

MPH NEWSLETTER

College of Agriculture and Applied Sciences



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DIRECTOR'S MESSAGE

Hello,

What a time to be studying and working in the field of public health. On a day-to-day basis we are witnessing how vital public health professionals and organizations are to sustaining and improving the overall health and well-being of our communities. We have seen how quickly resources, funding, and priorities can shift to accommodate a public health crisis. We have each individually demonstrated our commitment to public health and public safety by physically distancing ourselves from others, wearing masks, staying home when we are sick, and in many ways, changes our plans and schedules for the past 6+ months. I hope that you're all finding time for your own physical and mental health during this unprecedented year.

Thank you for taking the time to read our College of Agriculture and Applied Sciences Master of Public Health quarterly newsletter! You will find information about program and public health current events; our student spotlight, Alicia Meiners, who is a second year MPH Nutrition student; Dr. Jane Kelly's article titled The Dangers of Lambing and Kidding: Who Knew?; and more. Thank you to all of our contributors of this issue of the newsletter! If you ever want to contribute or if you have questions, please contact me at mateja.savoie@usu.edu.

Take care,
Mateja R. Savoie-Roskos, PhD, MPH, RD,
CAAS MPH Program Director, Assistant Professor





STUDENT SPOTLIGHT



This quarter's student spotlight is on Alicia Kunzler Meiners, an MPH Nutrition student. Alicia studied dietetics in her undergrad and decided to start the MPH Nutrition program to expand her horizons beyond nutrition. When she started graduate school, she accepted an assistantship with Dr. Mateja Savoie-Roskos and Carrie Durward. This assistantship worked with farmer's markets and doubled as her master's project. Her project involved being a part of a USDA sponsored grant team focusing on training farmer's market managers and increasing acceptance of farmer's market nutrition incentives through marketing. These incentives include the Supplemental Nutrition Assistance Program (SNAP) and the Double Up Food Bucks

Program (DUFB). The SNAP program replaced what was once called the Food Stamp Program, and DUFB is an extension of this. DUFB is a farmer's market incentive program available to SNAP participants that matches SNAP funds spent on fruits and vegetables.

Alicia was interested in this project because fruits and vegetables can be difficult to get for those who feel they don't have enough income to purchase them. Her goal was to educate low-income individuals who wanted to give up on healthy eating due to income. Alicia liked that her project allowed her to learn more about marketing, which is also an interest of hers!

With all of Alicia's hard work, she was able to create a best practices guide for farmer's market managers and develop a survey to evaluate the impact of social marketing campaigns on SNAP participants' use of farmer's markets. This best practices guide was published just last month! Alicia says that her project improved her skills in professional communication, writing, research analysis, marketing, and interviewing, and she is excited to be able to use these skills no matter where her career takes her!

Alicia graduates this December, and though she is open to many career options, she knows that she wants to educate. Her specific educational interests are healthy communication in relationships, being kind to oneself, and using activity/creativity for good mental health. She says that the MPH program has taught her that people are more complicated than they may seem and that a lot of factors go into health. She hopes this information helps her to be more compassionate to others. Alicia invites struggling and overwhelmed MPH students to remember that you have done hard things before and that you can do this too!



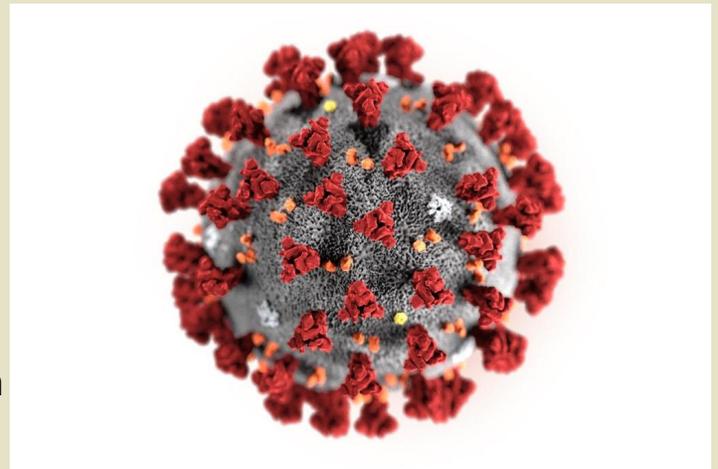
PUBLIC HEALTH IN THE NEWS

Get Your Flu Shot!

Now more than ever, the CDC encourages the public to get a flu shot for the 2020-2021 flu season. It will not only protect your loved ones and the community but will also reduce the burden on the healthcare systems and workers responding to COVID-19. Many pharmacies provide free flu shots during this time of year. For more information, click [here](#)!

Smoke and COVID-19

Wildfire smoke can cause inflammation in the lungs and make it easier to catch lung infections, including COVID-19. The CDC recommends limiting outdoor exercises when it is smoky and seeking cleaner air spaces. See this [link](#) for more information on how to protect your lungs.



World Health Organization Launches New Portal



On October 1st, the WHO launched a portal for global data that tracks the health and well-being of the elderly. This is intended to kick-off what the WHO has endorsed as the "2020-2030 Decade of Healthy Ageing". Learn more about what this data will be used for [here](#).

ZOONOTIC DISEASE CORNER

THE DANGERS OF LAMBING AND KIDDING: WHO KNEW?

E. Jane Kelly, DVM, MS, MPH, ACVPM, ACVM

When abortions occur in small ruminants, some of the possible causes of the abortion pose a risk to the humans tending the animals (veterinarians, producers etc), particularly to pregnant women.

For example, one of the most common causes of abortions in sheep and goats in Utah is *Chlamydophila abortus* which is a bacterial infection that causes late-term abortions and weak neonates. In sheep it is sometimes known as ovine enzootic abortion. It is spread to humans in aerosol or by accidental ingestion and can cause abortions in pregnant women that help at lambing or kidding. Another note of interest:

Chlamydophila psittaci, a cause of respiratory disease in birds, is also a zoonotic pathogen and can infect humans causing respiratory disease.

Q Fever is a disease that affects a wide variety of species, including humans. It is caused by a bacterium called *Coxiella burnetii*. In some species, it causes an asymptomatic infection. However, it can cause abortions or stillbirths in sheep and goats (as well as cattle). It is highly contagious and large numbers of organisms are shed when the animal gives birth. It is also shed in the feces, milk, and urine and can persist in the environment for long periods of time. Inhalation of organisms from placenta and amniotic fluid can cause abortions in pregnant women. Ingestion of unpasteurized milk is another source of infection. Q Fever can also cause generalized infections (not just reproductive disease) in humans. In fact, one of the first description of the disease involved meat plant workers in Australia. Infection can result in no clinical disease, an acute infection with flu-like symptoms, a chronic infection with possible severe disease such as endocarditis, or both acute and chronic disease. And, of course, abortions may occur in pregnant women.



Toxoplasma gondii is a protozoan parasite. Disease is usually associated with exposure to cat feces and the ingestion of undercooked meat. However, the organism can cause abortion in small ruminants and, therefore, pose a risk to pregnant women. Infection of a woman just before pregnancy or during pregnancy may result in congenital infections of the fetus. Infected babies may have eye or brain damage at birth or develop blindness or mental disability later in life. It is a serious infection in unborn children.

Listeria monocytogenes is a bacterium best known for causing food borne illness in humans. Food sources include unpasteurized milk and cheese and ready to eat deli meats and hot dogs. Pregnant women, older people, newborns, and immunosuppressed people are at higher risk of severe disease with listeriosis. Often pregnant women have flu-like symptoms but infection may cause miscarriage and stillborn babies. *Listeria monocytogenes* can also cause abortions in sheep and goats and, therefore, poses a risk to pregnant women helping out at lambing season or during an abortion storm in small ruminants.

Another bacterial cause of abortion in sheep is *Campylobacter* spp. (sometimes known as Vibriosis). It tends to cause abortions late in gestation or result in stillborn lambs. *Campylobacter jejuni* is one species of *Campylobacter* spp. associated with small ruminant abortions and it may cause intestinal infections and diarrhea in humans exposed to aborted ovine feti and placentas.



In some areas of the world, *Brucella melitensis* is an important zoonotic pathogen causing brucellosis in humans. In animals, it causes reproductive losses including abortions in sheep and goats. Humans are exposed by exposure to infected animal tissues including placentas and fetal fluids as well as by ingestion of raw milk. Luckily, this important zoonotic bacterial pathogen is not currently present in the United States, as far as we know. However, we do have cases of brucellosis in cattle (*Brucella abortus*) which may pose a risk to humans.

Recently, a sheep producer was experiencing an abortion storm and submitted aborted fetuses and ewes that had died to the Utah Veterinary Diagnostic Laboratory in Spanish Fork. It is quite unusual for ewes to be sick and dying as well as having abortions. We looked for all the common causes of abortion but the ewes had a severe metritis and *Salmonella* spp. was suspected. *Salmonella* *Sandiego* was isolated from the uterus of 2 ewes and from fetal tissues. *Salmonella* spp. are listed as a bacterial cause of abortions in ewes and does, but we rarely diagnose it. Most people are aware that *Salmonella* spp. are an important cause of foodborne illness in humans with many cases each year. However, this recent case also reminds us that we can acquire *Salmonella* spp. from tissues and fluids from infected animals.

In conclusion, there are risks to people helping at lambing or kidding time and, especially during abortions. Pregnant women should be particularly careful because many of the pathogens are particularly pathogenic to pregnant women and unborn babies. In addition, immunosuppressed people (diabetics, organ recipients, cancer patients, the very elderly and young children) should try and avoid contact with small ruminants that are giving birth. Gloves should be worn and placental tissue and fetal fluids should be removed to prevent ingestion by animals such as cats. Since some of the pathogens such as *Coxiella burnetii* are aerosolized, pregnant women should avoid the lambing/kidding areas completely.



UPCOMING EVENTS

Utah One Health Symposium

This year the Utah One Health Symposium will focus on the One Health approach to the COVID-19 pandemic. As we know, the One Health approach considers how human, animal, and environmental health are all interconnected. The symposium will also discuss mink on mink farms, rabies in Utah, vector-borne zoonotic diseases in food-producing animals, and the health of honey bees. Main speakers will be Caitlin Cossaboom from the CDC and Hannah Rettler, zoonotic disease epidemiologist from the Utah Department of Health. Please click [here](#) for more information on event registration.

Honor's Last Lecture

Each year, Utah State University's Honor's Program invites some of USU's exceptional professors to come and speak to students as if it were their "Last Lecture" at USU. On Wednesday, October 21st, at 3:30, Dr. Seth Archer is going to explore the U.S. government vaccination program for Native Americans in the 1830's and connect it to our current health crisis. You can find more information and find the Watch Live link [here](#)!

Biology Seminar: The USA National Phenology Network

Utah State University has recently started a seminar series where different biology professionals come and speak about their area of expertise. Dr. Theresa Crimmins from the USA Phenology Network is speaking virtually on October 27th from 3:30-4:30 pm. The USA Phenology Network monitors the impact of climate change on plants and animals in the United States. They track invasive species and pests, predict human health-related events, and seek to understand the timing of different ecosystem processes. Click [here](#) to access the Zoom information for the presentation.

PROGRAM UPDATES

A reminder to all current and new students that registration starts on November 16, 2020 for the Spring 2021 semester! Reach out to your faculty advisor with any questions.

Due to student interest, we have added a "Recent Job Postings" section on CAAS MPH Canvas. This can be found under Canvas > Master of Public Health Program > Modules > Recent Job Postings. We will add new job postings as we hear of them!

Know of someone who might be interested in one of the tracks of the CAAS MPH program? Due to the COVID-19 pandemic, we recently got approval to temporarily waive the GRE requirement for entrance into both the Nutrition and Veterinary Public Health tracks. If you know of anyone who might be interested in studying public health, please reach out to them and share the good news!



FOLLOW US ON SOCIAL MEDIA

Be the first to hear about MPH program updates by following our social media handles! This is a great way to stay up to date on program changes, class highlights, public health events, and potential job opportunities. It also provides you with the opportunity to network with other public health professionals and programs.

Instagram: @usu.mph

Linkedin: USU Master's of Public Health

Facebook: coming soon!

Twitter: coming soon!

