
Pandemic Influenza Outbreak	Phase 3: No or very limited human-to-human transmission	Stage 1: Suspected human outbreak overseas	Phase P0: Suspected human outbreak overseas
	Phase 4: Evidence of increased human-to-human transmission	Stage 2: Confirmed human outbreak overseas	Phase P1: Confirmed, sustained human-to-human transmission overseas
	Phase 5: Evidence of significant human-to-human transmission		
	Phase 6: Efficient and sustained human-to-human transmission	Stage 3: Widespread human outbreaks in multiple locations overseas	Phase P2: Suspected or confirmed human case in North America
		Stage 4: First human case in North America	Phase P3: Outbreak in the U.S.
		Stage 5: Spread throughout the U.S.	Phase P4: Suspected or confirmed human case in Minnesota
			Phase P5: Limited outbreak in Minnesota
	Stage 6: Recovery and preparation for subsequent waves	Phase P6: Widespread throughout Minnesota	
		Phase P7: Recovery and preparation for subsequent waves	

# Goals of Pandemic Response

- Maintain community infrastructure
- Minimize social disruption
- Reduce morbidity/mortality

# Protective Actions

- Governor is state decision maker about
  - Closing schools
  - Canceling large gatherings
  - Encouraging people to limit exposure to others
  - Assuring continuation of infrastructure
  - Using limited resources

# Regional and Local Planning Considerations

- Integrate non-health entities in planning
- Establish (vaccine and antivirals) distribution systems
- Identify spokespersons
- Provide effective public education

# Partnerships

- Homeland Security and Emergency Management
- County and city emergency managers
- Schools
- Law enforcement/military
- Voluntary organizations
- Local public health
- Clinics
- Emergency Medical Services
- Media



# Projected Pandemic Impact Based on 2004 U.S. Population Estimate of 294 Million (0.05% of World Population)

	<b>MODERATE PANDEMIC</b>	<b>SEVERE PANDEMIC</b>
<b>Illness</b> (30% of population)	90 million	90 million
<b>Outpatient Care</b> (50% of ill)	45 million	45 million
<b>Hospitalizations</b> (1% to 11% of ill)	865,000	9,900,000
<b>ICU Care</b> (15% of hospitalized)	128,750	1,485,000
<b>Ventilators</b> (50% of ICU)	64,875	742,500
<b>Deaths</b> (0.2% to 2% of ill)	209,000	1,903,000

## Projected Pandemic Impact Based on 2004 Minnesota Population Estimate of 5.1 Million (1.75% of U.S. Population)

	<b>MODERATE PANDEMIC</b>	<b>SEVERE PANDEMIC</b>
<b>Illness</b> (30% of population)	1,544,000	1,544,000
<b>Outpatient Care</b> (50% of ill)	772,000	772,000
<b>Hospitalizations</b> (1% to 11% of ill)	15,000	172,000
<b>ICU Care</b> (15% of hospitalized)	2,250	25,700
<b>Ventilators</b> (50% of ICU)	1,120	12,900
<b>Deaths</b> (0.2% to 2% of ill)	3,600	32,900

# Working with Community Partners to Address

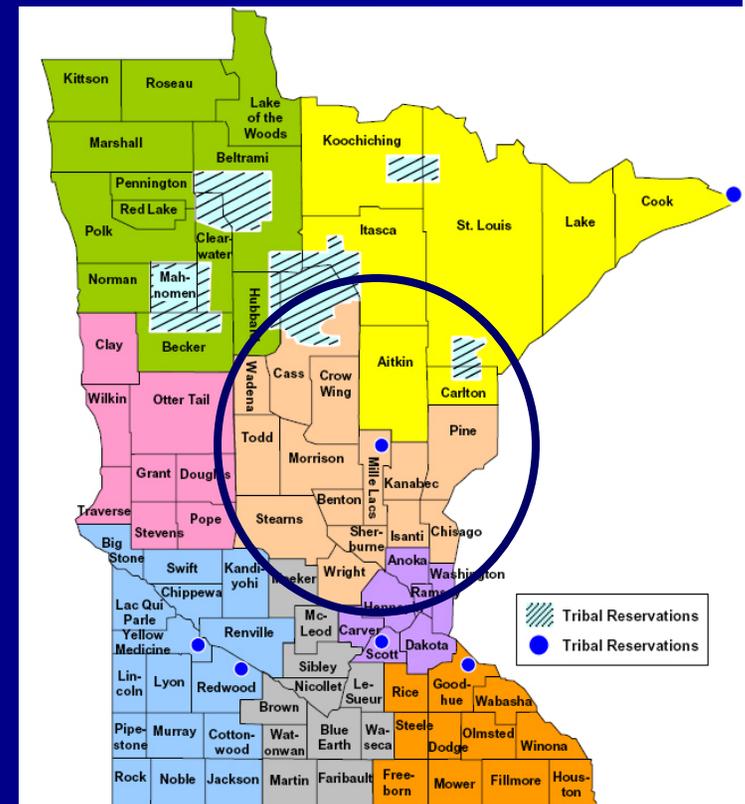
- Disease surveillance
- Clinical issues
- Laboratory
- Infection control
- Healthcare planning
- Vaccine and antiviral agents

## Working with Community Partners to Address (cont)

- Community disease control and prevention
- Communications
- Animal health collaboration
- Care of the deceased
- Legal issues
- Ethical issues

# HealthCare Planning

- Working together with hospitals, clinics, EMS, and long term care facilities in 8 regions
- Predicting and managing surge in demand
- Protecting workers and patients
- Managing off-site care facilities
- Providing home care
- Using Minnesota Responds, Medical Reserve Corps



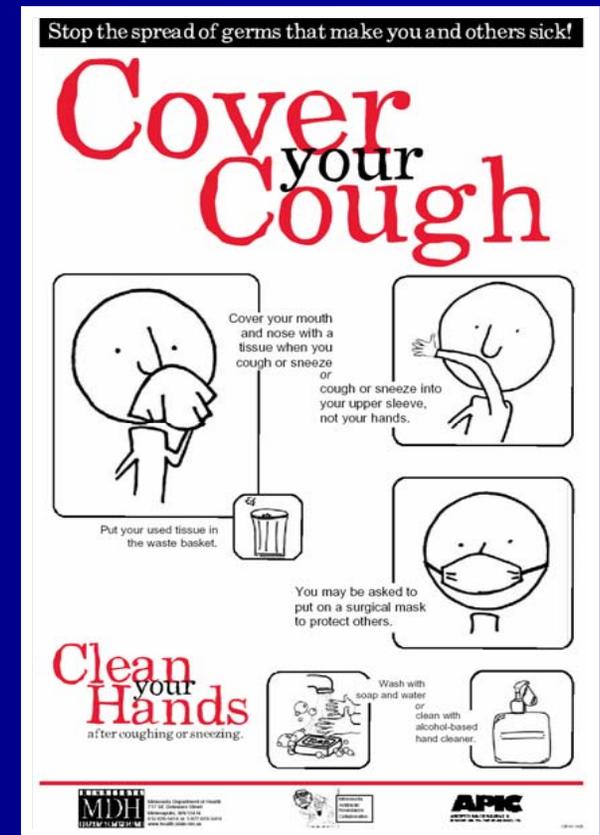
# Vaccine, Antiviral Agents, and Supplies

- Strategic National Stockpile (SNS) system
- Vaccine for prevention
- Antivirals potentially for prevention and treatment
- Get needed material/supplies delivered to the public quickly



# Community Disease Control and Prevention

- Respiratory hygiene
- Business continuation
- School closing
- Limited interaction of people
- Home care
- Isolation and quarantine



# Communications *(First Line of Defense)*

- Need many ways to reach people
- Consistent, understandable, complete messages
- Reaching non-English speakers
- Hotlines, web, TV, community organizations and many other means



# Legal Issues

- Governor's authority to manage an emergency
- Liability issues
- Being able to move quickly
- Licenses, sharing resources
- Isolation and quarantine



# Personal Preparedness

- Check with your local public health officials and health care providers for:
  - Information about the signs and symptoms of a specific disease outbreak
  - Recommended prevention and control actions

# Protect Your Family's Health

- Practice good health habits
- Stop the spread of germs
  - Frequent hand washing
  - Cover coughs and sneezes
  - Stay away from others as much as possible when you are sick

# Family Emergency Preparedness Awareness

- Food and water
- First aid kit
- Battery powered radio and flashlight with extra batteries
- Toiletry items
- Special items for infants, elderly and pets
- Family contact lists and meeting place
- Wills, insurance papers, medical records, inventory of possessions, identification
- Medications
- Basic care giving skills

# Stay Alert



- Stay informed about pandemic influenza and be prepared to respond.
- Consult [www.pandemicflu.gov](http://www.pandemicflu.gov) for updates on national and international information on pandemic influenza.
- Consult the local web sites frequently for updates:

[www.mdhflu.com](http://www.mdhflu.com)

[www.birdflu.state.mn.us](http://www.birdflu.state.mn.us)

# Are We Ready?

- More today than yesterday
- More tomorrow than today
- Continuing process
- Requires everyone to participate
  - State and local government
  - Businesses
  - Community organizations
  - Health Care Systems
  - Individuals/families

# Recommended Web Sites

<http://www.health.state.mn.us/divs/idepc/diseases/flu/avian/index.html>

<http://www.health.state.mn.us/divs/idepc/diseases/flu/pandemic/index.html>

[www.health.state.mn.us](http://www.health.state.mn.us)

[www.hsem.state.mn.us](http://www.hsem.state.mn.us)

[www.ready.gov](http://www.ready.gov)

[www.pandemicflu.gov](http://www.pandemicflu.gov)

<http://www.cdc.gov/flu/avian/>

[www.fema.gov/areyouready](http://www.fema.gov/areyouready)

[www.ed.gov/emergencyplan](http://www.ed.gov/emergencyplan)

[www.weprevent.org/usa/cover.pdf](http://www.weprevent.org/usa/cover.pdf)

[www.prepare.org/](http://www.prepare.org/)

# Contact Information

Benton County Human Services  
Public Health Unit  
531 Dewey Street  
Foley, MN 56329

Phone: (320)968-5087

Website Address:

[www.co.benton.mn.us](http://www.co.benton.mn.us)