

CWSHIN

swine health surveillance

2nd quarter 2021

CWSHIN serves western swine producers, swine herd practitioners and governments to improve swine health, production, and the economic prosperity of the sector.

Our vision is to have a surveillance system imbedded in an intelligence network that monitors diseases both present and absent.

The surveillance system will be monitoring and assessing trends over time to:

- Detect new emerging swine health issues;
- Detect unusual clinical presentation of known diseases;
- Provide information about endemic diseases; and,
- For diseases absent in western Canada (such as FMD and ASF) the objective is to help provide evidence of the absence of disease to support trade.

In the intelligence network, we seek to exchange experience and knowledge on disease occurrence, treatment, control, and prevention.

<https://www.cwshin.ca/>

PRODUCER Report

Late-summer status

After a challenging summer and as we hopefully will see the COVID restrictions ease let us look at the swine health situation.

The reporting to CWSHIN suggests that swine health has been good this year, but it would be prudent to draw your attention to a few issues that may be important over the next months.

A few factors may increase the risk of disease introduction to swine herds:

- ASF has been confirmed close to home in the Dominican Republic;
- ASF has been confirmed in domestic pigs in Germany close to control areas for ASF in wild boars;
- COVID restrictions will hopefully ease off but that will mean
 - more people can and probably will travel;
- we may expect more flu-cases in people the coming flu-season and that comes with a risk of spill-over to pigs.

There is good news (from Europe). Fences can help reduce ASF transmission from wild boars to domestic swine -- even in regions where ASF is known to be present in wild boars.

The take home message for Canadian swine producers is that if fences can limit ASF transmission they may also limit transmission of other disease. Therefore, it is worthwhile considering fences in areas with a wild pig population - also in Canada.

The region has done well in the first year of CanSpotASF but with ASF so close to home we need to keep our guard up – very high.

Therefore, the **practical tips** are:

- Review biosecurity (with staff) for people entering swine barns in general but especially after they return to Canada from travels;
- Keep your guard up and help ensure good ASF surveillance with CanSpotASF. You can have your veterinarian initiate ASF rule-out testing;
- Consider fences if your have barns or pigs with access to outdoors located in an area with wild pigs.

Follow-up

This is the last follow-up on PED and *Streptococcus equi zooepidemicus*.

We will of course report on these if there are changes to the status.

Streptococcus laboratory investigation

About 50% of the 125 premises that will be included in the survey has been selected.

Practical tips

If you have herd(s) with suspected *Strep suis* that have not been included, please consider having you're her practitioner submit materials asap and call your herd practitioner.

Follow-up

PED / Streptococcus equi zooepidemicus

All previously infected premises (in MB/AB) have achieved presumptive negative status and 16 premises (in MB) have moved to full negative status.

PED surveillance continues in MB and 4 clinically suspicious PED cases were reported in Q2: 2 finishers, 1 nursery and 1 farrow to finish. All tested negative.

In 2019, 5 sow herds (in MB) were confirmed infected with *Strep zoo*. Four have depopulated and repopulated. The last herd is expected to start clean-up later this year.

Targeted Emerging Health Issue Investigation -- *Streptococcus*

The first Laboratory Investigation on *Streptococcus* is ongoing. The purpose is to get a better understanding of the subtypes of *Strep suis* causing problems for producers and herd practitioners in the region.

In the project we select cases from diagnostic material submitted to PDS/VDS where *Strep suis* or *Strep zoo* are identified. For the selected cases the herd veterinarian will be invited to answer a herd survey to collect information on the clinical presentation.

Streptococcus investigation 28 July 2021		
Cases	106	
	VDS	82
	PDS	24
PIDs (premises ID)	76	
	MB	56
	SK	13
	AB	5
Surveys completed	48	
Vets contacted	24	
Vets responded	21	

About 50% of the 125 premises that will be included in the survey have been selected. We expect the last cases will be selected over the next 1-2 months.

Therefore, if you want the project to be representative of your province, you have about 1-2 months to contact your herd practitioner and get material for routine diagnostics submitted.

For further information please see: [Link to announcement](#).

Streptococcus suis

Streptococcus suis is by a large margin the most frequently identified *Streptococcus*.

In the last 3 quarters, PDS and VDS have identified about 120 streptococci cases per month. About 56% were *Strep suis*; 34% were *Strep dysgalactiae*; the last 10% included *Strep equi zooepidemicus* and other *Strep* spp.

CWSHIN surveillance

Each quarter, the swine herd practitioners provided their impression of the frequency of 10 syndromes.

Their clinical impression was that the same 4 syndromes ranked as most frequent over the last 8 quarters:

- Digestive
- Respiratory
- Systemic
- Locomotory

Four syndromes ranked as rare:

- Injury/welfare
- Reproductive
- Neurological
- Skin

The last two syndromes were very rare:

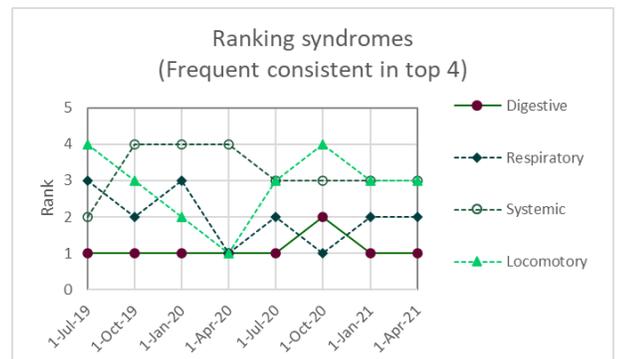
- Congenital
- Clinical

Going forward, these three groups of syndromes will guide how we perform the CWSHIN surveillance.

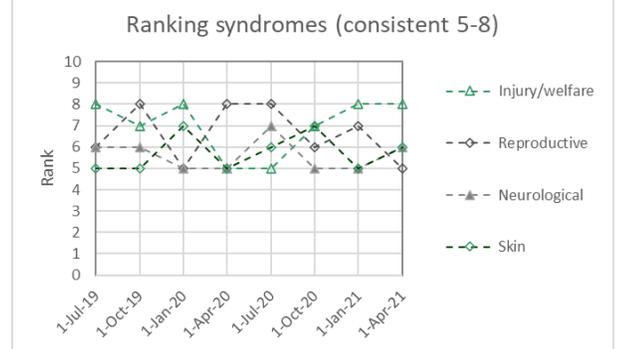
CWSHIN surveillance

Ranking by frequency recorded in the clinical impression survey (CIS)

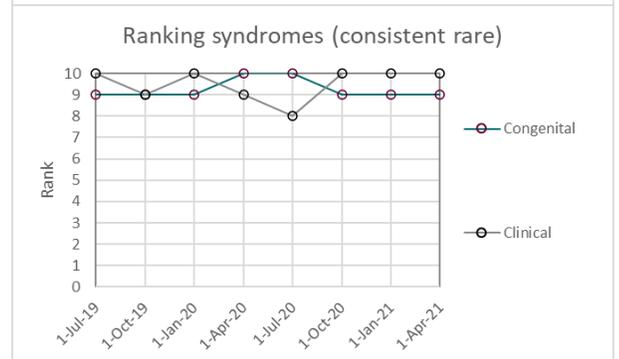
Four syndromes have consistently ranked as one of the 4 most frequent syndromes (Digestive, Respiratory, Systemic, Locomotory). These had an average CIS score between 1.55 and 1.84 which may be interpreted as occasion to common (table).



Another 4 syndromes have ranked 5-8 in recorded frequency (Injury/welfare, Reproductive, Neurological and Skin syndromes). Their average CIS score was between 1.02 and 1.13 that can be interpreted as rare (table).



The last two syndromes were ranked least frequent every quarter (Congenital, Clinical) with average CIS scores 0.79 and 0.73 (very rare (table)).



Going forward, these three groups of syndromes will guide how we perform the surveillance.

SPC charts for syndrome occurrences as recorded in CIS identified no signals or runs as we would expect after only 8 quarters (charts not shown).

	Syndrome score	Interpretation
The syndrome score is the mean of the clinical impression in the surveys. The original impressions were coded never=0, rare=1; common=2 and very frequent=3 before the mean was calculated.	0	Never
	0.5	Very rare
	1	Rare
	1.5	Occasional
	2	Common
	3	Very frequent

CWSHIN surveillance continued

Digestive syndrome & PED

Going forward, the Digestive syndrome (laboratory data) will be presented by two lines, one for PED and another for digestive disease.

Influenza

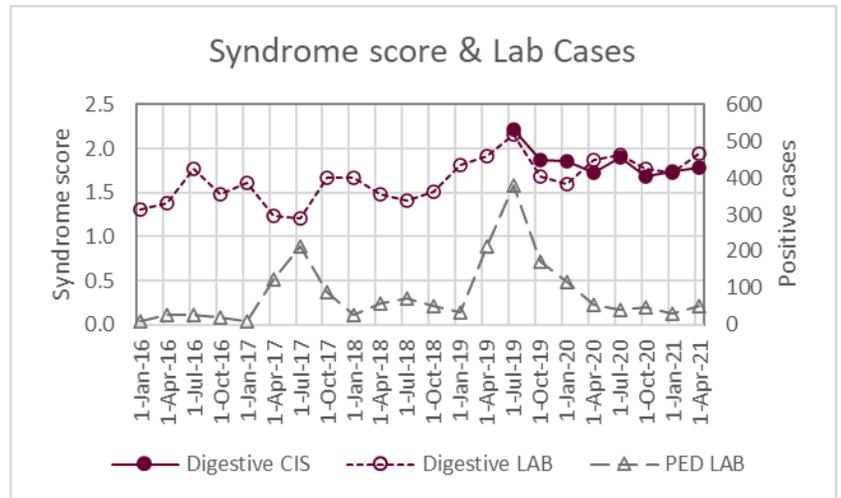
Human cases of pdmH1N1 are coming back and it is expected that as COVID restrictions ease off there will be more flu-cases in people.

Practical tips

As COVID restrictions ease off we may expect more flu-cases in people with spill-over into pigs.

Monitoring CIS and Laboratory data - Digestive syndrome

Comparing clinical impression and the laboratory data yielded no signals to be discussed. Therefore, we show only the chart for the Digestive syndrome where we have made an improvement to the surveillance method.



In the laboratory data the two PED outbreaks (MB 2017 & MB 2019) impacted the trend and disguised the trend for other digestive diseases. Therefore, going forward two dotted lines will represent the laboratory data: PED and other digestive disease. The result is that the clinical impression follows the Digestive syndrome in the laboratory data very closely.

Influenza

The number of cases tested for Influenza has been steady but the proportion of cases positive for Influenza was at the highest since January 2016.

This spring the flu-peak (case submissions) was late getting started and late ending in the 2nd quarter of 2021.

Human and pig cases of pdmH1N1 started to rise in the 2nd quarter of 2021 and there will be more flu-cases in people with spill-over events to pigs as COVID restrictions ease off.

CWSHIN REPORT

Unusual clinical presentations

Unusual clinical presentations

One vet reported to have seen blisters caused by a bacterial infection – that is a testament to good FMD awareness and a credit to the region's producers and swine practitioners.

Two practices in AB reported an uptick in Salmonella and Clostridium difficile.

Practical tips

If you see blisters on the skin of your pigs call your swine herd practitioner.

If diarrhea in younger pigs increase or it seems harder to treat the diarrhea call your swine herd practitioner for an investigation. There may have been a shift in occurrence organisms that can contribute to diarrhea.

New or unusual clinical signs based on CIS comments

Blisters

Blisters may be an unusual clinical sign in pigs and the causes of blister may be benign (bacteria, environmental) or a serious virus such as Foot and Mouth Disease (FMD).

This quarter we had one case of blisters caused by bacterial infection reported in our clinical Impression Survey. That is very good news because it is evidence of good FMD awareness and a credit to producers and veterinarians in our region.

The more such cases (of blisters) veterinarians see and report the better evidence of good awareness and an efficient surveillance for FMD we can present to CFIA. This evidence may be useful in support of the region's claim of freedom from FMD and trade negotiations.

Organisms related to diarrhea

Two practices in AB reported an uptick in Salmonella and *Clostridium difficile*. Various salmonella serotypes have been identified (such as Infantis, Mbandaka, Derby, Dublin and Typhimurium). The clinical presentations were:

- Diarrhea and wasting in the younger age-groups;
- Increased C. difficile in combination with Rotavirus in baby piglets (diarrhea);
- Salmonella (Mbandaka, Infantis, Derby) in the nursery (and early grower);
- Diarrhea, wasting and in the one farm septicemia/sudden deaths (Derby).

ASF and CanSpotASF

ASF

Worldwide, ASF is present in many countries, but two new outbreaks in July 2021 demand attention:

- Germany reported the first outbreaks of ASF in domestic swine in proximity to control areas for ASF in wild boars.
- ASF was confirmed in the Dominican Republic ([USDA link](#); [CFIA link](#); ([link AG Web](#); [Link PigProgress](#)) the cases were detected through surveillance

ASF in the Dominican Republic is a little close to home and we are reminded that when ASF spreads over long distances it is most likely with people (clothes, food etc.). We also expect COVID-19 restrictions ease off soon so people may start to travel more again.

Therefore, it is time to review biosecurity for people entering swine barns in general and especially after they return to Canada.

CWSHIN REPORT

ASF and CanSpotASF

Two new outbreaks of ASF in July 2021 in Germany and the Dominican Republic are a reminder to review biosecurity measures for people entering swine barns.

The region has done well in the first year of CanSpotASF, but we need to be on alert due to the new ASF cases close to home (above).

Practical tips

As COVID-19 restrictions ease off, it is time to review biosecurity for people entering swine barns in general and especially after they return to Canada.

When you see clinical signs such as:

- Skin discoloring – for example erysipelas
- Sudden deaths caused by bacteria such as *Strep suis*
- Bleeding

you can call your herd veterinarian to initiate ASF rule-out testing.

The EFSA's Panel on Animal Health and Welfare concluded that outdoor pig farms carry a substantial risk of introducing and spreading ASF (where ASF is present in wild pigs), but that installing single solid or double fences on all outdoor pig farms in areas of the EU where ASF is present could reduce this risk ([EFSA link](#)).

CanSpotASF

In the first year of CanSpotASF, the cumulative number of eligible cases was (estimated) 175 and the number of cases with a rule-out ASF-test was 134 (77%).

That is a good result for the region in the first year of CanSpotASF, but we cannot let our guard down with ASF getting closer to home.

If you or your herd practitioner suspect ASF you must report to CFIA immediately.

However, there is also an option for ASF rule-out testing in CanSpotASF.

ASF can be masked by other common diseases therefore CanSpotASF offers rule-out testing when you see clinical signs such as:

- Skin discoloring – for example erysipelas
- Sudden deaths - septicemia caused by bacteria such as *Strep suis*
- Bleeding

When you see these signs, you have a case eligible for ASF rule-out testing and you can call your herd veterinarian to initiate the rule-out testing.

We remind both producers and practitioners that:

- ASF -rule out testing can be initiated by the diagnostician at VDS/PDS but also by the herd practitioners;
- In Alberta and BC, practitioners can also submit samples (remember spleen) for ASF rule-out testing to the provincial laboratories