

STRIKING A BALANCE: REGULATION OF RAW MILK AND A NEW APPROACH FOR INDIANA

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I. INTRODUCTION

When someone ventures into the local supermarket to pick up a gallon of milk, he is forced to make several decisions. For example, what brand of milk is he going to buy? Should he buy the 2% milk? Should he buy the more expensive USDA certified organic milk or should he buy the conventionally produced milk? Is the expiration date far enough away?

In most states, however, there is one significant decision that the consumer does not have to make. In fact, he is not even allowed to make it: “Should I purchase the pasteurized milk, or the un-pasteurized (raw) milk?” This decision is foreign to most consumers in the United States because with few exceptions, states do not allow raw milk to be sold

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in stores. Many states go even further and prohibit the sale of raw milk to consumers anywhere, whether in supermarkets, farmers' markets, or even on the actual farm where the milk was originally produced. Although in some states the specific law that mandates pasteurization of milk is only a decade or two old, practically speaking, most milk intended for human consumption has been regularly pasteurized since the early 1920s.¹

Notwithstanding the fact that pasteurized milk is the only type of milk with which most people are familiar, in the past few years there has been a steadily growing furor by raw milk advocates who want the freedom to purchase and drink raw milk. Advocates, in support of their desire to drink raw milk, cite reasons ranging from the claimed superior taste and nutrition of raw milk, to simply wanting to support local dairy farmers and avoiding foods that have been through more processing.²

On the other side of the debate, many in the government and health fields claim that pasteurization is necessary for all milk in order to prevent people from getting sick, or even dying, from drinking tainted milk.³ They claim that this is especially true for children, pregnant women, and the elderly.⁴ In their opinion, there is no reason to allow raw milk to be sold when pasteurization is a safe, effective, and cheap way of protecting consumers from the dangers of raw milk.⁵

Although the potential dangers of drinking raw milk are undoubtedly real, states, in particular, Indiana, should allow the sale of raw milk. The key is to find a balance

¹ IND. STATE BD. OF ANIMAL HEALTH, INDIANA STATE BOARD OF ANIMAL HEALTH REPORT ON THE ISSUE OF SELLING UNPASTEURIZED MILK TO CONSUMERS 10 (2012).

² David E. Gumpert, *Got Raw Milk?*, THE BOSTON GLOBE MAGAZINE, Mar. 23, 2008, available at http://www.boston.com/bostonglobe/magazine/articles/2008/03/23/got_raw_milk/?page=full.

³ *Raw Milk Misconceptions and the Danger of Raw Milk Consumption*, U.S. FOOD AND DRUG ADMIN., <http://www.fda.gov/food/foodborneillnesscontaminants/buystoreservesafefood/ucm247991.htm> (last updated Nov. 1, 2011).

⁴ *Id.*

⁵ *Id.*

between giving consumers the right to purchase and consume raw milk, while at the same time going to great lengths to ensure that the raw milk is as safe as possible. This balance can be found by ensuring that milk producers meet certain standards, limiting the locations where raw milk can be sold, and mandating the placement of warning labels or disclaimers highlighting the possible dangers of raw milk.

In addressing the issue of the regulation of raw milk, this Note will first lay out the history of the pasteurization of milk. The second section of the Note will describe the arguments for each side of the raw milk debate, including legal, policy, and health arguments. In the third section, the Note will look at the current state of raw milk regulations and will briefly address current federal regulations, and then it will proceed to discuss the regulatory approaches taken by different states. The section will then look at the current state of raw milk regulation in Indiana and the proposed changes to those regulations. The Note will conclude by arguing how and why Indiana should adopt looser regulations that allow raw milk to be sold in certain places.

A. History of the Pasteurization of Milk

Humans have consumed milk for quite some time.⁶ Traditionally, however, it was not viewed as the grave health danger that the health community considers it today.⁷ In fact, the idea of trying to regulate milk to make it “safe” for consumption did not firmly take hold until the beginning of the twentieth century when large numbers of people were moving from the countryside into the cities.⁸ This urbanization of the nation, which started in the early and mid-1800s, dramatically altered the relationship

⁶ Damian C. Adams, Michael T. Olexa, Tracey L. Owens & Joshua A. Cossey, *Deja Moo: Is the Return to Public Sale of Raw Milk Udder Nonsense?*, 13 *DRAKE J. AGRIC. L.* 305, 307 (2008).

⁷ DAVID E. GUMPERT, *THE RAW MILK REVOLUTION: BEHIND AMERICA'S EMERGING BATTLE OVER FOOD RIGHTS* 42 (2009).

⁸ *Id.*

between individuals and the milk that they consumed.⁹ As cities grew and urban populations became denser, milk production and distribution were required to become more centralized in order to provide enough milk to feed the larger populations. Unlike before this movement to the cities when many families had ample room to grow and provide their own food, city-dwellers lacked this space and relied more heavily on others to provide them with milk.¹⁰

At the same time that cities were seeing a great increase in populations, demand for milk continued to rise. One of the greatest reasons for this rise was due to the fact that parents were seeking to use milk to feed to their infants.¹¹ In order to meet this growing need, many dairy operations were moved into the city, dramatically cutting down on the distance that the milk had to travel to reach its consumers. However, because cities often lacked the natural-growing food that cows typically ate in the countryside, these urban dairy farmers were forced to come up with new, innovative ways to feed their cows.¹²

One widely used source of food for the cows was called swill, which resulted in swill milk.¹³ This swill was the waste left over after the beer brewing process.¹⁴ As a result of its widespread use, many urban dairy farms were set up in close proximity to breweries.¹⁵ The process began when “corn and barley would be fermented to make vodka and whiskey, and the leftover grains, their nutrients depleted, would be fed to cows housed in adjoining buildings.”¹⁶ However, as dairy farms began to move to the city, grow larger, and use this alternative feed for the cows, the health of the cows began to deteriorate.¹⁷ Swill negatively affected the cows, as did the lack of proper sanitation resulting from

⁹ *Id.*

¹⁰ *Id.*

¹¹ Donna M. Byrne, *Raw Milk in Context*, 26 J. ENVTL. L. & LITIG. 109, 126-27 (2011).

¹² *Id.*

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ GUMPERT, *supra* note 7, at 43.

¹⁷ *Id.*

the large number of cows being kept inside dense, dirty areas.¹⁸

Robert Hartley, a man who extensively investigated the urban dairy industry during the 1840s, described the scene as follows:

If the wind is in the right quarter, he will smell the dairy a mile off; and on reaching it, his visual and nasal organs will, without any affection of squeamishness, be so offended at the filth and effluvia which abounds, that still-slop milk will probably become the object of his unutterable loathing the remainder of his life. His attention will probably be first drawn to a huge distillery, sending out its tartarian fumes, and, blackened with age and smoke, casting a somber air all around. Contiguous thereto, he will see numerous low, flat pens, in which many hundreds of cows, owned by different persons, are closely huddled together, amid confined air, and the stench of their own excrements. He will also see the various appendages and troughs to conduct and receive the hot slush from the swill with which to gorge the stomachs of these unfortunate animals, and all within an area of a few hundred yards.¹⁹

Along with the health of the cows, the quality of the milk they produced quickly deteriorated.²⁰ It was at this time that the “swill” milk began to sicken a large number of people, and its consumption even resulted in widespread and devastating outbreaks of tuberculosis among the population.²¹ Other illnesses that were attributed to consuming the raw milk were typhoid fever, diphtheria, and

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ Byrne, *supra* note 11, at 126-27.

²¹ GUMPert, *supra* note 7, at 17.

severe streptococcal infections.²² According to the Centers for Disease Control and Prevention, approximately 25 percent of food-borne illness stemmed from raw milk consumption at that time.²³

As people continued to get sick from the swill milk, a strong demand for milk from country farms started to rise. This milk, which was seen as more “pure and wholesome,” also resulted in fewer illnesses than swill milk.²⁴ As urban-dwellers actively sought out country milk, instances of fraud became more common. With increasingly centralized sources of milk, and the technology to transport milk into the cities from long distances, it was less likely than ever that a milk consumer would actually have personal contact with the dairy farmer from where the milk came. For this reason, it was easy for milk transporters to claim that their milk was wholesome milk from the country, when in reality it was from one of the urban swill dairies.²⁵

The occurrence of this milk fraud, along with the frequent illnesses brought about by the often-contaminated swill milk, led to a widespread push for the government to ensure that dairies were producing milk that was not likely to cause sickness. In 1910, large cities, such as New York City, had two options that would help ensure safer milk. First, New York City could have mandated dairies to be certified in order to sell milk. Secondly, it could have mandated pasteurization of all milk being sold.²⁶

Certification of dairy farms was already being used to some extent by private certifiers, which resulted in safer, but much more expensive milk. However, extending this certification process to all dairies wishing to provide milk would be economically costly as it would require more labor to carry out the certification testing and more capital to meet the certification standards.²⁷ Certification would require vast improvements in sanitation standards in cities,

²² *Id.*

²³ *Id.* at 18.

²⁴ Byrne, *supra* note 11, at 126-27.

²⁵ *Id.*

²⁶ *Id.* at 127.

²⁷ *Id.*

and more money and labor would be needed to carry out the government inspections of the dairies and their milking practices. Additionally, the dairy farmers would need to have more money to pay for their improved sanitation standards and also to continuously test their milk for diseases such as tuberculosis.²⁸ Certification could work, therefore, but not without substantial commitment of time and money by both the government and farmers.

Pasteurization, the second option, had been used since the 1890s as a method to purify milk.²⁹ Pasteurized milk was somewhat looked down upon because it was “cooked.”³⁰ However, pasteurization would be a much cheaper solution than dairy farm certification, and it could easily be applied to any and all milk intended for human consumption. With widespread use of pasteurization, there would be no need for the costly reforms of sanitation measures or expensive tuberculosis tests performed by farmers. All milk could be thoroughly cooked and thereby deemed “safe” for consumption.³¹ Further, as technological advances allowed a much greater quantity of milk to be produced and delivered to meet an ever-increasing demand, pasteurization would be a very quick solution that would not inhibit the speed and efficiency of dairies.³²

Given these two options, cities, one by one, ended up opting toward the required pasteurization instead of the certification process. The first cities to require pasteurization were Chicago, New York, Boston, Philadelphia, Milwaukee, and San Francisco, in that order.³³ Although mandated pasteurization in these cities eventually became standard, it did not always come easy. For example, Chicago experienced eight years of “political contestation” until full pasteurization was mandated.³⁴

²⁸ *Id.*

²⁹ *Id.*

³⁰ *Id.*

³¹ *Id.*

³² *Id.*

³³ GUMPERT, *supra* note 7, at 46-47.

³⁴ *Id.*

Nevertheless, pasteurization of milk was widespread across the nation's cities by the 1920s.³⁵

The federal government, however, did not step in until the mid-1920s, and even then, it merely made a recommendation that milk be pasteurized; it did not set out any required pasteurization until much later. In 1927, the federal government created new standards for milk under the Milk Importation Act. This Act addressed both the production aspect and the transportation of milk across state lines.³⁶ The Food and Drug Administration (FDA) created its own rules, forming what would later be known as the Pasteurized Milk Ordinance.³⁷

It was not until 1974 that FDA regulations actually required the pasteurization of milk, and it only covered milk that was transported between states.³⁸ The enforcement of these regulations was placed on hold due to a complaint from a raw milk dairy farmer, but in 1982 the agency drafted new rules that would require pasteurization of all milk for human consumption that traveled across state lines.³⁹ When the newly drafted rules were not adopted right away, a consumer advocacy group, Public Citizen, sued the Department of Health and Human Services (HHS) in order to force the adoption and promulgation of the rules.⁴⁰ In *Public Citizen v. Heckler*, Public Citizen used a large amount of evidence to demonstrate to the court why raw milk is dangerous for human consumption.⁴¹ HHS, on the other hand, only provided a minimal amount of evidence to try and show that the drafted rules would not be effective.⁴² In the end, the court ruled in favor of Public Citizen, holding that HHS could not arbitrarily refuse to ban the interstate sale of raw milk.⁴³

³⁵ Gumpert, *supra* note 2.

³⁶ Adams, Olexa, Owens & Cossey, *supra* note 6, at 312-13.

³⁷ *Id.*

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ *Id.* at 313.

⁴¹ *Id.*

⁴² *Id.*

⁴³ *Id.*

In 1987, the FDA drafted its current regulations on raw milk, which, with the exception of some varieties of aged cheese, prohibit the sale of raw milk across state boundaries.⁴⁴ Because the federal regulations only prohibit the interstate sale of raw milk, they do not pose a preemption problem for states wanting to adopt their own rules covering the sale of raw milk within the state.⁴⁵ As a result, states have taken the liberty to adopt their own regulations, resulting in differing standards across the United States.⁴⁶

II. THE ARGUMENTS IN FAVOR AND AGAINST RAW MILK

A. The Argument in Favor of Raw Milk

Raw milk may contain certain bacteria that, when consumed, cause the person to become very sick and possibly even die. The federal government takes these risks so seriously that recently a top FDA official publicly claimed that drinking raw milk is so dangerous that it is like “playing Russian roulette with your health.”⁴⁷

The question, then, is why some consumers continue to drink raw milk when pasteurization is such a cheap and effective way of reducing dangerous pathogens in milk. There is a long list of reasons. Raw milk advocates believe that raw milk is healthy for them and that the pasteurization process actually destroys much of the beneficial bacteria that are originally in the milk.⁴⁸ Behind these assertions are hundreds of examples where raw milk somehow improved the health of the consumer, and also there are some instances where the consumer relies on the raw milk to maintain his health.⁴⁹ Further, in response to those who say that raw milk is not safe to consume, raw

⁴⁴ *Id.*

⁴⁵ *Id.* at 314.

⁴⁶ *Id.* at 314-15.

⁴⁷ Kammi L. Rencher, *Food Choice and Fundamental Rights: A Piece of Cake or Pie in the Sky?*, 12 NEV. L.J. 418, 421 (2012).

⁴⁸ *Id.*

⁴⁹ *Id.* at 422.

milk advocates remind the naysayers that just because milk is pasteurized does not mean that it is completely safe, as it can still contain harmful pathogens.⁵⁰ In fact, pasteurized milk reportedly sickens approximately 600 individuals every year.⁵¹ Raw milk advocates point to several outbreak of illnesses directly attributed to pasteurized milk. For example, in 1983 forty-nine individuals became ill and fourteen individuals died from pasteurized milk that had been contaminated with the deadly disease listeria prior to pasteurization.⁵² In 1985, 16,000 individuals were sickened by pasteurized milk that was contaminated with salmonella.⁵³ In 1994, salmonella in ice cream, made from pasteurized milk, caused 224,000 individuals to become sick.⁵⁴ In 2006, over one thousand prisoners in California fell ill due to campylobacter in pasteurized milk.⁵⁵ Finally, in 2007, three individuals died as a result of drinking pasteurized milk contaminated with listeria.⁵⁶

The FDA and Centers for Disease Control and Prevention respond to those advocates by using statistics to show that the percentage of individuals getting sick from raw milk is much higher than the percentage of people getting sick from pasteurized milk, therefore showing that raw milk is much more dangerous.⁵⁷ Raw milk advocates, however, believe that the government's statistics are misleading and biased against raw milk. The statistics are misleading because when compiling the reports of illnesses, the government combines instances caused by any kind of raw dairy, including "cheese produced under known unsanitary conditions, milk intended for pasteurization (and therefore not subject to strict sanitary practices), and cases where raw milk takes the blame by default," such as

⁵⁰ *Id.*

⁵¹ *Id.*

⁵² *Id.*

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ *Id.* at 421.

where the health officials list raw milk as the source of the illness without actually tracing the illness to the milk.⁵⁸

Further, even if someone is more likely to become sick from drinking raw milk than pasteurized milk, the number of reported people getting sick from raw milk annually is extremely small. From 1973 until 2005, this number averaged fifty-four individuals per year. The estimated seventy-six million individuals sickened every year from all contaminated foods makes this number appear even more insignificant.⁵⁹ Raw milk advocates also point out that when illnesses occur from raw milk consumption, the outbreaks tend to be local and only affect a few individuals. Outbreaks caused by pasteurized milk, on the other hand, tend to affect a much larger group of consumers spanning across the entire nation.

Another favorite point made by some raw milk advocates is that despite the CDC's dire warnings that individuals can die from consuming raw milk, no one has actually died from drinking raw milk since at least 1998.⁶⁰ The two deaths since 1998 that the CDC had attributed to raw milk consumption were found to have been caused by consumption of queso fresco cheese, which is a cheese that is not legal under the FDA's requirements and that is often produced in unsanitary conditions.⁶¹

Next, raw milk advocates believe that as a result of the cooking process which pasteurized milk goes through, pasteurized milk contains substantially less nutrition than raw milk.⁶² Some of the vitamins in milk, for example, are partially removed when the milk is pasteurized.⁶³ The amounts of both vitamin B and vitamin C can be decreased by twenty percent.⁶⁴ The whey protein can be reduced up to

⁵⁸ *Id.* at 422.

⁵⁹ *Id.*

⁶⁰ David Gumpert, *The Power of Numbers in the War over Raw Dairy*, THE COMPLETE PATIENT (Feb. 19, 2011, 2:48 PM), <http://thecompletepatient.com/article/2011/february/19/power-numbers-war-over-raw-dairy-how-cdc-came-admit-death-wasnt-categorized>.

⁶¹ *Id.*

⁶² Byrne, *supra* note 11, at 115-16.

⁶³ *Id.*

⁶⁴ *Id.*

eighty percent.⁶⁵ Not only are vitamins seriously reduced, but pasteurization can also destroy some of the bacteria-fighting substances that raw milk advocates claim help keep the raw milk safer. This has been shown in studies where immunoglobulin domains and antibodies, which both attack bacteria that affect cows, have been destroyed by the pasteurization process.⁶⁶ A 2005 European study also provides support for raw milk advocates. The study looked at the health of school children who drank raw milk versus the children who did not, and the study concluded that drinking raw milk may actually protect against developing asthma or allergies. While the study did note the dangers of drinking raw milk, it concluded by mentioning that a “deepened understanding of the relevant protective components of farm milk [raw milk] and a better insight into the biological mechanisms underlying this association are warranted as a basis for the development of a safe product for prevention [of asthma or allergies].”⁶⁷ In other words, in terms of possible health benefits, raw milk is worth another look.

In 2011, a second study, the Gabriela Study, was conducted in Switzerland, Austria, and Germany.⁶⁸ In the study, 8,334 school-age children were tested, and it was found that there was a definite inverse relationship between raw milk consumption and the prevalence of asthma and hay fever.⁶⁹ Like the 2005 European study, the Gabriela Study concluded that raw milk may have a protective effect against asthma.

When milk is pasteurized, it is heated to a very high temperature that is meant to kill any harmful bacteria in the milk. According to raw milk advocates, this process, which essentially “cooks” the milk, negatively affects how

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.* at 116-17.

⁶⁸ Georg Loss et al., *The Protective Effect of Farm Milk Consumption on Childhood Asthma and Atopy: The GABRIELA Study*, 128 J. ALLERGY & CLINICAL IMMUNOLOGY 766, 766 (2011), available at <http://download.journals.elsevierhealth.com/pdfs/journals/0091-6749/PIIS0091674911012346.pdf>.

⁶⁹ *Id.*

the milk tastes. The reason for this is known as the Maillard reaction.⁷⁰ Once heated, “the lactose in the milk reacts with amino acids and the reaction changes the flavor of the milk.”⁷¹

Also affecting the taste and nutrition of milk, raw milk advocates say, is homogenization, a process that reduces the size of the fat molecules in the milk.⁷² The reduced size of the fat molecules prevents the milk fat from rising to the top of the milk, as is typical in raw milk. Because the homogenization of milk is not done for safety but simply for convenience, it would be possible and legal for milk to be sold that is pasteurized but non-homogenized. Nevertheless, the processes of pasteurization and homogenization usually go hand in hand.⁷³

One problem with the argument of raw milk advocates, however, is that the tests that prove these claims are hard to come by, a fact that health agencies are quick to point out. While the scientific facts on raw milk’s benefits might still be unsettled, raw milk advocates make up for this with a wealth of anecdotal evidence. When one raw milk farmer was being investigated by the Cass County, Michigan Prosecutor’s Office for allegedly selling raw milk, 232 testimonials were received from raw milk drinkers who were reaching out in support of the sale of raw milk.⁷⁴ One letter read: “[s]ince I’ve been consuming raw dairy, my health has improved dramatically. I have osteoporosis and am allergic to the medication the doctor prescribed. I feel so much better physically since I’ve been enjoying raw dairy. I no longer have muscle and joint pain”⁷⁵

Another raw milk consumer wrote, “I have been consuming raw dairy products for two years. I have noticed a significant decrease in seasonal allergies, asthma and inflammation since I have replaced commercially available

⁷⁰ Byrne, *supra* note 11, at 117.

⁷¹ *Id.*

⁷² *Id.*

⁷³ *Id.*

⁷⁴ GUMPERT, *supra* note 7, at 84.

⁷⁵ *Id.* at 85.

pasteurized milk with raw milk and cream from pasture-fed cows.”⁷⁶ Finally, another woman wrote:

I grew up a ‘sick’ child. Even though my parents thought that they were doing the best for me, the foods that I was being raised on were literally killing me. I was finally diagnosed as an adult with celiac disease and severe lactose intolerance. The pasteurized foods caused 25 years of distress in my gut (from the lack of lactase in commercial dairy) causing severe chronic abdominal pain, chronic fatigue, sleepiness, chronic tonsil infections, diarrhea, constipation – to name just a few. Since being on raw dairy, I no longer have these symptoms. My gut is getting healthier progressively, the more I feed my stomach these raw foods that are rich in enzymes. My sick gut is healthy now. If you take this blessing away from me, I’ll be sick again. The pasteurization process destroys the enzymes my body needs to sustain itself. Raw dairy keeps me healthy so that I don’t have to be a burden on society. Don’t we already have enough sick citizens?⁷⁷

While many of the testimonials address how raw milk has helped with asthma or allergies, as alluded to in the 2005 European study and the 2011 Gabriela Study, some individuals have even gone as far as to state that raw milk has significantly helped reduce the effects of ADHD, Aspergers, autism, and even cancer.⁷⁸ Interestingly enough, these arguments in favor of raw milk’s health benefits are not new. Milk was prescribed by “physicians of the ages to help cure all manner of diseases.”⁷⁹ As an example, there is a book that was published in 1905 titled *Milk Diet: As a*

⁷⁶ *Id.*

⁷⁷ *Id.*

⁷⁸ *Id.* at 89-91.

⁷⁹ *Id.* at 17.

Remedy for Chronic Disease.⁸⁰ A doctor wrote the book as a recommendation that raw milk be used to cure “everything from asthma to rheumatism to high blood pressure.”⁸¹ Although raw milk advocates may not have an overwhelming amount of scientific evidence behind them, it is apparent that raw milk drinkers across the country are passionate about their milk and truly believe in its health benefits.

B. The Argument Against Raw Milk

While raw milk advocates are extremely passionate about the benefits of raw milk, those who believe that raw milk is too dangerous are just as determined to fight against allowing raw milk to be sold. First and foremost is the risk that raw milk poses. Raw milk can contain several different harmful bacteria and viruses, such as campylobacter, *E. coli*, listeria, rabies, salmonella, anthrax, staphylococcus, tuberculosis, typhoid fever, and yersiniosis.⁸² Although pasteurization of milk does not completely ensure consumption of safe milk, the pasteurization process certainly kills many of these potential harmful bacteria.

Even though there is a risk of getting sick from consuming either pasteurized or raw milk, the CDC and the FDA rely on a 1998 study that shows that out of the forty-six outbreaks between 1973 and 1998 that were caused by consuming raw milk, forty of those outbreaks occurred in states that made the sale of raw milk legal.⁸³ The authors of the study point out that it was most likely the easier access to raw milk that led to the outbreaks.⁸⁴ Therefore, if the states had not allowed the sales of raw milk, the outbreaks may have been entirely prevented.⁸⁵

While the potential dangers of consuming raw milk make up a large part of the argument against raw milk, the

⁸⁰ *Id.*

⁸¹ *Id.*

⁸² Adams, Olexa, Owens & Cossey, *supra* note 6, at 307.

⁸³ Byrne, *supra* note 11, at 114.

⁸⁴ *Id.*

⁸⁵ *Id.*

remainder of the argument focuses on refuting the health claims made by raw milk advocates. For example, in a 2011 document titled, *Raw Milk Misconceptions and the Danger of Raw Milk Consumption*, the FDA attacks the health “myths” of raw milk point by point. The document, which cites scientific research, makes several counterclaims. Some examples of points made by the document are: raw milk does not cure lactose intolerance; raw milk does not cure or treat asthma or allergy; there are no beneficial bacteria in raw milk for gastrointestinal health; raw milk is not nutritionally superior to pasteurized milk; pasteurized milk is safer than raw milk; and finally, raw milk does not contain natural antimicrobial components that make milk safe.⁸⁶ After the FDA posted this document, the Weston A. Price Foundation, an organization that promotes consumption of raw milk, authored a “Rebuttal to the FDA Article,” where every point made by the FDA’s document was rebutted.⁸⁷

III. THE CURRENT STATE OF RAW MILK REGULATION

A. Federal Regulation

In order to better understand and appreciate the current state of raw milk regulation in Indiana and other states, a brief background on the federal government’s policies in the area of raw milk is necessary. Policymaking in the federal government is often focused on the safety of food, which is largely due to the high costs that foodborne illnesses cause when there are outbreaks. It is estimated by the CDC that more than 38.4 million illnesses, 71,500 hospitalizations, and 1,600 deaths each year are caused by food pathogens causing outbreaks.⁸⁸ The medical costs for the victims in

⁸⁶ U.S. FOOD AND DRUG ADMINISTRATION, *supra* note 3.

⁸⁷ WESTON A. PRICE FOUNDATION, REBUTTAL TO THE FDA ARTICLE “RAW MILK MISCONCEPTIONS AND THE DANGER OF RAW MILK CONSUMPTION” (2012), *available at* <http://www.realmilk.com/wp-content/uploads/2012/11/RebuttaltoFDARawMilkArticle-MAR2012.pdf>.

⁸⁸ Nicholas R. Johnson & A. Bryan Endres, *Small Producers, Big Hurdles: Barriers Facing Producers of “Local Foods,”* 33 HAMLIN L. & POL’Y 49, 71 (2011).

these outbreaks are estimated to be \$164 billion each year.⁸⁹ Further, when foodborne related outbreaks do occur, the outbreaks are often reported in the news, causing the outbreak to have a widespread public impact. Because even minor outbreaks are widely reported, the government may feel more pressure to get to the bottom of the problem and to find out exactly from where the pathogen is coming. In spite of the government's extra efforts, methods for determining the source of the outbreak are oftentimes inadequate, and the actual source of the outbreak will frequently go unsolved.⁹⁰

In 2006, the CDC reported that out of all of the foodborne outbreaks in that year, approximately 3% were related to milk, either pasteurized or raw. However, out of the 3% that were related to milk, 71% were caused by the consumption of raw milk.⁹¹ From 1998 to 2008, the FDA reported that the drinking of raw milk was behind eighty-five outbreaks, which equaled more than 1,600 individuals actually sickened by the raw milk.⁹² Of those outbreaks, 187 individuals were hospitalized and two died.⁹³ Because many foodborne illnesses or outbreaks are not actually reported to the government, it is estimated that the actual number of outbreaks and illnesses is higher.

In regulating food, the federal government establishes specific standards that must be met in order for a certain substance to be labeled "food." Similarly, the federal government has standards for "milk." If the product in question does not meet these standards, it cannot be labeled as "milk." According to the federal government,

Milk is the lacteal secretion, practically free from colostrum, obtained by the complete milking of one or more healthy cows. Milk that is in final package form for beverage use shall have been pasteurized or

⁸⁹ *Id.* at 72.

⁹⁰ *Id.*

⁹¹ Byrne, *supra* note 11, at 113-14.

⁹² *Id.* at 113.

⁹³ *Id.*

ultrapasteurized, and shall contain not less than 8 ¼ percent milk solids not fat and not less than 3 ¼ percent milkfat. Milk may have been adjusted by separating part of the milkfat therefrom, or by adding thereto cream, concentrated milk, dry whole milk, skim milk, concentrated skim milk, or nonfat dry milk. Milk may be homogenized.⁹⁴

Current regulations mandate that “milk,” as is recognized by the government, can only have that identification if, when in “final package form for beverage use,” it has been pasteurized or ultra-pasteurized.⁹⁵ Because these regulations determine what can be sold in interstate commerce, the standards for milk mandate that any milk sold in interstate commerce must be pasteurized or ultra-pasteurized.⁹⁶

In directly addressing the ban on selling raw milk across state borders, 21 C.F.R. § 1240.61 provides that

No person shall cause to be delivered into interstate commerce or shall sell, otherwise distribute, or hold for sale or other distribution after shipment in interstate commerce any milk or milk product in final package form for direct human consumption unless the product has been pasteurized or is made from dairy ingredients (milk or milk products) that have all been pasteurized, except where alternative procedures to pasteurization are provided for by regulation, such as in part 133 of this chapter for curing of certain cheese varieties.⁹⁷

Pasteurization, as it is used here, is the “process of heating every particle of milk and milk product in properly designed and operated equipment to one of the

⁹⁴ 21 C.F.R. § 131.110 (2013).

⁹⁵ Byrne, *supra* note 11, at 117-18.

⁹⁶ *Id.* at 118.

⁹⁷ 21 C.F.R. § 1240.61.

temperatures given in the following table and held continuously at or above that temperature for at least the corresponding specified time.”⁹⁸

There is some indication that the current condition of raw milk regulation in the federal government is being re-evaluated. In 2011, former House Representative Ron Paul, with five co-sponsors, introduced H.R. 1830, which would legalize the sale of raw milk across state lines.⁹⁹ In his statement introducing the bill, Representative Paul stated:

Hard as it is to believe, the federal government is actually spending time and money prosecuting small businesses for the “crime” of meeting their customers’ demand for unpasteurized milk! Recently the Food and Drug Administration conducted a year-long sting operation targeting Rainbow Acres Farms in Pennsylvania. As a result of this action, Rainbow Acres’ customers will no longer be able to purchase unpasteurized milk from this small Amish farm.

Mr. Speaker, many Americans who the government wishes to deny the ability to purchase unpasteurized milk have done their own research and come to the conclusion that unpasteurized milk is healthier than pasteurized milk. These Americans have the right to consume these products without having the federal government second-guess their judgment about what products best promote health. If there are legitimate concerns about the safety of unpasteurized milk, those concerns should be addressed at the state and local level.¹⁰⁰

⁹⁸ 21 C.F.R. § 131.3.

⁹⁹ H.R. 1830, 112th Cong. (2011), *available at* <http://www.govtrack.us/congress/bills/112/hr1830#overview>.

¹⁰⁰ Statement Introducing Unpasteurized Milk Bill, H.R. 1830, 2011 Sess. (2011), <http://www.ronpaul.com/2011-05-16/statement->

In December of 2012, Senator Rand Paul introduced a similar bill to legalize the interstate sale of raw milk.¹⁰¹ Although both of these bills died in committee, they show that there may be some growing support for changes to be made in federal regulation of raw milk.

B. State Regulation

1. Introduction to State Regulation of Raw Milk

The federal government bans the sale of raw milk across state lines, but it does not directly address intrastate sales. While the federal government may have the authority to do so, it has decided to leave the question of raw milk up to each state so that they can regulate as they see fit. As could be expected in this sort of approach, there is a very broad spectrum of rules across the states. These rules do not seem to be primarily determined by the state's geographical region, by how many people are living in the state, or even by the historical or present importance of the dairy industry in the state.

As a general rule, the regulations of the states can be separated into four different approaches. It is important to note that these approaches are simply a means to categorize the laws, and some states may combine multiple approaches presented here.

First is the "actual or de facto prohibition on sale" approach.¹⁰² In this approach, the state has made it completely illegal to sell raw milk to consumers; all milk intended to be sold for human consumption must be pasteurized. If the milk is sold as pet food, it must also be pasteurized. Currently, there are at least eleven states, plus Washington, D.C., where raw milk sales and

introducing-unpasteurized-milk-bill-hr-1830/ (statement of Rep. Ron Paul).

¹⁰¹ S. 1955, 112th Cong. (2011), *available at* <http://www.govtrack.us/congress/bills/112/s1955>.

¹⁰² Adams, Olexa, Owens & Cossey, *supra* note 6, at 314-15.

distribution are completely illegal.¹⁰³ In 1948, Michigan led the way in statutorily mandating that all milk sold to consumers be pasteurized.¹⁰⁴

Second is the “animal-share or leasing” approach.¹⁰⁵ This approach takes advantage of a loophole that is usually present when a state has a law that bans the sale of raw milk to consumers. Instead of purchasing raw milk, which is illegal, the consumer purchases a part or a “share” of a cow. Along with the purchase price, the consumer also pays a monthly fee that covers boarding at a farm for the cow. Once every week or two weeks, all the consumers who own part of the cow meet at the farm, or at another location with the farmer, to collect their share of the milk that their cow produced. Since the consumers own part of the cow and are simply collecting the milk that their cow produced instead of buying the milk, technically the law is not being broken. Courts in several states have adopted this reasoning and have held that cow-shares were not a violation of the law. In 2006, a Darke County Court of Common Pleas judge in Ohio allowed such a claim because the state statute had not defined the words “sell” or “sold.”¹⁰⁶ Still in other states, such as Tennessee, Colorado, and Alaska, cow-shares are legal because of an explicit statute or agency regulation addressing the issue.¹⁰⁷ The state statute in Tennessee allowing cow-shares reads: “[n]othing in this part or any other law shall be construed as prohibiting the independent or partial owner of any hoofed mammal from using the milk from the animal for the owner's personal consumption or other personal use.”¹⁰⁸ However, some courts have held that cow-shares are illegal as interpreted under the law. Those courts usually find that the cow-share is an obvious attempt to circumvent the prohibition on sales; because the

¹⁰³ *State by State Review of Raw Milk Laws*, FARM-TO-CONSUMER LEGAL DEFENSE FUND, (June 21, 2013), http://www.farmtoconsumer.org/raw_milk_map.htm.

¹⁰⁴ Adams, Olexa, Owens & Cossey, *supra* note 6, at 315.

¹⁰⁵ *Id.* at 314-15.

¹⁰⁶ Byrne, *supra* note 11, at 120.

¹⁰⁷ *State by State Review of Raw Milk Laws*, *supra* note 103.

¹⁰⁸ TENN. CODE ANN. § 53-3-119 (2012) (permitting use of milk from hoofed mammal for owner's personal consumption or use).

shareowners never take possession of the cow or take care of it, the cow shares look almost identical to milk sales.¹⁰⁹

While the states using the de-facto prohibition approach and the states using the animal-share approach both prohibit the sale of raw milk, the de-facto prohibition states have either closed the loophole that allows animal-shares or a court has ruled animal-shares impermissible as interpreted under the statute. Animal-share approach states have either declined to close the loophole, or there is a specific court ruling, statute, or regulation allowing them.

Third is the “limited public sale and/or labeling requirements” approach.¹¹⁰ In this approach, raw milk can be purchased, but only with certain conditions. For example, many states, such as Oregon and several Midwestern states, only allow raw milk to be purchased at the actual farm where it is produced.¹¹¹ In Oregon, on-farm sales are allowed, but the milk producer must not own “more than three dairy cows that have calved at least once, nine sheep that have lactated at least once or nine goats that have lactated at least once.”¹¹² Also, not only must the milk be sold at the farm where the milk is produced, but the farmer is not allowed to advertise that the raw milk is for sale.

Another limitation often imposed on the sale of raw milk is the requirement of placing a conspicuous warning label on the milk container, as is the case in Arizona, Maine, Massachusetts, Nebraska, New Mexico, New York, Pennsylvania, and South Dakota.¹¹³ These warning labels oftentimes must include a message saying that the product inside the container is raw milk, and not pasteurized, and therefore harmful pathogens may be present that produce a possible health risk.¹¹⁴ When labels are required, sales are oftentimes allowed both on and off the farm.¹¹⁵

¹⁰⁹ Byrne, *supra* note 11, at 120.

¹¹⁰ Adams, Olexa, Owens & Cossey, *supra* note 6, at 314-15.

¹¹¹ *State by State Review of Raw Milk Laws*, *supra* note 103.

¹¹² Byrne, *supra* note 11, at 119.

¹¹³ Adams, Olexa, Owens & Cossey, *supra* note 6, at 317.

¹¹⁴ *Id.*

¹¹⁵ *Id.*

Also, in several states that allow raw milk to be sold, there are strict certification and testing requirements that must be met by the raw milk producer in order for the raw milk to be sold to the public.¹¹⁶ A majority of the states have adopted either an exact or a close copy of the Grade “A” Pasteurized Milk Ordinance, or PMO.¹¹⁷ This ordinance is an administrative and technical guide that milk producers and state regulators can use as guidelines for proper “milk production, inspection, processing, and packaging to the minutest detail.”¹¹⁸ California, one out of approximately ten states that allow retail raw milk sales,¹¹⁹ is an example of a state that requires both a warning label on the milk and that the milk producer be licensed to sell the milk.¹²⁰

The last approach is the “pet food exception” approach.¹²¹ This approach is often combined with the previous “limited public sale and/or labeling requirements” approach.¹²² In states that use the pet food exception approach, raw milk can be sold in stores, but only if the milk has a label on it that indicates that it is pet food.¹²³ While raw milk is sometimes used as pet food, most raw milk producers in these states are fully aware that people are purchasing the raw milk with the intent of consuming it themselves.

2. *Regulation of Raw Milk in Indiana*

“There are approximately 176,000 dairy cows in Indiana on 1,527 dairy farms.”¹²⁴ These 176,000 dairy cows “produce 3.4 billion pounds of milk per year,”¹²⁵ which puts Indiana in 14th place among all the states in total milk production.

¹¹⁶ *Id.* at 306.

¹¹⁷ *Id.* at 312-13.

¹¹⁸ Byrne, *supra* note 11, at 118.

¹¹⁹ *Id.* at 119.

¹²⁰ Adams, Olexa, Owens & Cossey, *supra* note 6, at 317.

¹²¹ *Id.* at 319.

¹²² *Id.* at 316.

¹²³ *Id.*

¹²⁴ IND. STATE BD. OF ANIMAL HEALTH, *supra* note 1, at 6.

¹²⁵ *Id.*

Indiana also “ranks number 2 among states in the production of low-fat ice cream in the U.S.”¹²⁶

These statistics show that while Indiana is not the leader in dairy states, the dairy industry plays a significant role in business and culture in the state. For this reason, or in spite of this reason, Indiana’s government has been involved in regulating milk and milk products since the 1920s.¹²⁷ The Indiana General Assembly passed a law in 1925 that required either the pasteurization of all milk meant for human consumption or the testing of the cattle for tuberculin, and in 1935 the Milk Control Act was enacted.¹²⁸

A year after the Milk Control Act was enacted, in *Albert et al. v. Milk Control Board of Indiana*, the Indiana Supreme Court held that this Act was constitutional, stating that “[t]he regulation of the sale of milk for human consumption is a proper exercise of the police power of the state, and such regulation does not amount to the taking of private property without compensation, in violation of section 21, article 1, of the State Constitution.”¹²⁹ In response to the appellants’ argument that the regulation of milk was not a public health matter and was therefore an unconstitutional use of police power, the court noted:

If the milk supply of the state is not affected with a public interest and has no relation to public health and the general welfare of our people, then, of course, the act would be invalid. But it is of common knowledge that the milk supply is affected with a public interest and has a direct relation to public health and the general welfare of the people. It is judicially known that milk and its by-products is a food absolutely essential to thousands of our citizens in order to sustain life, and, if the supply was cut off for only a

¹²⁶ *Id.*

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ *Albert v. Milk Control Bd. of Ind.*, 200 N.E. 688, 692 (1936).

few days, no one could foretell the dire calamity that would follow.¹³⁰

Currently, the Board of Animal Health (BOAH) runs the Indiana dairy program, per Indiana Code sections 15-17-2-8 and 15-18-1. Indiana law requires that all dairy farms have a permit from BOAH, and BOAH has the authority to adopt new rules regarding the production of milk in Indiana.¹³¹ There are two varieties of milk recognized by BOAH: Grade A milk and Manufacturing Grade milk. Several types of dairy products are produced using Grade A milk, such as fluid milk, yogurt, and other dairy ingredients. Manufacturing Grade milk is often used to make butter, cheese, ice cream, and other frozen desserts.¹³²

Indiana Code section 15-18-1-21 sets out Indiana's law on the pasteurization of milk. It states:

A person may not offer, display for sale, sell, deliver, or have possession of with intent to sell or deliver milk or milk products for human consumption unless every particle of the final mixture of the milk or milk products used in processing or manufacture has been thoroughly pasteurized by equipment approved by the board.¹³³

This statute applies to both Grade A milk and Manufacturing milk and to all dairy products made from those two grades of milk. An exception exists, however, for certain aged cheeses that do not have to be pasteurized because the aging process kills most of the potential harmful pathogens.¹³⁴ Notably, it has been a long-standing policy of BOAH to interpret the pasteurization statute in a way that would not prohibit a farmer, his family, or any

¹³⁰ *Id.* at 691.

¹³¹ IND. STATE BD. OF ANIMAL HEALTH, *supra* note 1, at 6.

¹³² *Id.* at 7.

¹³³ IND. CODE § 15-18-1-21(a) (2013).

¹³⁴ IND. STATE BD. OF ANIMAL HEALTH, *supra* note 1, at 7.

non-paying guest from consuming raw milk produced by a cow that the farmer owned.¹³⁵

As explained above, there are several different ways that a state can regulate the sale of raw milk. Like many other states, in the face of this growing raw milk debate, Indiana is currently taking a second look at its longstanding policy of prohibiting the sale of raw milk to consumers. The 2012 Indiana General Assembly, faced with some bills that would potentially affect raw milk regulation, passed House Enrolled Act 1129 (HEA 1129). This Act directed the Indiana BOAH to delve deeper into the contentious issue of raw milk regulation. The Act directed BOAH to write and deliver a report to the General Assembly about the issue no later than December 1, 2012.¹³⁶ The report included not only whether BOAH believed raw milk sales should be made legal but it also covered the most effective methods for doing so.

Even though Indiana has a very clear statute mandating the pasteurization of all milk sold for human consumption, as in other states, some Indiana residents who want to consume raw milk have circumvented this law, or in some cases, deliberately violated it. The BOAH report indicates that there are several ways that Indiana residents are gaining access to raw milk. Some residents are deliberately violating the statute by purchasing raw milk from farmers. Some residents are purchasing raw milk designated as pet food for personal consumption. In fact, the Office of the Indiana State Chemist (OISC), which regulates commercial feed in Indiana, has noted that recently there has been an increase in the number of farmers applying for a license to sell raw milk as pet food.¹³⁷ The OISC has also noticed that more farmers are selling raw milk, labeled as pet food, at retail stores and farmers markets. This milk may often be sold with literature indicating that humans should consume raw milk.¹³⁸ In response to this increase in the sale of raw milk labeled as pet food, in 2012 the Indiana General

¹³⁵ *Id.* at 8.

¹³⁶ *Id.* at 5.

¹³⁷ *Id.* at 16.

¹³⁸ *Id.*

Assembly amended Indiana Code section 15-19-7-40 to require all raw milk sold as pet food to have a conspicuous label stating “Not For Human Consumption.” The amendment also makes it illegal to promote or advertise raw milk as being fit for human consumption.¹³⁹

The BOAH report further indicates that cow-shares, or herd-shares, are presently used in Indiana as a way to circumvent the prohibition on the sale of raw milk. Unlike other states that have directly dealt with the presence of cow-shares, Indiana has no law or regulation directly addressing cow-shares. Also, the issue of cow-shares has not been litigated in any Indiana court. While Indiana government officials are fully aware that cow-shares are being used to distribute raw milk, as of yet the government has not taken any explicit step to allow or prohibit them.¹⁴⁰

The final method of obtaining raw milk that the BOAH report mentions is distribution agreements. These include community supported agriculture (CSA) programs where individuals buy a subscription to receive a set quantity of food produced at a farm, and buying clubs where individuals buy products directly from the farm.¹⁴¹ One of the primary reasons stated by raw milk advocates for why the distribution agreements do not violate Indiana law is that because the programs are only open to members, and not the public, the Indiana pasteurization regulations do not apply.¹⁴²

The Board of Animal Health report next addresses the issue of farm owner’s insurance.¹⁴³ Since farmers can be found liable for tainted food produced on the farm, the BOAH was interested in finding out if any of the top farm owner’s insurance companies had an exclusion policy for raw milk incidents. An exclusion policy would limit the insurance company’s duty to cover for the farmer’s liability if the illness was caused by consumption of raw milk. The question is an important one because if a farmer sold raw

¹³⁹ *Id.*

¹⁴⁰ *Id.* at 17.

¹⁴¹ *Id.*

¹⁴² *Id.*

¹⁴³ *Id.* at 18.

milk that caused people to become seriously ill, an exclusion policy would leave the farmer on the hook for compensating the victims, possibly driving the farm out of business. Worse, if the farmer could not fully compensate the victims, then the victims could be left without anyone else from whom they might recover. After looking at the top five farm owner's insurance companies operating in Indiana, the BOAH report noted that the top insurance company and the bottom insurance company did have exclusion policies for raw milk consumption incidents, but the three in-between did not.¹⁴⁴

To obtain a good overall synopsis of how others approach the issue of raw milk regulation, the BOAH compiled regulation information from several other states and also from countries around the world. The BOAH report finds that including Indiana, twenty states do not allow the sale of raw milk to consumers, while thirty states allow some form of selling raw milk.¹⁴⁵ Among the thirty states that do allow some form of raw milk sales, there is no overarching standard or regulation that all of the states use; however, virtually all of the thirty states do have some sort of regulatory system in place addressing the production and sale of raw milk.¹⁴⁶

The large majority of states that do allow raw milk sales prohibit resale of the milk, and they also do not allow raw milk to be served in restaurants, hotels, schools, and health care facilities.¹⁴⁷ Of the thirty states, eighteen do not allow raw milk sales anywhere except on the farm where the milk was produced. Of those eighteen states, most placed further restrictions on the sales. Four of the states only allowed raw goat milk to be sold.¹⁴⁸ This is due to the fact that goats tend to be cleaner than cows, and therefore goat milk is less likely to be contaminated with harmful pathogens. Four states only allowed "incidental" sales (The BOAH report does not define the word "incidental," but the

¹⁴⁴ *Id.*

¹⁴⁵ *Id.* at 19.

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ *Id.*

Merriam-Webster dictionary defines it as “occurring merely by chance or without intention or calculation.”¹⁴⁹ A small number of the states actually allow the farmer to directly deliver the raw milk to the consumer.¹⁵⁰ A little fewer than half of the thirty states allow raw milk to be sold at farmers markets and at retail stores. However, some states limit those sales to retail stores owned by the farmer, or they only allow the sale of raw goat milk at the farmers’ market.¹⁵¹

While some states directly address cow-shares or herd-shares, the majority of states, like Indiana, have not. Of those that have addressed them, approximately half of them have continued to allow raw milk to be distributed through the shares, and the other half of the states do not allow cow-shares unless the milk is pasteurized.¹⁵² Also, in the states that allow some form of raw milk sales, most only allow the sale of milk and/or cream, but not other dairy products such as butter or yogurt. Only a small number of states have a limit on the number of cows or goats that can be milked or on how much milk can be sold at a time.¹⁵³

Of the thirty states that allow raw milk sales to consumers, almost all of them require the raw milk producer to be licensed with the state and undergo regular sanitation testing to reduce the chance of raw milk being contaminated with pathogens.¹⁵⁴ There are several areas in the milk producing process where the states usually set standards and regularly do testing. Typically, statewide standards must be met for cow health, the cleanliness of the area where the cows are milked, the cleanliness of the milking equipment used, cooling temperatures and storage of the milk, construction and sanitation of the dairy farm as a whole, the containers and filling methods, and labeling of the milk. The quality of the actual milk can also be tested

¹⁴⁹ *Incidental Definition*, MERRIAM-WEBSTER, <http://www.merriam-webster.com/dictionary/incidental> (last visited Sept. 8, 2013).

¹⁵⁰ IND. STATE BD. OF ANIMAL HEALTH, *supra* note 1, at 19.

¹⁵¹ *Id.*

¹⁵² *Id.* at 20.

¹⁵³ *Id.*

¹⁵⁴ *Id.*

for the somatic cell count, bacteria, coliform, pathogens, and drug residues.¹⁵⁵

Being aware of the raw milk regulations used in other states and looking at what has and has not worked in those other states can be invaluable as a way to devise new standards for Indiana. Because states are situated similarly in relation to the federal government, it can be relatively easy to take ideas from other states and adopt them for use in Indiana. Nevertheless, because the states have been taking ideas almost exclusively from each other and applying standards that have been used in other states, it is likely that other countries have adopted raw milk regulations that are entirely new and unseen in the United States. For this reason, the raw milk regulations in other countries should be analyzed to see if any new ideas can be gleaned from them.

The BOAH did not complete an in-depth analysis on the pasteurization laws of other countries, although it did gather some basic information from a few countries.¹⁵⁶ Canada, for example, entirely prohibits raw milk sales to consumers. The BOAH noted that the European Union allowed its member states to keep or introduce their own laws on raw milk sales. The United Kingdom revisited its raw milk policies a few times between 1997 and 2002, but in the end it decided to leave the policy as it was.¹⁵⁷ Raw milk can be sold to consumers on the farm or at farmers' markets, or a delivery person can deliver the milk. Retail sales are not allowed. Raw milk dairies must be licensed and continue to meet sanitation and warning label requirements.¹⁵⁸ In 1983, Scotland prohibited raw cow milk from being sold for human consumption, and it extended that prohibition to all raw milk in 2006.¹⁵⁹

Italy has one of the more unusual approaches to raw milk regulation of the countries looked at by the BOAH. In

¹⁵⁵ *Id.*

¹⁵⁶ *Id.* at 21.

¹⁵⁷ *Id.*

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

Italy, “local officials in territories” can sell raw milk.¹⁶⁰ Also, raw milk can be sold in vending machines.¹⁶¹ Finally, Germany allows raw milk to be sold on the farm where it was produced. Vending machine sales and off-the-farm sales are also allowed, however these sales are regulated more strictly.¹⁶²

In the conclusion of the report, the BOAH notes that “[b]oth sides of the raw milk debate have sincere deeply held positions on the issue. No consensus middle ground exists between the public health community that wants no raw milk sales to consumers and advocates who want raw milk sales to consumers.”¹⁶³ The report goes on to say that pasteurization of milk has been an effective way to make milk safer, and allowing raw milk sales would undoubtedly increase the possibility of Indiana residents becoming ill from pathogens in the milk. However, the report reminds the reader that although there are twenty states that prohibit the sale of raw milk, there are thirty states, or 60% of the states, that have decided that the benefits outweigh the risks of allowing sales of raw milk.¹⁶⁴

At the end of the report, the BOAH recommends that the Indiana General Assembly take one of two distinct approaches. In “Option A,” the BOAH recommends that Indiana:

[m]aintain the current requirement for milk to be pasteurized prior to sale and amend the statute to clarify that all persons producing milk for consumption must comply with state sanitation standards and pasteurize the milk regardless of the method used to distribute the milk, including cow or herd share arrangements and products labeled for pet food.¹⁶⁵

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

¹⁶² *Id.* at 22.

¹⁶³ *Id.*

¹⁶⁴ *Id.*

¹⁶⁵ *Id.* at 23.

This "Option A" approach would effectively close all loopholes for selling raw milk that currently exist, making Indiana one of only 12 states that do not allow sales of raw milk for consumption in any form.¹⁶⁶ Practically speaking, the only individuals able to obtain raw milk would be the dairy farmer, his family, and any friends or occasional guests that the farmer would give raw milk to for free.

The BOAH's "Option B" goes in the opposite direction. Option B calls for changing current legislation in order to "allow limited distribution of raw milk directly from the farmer producing the milk to consumers and authorize the BOAH to establish minimum sanitary requirements that may reduce the risk of human illness."¹⁶⁷ Following this approach would place Indiana with 15 other states that have decided to allow sales of raw milk confined to the farm.¹⁶⁸

The BOAH then goes on to say that if Option B is adopted by the General Assembly, certain basic principles should apply. First, they say, the BOAH should be given the authority to adopt rules that would require raw milk permits and set sanitation standards to be followed by the raw milk producers.¹⁶⁹ Next, the BOAH states that all raw milk farmers should be held to the same standards.¹⁷⁰ Finally, all raw milk that is sold needs to be sold directly to consumers by the farmer from whose farm the milk came.¹⁷¹

Along with these basic principles, the BOAH set out in Appendix B of the report further ideas of what allowing the sale of raw milk could look like and what issues would need to be addressed if raw milk sales were legalized by the General Assembly. For example, the committee making the recommendations was split on what locations raw milk sales should be allowed. While everyone on the committee agreed that raw milk could be sold on a farm where it is produced, there was disagreement as to whether a farmer

¹⁶⁶ *State by State Review of Raw Milk Laws, supra* note 103.

¹⁶⁷ IND. STATE BD. OF ANIMAL HEALTH, *supra* note 1, at 23.

¹⁶⁸ *State by State Review of Raw Milk Laws, supra* note 103.

¹⁶⁹ IND. STATE BD. OF ANIMAL HEALTH, *supra* note 1, at 23.

¹⁷⁰ *Id.*

¹⁷¹ *Id.*

could deliver the milk to consumers, and whether a farmer could sell the raw milk at a farmers' market or at a retail store owned and run by that farmer.¹⁷²

The BOAH committee also reviewed the loopholes that allow for raw milk sales, such as pet food sales and cow-shares. The committee did not make a recommendation on whether those loopholes should be closed or not. However, if those loopholes did continue to exist, the cow-share and pet food distributors would be held to the exact same standard as farmers who sell raw milk directly to consumers.¹⁷³

In order to determine who would be allowed to sell raw milk, the BOAH would issue a "raw milk products permit," similar to the other milk permits that BOAH currently issues. In order to obtain this permit, the farmer would have to comply with certain requirements set forth by BOAH.¹⁷⁴ Interestingly enough, the raw milk products permit would allow raw milk from any hooved mammal to be sold, including "cattle, water buffalo, sheep, goats, camels, deer, and horses."¹⁷⁵ Other topics that would need to be addressed in greater specificity by BOAH are recall plans in case tainted raw milk is discovered, standards that farmers must comply with in producing, bottling, and storing raw milk, labeling requirements, somatic cell count and bacteria standards, testing for animal health and farm sanitation, and record keeping.¹⁷⁶

In response to the BOAH report, on January 14, 2013, Indiana Senator Richard Young, a Democrat, introduced Senate Bill 513.¹⁷⁷ This bill set out the necessary framework for allowing raw milk sales in Indiana and

¹⁷² IND. STATE BD. OF ANIMAL HEALTH, INDIANA STATE BOARD OF ANIMAL HEALTH REPORT ON THE ISSUE OF SELLING UNPASTEURIZED MILK TO CONSUMERS: BOAH RECOMMENDATIONS app. B (2012), *available at* [http://www.in.gov/boah/files/BOAH_Raw_Milk_Report_\(2012\)_FULL_REPORT.pdf](http://www.in.gov/boah/files/BOAH_Raw_Milk_Report_(2012)_FULL_REPORT.pdf).

¹⁷³ *Id.* at 3-4.

¹⁷⁴ *Id.* at 5.

¹⁷⁵ *Id.*

¹⁷⁶ *Id.* at 6-11.

¹⁷⁷ S.B. 513, 118th Gen. Assemb., 1st Reg. Sess. (Ind. 2013), *available at* <http://openstates.org/in/bills/2013/SB513/>.

mirrored very closely the recommendations outlined in the BOAH report. The bill would allow raw milk sales if the sellers met certain requirements. These requirements would be determined by the BOAH. Further, the bill would completely prohibit “reselling or redistributing raw milk, or offering, providing, or distributing raw milk in a restaurant, educational institution, day care facility, or health care facility.”¹⁷⁸ The State Chemist would continue to be in charge of regulating raw milk sold as pet food, but the Chemist would also be responsible for making sure that the raw milk pet food also met the BOAH criteria for raw milk intended for human consumption. However, the Indiana Senate was never given the opportunity for a vote on SB 513 as it later died in the Committee on Agriculture and Natural Resources.¹⁷⁹

Three days after SB 513 was introduced, Senate Bill 610 was introduced by two Indiana Senate Republicans, John Waterman and Jim Banks.¹⁸⁰ SB 610 would have allowed the “acquisition of unpasteurized milk by an individual who obtains the milk from animals solely or partially owned by the individual.”¹⁸¹ The bill would also have allowed raw milk dairy farmers to give their raw milk to family members and nonpaying guests. So while passage of SB 513 would have been the ultimate prize for raw milk advocates, passage of SB 610 would at least ensure that cow-shares would continue to exist in Indiana, whether direct sales were legal or not. Passage of SB 610, without the simultaneous passage of SB 513, would have made Indiana only the fourth state to pass a statute or regulation explicitly allowing the existence of cow-shares as a means to distribute raw milk.¹⁸² As it turned out, however, SB 610 was eventually allowed to die in the Committee on Health

¹⁷⁸ *Id.*

¹⁷⁹ Dan Flynn, *Raw Milk Study Leads Indiana to Keep Mandatory Pasteurization*, FOOD SAFETY NEWS (Mar. 6, 2013), <http://www.foodsafetynews.com/2013/03/indiana-follows#.UTs7tByG3UU>.

¹⁸⁰ S.B. 610, 118th Gen. Assemb., 1st Reg. Sess. (Ind. 2013), available at <http://openstates.org/in/bills/2013/SB610/>.

¹⁸¹ *Id.*

¹⁸² *State by State Review of Raw Milk Laws*, *supra* note 103.

and Provider Services, leaving any hopes for quick progress on raw milk access to die with it.¹⁸³

While these recent setbacks certainly provide a blow to the raw milk movement in Indiana, raw milk advocates can take some comfort in the fact that the result was not worse. The BOAH report offered two options with polar opposite results, one option to allow some sales of raw milk, and one option to prohibit all sales and close all the current loopholes. So even though the bill attempting to allow raw milk sales did not succeed, as of now, no bill has been introduced that would attempt to close all the loopholes. With the failure of both pro-raw milk bills to even make it out of committee, it would not be hard to imagine that a bill proposing to close all the loopholes would enjoy strong support in the Indiana Senate and might even leave raw milk advocates empty-handed.

IV. CONCLUSION

As shown, there are innumerable factors to consider when addressing the issue of raw milk sales. However, the decision that a state makes ends up being simply a matter of policy reached by balancing the pros and cons of each side. As the Indiana General Assembly is considering this issue in light of the BOAH report, it is apparent that there are three broad options that the General Assembly could take. It could close the loopholes and completely prohibit raw milk sales. It could leave the current regulations untouched, leaving the loopholes open for individuals to exploit. Finally, it could loosen the current prohibitions and allow at least some sales of raw milk.

By deciding to change current regulations to allow sales of raw milk, the General Assembly would appropriately be promoting a policy that values consumer choice and the ability of individuals to determine what is best for his or her own needs. As food and health choices are very personal, giving consumers the chance to choose the foods that promote health and well-being should be an important

¹⁸³ Flynn, *supra* note 179.

objective of the General Assembly. As shown by the BOAH report's analysis of "Option B," and shown by the many states that currently allow some form of raw milk sales, it would not be difficult to establish a regulatory framework for allowing sales from certified raw milk producers. Indiana's BOAH is already responsible for certifying and distributing licenses for dairy farmers, so the infrastructure to certify raw milk producers is in place. Also, as other states have set up certification processes for raw milk dairies, the General Assembly could pick and choose from regulatory policies that have worked in other states.

Another reason that the benefits of allowing raw milk sales outweigh the negatives is because of the scope of health dangers versus the potential health benefits. With an average of only fifty-four reported illnesses attributed to raw milk consumption each year, and no deaths since 1998, raw milk consumption is simply not a significant public health concern.¹⁸⁴ This is especially true in light of the average of 600 illnesses from pasteurized milk¹⁸⁵ and the seventy-six million cases of foodborne illnesses each year.¹⁸⁶ It is probable that the average number of illnesses attributed to raw milk consumption would rise if raw milk sales were allowed in Indiana; however, because the number of individuals switching over from drinking pasteurized milk to raw milk would probably not be significant, the increased number of illnesses would most likely be negligible. While it is important to remember that raw milk consumption could lead to serious illness, or potentially even death, this may be the case with any food product, as demonstrated by the sicknesses caused by the pasteurized milk outbreaks and the recent outbreak of salmonella in cantaloupe.¹⁸⁷ It is worth noting that according to outbreak data from the CDC, the risk of getting

¹⁸⁴ Rencher, *supra* note 47, at 421; Gumpert, *supra* note 60.

¹⁸⁵ Rencher, *supra* note 47, at 422.

¹⁸⁶ *Id.* at 421.

¹⁸⁷ James Andrews, *Cantaloupe Outbreak: Some Retailers Identified, Others Not*, FOOD SAFETY NEWS (Aug. 25, 2012), <http://www.foodsafetynews.com/2012/08/cantaloupe-outbreak-some-retailers-identified-others-not/#.UTjKWByG3UU>.

sick from eating deli meat, a food common in any supermarket, is higher than the risk of drinking raw milk.¹⁸⁸

On the other hand, to many people, the potential health benefits of drinking raw milk outweigh the possible risks. While the nutritional superiority of raw milk is questioned by government health agencies, the government agencies fail to take into consideration the countless number of raw milk testimonials presented as anecdotal evidence of raw milk's health benefits. Whether the raw milk being consumed by these individuals is truly benefitting them or is merely having a placebo effect, it would be irresponsible for the government health agencies to ignore this evidence. Further, the 2005 European study and 2011 Gabriella Study showing lower levels of asthma and allergies in children who drink raw milk lend even more credence to the raw milk testimonials.¹⁸⁹

While a few states, such as California, Washington, and Pennsylvania allow the sale of raw milk in retail stores, the majority of states that allow raw milk sales have not gone as far. In the BOAH report's recommendations on potential regulations, it is clear that if Indiana were to allow the sale of raw milk, general retail sales would wisely not be an option. By allowing the sale of raw milk in a few specific areas, such as farms, farmers' markets, and stores owned and run by farmers, and keeping it out of most other retail stores, the state would be ensuring that unaware, unsuspecting consumers would not accidentally purchase raw milk. If a consumer is forced to go to a farm, farmers' market, or farmer-owned store for milk, then it is much more likely that the consumer will be better informed about the risks involved with drinking milk and will have intentionally chosen to take their chances with raw milk. It would be unlikely that someone unaware of the risks of raw milk consumption would travel to one of these three types of locations and pick up raw milk. Therefore, even though the risks are still present, the raw milk consumer is making a

¹⁸⁸ GUMPert, *supra* note 7, at 122.

¹⁸⁹ Byrne, *supra* note 11, at 116-17; Loss et al., *supra* note 68.

conscious choice to face the possible ramifications of his decision to drink raw milk.

As is the case in most of the other states that allow some form of raw milk sales, labels clearly marking the milk as "raw milk" should be mandated in most circumstances. It also may be required for the labels to generally state the possible risks of consuming raw milk. Requiring these labels on raw milk in farmers' markets or farmer-owned stores would help ensure that every person purchasing the raw milk is aware of the risks. While the legislature may also mandate these labels on raw milk that is sold on farms, the likelihood that someone would drive to a farm and purchase raw milk without being informed of the risks is low enough as to render the labels essentially useless.

Another reason for the Indiana General Assembly to allow the sale of raw milk is that even if the General Assembly leaves the regulations in their current state with the loopholes, or even decides to close the loopholes, raw milk advocates will continue to find ways to drink raw milk, even if it means directly violating the law. It would be better for the General Assembly to allow raw milk sales and to closely regulate raw milk production and sales, thereby ensuring sanitary conditions, because the alternative would be to allow consumers to obtain raw milk from uncertified, and often unsanitary dairy farms. As brought up by raw milk advocates, several of the individuals who have become sick from drinking raw milk obtained their milk from conventional dairies that send most of their milk to be pasteurized. Because this milk was produced with pasteurization in mind, the dairies might not have maintained as strict of sanitation standards.¹⁹⁰

By allowing raw milk sales and setting up a raw milk certification procedure, Indiana could ensure that raw milk dairies are producing milk under sanitary conditions that lessen the likelihood of the milk being contaminated. Although there will always be some risks in drinking raw milk, it is helpful to remember that the pressing need for pasteurization was only apparent once the rapidly

¹⁹⁰ GUMPERT, *supra* note 7, at 117.

deteriorating and unsanitary conditions of dairy farms in the city caused the milk to be laden with deadly diseases such as tuberculosis.¹⁹¹ Based on evidence from other states that have established a certification process to allow the sale of raw milk, raw milk sales in those states have not resulted in a widespread epidemic of illnesses like was the case during the early 1900s when the sanitary conditions of the cows were poor.

Even though actual statistics show that raw milk consumption is not as much of a public health risk as originally believed, it is understandable that the General Assembly might be hesitant to allow the sale of a product that was responsible for thousands of deaths in the early 1900s. For this reason, the General Assembly may decide that it would be best to allow a trial run before completely allowing raw milk sales. For example, the General Assembly could initially allow the BOAH to issue only a very limited number of raw milk certifications in order to keep potential outbreaks smaller and more confined. The General Assembly could also require that the issue be addressed again in three or five years, after which the General Assembly could reevaluate whether it wants to continue to allow raw milk sales.

Although the vast majority of milk consumed by individuals in the United States since the early 20th century has been pasteurized, the strong demand for raw milk and the possible health benefits it could bring, as compared with the minor risk of illness caused by the raw milk, tip the scales in favor of legalizing the sale of raw milk. Through careful regulation by Indiana's Board of Animal Health, raw milk dairy farms can sell a natural food that produces a minimal chance of making someone sick from the pathogens in the milk. As Indiana already has a dairy certification process in place, the start-up costs of creating a raw milk certification would be minimal. Although the few potential risks of drinking raw milk can be serious, placing the choice to drink raw milk in the hands of consumers is a good way to put health back in the hands of the people of Indiana.

¹⁹¹ Byrne, *supra* note 11, at 127; GUMPERT, *supra* note 7, at xxv.

