Raw Milk Consumption
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What is Raw Milk?

• Not pasteurized or homogenized milk which creates potential for food-borne illness
• Currently sale of raw milk is illegal in Wisconsin
• Legal to drink raw milk if cow ownership is yourself
  – Created cow-share programs
  – Niche market for dairy farms
Raw Milk Legislation

• Assembly Bill 453 introduced in Fall 2005 by Representative Gronemus

• Requires
  – TB/Brucellosis testing
  – Label: “Warning: This product has not been pasteurized and, therefore, may contain harmful bacteria that can cause serious illness in children, the elderly, and persons with weakened immune systems.”

Potential Pathogens

• *Listeria monocytogenes*, *Campylobacter jejuni*, *Escherichia coli*, *Salmonella species*, *Staphylococcus aureus*, *Cryptosporidium parvum*, *Mycobacterium tuberculosis*, *Yersinia entercolitica*, *Coxiella burnetti*, *Brucella species*, potentially *Mycobacterium avium* subspecies *paratuberculosis*
A Special Case of Bacterial Infection

- *Mycobacterium avium* subspecies *paratuberculosis* (MAP): Johne’s disease
- Chronic disease in cattle and other ruminants
- Epidemic in dairies
- Potential disease transmission to humans relating to Crohn’s disease

The National Farm Medicine Center

- Research department of the Marshfield Clinic Research Foundation

- Mission: conduct high quality research addressing human health and safety associated with rural and agricultural work, life, and environments
Methods

• Purpose:
  - assess prevalence of raw milk consumption in dairy farm population
  - determine perceptions of raw milk consumption

• Potential survey

• Focus Groups

Focus Groups

• Local dairy farmers divided between raw milk consumers and pasteurized milk consumers
• Most participants were 50-65 years of age from dairy farms with about 55 cows and a pipeline milking system
• Mix of males and females
Focus Group Results

**Participating dairy farmers agreed**
- Refer to the product as bulk tank milk
- All grew up drinking raw milk
- Why they feel farmers drink it:
  - Tradition, taste, pride, convenience, affordability, builds immunity
- Why they feel farmers may not drink it:
  - Higher fat content
  - Larger dairies, difficult to access
  - Significant others’ opinion

Pasteurized Milk Drinkers

**Reasons farmers don’t drink raw milk**
- New bulk tank made it inconvenient to access
- Wants less fat in diet
- Possible risk of illness to children and families
- Children became accustomed to pasteurized milk in school

- All participants would go back to drinking raw milk
Focus Group Comments on a Survey

- Farmers are bombarded with surveys

- Keep it short and to the point!
  - 2 pages maximum, 5-8 minutes to complete
  - Majority prefer mailed survey versus telephone

- Make participants aware of purpose of study and what will happen to the information

Discussion

- Survey developed for dairy farmers

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- Recently published data, Summer 2006:
  - WI survey among dairy farmers\(^1\)
    - 60% report drinking raw milk
    - Over half of participants not consider raw milk a human health hazard

Discussion

– PA study\(^2\)
  
  • 42% report drinking raw milk

  • Taste and convenience

  • Two-thirds report knowledge of foodborne pathogen risk


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Discussion

– PA study\(^2\)

  • 13% milk cultured ≥ 1 bacterial pathogen

  • Bacteria cultured: *Campylobacter jejuni*, Shiga toxin-producing *Escherichia coli*, *Listeria monocytogenes*, *Salmonella* species, and *Yersinia entercolitica*

  • Farmers two times more likely to drink raw milk if they were not aware of foodborne pathogens

Conclusion

• Intervention efforts
  – Educational awareness
  – Policy to decrease access
  – Collaborations

• Perceived challenges
  – Overcoming tradition
  – Populations passionate about raw milk consumption

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