

Occupational Zoonoses in Colorado: Improving Surveillance

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funded by MAP-ERC



Zoonoses



Enteric Zoonoses



CDC estimates 450,000 illnesses attributable to contact with animals and their environment



Occupational Zoonoses






CSTE

COUNCIL OF STATE AND
TERRITORIAL EPIDEMIOLOGISTS

*National Institute for
Occupational Safety and Health*
NIOSH



36,000 farms and ranches
173,000 agricultural workers
7,300 animal slaughtering & processing

Colorado Electronic Disease Reporting System (CEDRS)

*Patient Name _____ CEDRS # _____
 *Address _____ *Phone (hm) _____
 *City _____ *County _____ ZIP _____ *Phone (wk) _____
 *DOB _____ *Age _____ *Sex: M F

*Race American Indian/Alaska Native Asian Black
 (check all that apply): Native Hawaiian/Pacific Islander White Other race _____

*Ethnicity: Hispanic Non-Hispanic Other/Unknown

*Place of birth: USA Other country: _____

*Occupation (specify if multiple jobs) _____

Last day worked (or attended school/child care) ___/___/___
Note: If case is a foodhandler (i.e. anyone whose hands come into contact with food), fill out and attach the high-risk occupation questionnaire and the food establishment inspection worksheet. If case is a childcare provider, or health/dental care worker, fill out the high-risk occupation questionnaire.

Employer/School/Child care facility name: _____
 Address: _____ Telephone#: _____
 Contact person: _____ Grade/child care class: _____

Physician (name and location) _____

Water (ask about 15-50 day time frame above)

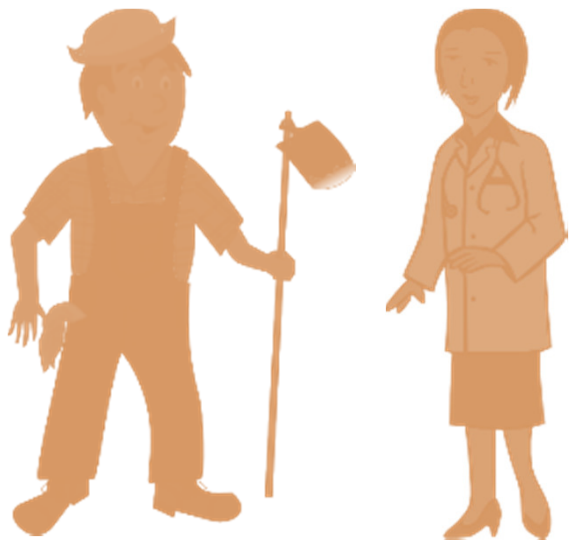
What was patient's primary source of drinking water?
 Municipal Well water Bottled water Other _____
 Did patient drink any untreated water from a pond, stream, spring, or lake? Yes No Unk
 If yes, specify where and when: _____

Food history Interviewer: if patient is unsure, ask patient if it is likely if s/he ate a particular food item
 Did the patient eat any of the following during 15-50 day time frame above? If yes, please specify where these were likely purchased/consumed:

Produce				Where purchased/consumed?
Any food from a salad bar	Y	N	U	
Sprouts (bean, alfalfa, clover...)	Y	N	U	
Uncooked tomatoes	Y	N	U	
Lettuce	Y	N	U	
Prepared at home	Y	N	U	
Lettuce purchased as (check all that apply):				
<input type="checkbox"/> Precut/pre-shredded <input type="checkbox"/> Head	Brand/type: _____			
Prepared elsewhere	Y	N	U	
Uncooked green onions (scallions)	Y	N	U	
Uncooked cilantro	Y	N	U	
Other raw vegetables: _____	Y	N	U	
Any unpasteurized juice or cider	Y	N	U	
Strawberries	Y	N	U	<input type="checkbox"/> Fresh <input type="checkbox"/> Frozen
Raspberries	Y	N	U	<input type="checkbox"/> Fresh <input type="checkbox"/> Frozen
Blueberries	Y	N	U	<input type="checkbox"/> Fresh <input type="checkbox"/> Frozen
Other berries: _____	Y	N	U	<input type="checkbox"/> Fresh <input type="checkbox"/> Frozen
Cantaloupe	Y	N	U	
Honeydew	Y	N	U	
Other fruit: _____	Y	N	U	
Other Food Items.				
Foods brought from another country	Y	N	U	
Fresh salsa / pico de gallo	Y	N	U	
Cream filled pastries	Y	N	U	
Health food products or supplements	Y	N	U	

Is the case employed as a food handler?

Did the case attend or work at a childcare center or preschool?



Transmission
*Risk Factors that
increase risk of
transmission from
workers to the
community*

New CEDRS

- CEDRS redesign
- Identified optimal set of variables
- Developed by experts
- Goal to determine which specific questions can further inform specific control measures

Occupation during 7 days before illness onset

[Please Select]

[Please Select]

- Animal Care and Service Workers
- Butcher
- Childcare Worker
- Farmer, Rancher, or Other Agricultural Worker
- Foodhandler
- Healthcare Practitioner (including physician, nurse)
- Microbiologist or Other Medical or Clinical Laboratory Worker
- Slaughterer, Meat Packer, Meat and Poultry Cutter or Trimmer
- Veterinarian, Veterinary Technologist or Technician
- Other
- Unknown
- Retired
- Student
- Refused

Industry during 7 days before illness onset



[Please Select]

[Please Select]

Animal Production: Cattle Ranching and Farming

Animal Production: Hog and Pig Farming

Animal Production: Other Animal Production (including breeding of pets)

Animal Production: Poultry and Egg Production

Animal Production: Sheep and Goat Farming

Biotechnology research and development laboratories

Correctional Institutions

Crop Production: Grain, Vegetable or Other Crop Farming

Educational Services (schools, colleges, and universities)

Fishing, Hunting and Trapping

Food Manufacturing: Animal Slaughtering and Processing

Food Manufacturing: Dairy Product Manufacturing

Food Manufacturing: Other Food Manufacturing

Food Services and Drinking Places

Forestry and Logging

Health care and social assistance: Child day care services

Health care and social assistance: Hospitals

Health care and social assistance: Medical and Diagnostic Laboratories

Health care and social assistance: Nursing and Residential Care Facilities

Health care and social assistance: Other health care and social assistance

Pet and Pet Supplies Stores

Pet Care (except Veterinary) Services

Veterinary Services

Zoos, Petting zoos, and other live animal life displays

Refused

Unknown

Not applicable

Other

Describe main occupational duties during 7 days before illness onset

Farmer, Rancher, or Other Agricultural Wo ▼

Animal Production: Cattle Ranching and Fe ▼

Feeds cattle and operates machinery in feed lot

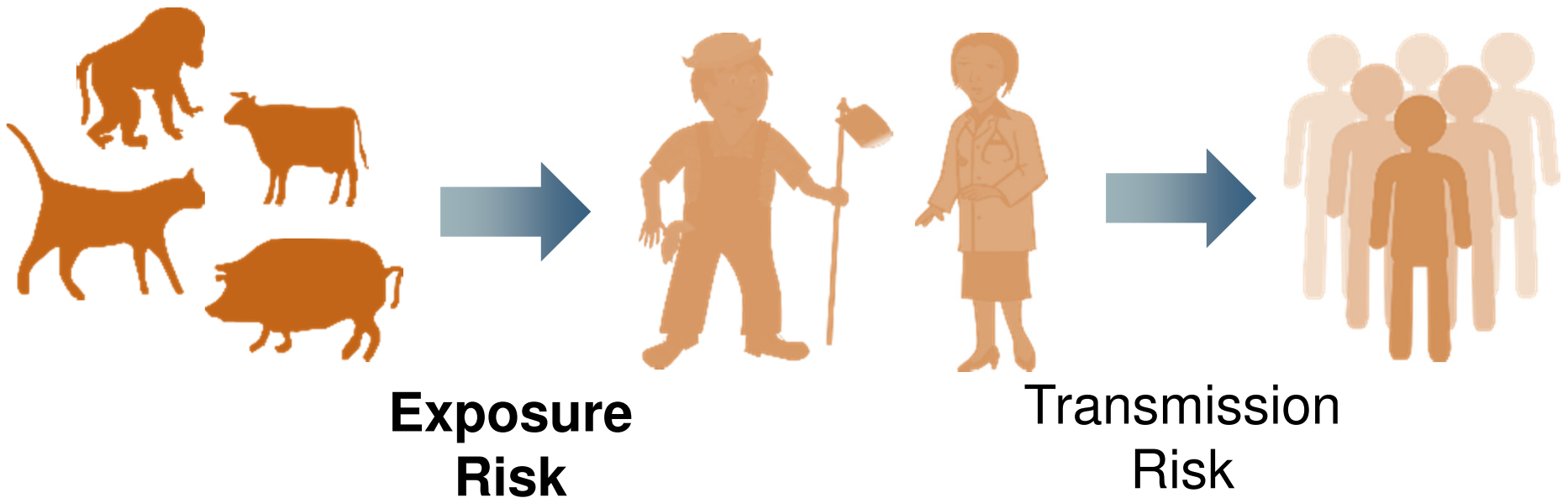
SUN	MON	TUE	WED	THU	FRI	SAT
				Exposed		
	Becomes ill				Fired for missed work	
	Starts new job			State calls for interview		

The image shows a 3x7 grid representing a week from Sunday to Saturday. The grid contains handwritten notes in red ink and a blue arrow. The notes are: 'Exposed' on Thursday, 'Becomes ill' on Monday, 'Fired for missed work' on Friday, 'Starts new job' on Monday, and 'State calls for interview' on Thursday. A blue arrow points from Thursday to Monday, and a blue horizontal line is drawn on Sunday.

What was the case's occupation during 7 days before illness onset?

What was the case's industry during 7 days before illness onset?

Describe main occupational duties during 7 days before illness onset



Exposure



Exposure



Transmission



Impact

- Old system
 - Transmission risk because handles food
- New system
 - Captures the occupation, industry, and specific duties that led to the worker being exposed and becoming ill

Future

- Evaluate impact
- Identify workers at high risk
- Track trends
- Prioritize interventions

