



The quarterly meeting of the WeCAHN poultry network was held Sept. 16, 2022 reviewing Q2 (April—June 2022)

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Clinical Impressions Survey:

The purpose of the clinical impressions survey is to be a simple, quick overview of diagnoses by practitioners, which does not require practitioners to extract data from their information management systems to complete (as this can be a major barrier to participation).

It asks practitioners to report, for a list of selected pathogens/syndromes how frequently (never/rarely/commonly/very frequently, as defined within the survey) they have diagnosed these pathogens over the time period in question. Additionally, they are asked whether, compared to the previous time period) their diagnosis of these pathogens is increasing/decreasing/ or stable.

1. Dataset Overview

i. HPAI data: Publicly available wild bird testing; laboratory and clinical impressions survey data, CEZD.

ii. Practitioners Clinical Impressions Survey

iii. Laboratory Data:

- Animal Health Centre
- UCVM DSU
- Prairie Diagnostic Services
- Manitoba VDS Laboratory

iv. Scan: CEZD



2. HPAI

Domestic bird AI testing Q2 2022

AI detections in domesticated birds Q2 2022, at PDS and MB VDSL

| Laboratory | Negative | Positive | Total |
|---------------|----------|----------|-------|
| PDS | 701 | 19 | 720 |
| Manitoba VSDL | 37 | 1 | 38 |

i) Clinical case reports:

BC:

Commercial:

- First detection at Chilliwack: increased culling layer flock suspect Marek's Disease. Some pullets were emaciated, some recumbent.
- Tissues were harvest and submitted to AHC. Next day, increased mortality with few signs.
- Tissues were tested for AI, and were positive.
- Subsequent mortalities were clustered in certain areas of the barn.

Manitoba:

- Suspect cases currently in outside geese flocks.
- Similar to other regions, producers are finding a "red" level of biosecurity is sustainable for ~ 2-3 months maximum.

Alberta:

- Flock of turkeys, 12 weeks old.
 - Talking with owner earlier in day, everything ok
 - Later - 50 dead. These were post-mortem'd in evening; flock was positive and mortalities increased very quickly.
- Layers: presenting complaint increased mortality.
 - No drop in egg production
 - Most still had eggs in shell glands
 - Flock was AI positive

ii) CEZD: AI in Canadian wildlife:

- [Canadian Wild Bird Dashboard](#) – reports cases confirmed and reported to OIE, as well as suspect cases tested by Provinces but not yet confirmed. 1178 cases reported there.
- HPAI cases in many mammal species now reported, latest confirmed cases in new species is in a black bear in Quebec, grey and harbour seals in Quebec, Porpoise (Sweden) and Dolphin (United States) are also recent mammalian confirmations.

3. Other poultry disease data

a) Broilers

- **Commonly reported conditions (seen Commonly or Very frequently) by 3 or more of the 6 practitioners answering this section:**
- **Early systemic bacterial infection:** reported Rarely to Very frequently by network practitioners, associated with *E. coli* or *Enterococcus*, and also AMR by 1, and rated Stable by all.
- **Case: Mortality due to *E. coli*/Enterococcus** started as omphalitis, yolk sac infections, culled well and continued despite three different antibiotic regimen, based on antibiotic sensitivity.
- **Late systemic bacterial infection:** reported Rarely to Commonly, associated with *E. coli*, and rated Stable by 5.
- **Ascites:** reported Rarely to Commonly to Very frequently, and rated Decreasing by 1 and Stable by 5 practitioners relative to the previous quarter (January – March 2022).
- **Yolk sac infections:** reported Rarely to Commonly to Very frequently by practitioners, and rated Stable by all.
- **Bacterial lameness:** Reported Rarely to Commonly to Very frequently by network practitioners, associated with *E. coli* and *Enterococcus*, and rated Increasing by 1, and Stable by 5 practitioners.
- **Inclusion Body Hepatitis:** reported Never to Very frequently by practitioners, and rated Increasing by 1, Decreasing by 2, and Stable by 3.

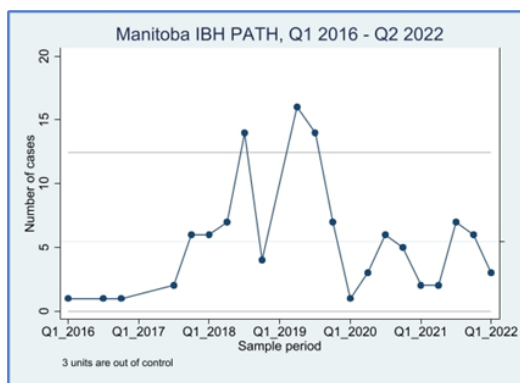
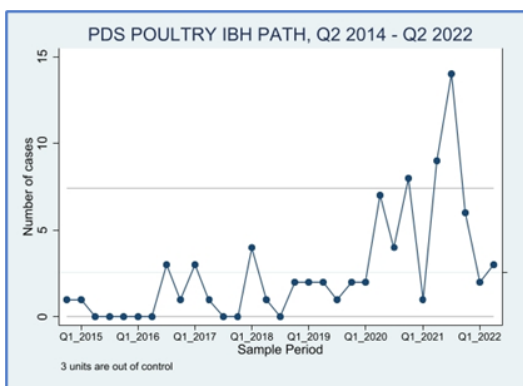


(Other poultry disease data, Broilers, continued)

Laboratory data:

Recap on 'control charts': for each of the following graphs, each data point reflects the number of positive samples or cases reported, over a 3 month period. The upper and lower horizontal lines, called control limits, are similar to statistical confidence intervals.

Control charts are a simple way of presenting data collected over time. Apparent trends (e.g. increasing or decreasing frequencies of detection) over time, or individual points (each representing 3 months of lab data for the pathogen of interest) lying outside the control limits, suggest a need for investigation to determine whether/how significant a signal they represent.



- Slightly different apparent time trend reported from Manitoba VSDL relative to PDS.

Other methods for data presentation:

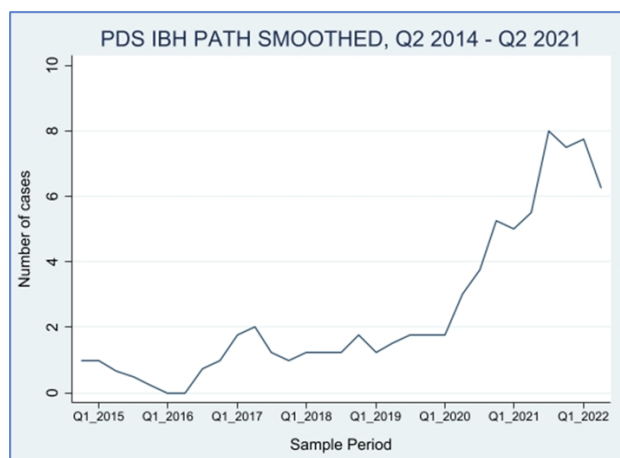
Background: While the raw data for pathologic cases or laboratory detection of specific pathogens can be plotted in control charts, other options exist. Simple line graphs may contain several features which will contribute to the plot:

- Random variation or "white noise"
- Seasonal variation; less likely to be present in poultry data relative to other sectors e.g. beef.
- Longer term trends.



Other options for presentation, besides simple line graphs or control charts, include:

- simple smoothing techniques plotting a moving average of "positives" over time, to reduce the impact of "white noise"



- This plot is generated by using a moving average of cases per quarter instead of the "raw" or actual number of pathologic diagnoses of IBH at PDS. It has the advantage that it can reduce the visual impact of some natural random variation quarter-to-quarter, allowing an underlying trend to stand out more clearly. Use and interpretation of these various methods for WeCAHN data is a work in progress. It makes sense to me that to support evidence for noteworthy trends, and especially to support any discussions down the road of predictions, we would want to see evidence of the same "message" using multiple different methods.

b) Broiler-breeders

Commonly reported conditions: Following were diagnosed commonly (defined in this section as 3 or more of 6 individual practitioners responding, reporting a syndrome diagnosed once or twice a month, or more frequently):

- **Early bacterial systemic infection:** reported Commonly by 3 practitioners, and rated Stable by all practitioners.
- **HPAI:** reported Rarely by 1 and Commonly by 1, and rated Increasing by 2 practitioners.

Overview of seven Clinical Impressions Surveys: Broiler-breeders

- **Early bacterial infections:** after an apparent uptick in reported cases last summer, this condition has now been rated as stable for the last 3 quarterly surveys.

c) Layers

Commonly (defined for purposes of this report as 3 or more of 5 more individual practitioners reporting a syndrome diagnosed once or twice a month, or more frequently, in the practitioners' survey) reported diagnoses:

Commonly reported conditions: none.

Overview of seven Clinical Impressions Surveys: Layers

- This is generally a very stable sector relative to the others.
- **ILT:** reported increasing by one practitioner in Q2.

d) Turkeys

Commonly (defined for purposes of this report as 3 or more of 6 individual practitioners reporting a syndrome diagnosed once or twice a month, or more frequently, in the practitioners' survey) reported:

Commonly reported conditions:

- **Early systemic bacterial infection:** reported Commonly by 4 practitioners, Increasing by 1, and Stable by 5.
- **Roundheart:** reported Commonly (N = 3) to Very frequently (N = 1) by practitioners, and rated Stable by all practitioners.

Overview of 7 Clinical Impressions Surveys: Turkeys

- **Early systemic bacterial infections:** having fluctuated up and down since WeCAHN started surveys, early infections were once again rated Increasing by one practitioner this quarter.

e) Smallholders

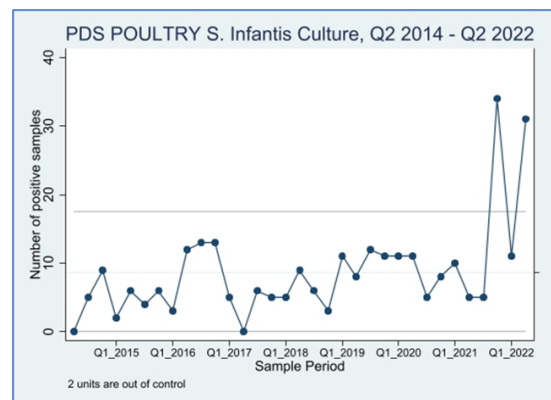
Commonly reported syndromes: Commonly (defined for purposes of this report as 3 or more individual practitioners out of 5 reporting a syndrome diagnosed once or twice a month, or more frequently, in the practitioners' survey) reported:

- **Mycoplasma:** Reported Commonly (N = 2) to Very frequently (N = 1) and rated Stable by all, with both MS and MG reported.
- Despite frequent diagnoses of Marek's Disease and Mycoplasma by some practitioners, all syndromes continue to be rated Stable by all practitioners in the Clinical Impressions Survey.

f) Salmonella isolation: PDS and Manitoba VSDL:

The *Salmonella* isolations from both labs were interesting in that this is the first quarter noted where *S. Infantis* was the most frequently reported serovar. *S. Infantis* isolations also appear to be trending up recently at PDS. *S. Infantis* can be zoonotic and is often multidrug resistant.

S. Infantis Isolation from Poultry Samples at PDS, 2014 - 2022



- This is also occurring in Manitoba. WeCAHN will continue to monitor this trend and also request an antibiogram on *S. Infantis* isolates from PDS next quarter.

4. Meeting Take-aways

- **Recent Cases of HPAI across the west have been reported which initially presented with increased mortalities and no other clinical signs. These presentations underline the importance of producers pursuing investigation of increased mortalities ASAP.**