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HB1515

Senate Agriculture and Veterans Affairs

March 16, 11:00 a.m.

Good morning, Chairman Luick and members of the Senate Agriculture and Veterans Affairs Committee. My name is Michelle Dethloff, and I am the Infectious Diseases and Epidemiology Unit Director of the North Dakota Department of Health and Human Services Public Health Division, Disease Control and Forensic Pathology Section (Department). I am here today to oppose House Bill 1515.

Unpasteurized dairy products, such as raw milk, have contributed to the transmission of infectious diseases, which has been well documented. Before I provide information on the risks of consuming raw milk, I would first like to remind all of us about the history of pasteurization and public health. Before routine pasteurization of milk began in the 1920s, many people became sick and some died of diseases such as *tuberculosis*, *listeriosis*, *campylobacteriosis*, typhoid fever, *salmonellosis*, Shiga toxin-producing *E. coli* (STEC), *brucellosis* and other diseases spread through raw milk. Pasteurization, which is the process of heating milk to a high temperature for a long enough time to kill these bacteria, has been recognized as one of public health's most effective food safety interventions of the 20th century.

Raw milk has been recognized as a source of infection for over 100 years. Harmful pathogens such as *Campylobacter*, *E. coli*, *Salmonella*, and *Listeria* can contaminate milk and cause serious illness, hospitalization, or death. Common symptoms from these pathogens include diarrhea,

stomach cramping, and vomiting. Infection can also cause severe or long-term consequences such as Gillian-Barre' syndrome which can result in paralysis or hemolytic uremic syndrome (HUS) which can result in kidney failure. Infection is predominantly serious in those who are very young, adults 65 years and older, or those who have impaired immune systems.

Milk can become contaminated in many ways, including from an animal's fecal material, skin, germs in the environment, or if the animal has a disease such as *tuberculosis* or *brucellosis*. In 2019, a cow from Pennsylvania had *Brucella abortus* RB51, the *brucellosis* strain in the vaccine used by veterinarians, and infected one individual and exposed people from 19 states that consumed raw milk from the dairy. Because the risk of *brucellosis* infection is high after consuming raw milk potentially contaminated with RB51, those exposed needed to take antibiotics for 21 days to prevent infection. In some rare instances, vaccinated cows can shed RB51 in their milk. In this situation, pasteurization of the milk would have killed the RB51, along with other types of *Brucella*, and other disease-causing pathogens.

This bill would permit the sale of raw milk directly to an individual for personal consumption. Of primary concern is the consumption of unpasteurized milk by children, older adults, pregnant women, and those with compromised immune systems. These individuals are at greater risk for severe outcomes if infected. A study published in 2015 that reviewed outbreaks linked to raw milk in the United States from 2007-2012 found that 59% of outbreaks involved at least one child younger than five years[1]. A similar study published in 2022 found that of the raw milk outbreaks reported (2013-2018), 48% involved at least one child younger than 19 years of age[2].

Several studies in the United States have compared the number of outbreaks and associated illnesses in those states where raw milk sales are legal to those states where it is not. One study found that in areas where raw milk was legally sold, there were 3.2 times more outbreaks than in areas where the sale of raw milk was illegal[2]. Another study estimated that the risk of outbreaks linked to raw milk is at least 150 times greater than the risk of outbreaks linked to pasteurized milk[3]. These studies show that the increase in the availability of raw milk is associated with more illnesses and outbreaks.

Cows and other dairy animals often do not appear ill but can carry harmful pathogens. Furthermore, no matter how clean the farms and dairies are, disease-causing germs can still be in the milk. Testing one batch of raw milk does not assure that the subsequent batches are not contaminated with harmful germs. Additionally, tests may not always detect low levels of contamination. One cannot look at, smell, or taste raw milk to determine if it is safe to consume.

Pasteurization continues to be an important public health intervention that offers consumers safe dairy choices. Most of the nutritional benefits of drinking raw milk are available from pasteurized milk without the risk of disease-causing illness or serious long-term consequences.

This concludes my testimony. I am happy to answer any questions you may have.

1- Mungai EA, Behravesh C, Gould L. Increased Outbreaks Associated with Nonpasteurized Milk, United States, 2007–2012. Emerging Infectious Diseases. 2015;21(1):119-122. doi:10.3201/eid2101.140447.
2- Koski L, Kisselburgh H, Landsman L, et al. Foodborne illness outbreaks linked to unpasteurised milk and relationship to changes in state laws – United States, 1998–2018. Epidemiology & Infection. 2022;150:e183. doi:10.1017/S0950268822001649
3- Langer AJ, Ayers T, Grass J, et al. Nonpasteurized Dairy Products, Disease Outbreaks, and State Laws—United States, 1993–2006. Emerging Infectious Diseases. 2012;18(3):385-391. doi:10.3201/eid1803.111370.

Link to stories from individuals that demonstrate the risk of consuming raw milk. www.cdc.gov/foodsafety/rawmilk/raw-milk-videos.html