

Abstract

Background: In spite of universal laws requiring pasteurization, special interest groups in several states have been able to get exemptions through unique arrangements such as "selling or leasing parts of a cow or goat" in the absence of the regulation that "owners" could drink raw milk. By creating "certified" dairies of various sorts so that increased regulation, testing, inspections, etc. would supposedly eliminate the risk of illness, "sales" through one-on-one arrangements such as "exchange of goods" on the farm or at farmers markets, etc.

Over the past 20 years there continue to be many outbreaks occurring through these "gaps" in pasteurized milk deliveries in the U.S., as well as an increasing problem with imported products primarily for and through ethnic populations. The concept of allowing raw milk sales seems to keep repeating the same in non-geographical areas on a consistent basis. Such a bill was introduced to the Tennessee legislature last year, and the expectation is that similar efforts will be made in the coming legislative session. The proposed bill violated other states by prohibiting the Department of Health (TDH) from discussing any aspects of raw milk-associated outbreak with anyone outside the Department or the media until the findings are confirmed by two independent labs.

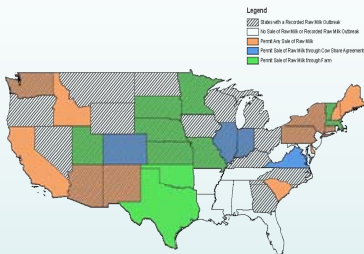
Objectives: The purpose of this project is to provide an overview of the response of TDH to the bill submitted to the House of Representatives to amend the current statute for Dairy Law (TCA, Title 53, Chapter 3) relative to raw milk production and sale. This project will also evaluate the different categories of raw milk by being sold or marketed by different states and discuss the outbreaks clusters linked to consumption of raw milk, and survey similar efforts in other states to identify similar strategies that may support future TDH responses to this important issue.

Personal Leadership Development Opportunity: This project will allow me to work with two of the top leaders in public health in CDC and Tennessee Department of Health, Tim Jones, M.D., Deputy Epidemiologist and the Director of Foodborne programs in Tennessee, and John Dunn, D.V.M., Ph.D., Medical Epidemiologist at TDH. Both are experts in the issues related to the raw milk legislation. This project is an opportunity for me to become aware of the procedures in leasing legislation or health laws dealing with national public health problems. It is a chance to which my skills in research, sharing concerns, and exchange of the information with partners like USDA and FDA in the future.

Evaluation of Tennessee Health Department Response to Legislation Calling for Looser Regulations of Unpasteurized Milk Sales

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Raw Milk Sale by State and Recorded Outbreaks, United States, 1988-2005



	States which permit milk sale by any mean	States with raw milk linked outbreaks
	N	n (%)
Yes	27	17 (63)
NO	24	12 (50)

- A total of 45 outbreaks reported to CDC with two of them were multi-state
- These outbreaks accounted for:
 - 1,007 illnesses,
 - 104 hospitalizations,
 - 2 deaths
- A multi-state outbreak of *Salmonella* Typhimurium in 2002-2003 was associated with the consumption of raw skim milk, raw milk butter, and raw cream. 62 people from Illinois, Indiana, Ohio and Tennessee were infected

Healthy or Not Healthy?

- Raw milk is oftentimes marketed as being a "healthy food", a fact that is unsubstantiated in the scientific literature
- Early in the 20th century, there have been many improvements in pasteurization process so as to minimize any effect on the nutritional aspects of milk. This also led to substantial reductions in milk-associated disease
- Raw milk is inherently dangerous. It may contain a whole host of pathogens, including:

Enterotoxigenic Staph. Aureus
Campylobacter jejuni
Salmonella species
E. coli (EHEC) (ETEC)
Listeria monocytogenes
Mycobacterium tuberculosis
Mycobacterium bovis
Brucella species
Coxiella burnetii
Yersinia enterocolitica



- Many of these organisms are especially dangerous and potentially fatal to infants, the elderly, pregnant women and those who are immunocompromised
- There are variations in incidence rates reported for the three main commercial milks (bovine, ovine and caprine)

Federal Regulations on Raw Milk Sale

- Since 1987, FDA has required raw milk and its products packaged for human consumption be pasteurized before being delivered for introduction into interstate commerce (21 CFR 1240.6)
- Tennessee Code Annotated, Title 53, Chapter 3, prohibits sale of raw milk in Tennessee by any means
- The rules and regulations for pasteurization of milk and restriction of its sale have been endorsed by many national and state organizations

Current Unlawful Ways of Raw Milk Sale

- "Owning or leasing parts of a cow or goat" so owners can drink raw milk from their own animal
- Creating "certified" dairies of various sorts so that increased regulation, testing, inspections, etc. would supposedly eliminate infection risk
- Allowing "sales" through one-on-one arrangements such as "exchange of goods" on the farm or at farmers markets



Tennessee Bills Calling for Looser Regulation

- It has been several years since such bills were last introduced in Tennessee
- A similar bill came in 2006 under the pressure of special interest groups (SB 3260, HB 3515)
- This bill allows the sale of raw milk, so long as producers and processors are licensed to ensure that it is safe
- The bill diminishes the legal authority of the department of health to investigate outbreaks caused by raw milk
- A departmental bill analysis was submitted to the General Assembly in January 2007 to argue against the proposed bill

Growing Matters of Concern in Tennessee

- The increase of ethnic populations and disease potential from imported foods brought in to meet the demand and bypassing our regulatory protections for the public
- The recent increase in goat herds as an alternate income source for prior tobacco farmers with subsequent increase in *Coxiella* or Q fever cases
- With this, any loosening of proven public health controls will greatly increase zoonotic diseases
- More effective consumer education is needed to further reduce milk-associated diseases