

# Collin County Health Care Services – Epidemiology and COVID-19



# Discussion Topics

1. Contact tracing provided by DSHS vs. contact tracing completed at CCHCS
2. COVID-19 Data Management and the Collin County Dashboard



# 1. Contact tracing provided by DSHS vs. contact tracing completed at CCHCS



# Contact Tracing BEFORE June 1, 2020

- COVID-19 cases were reported via the National Electronic Disease Surveillance System (NEDSS) and thru faxes.
- Labs from NEDSS and faxes had to be manually entered into Laserfiche.
  - 39 Health Care Employees (non-Epi) were assisting full time with data entry of NEDSS labs and faxes into Laserfiche.
- From Laserfiche cases were assigned to the investigator (contact tracer).
  - 159 total trained employees (non-healthcare) for contact tracing.
  - At the time of the June 1, 2020 transition to Texas Health Trace there were 60 (non-healthcare) employees actively working on cases.
- Laserfiche required multiple FTE from IT.



# Contact Tracing AFTER June 1, 2020

- Contact tracing by DSHS thru Texas Health Trace was implemented June 1, 2020.
- At this time data management and the dashboard updates continued to be maintained by Collin County IT and internal staff at CCHCS.
- Positive labs from NEDSS were now able to be imported directly to THT, thus eliminating time consuming manual data entry of positive labs and many human errors.
- Positive labs from faxes received at CCHCS were sorted and sent to DSHS for manual data entry into THT by DSHS staff, taking the manual data entry burden of positive faxes off CCHCS staff as well.
- After Texas Health Trace implementation and DSHS contact tracing, Epidemiology staff were able to devote resources to outbreaks occurring at businesses and schools.



# CCHCS Epidemiology Focus after June 1, 2020

- Outbreak Investigation and Facility Assistance:
  - As of 10/19/2020 the epidemiology department has been able to provide individual assistance to 508 different organizations with a confirmed case of COVID-19 in Collin County.
  - 173 of these were classified as an outbreak.
- Independent School Districts and Private School Assistance:
  - Each ISD and private school has been assigned an epidemiology contact who they can coordinate with on COVID-19 guidance. School nurses and ISD superintendents have commented that this individual attention has been crucial in helping them make decisions about best methods for keeping campuses open and navigating the ever-changing CDC, UIL and TEA guidelines.
  - As of 10/19/2020 the epidemiology team has provided assistance to 187 individual schools.
  - 27 of those reported an outbreak.
- Individualized attention from epidemiology on businesses and schools has diminished fears, cleared up confusion, and has allowed for these establishments to remain open.



# CCHCS Epidemiology Focus after June 1, 2020

- Non-COVID Related Investigations:
  - Since January the epidemiology department has had 2079 other disease reports that were non-COVID related.
  - Some of these investigations included:
    - Neisseria Meningitis (bacterial meningitis) Urgent investigation with rare occurrence - expected cases: <1 per year.
    - CDC Targeted MDROs
      - NDM – expected cases: <1 per year
      - VIM – expected cases: <1 per year
    - Legionellosis
    - Zoonotic Disease Increase
      - Lyme, West Nile, Rabies, Ehrlichiosis, Babesiosis, Chagas



# CCHCS Epidemiology Department

- Full Time Epidemiology Staffing:
  - 1 Chief Epidemiologist
  - 3 Epidemiologists
  - 2 Health Care Analysts
- COVID-19 Grant Funded Epidemiology Staffing:
  - 8 Epidemiologists recently hired under COVID funding on a grant that is expected to be over in March 2021.





# Epidemiology Monthly Stats

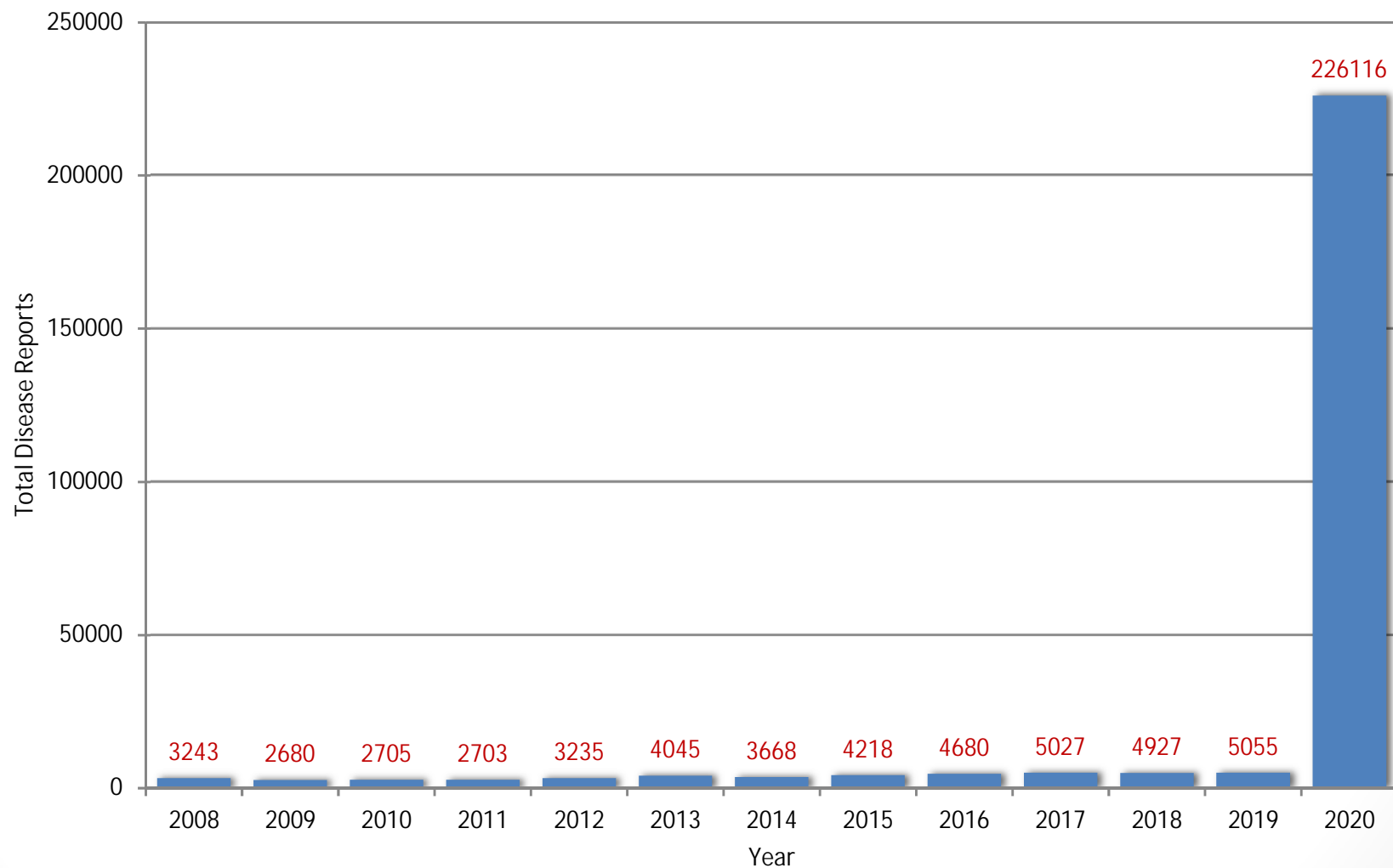
Epi and Surveillance Stats	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Total # of Disease Reports	375	352	416	471	419	2807	6965	10390	24659	37975	80745	61685
Total # of Additional Contacts	87	52	174	285	293	671	286	713	10289	6306	4577	1172
Communication Demands	2251	1824	1902	2654	3095	8676	4936	5516	7874*	8617	9392	9493

\*After June 1 CCHCS clinics opened and other county staff went back to their own job duties, leaving only the 14 epidemiology staff to take calls.



# All Disease Reports

Total Disease Reports, Collin County



# CCHCS Epidemiology Moving Back to In-House Contact Tracing

- As of 10/19/2020 there have been 467 DSHS contact tracers assisting with Collin County contact tracing through THT.
- From 9/29 – 10/12 we received an average of 195 reported cases per day.
  - Based on this average we would need 39 ADDITIONAL FTE working 7 days per week to complete contact tracing start to finish. (Calculation based on efficiency expert and team leads who calculated case load per individual/per day at 5 cases per day.)
  - 6 ADDITIONAL FTE for team leads working 7 days per week.
  - Additional employees needed as relief staff to alleviate burden of 7 days per week.
  - Total 45 ADDITIONAL FTE, PLUS relief staff just for contact tracing efforts.



# CCHCS Epidemiology Moving Back to In-House Contact Tracing

- Currently, faxes are sorted by epi staff and sent to DSHS for data entry. CCHCS would have to take this task back as well.
  - Faxes sent to DSHS for THT upload include positive test results ONLY. These positive results are not included in the NEDSS electronic lab result system. These tests are from in house testing at local physician offices.
  - 797 Positive COVID cases from faxes that were sent to DSHS for manual data entry between 9/29 – 10/12.
    - Average 56 per day.
    - 3 ADDITIONAL FTE for data entry into THT 7 days per week PLUS relief staff.



# CCHCS Epidemiology Moving Back to In-House Contact Tracing

- CCHCS completing contact tracing needs:
  - 39 additional FTE plus relief staff needed for contact tracing only.
  - 6 additional FTE plus relief staff needed to be team leads for contact tracing.
  - 3 additional FTE plus relief staff needed for data entry into THT.
  - TOTAL = 48 FTE plus relief staff needed\*
- Focus from epidemiology staff would move to logistics of in-house contact tracing and data entry, thus taking away the attention from current schools and business assistance.
- Schools and businesses not receiving individualized attention and consultation would likely lead to more closures and outbreaks in the community.

\*This is based on current cases which could increase. This does not include any IT staff that would have to assist with data management.



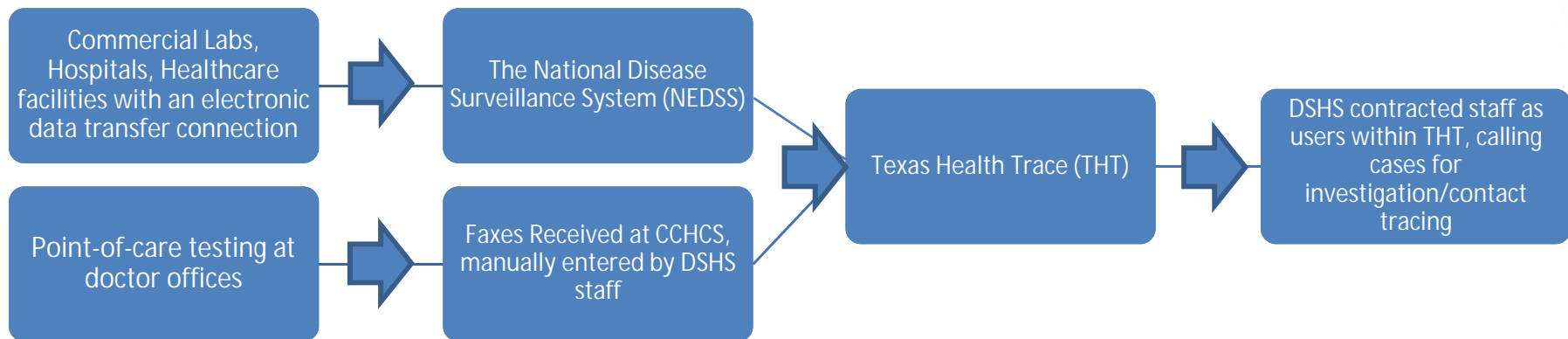
# CCHCS Epidemiology Moving Back to In-House Contact Tracing

- Logistics of hiring 48 FTE plus relief staff:
  - The hiring process ~ 4 weeks - 8 weeks to find, interview, and hire.
  - Training new staff ~ 4 weeks of training for new hires.
  - Would need new office space for workstations.
  - Equipment need:
    - 48 computers plus extra for relief staff
    - 48 physical phones and phone lines plus extra for relief staff
  - IT work hours needed for equipment set-up and user set up.
- Likely to be a continuous process
  - Ongoing hiring and training due to unforeseeable circumstances.

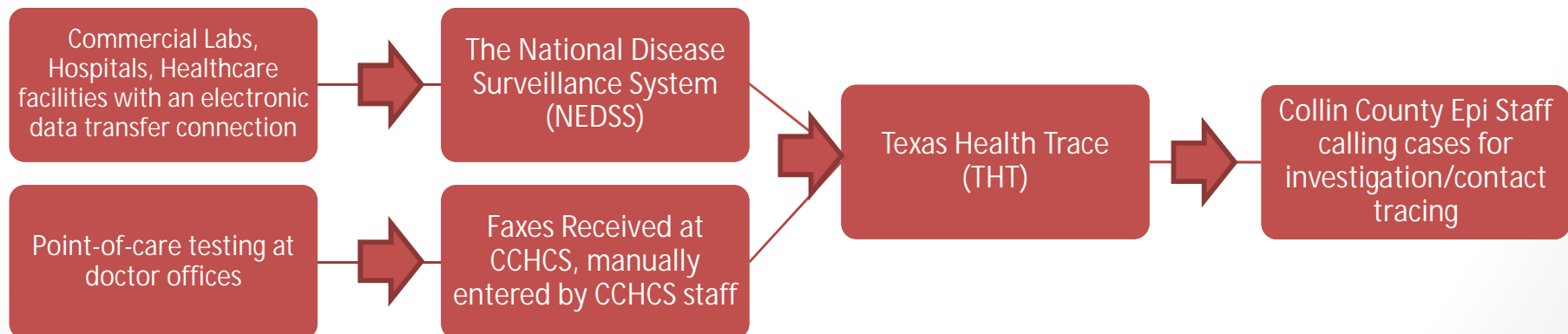


# DSHS Contact Tracing vs. CCHCS Contact Tracing and Flow of Data

## Contact Tracing Completed by DSHS – Funded by the State



## Contact Tracing Completed by CCHCS – Funded by Collin County



## 2. COVID-19 Data Management and the Collin County Dashboard





# Dashboard Management and Updates

- After the June 1, 2020 transition to THT, dashboard updates and the data continued to be maintained by Collin County IT and internal staff at CCHCS.
- On Aug 4, 2020 the state implemented an updated to their electronic reporting system (NEDSS). Due to this update, a backlog of positive cases was reported.
- Backlogged cases have continued to filter in over the weeks.
- On Aug 17, 2020 data management and control of the dashboard was discussed in Commissioner's Court. There was frustration over the newly uploaded backlogged cases in the "daily new cases count".
- A "disclaimer" was added to the dashboard after this. Data transitioning occurred at this time so the Collin County dashboard was directly linked to the DSHS dashboard.



# Dashboard Management and Updates

- Updates to NEDSS and the overwhelming amount of backlogged cases has NOTHING to do with contact tracing being completed by DSHS.
- Backlogs will continue to occur regardless of who completes contact tracing.
- Healthcare providers and testing sites will continue to fail to report in a timely manner.

June 1, 2020 THT DSHS  
Contact Tracing Begins

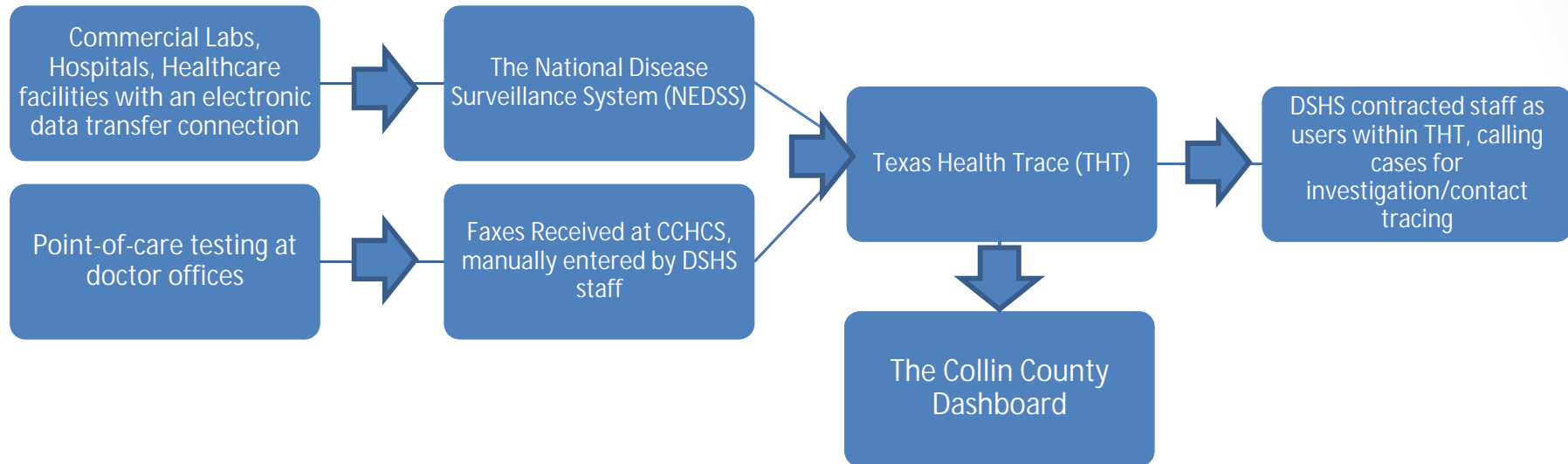
Aug 17, 2020 Discussion  
to move dashboard feed  
to DSHS dashboard feed

Aug 4, 2020 NEDSS  
System Upgraded and  
Backlog Appears

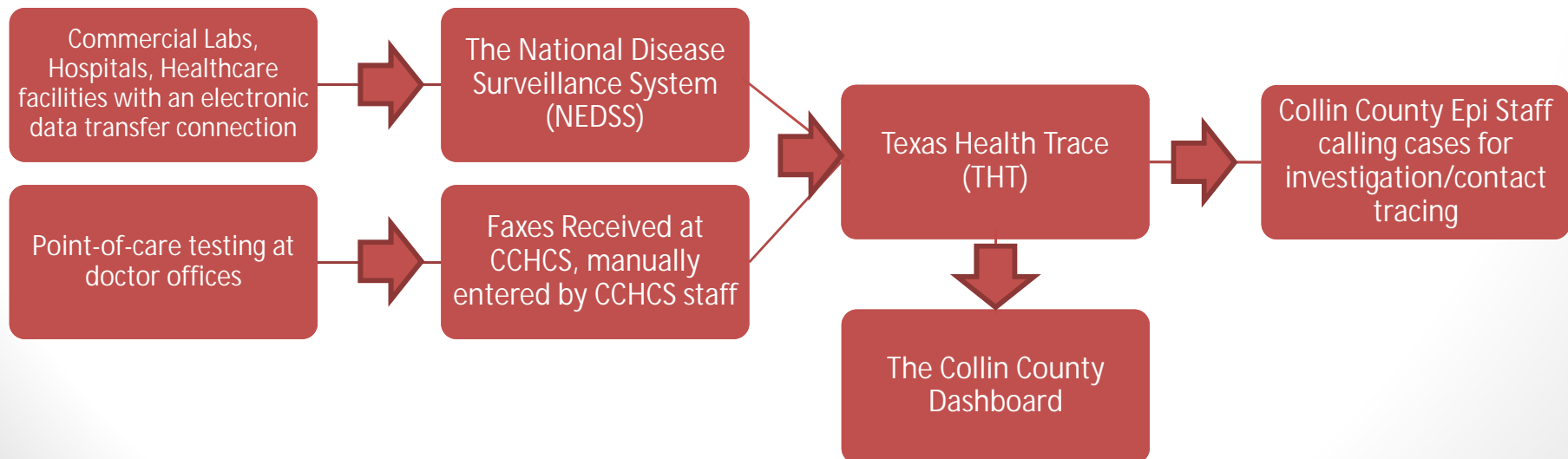


# DSHS Contact Tracing vs. CCHCS Contact Tracing and Flow of Data

## Contact Tracing Completed by DSHS – Funded by the State



## Contact Tracing Completed by CCHCS – Funded by Collin County



# Collin County Health Care Services Recommendations

- Continue to use DSHS funded contact tracers to complete contact tracing through Texas Health Trace.
- Collin County Epidemiology staff continue to place full time focus on schools and businesses, allowing for individualized plans to keep these organizations open with minimal disruption.
- Re-visit the situation after March 2021 to evaluate current staffing and funding.



# Questions



# Daily positive COVID-19 (PCR ONLY FROM NEDSS)

Date	Positive PCR
Oct 5	146
Oct 6	91
Oct 7	88
Oct 8	124
Oct 9	172
Oct 10	188
Oct 11	98
Oct 12	207
Oct 13	158
Oct 14	143
Oct 15	276
Oct 16	223
Oct 17	136
Oct 18	204

- Epidemiology looks at all positive PCR tests uploaded to NEDSS daily.
- This just new uploads.
- It does not eliminate repeat testing.
- It does not include daily positive faxes.
- It does not include Antibody or Antigen results.



# Time from Specimen Collection Date to Case Reported to Public Health

# Days to open case/Enter call queue					
Date Created	5 or Less Days	6 to 10 Days	More Than 10	NO SPEC COLL DATE	Grand Total
10/1/2020	55	4	5		64
10/2/2020	57	15	24		96
10/3/2020	63		98	1	162
10/4/2020	1			1	2
10/5/2020	46	7	7		60
10/6/2020	107	54	20	5	186
10/7/2020	63	19	11	3	96
10/8/2020	44	17	24	4	89
10/9/2020	63	13	25	2	103
10/10/2020	55	15	4		74
10/11/2020	46		1		47
10/12/2020	63	30	21	3	117
10/13/2020	40	19	43	2	104
10/14/2020	71	45	22	15	153
10/15/2020	39		10	5	54
Grand Total	813	238	315	41	1407
Percentage of Total	57.78%	16.92%	22.39%	2.91%	100.00%



# Collin County Dashboard



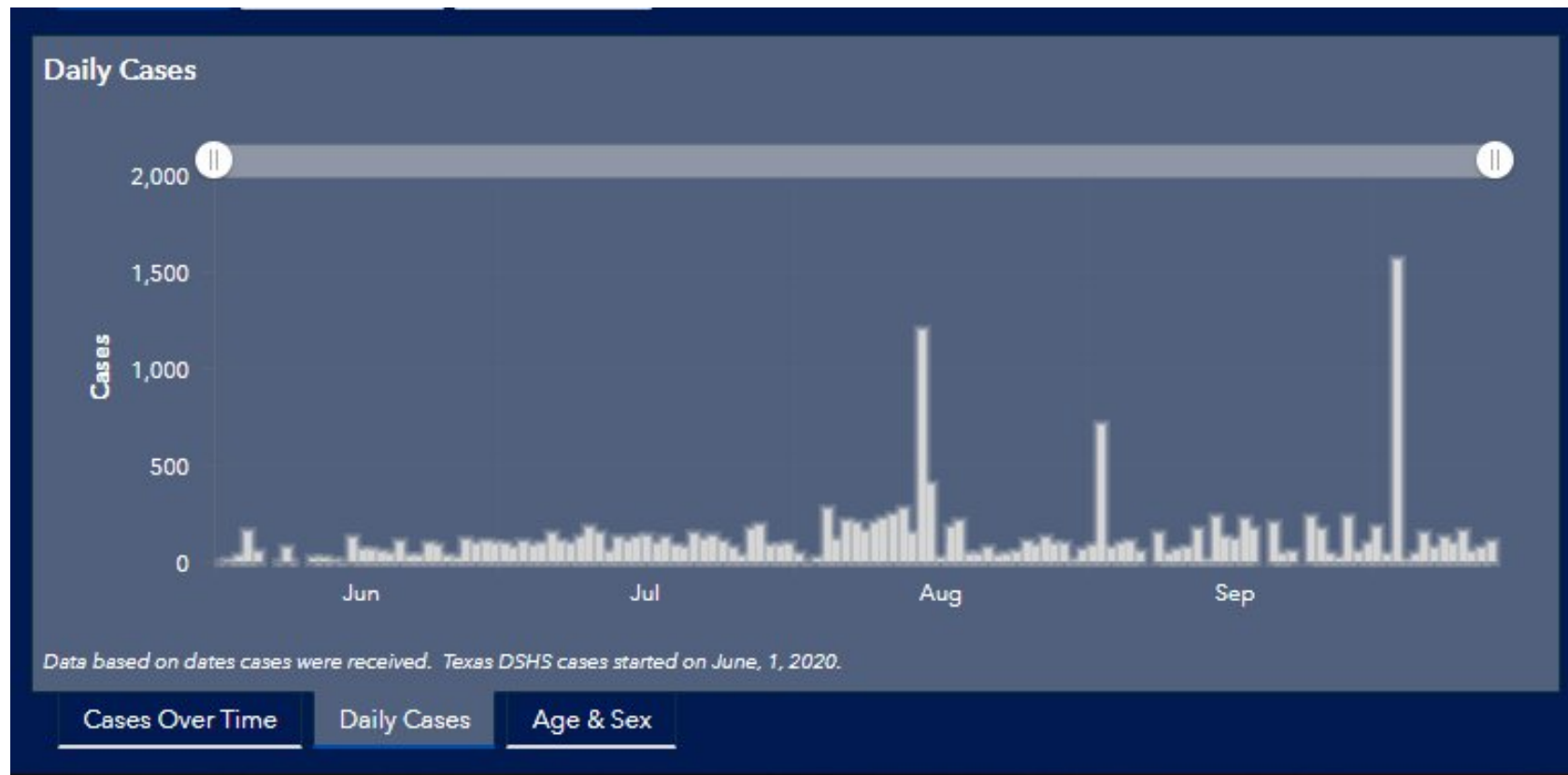


# Epidemic Curves

- Also known as an “epi curve”.
- The horizontal axis (x-axis) is the day/week/year when a person became ill. The vertical axis (y-axis) is the number of persons with illness onset each day/week/year.
- Why is an epi curve important?
  - Shows progression of illnesses in an outbreak over time by providing a visual of the illness onset
  - Can help with the identification of the mode of transmission
  - Show the disease's magnitude
  - Can show the incubation period



# This is not an epi curve

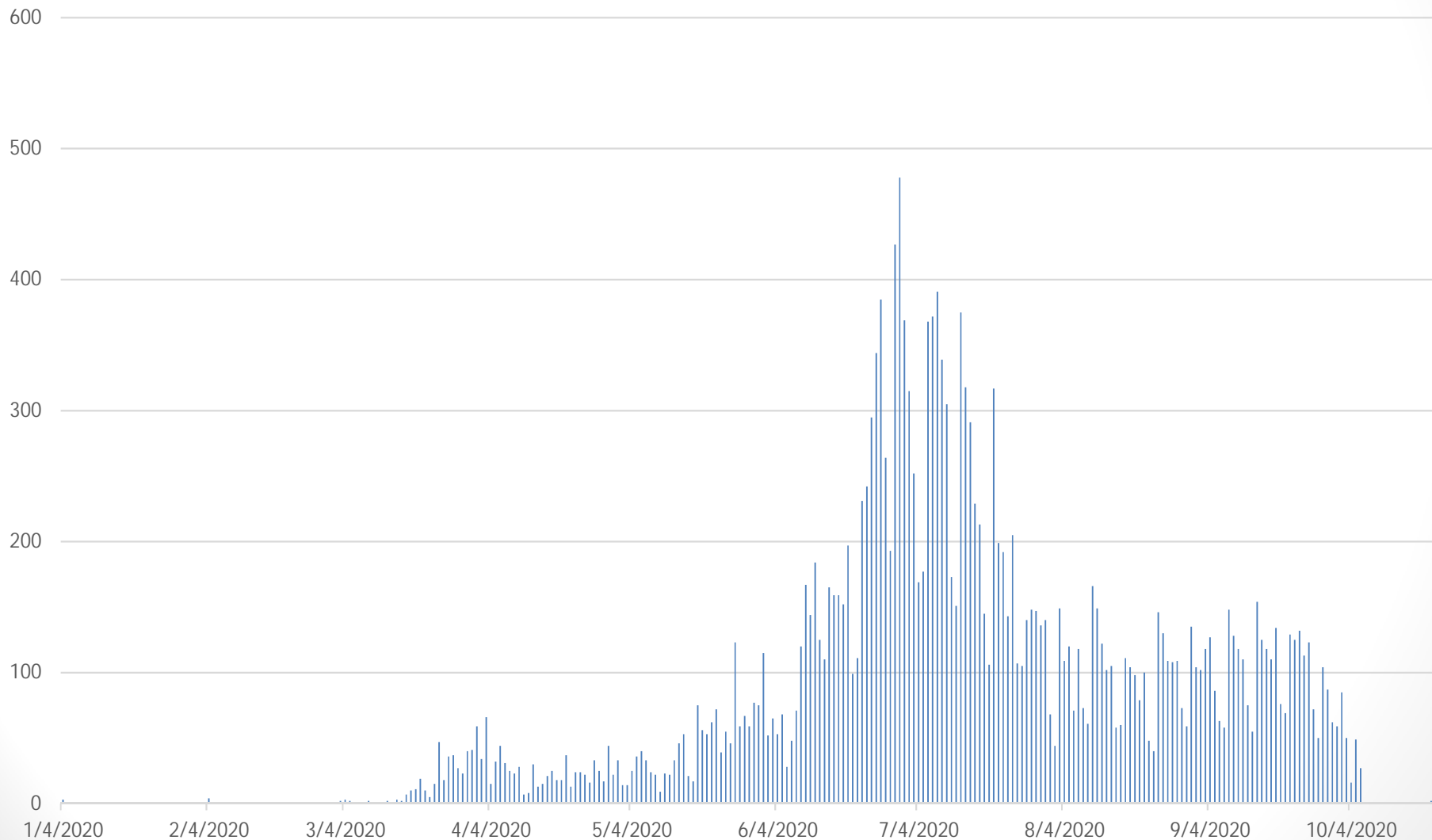


Collin County Dashboard



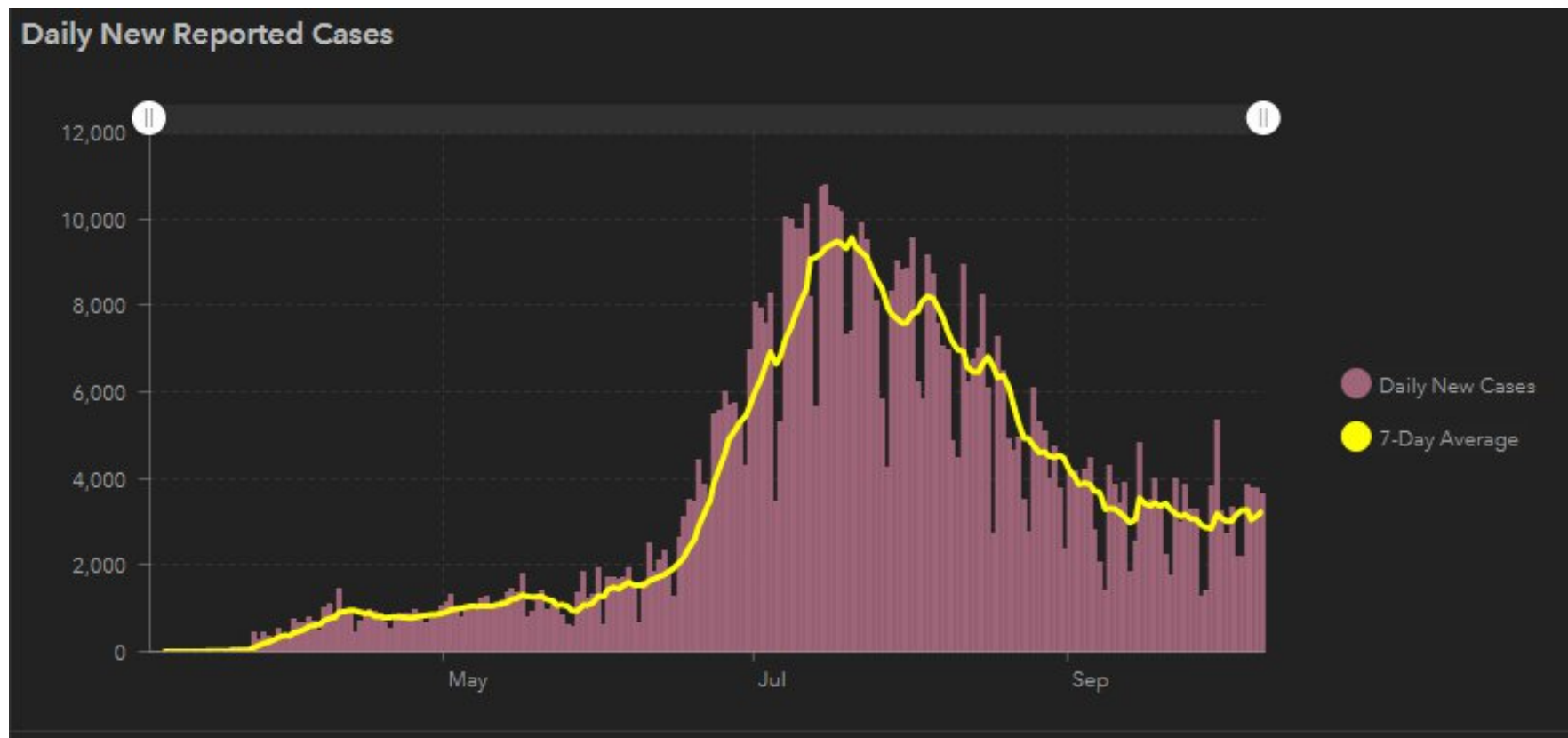
# This is an epi curve

Epidemiologic Curve by Specimen Collection Date - COVID-19



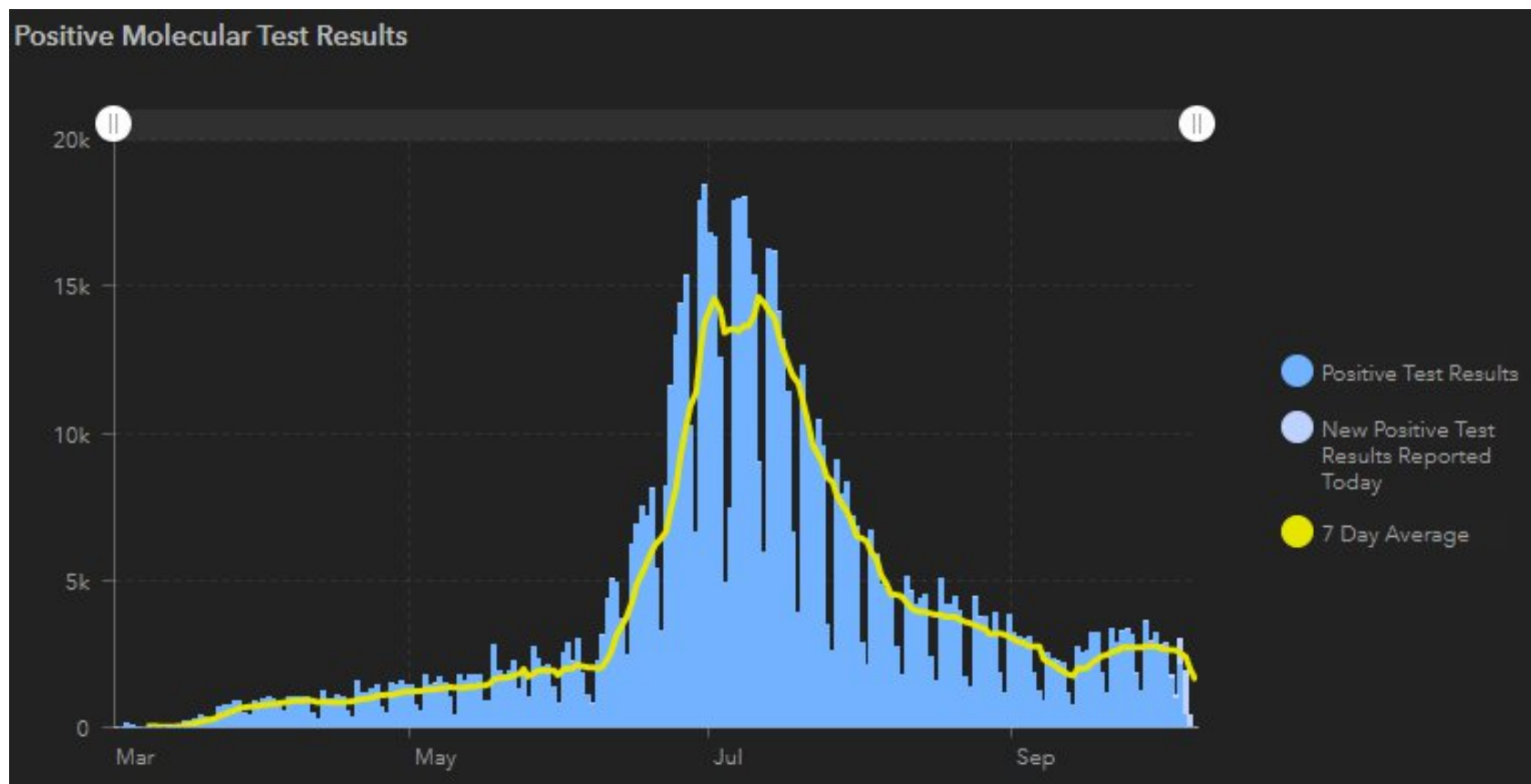
# COVID-19 Data

- Daily New Cases Vs. Specimen Collection



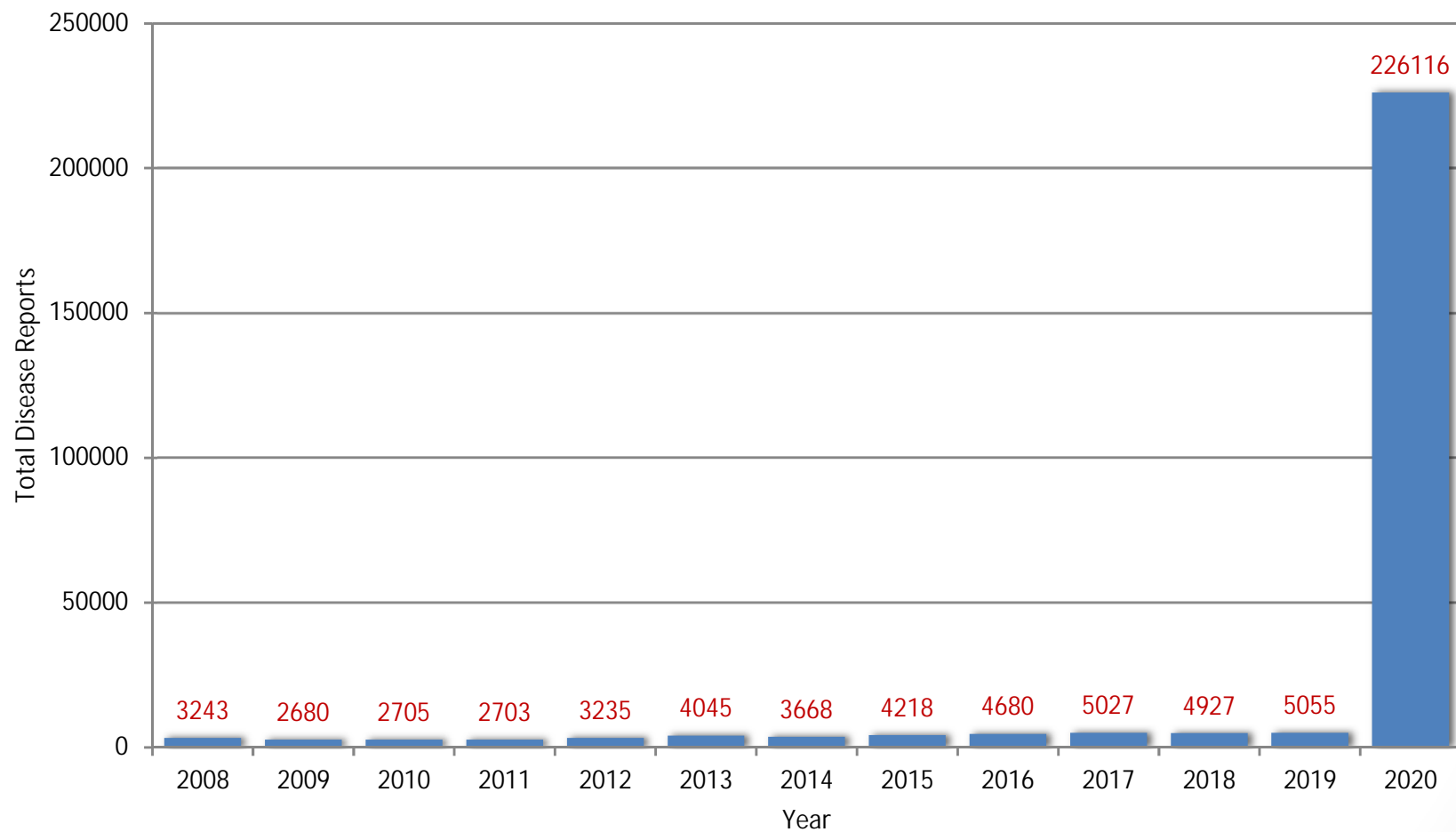
# COVID-19 Data

- Daily New Cases Vs. Specimen Collection



# All Disease Reports

Total Disease Reports, Collin County



# COVID-19 Data Management

- The lab testing, positives and negatives that health departments across the U.S., including Collin County Health Care Services, is overwhelming.
- Prior to COVID-19 we managed about ~1,000 disease reports per epi in a year.
- After COVID-19, with new grant funded positions about ~16,151 reports per epi.

