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Raw Milk and Implications for Public Health.

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Summary of Findings:

- Consumer demand exists for the sale of unpasteurized (i.e., raw) milk, driven by a number of consumer interests including: taste preference, belief about health benefits, desire to consume local food, concern that pasteurization masks ‘dirty’ milk, interest in ‘right to choose’, and arguments that producers can encourage beneficial microbes and thereby control the presence of harmful bacteria in raw milk .
- Current Minnesota law allows “occasional” sale of raw milk only by dairy producers on the farm where the milk was produced.
- Public health investigations have identified links between raw milk consumption and foodborne illness outbreaks caused by a range of pathogens in Minnesota and other states.
- Children are at greatest risk of serious illness and death from raw milk consumption.
- Pasteurization of milk began in the 1920s in the United States, and became a widespread practice by the 1950s. Use of pasteurization led to a reduction in food borne diseases commonly linked to unpasteurized milk.
- Scientific evidence suggests that relaxing Minnesota regulation of raw milk sales will result in increased illness and more multi-person outbreaks.
- While sanitation inspections and regular product testing may decrease the health risks of raw milk, multiple policy options exist regarding regulation of raw milk sales.

Background:

Sale of raw milk remains a contentious issue. Raw milk is defined as milk that has not been pasteurized (heat-treated to destroy potentially harmful microbes).¹ Consumers seek raw milk, and raw milk products like some cheeses, because of taste preference; the belief that raw milk has special nutritional benefits or medical properties; and desire to consume local products. Some consumers are suspicious of government regulation of food, and believe that pasteurization masks contamination; others argue that access to raw food should be a matter of personal choice and not restricted by law. Much of the interest in raw milk is not anti-pasteurization, but rather a belief and trust in producers’ abilities to maintain useful bacteria in milk while eliminating harmful ones.

Regulatory History

The United States (US) Food and Drug Administration (FDA) in 1987 outlawed the interstate movement of raw milk, and products derived from raw milk, for sale to consumers.² Minnesota dairy law, first introduced in 1945 (chapter 384 section 4), was amended in 1990 to require that milk and products made from milk undergo pasteurization prior to being sold in retail stores. One exception remains that occasional sales may be made directly to consumers on the farm where the milk is produced (*Section 1. Minnesota Statutes 2010, section 32.393*). Surveys of state laws by several groups suggest that 2/3 of the states in the US allow some form of raw milk sales and that 1/3 ban raw milk sales altogether.^{3,4} About one in five states permit the retail sale of

Raw milk sales in the United States



raw milk and raw milk products.^{3,4} Among states like

Minnesota that allow on-farm sales of raw milk, roughly half require the farms to be licensed. Consumers can still access raw milk in several states where retail sales are illegal through cow-leasing or herd shares, which permit consumers to lease an individual cow or purchase a share in a herd; however, some states now specifically outlaw these practices. The degree to which illegal distribution of raw milk and raw milk products occurs is difficult to ascertain.⁵

Arguments for Raw Milk Sales:

- Taste tests demonstrate consumer preference for raw milk, probably due to higher fat content than the standardized fat levels of most pasteurized and homogenized milk sold at retail.⁶
- Advocates claim health benefits from raw milk consumption, including increased immunity and probiotic properties that improve digestive health; however, well-designed studies to prove these benefits of raw milk consumption are lacking.
- Some people believe that producers themselves can control potentially harmful bacteria without pasteurization; to date, scientific studies have not been able to demonstrate this as routinely achievable.
- Others argue that many potentially dangerous raw food products are sold at retail, such as oysters and raw chicken and meat; therefore, raw milk should be made available as well. They contend that consumers have the right to choose and the responsibility for appropriate preparation and use, as well as any assumption of risk that comes from consuming raw food products.

Safety Concerns around Raw Milk Consumption:

- Raw milk or raw milk products were associated with 148 disease outbreaks reported to the Centers for Disease Control and Prevention (CDC) from 1998 through 2011.⁷ These outbreaks involved 2,384 illnesses, 284 hospitalizations, and 2 deaths.
- Outbreak data suggest that the chance of becoming ill from consumption of raw milk is about 150 times greater than consuming an equivalent amount of pasteurized dairy products.⁶
- Sporadic cases of illness are often missed by surveillance. Information from Minnesota indicates that the number of outbreak-associated cases of raw-milk related illness only represents a small proportion of the actual number of illnesses and that sporadic illness represents a true health burden, particularly for children.⁸
- Children account for many of the illnesses associated with raw milk consumption. The CDC reports that 82% of the raw milk-associated outbreaks, where age data was available, involved at least one person less than 20 years of age.⁹

Regulatory Efforts to Reduce Public Health Risks

- States that restricted the sale of raw milk and products made from raw milk experienced fewer outbreaks between 1993 and 2006.⁵
- Some states that allow sales of raw milk have put in place sanitation requirements and product testing to reduce public health risks. A 2009 survey of state requirements found that all states then allowing retail sale of raw milk reported legal limits for certain bacteria frequently present in raw milk (measured by SPC, the Standard [bacterial] Plate Count); however, only 3 of the 14 states then permitting on-farm sales reported setting bacterial limits. The most frequent cause of high SPCs is poor sanitation of milking systems.⁶

Available Policy Options for Minnesota:

- *No change:* Raw milk continues to be available for occasional purchase only on the farm where it is produced. Producers would remain barred from advertising raw milk and raw milk products.
- *Enhance regulations for farms selling raw milk:* Options include mandatory licensing, bacteria standards for raw milk sold on-farm, and full disclosure regarding the health risks of raw milk through labeling and/or signage at farm facilities.
- *Allow retail sales of raw milk:* Allow retail sales with or without licensure, labeling, and additional inspections to ensure that facilities and products meet minimum standards for sanitation.
- *Allow cow-leasing and/or herd-sharing:* Provide an official mechanism for individuals to contract with a dairy farmer so as to get raw milk from a cow they lease or from a herd in which they own a share. Currently if any individual agreements were to be developed, they would be subject to examination by the Minnesota Department of Agriculture.
- *Ban raw milk sales:* Minnesota could outlaw the sale of raw milk entirely with or without a ban on cow-leasing and herd-sharing.
- *Enact product liability legislation:* Provide a mechanism to recoup from producers and buyers the costs to the state of responding to a public health event arising from raw milk.

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