Plano City of Excellence | Memorandum

Date: June 1, 2020

To: Jamey Cantrell, Animal Services director

From: Rachel C. Patterson, Environmental Health & Sustainability director

Subject: Backyard Flocks: An Environmental Health Perspective

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Zoonoses are infectious diseases of animals that are transmissible to humans. Infectious agents that can be transmitted include protozoans, fungi, bacteria, chlamydial organisms and viruses. The ability of a certain disease agent to make a person ill and its severity is contingent upon exposure to the organism, dose of the infectious agent, route of infection, and the age, health and immunocompetency of the person.

Allowing disease agents and/or their carriers to live in close proximity to people increases the likelihood of illness. Some diseases associated with chickens include avian influenza, chlamydiosis, salmonellosis, cryptosporidiosis, eastern equine encephalitis (chickens are actually used as bait for mosquitoes in detecting EEE), avian tuberculosis, histoplasmosis, cryptococossis, campylobacteriosis and listeriosis.

Between 2000 and 2018 there were 76 Salmonella outbreaks linked to backyard poultry. Those outbreaks sickened 5,128 people, including 950 who were hospitalized and 7 who died (CDC). Up until 2019, the largest number of Salmonella illnesses ever recorded from backyard flocks occurred in 2017 when the CDC recorded 1,120 cases in 48 states; 249 people were hospitalized and 1 died (CDC). In 2018, a Salmonella outbreak was reported from 47 states connected with backyard flocks. 334 persons became ill with 56 hospitalizations. 21% of the victims were less than 5 years old (CDC).

In 2019 the number of Salmonella cases reported and associated with backyard flocks exceeded the previous record set in 2017. There were 13 multistate outbreaks of different strains of Salmonella. The CDC recorded 1,134 cases in 49 states. Of these, 219 were hospitalized, and two people died (one in Texas, one in Ohio). 21% of the reported cases were in children younger than 5 years old (CDC).

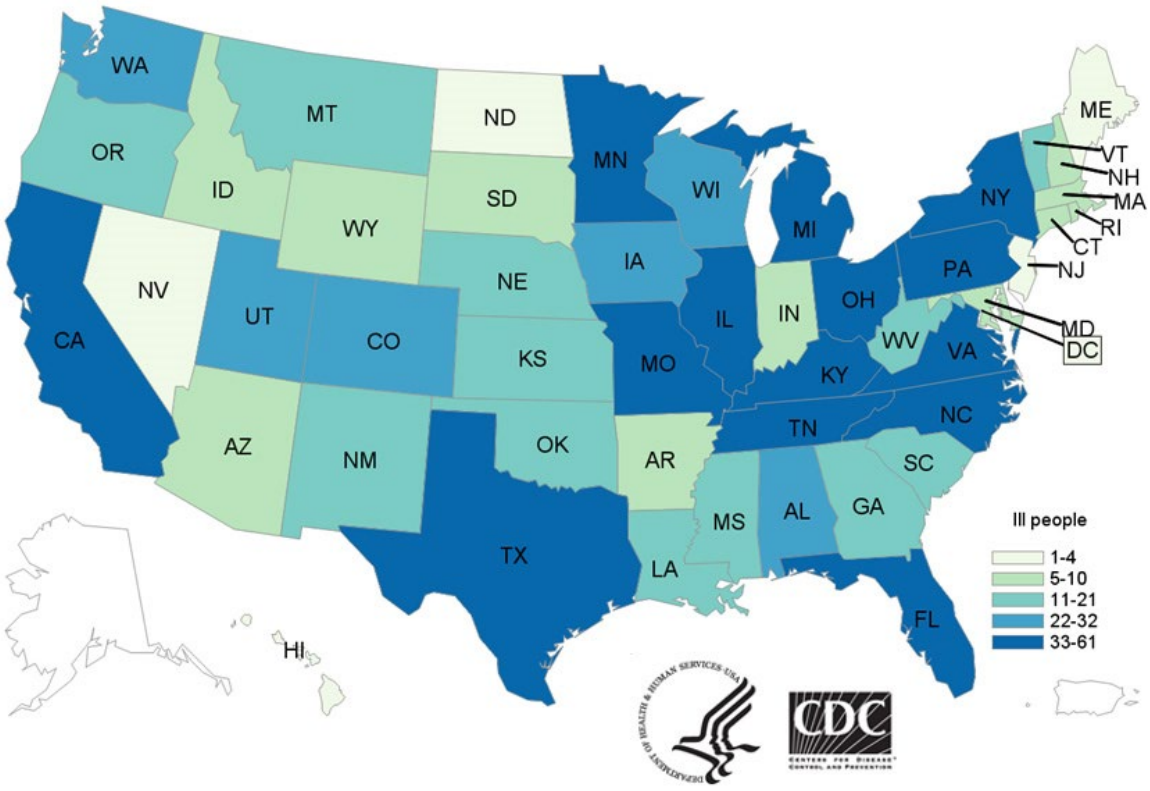
In May 2020, the CDC announced an investigation of a multistate outbreak of Salmonella epidemiologically linked to backyard poultry. To date, the case count is 97 with 17 hospitalizations in 28 states. Of these, 30% of cases have been reported in children younger than 5 years old (CDC).

Table 1: Summary of Salmonella Outbreaks 2017-2019 connected with backyard flocks

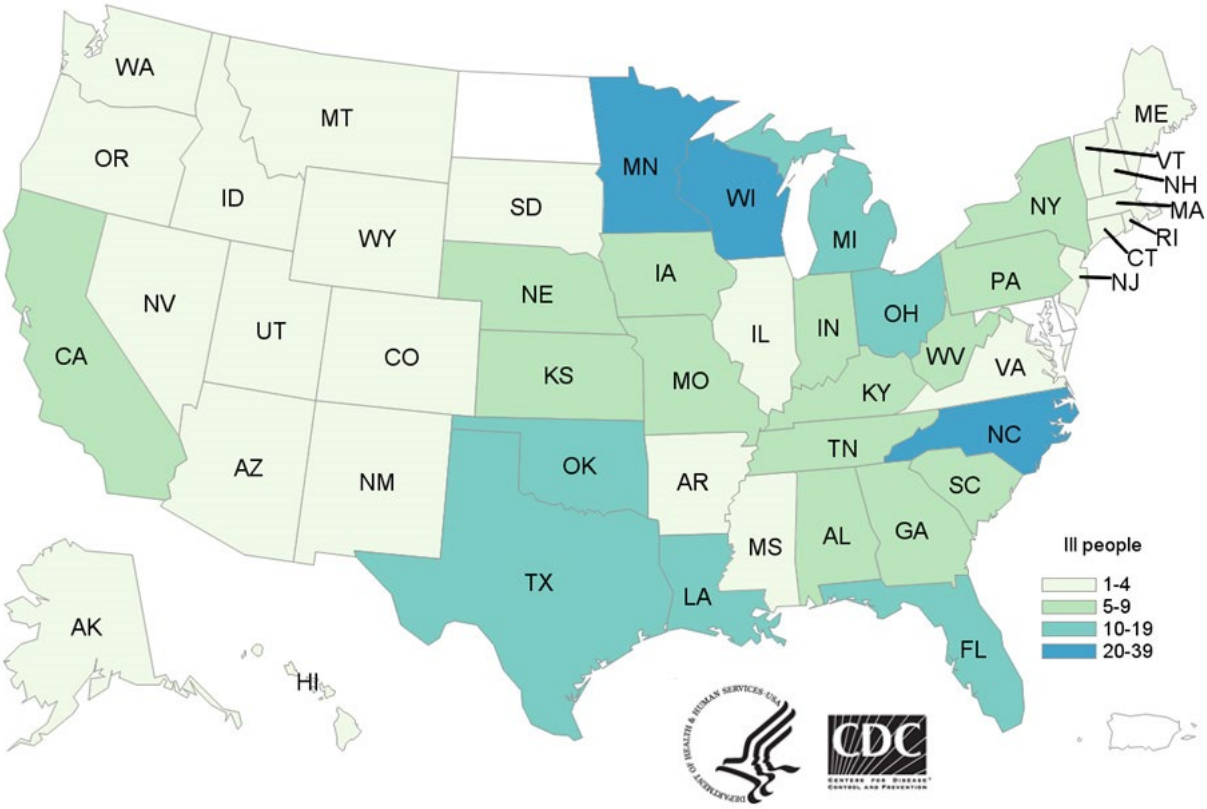
Year	Affected States	Case Count	Hospitalizations	Deaths	Number of Strains	Notes
2017	48	1,120	249	1*	10	
2018	47	334	56	0	6	21% cases in children < 5 yrs old
2019	49	1,134	219	2**	13	21% cases in children < 5 yrs old
2020	28	97	17	0	1	30% cases in children < 5 yrs old

*Death in North Carolina
**Deaths in Texas and Ohio

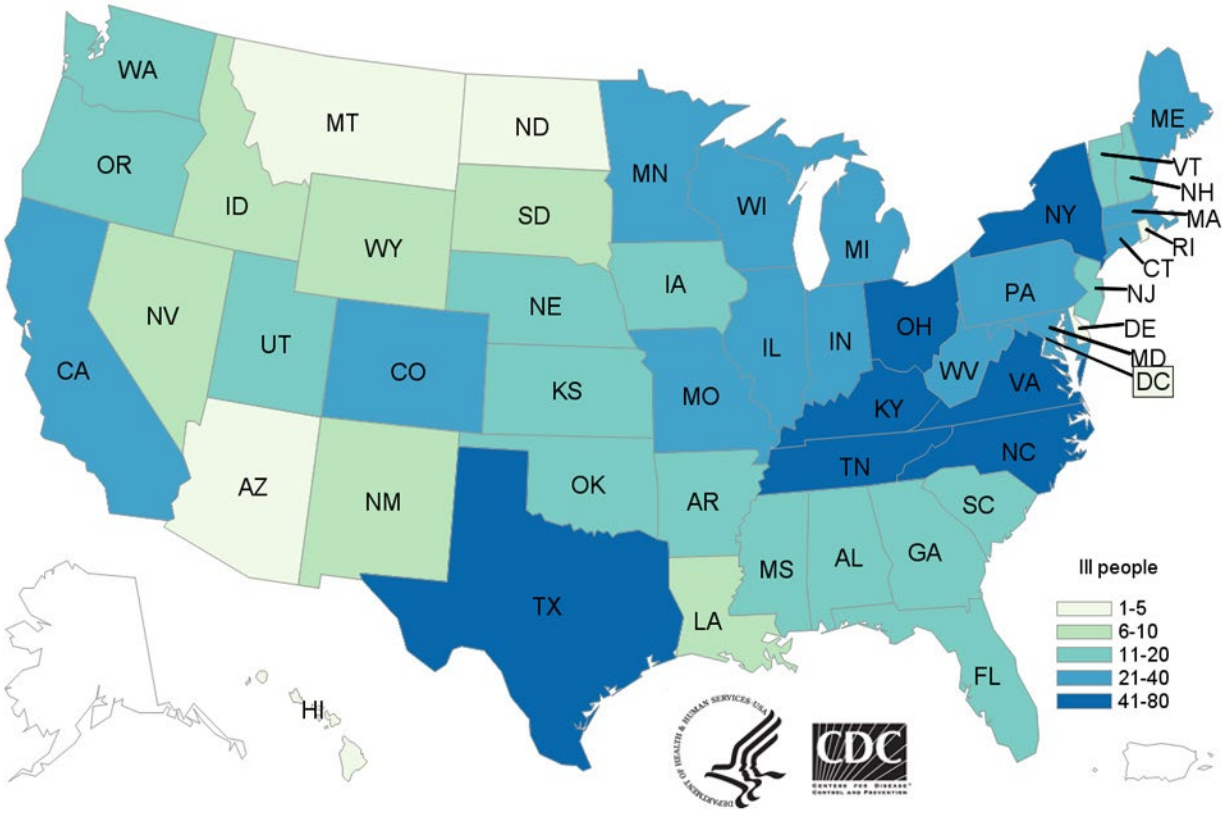
[2017 Outbreak Map]



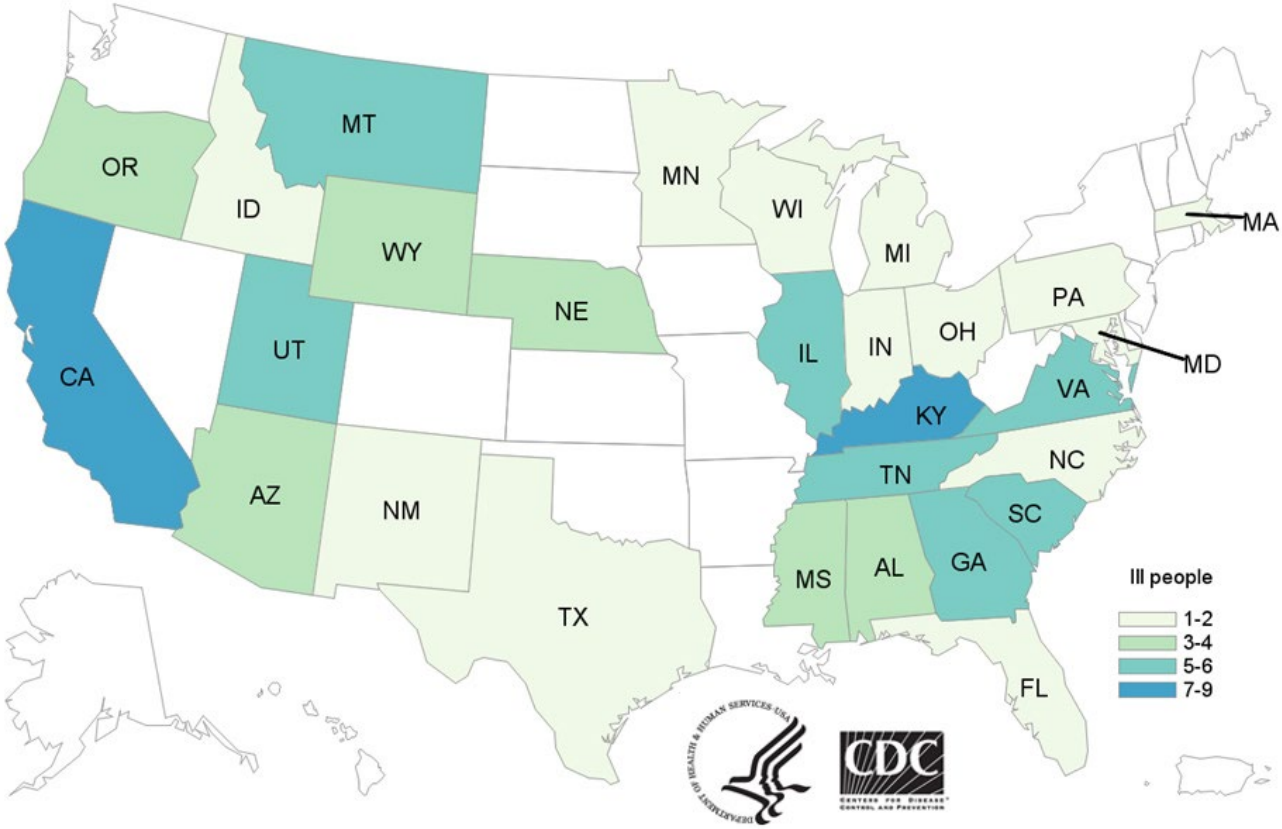
[2018 Outbreak Map]



[2019 Outbreak Map]



[2020 Outbreak Map]



One more disease-related concern is Virulent Newcastle Disease (vND). vND can result in a death rate nearing 100% in unvaccinated flocks and can even infect vaccinated flocks. Commercial poultry in the United States had been free of vND since 2003. In May 2018, this disease began spreading through backyard chickens in Los Angeles, San Bernardino, Riverside, Ventura, Alameda, and San Diego counties in California resulting in 60,000 birds being killed. Unfortunately, everyone's fears were confirmed when in December 2018 vND jumped to commercial flocks in these areas. Since then, over 1.2 million birds have either died or been euthanized as a result with multiple quarantines in effect (CDFA).

Finally, animals kept as pets lead to environmental nuisance issues for others in the neighborhood. Chickens coops must be cleaned and maintained on a daily basis to prevent their feces and the associated odors from accumulating and attracting flies, lice, mites, rats and mice. These pests will spread to other areas of the neighborhood as they search for food, water, shelter, and breeding sites. Odor (feces) and noise (clucking even without roosters) complaints will increase as space buffers for keeping chickens decrease.