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Background

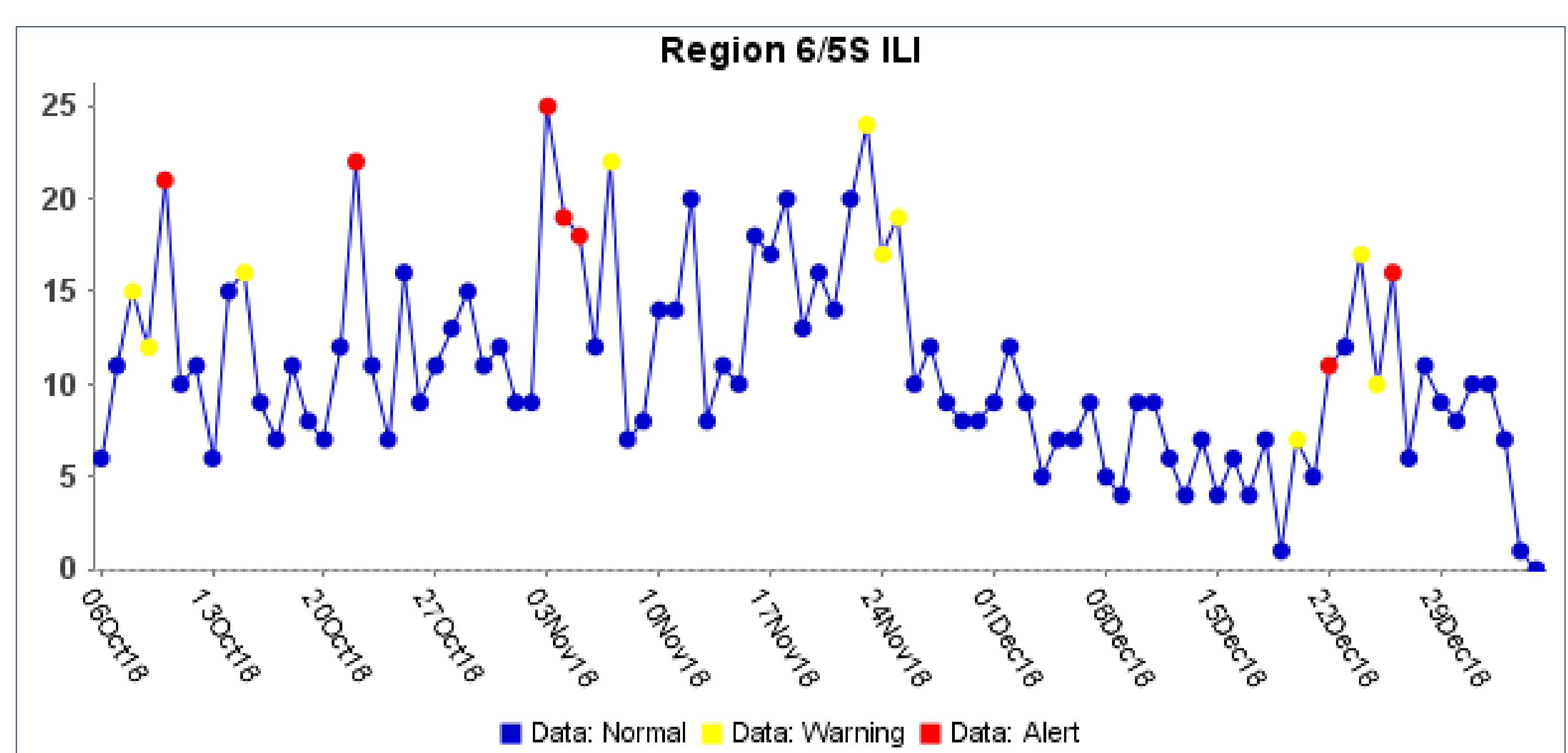
Obtaining a true picture of the community burden of influenza (flu) can be difficult due to individual cases not being reportable. In order to address the needs of the community, Texas Department of State Health Services (DSHS) Region 6/5S utilizes a variety of data sources, including regional and state weekly reports and school surveillance data. Texas DSHS Region 6/5S uses the data obtained from these sources to better inform decisions regarding flu in weekly meetings during flu season. Community Health Services, Immunizations, Epidemiology, Public Health Emergency Preparedness and Response, and Region 6/5S leadership are represented in this meeting.

Acquiring additional Influenza-like illness (ILI) data through a syndromic surveillance system, such as TXS2, would greatly enhance our ability to better comprehend the true flu burden of the community and react appropriately with control measures. Texas DSHS Region 6/5S plans to both develop protocols regarding the utilization of syndromic surveillance by our staff and to incorporate ILI data obtained from syndromic surveillance systems into the weekly flu meeting once our staff obtains access to syndromic surveillance data for residents within our jurisdiction. Region 6/5S also plans to regularly share the ILI data from TXS2 with additional stakeholders, such as regional nurses, to better direct their capabilities to the communities most in need.

Queries

Texas DSHS Region 6/5S staff have already created county-specific and region-wide queries for our jurisdiction for each of the syndromes (botulism symptoms, exposure, fever, gastrointestinal symptoms, hemorrhagic illness, ILI, injury, neurologic, other, rash, records of interest (acute or communicable disease), respiratory illness, and shock/coma) within TXS2.

The output of these queries will look similar to Graph 1 below.



Graph 1: Texas DSHS Region 6/5S ILI Query from TXS2.

The county-specific ILI query graphs will be incorporated in the weekly flu meetings and shared with regional nurses and other stakeholders to give a better visual representation of the community baseline levels of flu and when a county could be experiencing clusters and outbreaks of flu.

TXS2 users can also access more granular data of their queries. An example of such data is Graph 2 in the following column.

Queries Continued

PIN	Date	Time	Facility Name	Zipcode	Region	C_Patient_County	ChiefComplaintOrig
Hosp08_NULL_VAER_7241	29Sep06	05:10 PM	Hospital 08	22101	VA_Fairfax	none	CHILLS/FEVER/BODY ACHES/COUGH
Hosp10_NULL_MDER_9118	29Sep06	02:11 AM	Hospital 10	OTHER	OTHER_REGION	none	CHILLS AND FEVER
Hosp12_NULL_MDER_2292	29Sep06	04:28 PM	Hospital 12	OTHER	OTHER_REGION	none	CHILL/FEVER COUGH
Hosp18_NULL_MDER_1610	29Sep06	03:26 AM	Hospital 18	OTHER	OTHER_REGION	none	CHILLS/FEVER/BODY ACHES/COUGH
Hosp20_NULL_MDER_8067	29Sep06	08:00 AM	Hospital 20	20852	MD_Montgomery	none	Fever/chills/sob
Hosp31_NULL_VACER2579	29Sep06	05:42 PM	Hospital 31	22180	VA_Fairfax	none	FEVER/CHILLS

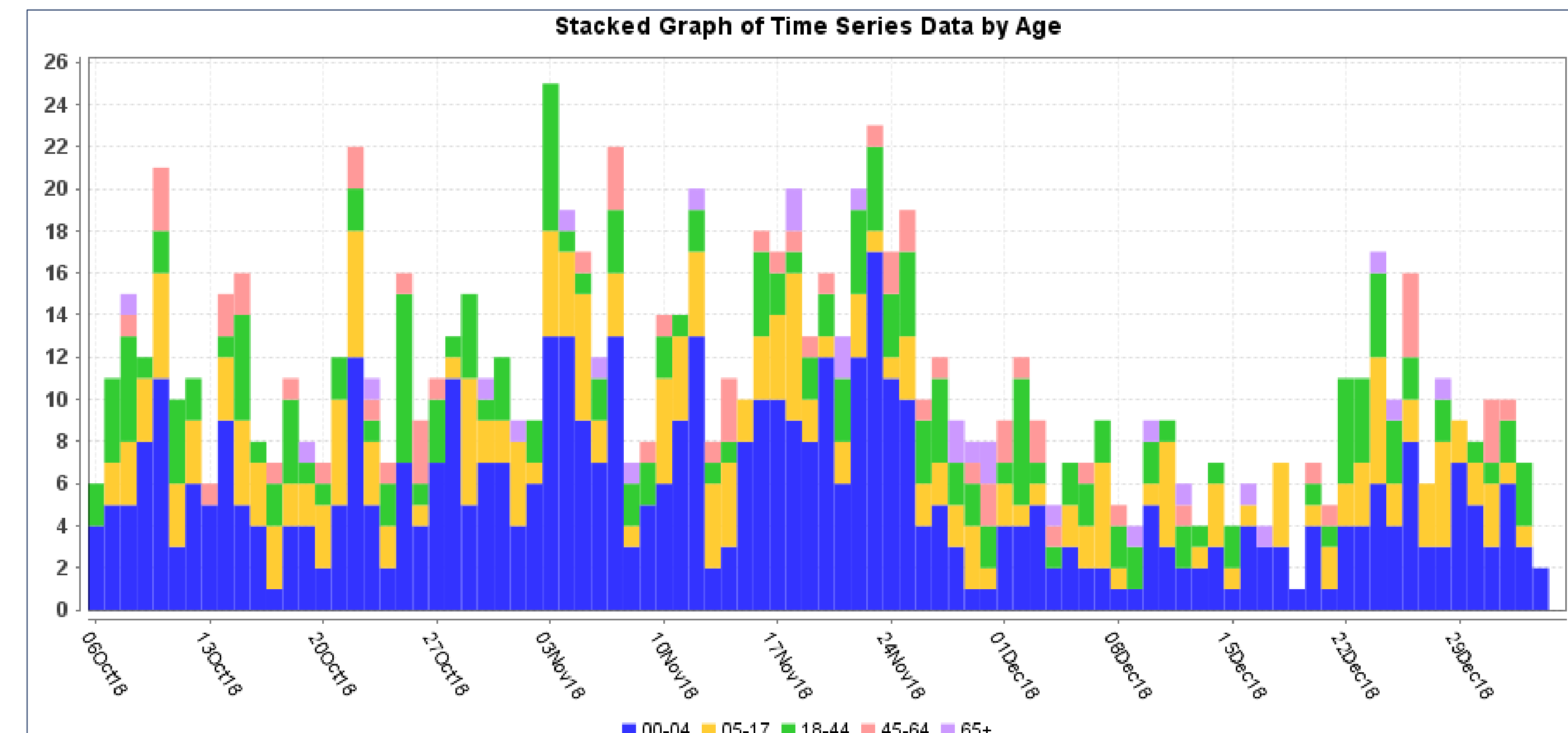
Graph 2: Line List Example.

Texas Region 6/5S will be using such data when there is a higher occurrence of ILI than expected, as detailed by the red and yellow dots in Graph 1. The specific process will be detailed in the developing protocol.

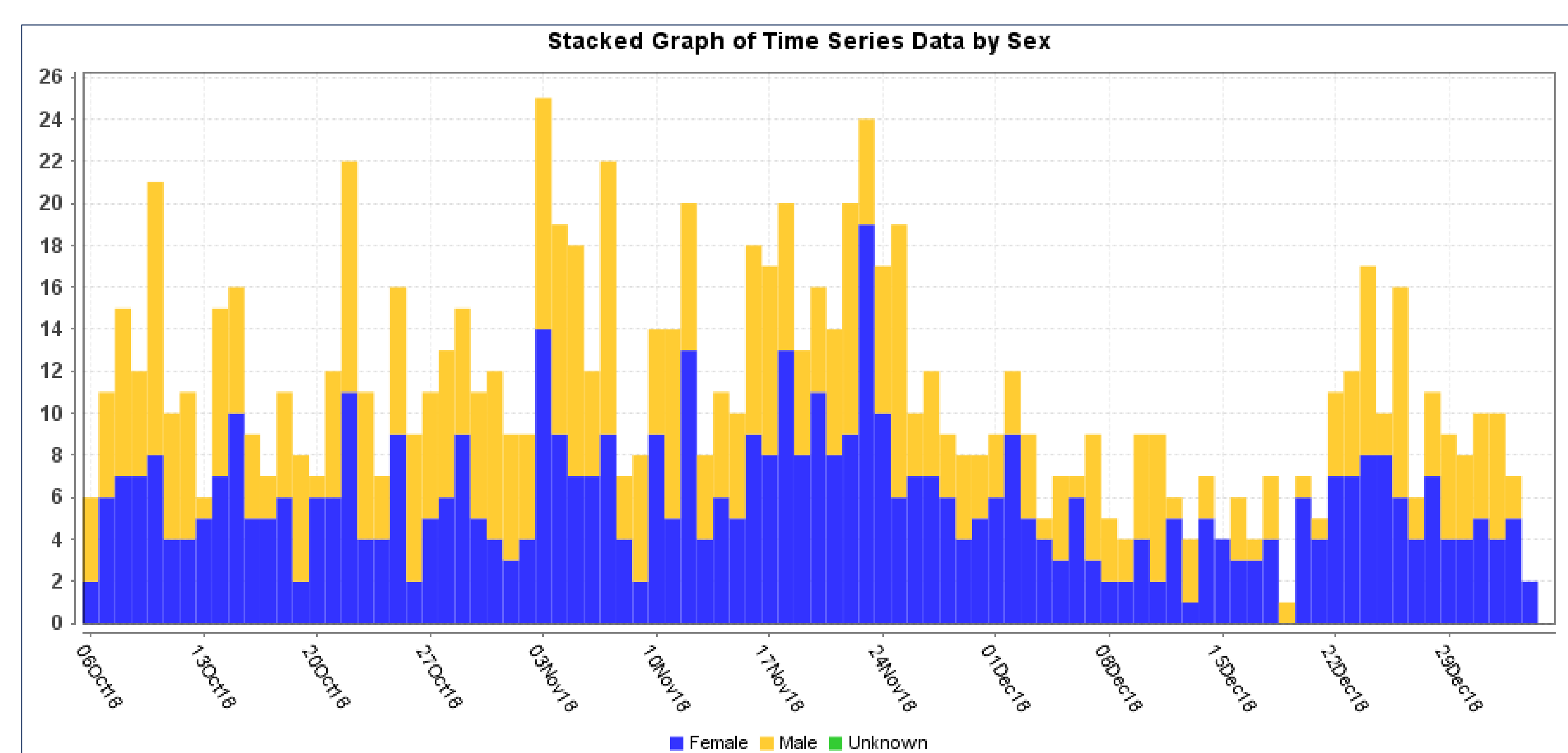
Additional Graphs and Maps

Additional graphs made with the TXS2 queries will also be utilized during the weekly flu meetings and shared with regional nurses and other stakeholders to give a more detailed view of the age groups and sexes of the impacted communities. This information can give Region 6/5S staff a better idea of what populations to target with control methods, such as immunization clinics, to prevent the spread of flu.

An example of these graphs can be found in Graph 3 and Graph 4 below.



Graph 3: Texas DSHS Region 6/5S ILI Query Stacked Graph by Age from TXS2.

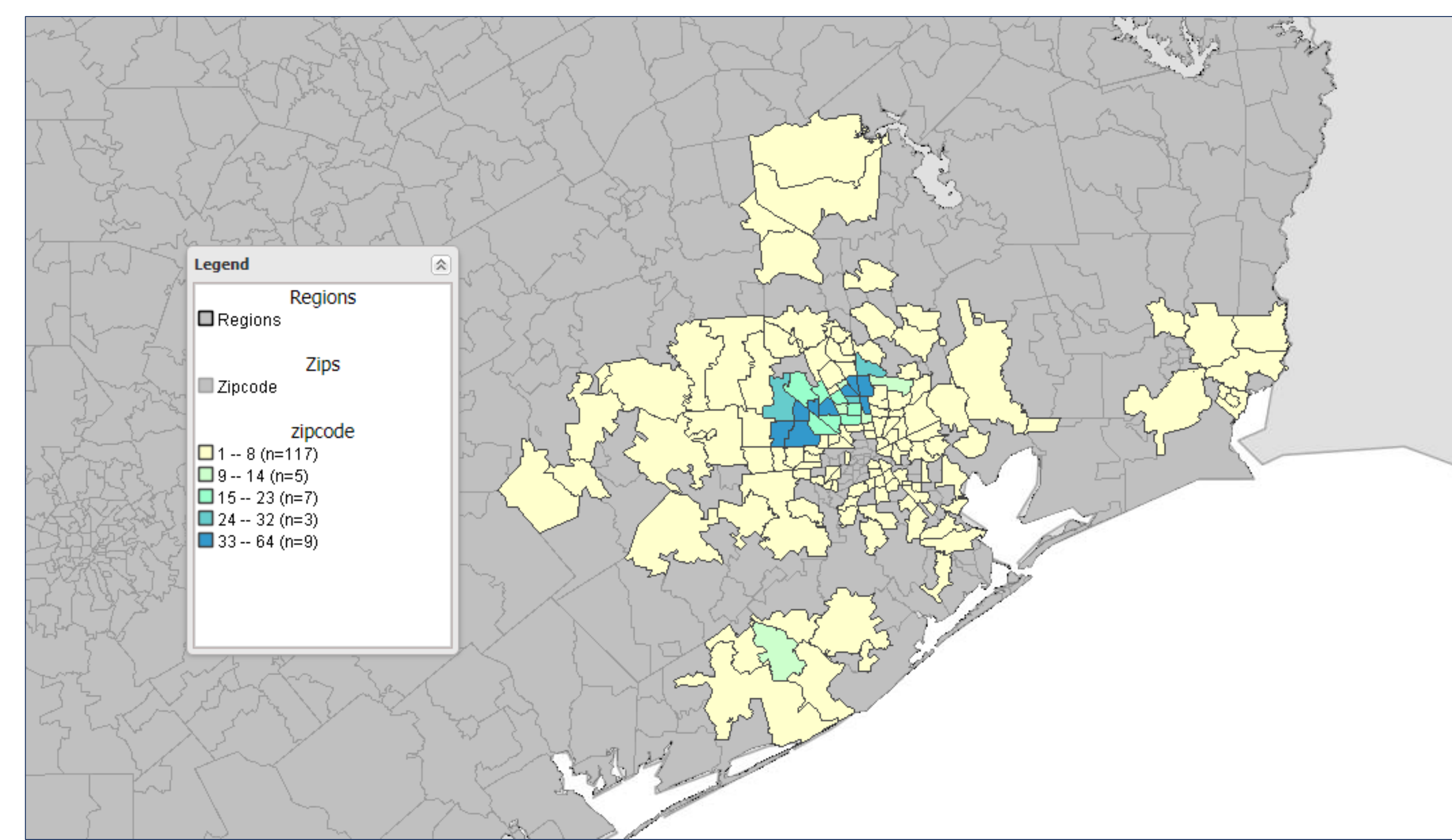


Graph 4: Texas DSHS Region 6/5S ILI Query Stacked Graph by Sex from TXS2.

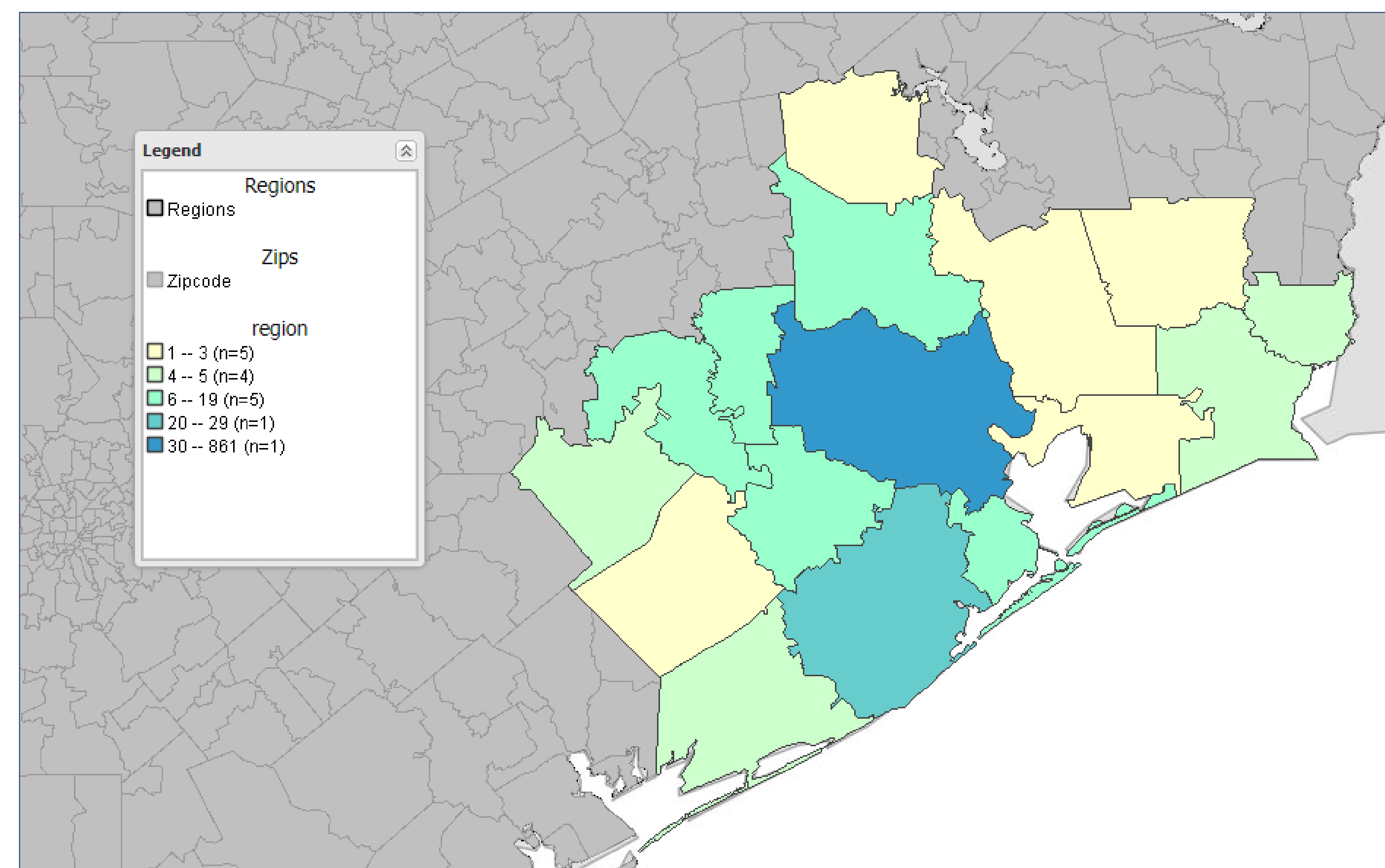
Additional Graphs and Maps Continued

Data from queries can also be developed into maps in TXS2. Region 6/5S staff plans to plot the ILI data from TXS2 on the mapping tool in the system to gain additional information on the locations of ILI activity by both county and zip code level.

Examples of such maps can be found in Map 1 and Map 2 below.



Map 1: Texas DSHS Region 6/5S ILI Query by Zip Code Map from TXS2.



Map 2: Texas DSHS Region 6/5S ILI Query by County Map from TXS2.

Conclusion

To conclude, the addition of ILI data from TXS2 will advance the Texas DSHS Region 6/5S staff's ability to better ascertain the impact of flu and inform actions to prevent the spread of flu in our communities.