

# THE COVID-19 PANDEMIC CASE INVESTIGATION AND CONTACT TRACING

2020 – 2022






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# THE COVID-19 PANDEMIC: UND CASE INVESTIGATION AND CONTACT TRACING, 2020-2022

## Introduction

In response to the COVID-19 global pandemic, the North Dakota Department of Health (NDDoH) called upon the University of North Dakota (UND) to conduct case investigations and contact tracing for the state of North Dakota and the North Dakota University System (NDUS). Case investigations and contact tracing are identified as methods that can slow the transmission of COVID-19. These methods are part of a process that support those who have been diagnosed with COVID-19 along with assisting them in notifying their close contacts. Case investigations and contact tracing is a specialized skill that requires a trained team capable of adapting to rapid and frequent changes.

In March 2020, the NDDoH requested the initial team from the UND School of Medicine & Health Sciences, Public Health Program. This team provided support to the NDDoH in conducting case investigations and contact tracing for the state of North Dakota. In August 2020, a similar team started within UND Student Health Services. This team conducted case investigations and contact tracing for UND and the NDUS. This allowed for specialized support to the University System, including its students, faculty, and staff. The teams collaborated in sharing best practices, trainings, and support. In July 2021, the two teams combined to provide case investigations and contact tracing for the state of North Dakota and the NDUS. The UND team completed their last day of case investigations at the end of the Spring 2022 semester.

This report serves as a summary of the case investigation and contact tracing work completed by UND from March 2020 to May 2022.

# THE COVID-19 PANDEMIC CASE INVESTIGATION & CONTACT TRACING

## 2020 Timeline

Green text = University of North Dakota School of Medicine & Health Sciences team

Gray text = Student Health Services team

Blue text = Combined team

March 2020	
Received initial email from NDDoH State Epidemiologist, Tracy Miller, requesting MPH students to help Division of Disease Control conduct case investigations and contact monitoring	3/26/20
Received first contract from NDDoH, \$36,000	3/30/20
April 2020	
4/5/20	“Officials mobilize sprawling network of volunteers to trace contacts, stop spread of virus” <a href="https://inforum.com/newsmd/officials-mobilize-sprawling-network-of-volunteers-to-trace-contacts-stop-spread-of-virus">inforum.com/newsmd/officials-mobilize-sprawling-network-of-volunteers-to-trace-contacts-stop-spread-of-virus</a>
4/21/20	“UND playing a role in contact tracing amid coronavirus pandemic” <a href="https://grandforksherald.com/news/und-playing-a-role-in-contact-tracing-amid-coronavirus-pandemic">grandforksherald.com/news/und-playing-a-role-in-contact-tracing-amid-coronavirus-pandemic</a>
4/23/20	“States are trying to build armies of coronavirus contact tracers” <a href="https://marketplace.org/2020/04/23/coronavirus-contact-tracers-sought-by-us-states/">marketplace.org/2020/04/23/coronavirus-contact-tracers-sought-by-us-states/</a>
JULY 2020	
Contract amended to include 1000 hours/week, additional \$763,000	7/21/20
AUGUST 2020	
8/10/20	Student Health Services awarded contract, \$1,762,690
September 2020	
SMHS team expands to ~80 team members	9/1/20
SHS team interview, hire and train a team of 30 contact tracers, with 2-3 case managers. Primary role to contact trace positive Covid-19 cases, for UND students, staff and faculty	9/1/20
SHS team first case investigation interview	9/16/20
“UND hires 29 more coronavirus contact tracers, aided by state funds” <a href="https://grandforksherald.com/news/und-hires-29-more-coronavirus-contact-tracers-aided-by-state-funds">grandforksherald.com/news/und-hires-29-more-coronavirus-contact-tracers-aided-by-state-funds</a>	9/18/20
October 2020	
10/23/20	Expand team to serve other NDUS campuses at the request of President Armacost and other NDUS presidents.
10/30/20	“Another grim milestone leaves North Dakota 'stunned and hurting' with over 500 COVID-19 deaths” <a href="https://inforum.com/another-grim-milestone-leaves-north-dakota-stunned-and-hurting-with-over-500-covid-19-deaths">inforum.com/another-grim-milestone-leaves-north-dakota-stunned-and-hurting-with-over-500-covid-19-deaths</a>
November 2020	
Added additional shifts to schedule 840 hours per week	11/2/20
Added Contact Tracing for other NDUS institutions Bismarck State College, North Dakota State School of Science, Mayville State University, Dickinson State University, University of North Dakota.	11/16/20
December 2020	
12/1/20	51 active Caseworkers and 8 managers
12/1/20	68 active Caseworkers and 5 managers
12/2/20	Close contacts will no longer be contacted for State Cases-Only household contacts will be contacted
12/3/20	Introduced abbreviated state interview, exception of University students/staff/faculty where continued to conduct full contact tracing
12/8/20	Combined team training – Motivational Interviewing
12/23/20	CARES ACT funding carries over, extending NDUS contact tracing

# THE COVID-19 PANDEMIC

# CASE INVESTIGATION & CONTACT TRACING

## 2021 Timeline

Green text = University of North Dakota School of Medicine & Health Sciences team

Gray text = Student Health Services team

Blue text = Combined team

January 2021	
Additional Colleges/Universities: Minot State University, Williston College, Dakota College at Bottineau	1/4/21
MAT-Monoclonal Antibody Treatment question added to interviews	1/6/21
Close contacts for State cases started being sent to ND National Guard team	1/11/21
Combined team training – Difficult Conversations	1/25/21
Cases start to drop. Plans to downsize team.	1/31/21
February 2021	
Superbowl social interactions added to interview	2/8/21
Quarantine changes for vaccinated individuals	2/10/21
March 2021	
Recommendations for fully vaccinated individuals released by NDDoH	3/10/21
Contract amended to include 1000 hours/week, additional \$173,720	3/23/21
April 2021	
Governor Burgum lifts Covid-19 Emergency Declaration. Cases no longer mandated to isolate.	4/30/21
May 2021	
CDC says no masks are required for fully vaccinated people.	5/19/21
Variants are present in North Dakota. Vaccines encouraged as the best way to fight and stop the variants.	5/28/21
June 2021	
Rosy Dub retires from Student Health Services. Alex Pokornowski assumes POC role.	6/30/21
July 2021	
SMHS and SHS teams combine under SMHS. Team of 17 providing case interviews for both State of ND and NDUS.	7/1/21
Received contract for work through 6/30/2022, \$817,500	7/1/2021
Delta variants detected in ND.	7/20/21
Start planning for fall and a possible spike in cases due to variants (Delta).	7/30/21
August 2021	
Preparing for Delta wave – Rehire former case workers to handle the surge in cases.	8/1/21
Begin conducting investigations for Valley City State University.	8/30/21
September 2021	
Shortened interview process due to surge in cases	9/16/21
Vaccine Incentive put in place for UND students	9/17/21
Vaccine information is becoming increasingly important to add into Case files, ensure all information is being entered, including if vaccinated out of state.	9/17/21
October 2021	
Implemented 12-week Public Health Training for case workers	10/21
November 2021	
First mention by WHO of Omicron variant	11/26/21
December 2021	
Omicron variant in North Dakota	12/1/21
CDC releases new isolation and quarantine guidelines. Change from 10 day recommended isolation to 5 day isolation.	12/27/21

# THE COVID-19 PANDEMIC CASE INVESTIGATION & CONTACT TRACING

## 2022 Timeline

Green text = University of North Dakota School of Medicine & Health Sciences team

Gray text = Student Health Services team

Blue text = Combined team

January 2022	
UND campus adopts new CDC recommended 5 day isolation and quarantine.	1/4/22
“Thank you” video message from President Armacost <a href="https://share.vidyard.com/watch/HonYXS3jKtSWzY3QnMdi35?autoplay=1">share.vidyard.com/watch/HonYXS3jKtSWzY3QnMdi35?autoplay=1</a>	1/24/22
February 2022	
	2/24/22 Relaxation of UND mask policy
March 2022	
Spring Break Travel guidance reminder to university community	3/4/22
UND team starts to only conduct investigations for UND/NDUS	3/15/22
Masks encouraged but not required at UND	3/28/22
April 2022	
	4/30/22 Last day for team except two team leads
May 2022	
Last day of Case investigations for the UND Case investigation team	5/13/22



## LESSONS LEARNED

### Hiring

- It is important to work directly with human resources to screen and interview applicants. Once hired, frequent follow up is important to ensure documents are submitted timely for hire (specifically I-9 documents).
- Prior to posting and hiring for positions, take time to strategize team structure. Modify team structure along the way to meet demands of the work.
- Within position description and during interview, ensure candidates clearly understand expectations for training and job requirements.

### Training

- Provide training documents with a timeline for completion. Conduct frequent follow up to provide support as needed. Designate one to two managers to run training and trouble-shooting.
- Provide space and time for employees to be shadowed and/or conduct mock investigations.
- Precise language was key in training, definitions of concepts (such as the difference between isolation and quarantine), or the titles of other employees (e.g., case manager vs. shift manager).
- Provide ongoing training and continuing education. Provide trainings that go beyond the scope of work (e.g., effective communication, how to have difficult conversations).

### Team Management

- Supporting the team is crucial in retaining staff and ensuring their wellness.
- Conduct regular check-ins with team members. This is important in any management role, and particularly during a time of isolation.
- Find ways to celebrate successes and provide encouragement. This goes a long way in a remote environment, particularly one that does not offer any monetary rewards.
- Document your processes, requirements, communication, and training.
- Ensure team members understand expectations, including timelines, next steps, and deliverables.
- Touch base with employees one-on-one on a regular basis. This was implemented in December 2021, but it should be implemented more frequently. Shift managers could also participate in making the calls to share the workload.
- With four organizations providing access to 5+ software applications, it is critical to have a clear support map detailing who to contact for troubleshooting software and access issues.

### Work/Scheduling

- Schedule one to two shift managers per every 10-12 caseworkers.
- Designate one lead to communicate changes, update documents, manage time, attend state meetings, run team meetings, and for scheduling.
- Use a scheduling tool, such as Sling, to post available shifts. This allows case workers to control their own schedules based on their availability. This was successful in providing flexibility to the case workers, many of whom worked other full-time jobs. Also, this eased time constraints for the team managers and leads, not making them create schedules and causing less frequency for rescheduling of shifts.



## Data Quality/Quality Assurance

- Develop great data quality within a team, and a system of self-auditing, paired with an auditing manager who would follow-up by email when things were missed or entered incorrectly.

## Communication/Changes

- *Change* within a pandemic is inevitable, so being able to adapt to change, implement revised protocols, and educate staff on new information was/is vital. This includes updating documents on short notice and contacting appropriate primary contacts at various universities. The ability for all to be able to adapt is key.
  - Recorded weekly meetings worked well to communicate changes.
  - Posting regularly to the Microsoft Teams channel was a good platform to reach the whole group. The expectation of the team was to check in Teams for announcements and changes before the start of each shift.
- *Communication* is of utmost importance, both within the university systems, and with the NDDoH. The team needed to be able to accept state protocol and adapt to fit our team without compromising the information gathered, and provide clear and concise communication to the campus point of contact.
- *Group email* for managers was key. When a manager was not on the schedule, the manager on duty was able to respond to incoming time sensitive emails. This was also a great tool for the NDDoH & University POC's to be able to communicate with our team managers, using one email.

## Investigation Processes

- Work to gain an early in-depth understanding of the software applications used for investigations to be able to leverage more features. Developing UND/NDUS-specific views and dashboards in Dynamics was helpful for managing team workflow and data quality; additional views allowed us to seek out university-related cases based on data, including address, interactions, and test order facility.
- With frequent changes to the questions asked during case investigations and contact tracing, it is important to find ways to communicate those changes using easy to understand, and multiple, methods. For example, 1) maintaining an up-to-date interview script, or 2) modify the software application either to hide questions not being asked or highlight current questions (depending on programming capabilities) to use a **bold font**, ALL CAPITALS, or highlighting the background to provide quick visual clues to investigators (dependent on NDDoH).
- It is important to provide definitions and examples of terms that might be unfamiliar to case investigators. This could be accomplished through the team protocol, or NDDoH might be able to update the application to include click-to-view info icons (commonly, a circle with an "i" in the middle) to provide "definitions on demand," which could be used to provide definitions and explanations/importance of questions.
- Clarity and precision of language in interview terms and questions are important. This would need to be supported / implemented through the NDDoH.
  - The term "School" was used for k-12 schools but is a general term that is also used conversationally for individuals attending colleges, universities, and trade schools. Changing the term to something like "K-12 School" would have eliminated inaccurate "Yes" responses to those questions.
  - "Unable to Interview" was added to investigations to collect data on cases we were unable to reach or who refused interviews. This question was supposed to be answered "No" if an investigator completed the interview – which seemed to be counterintuitive for case workers on our team and throughout the state.



- “Hospitalized” was meant to capture cases who were hospitalized for COVID-19, but the question was general enough that investigators also included cases who were hospitalized for any reason or were hospitalized with COVID-19.
- Guidelines for when to ask select questions or complete them with a default “No” are helpful for gathering more complete case information. Examples include childcare and k-12 school questions and “If female, pregnant?” – providing guidance that the pregnancy question only needed to be asked of cases between the ages of 16 and 50 resulted in this question being completed more frequently.
- Anecdotally, placing the “Gender,” “Race,” and “Ethnicity” demographic questions at the beginning of the interview seemed to increase chances that the case or contact would become irritable – moving the questions to the end and providing an explanation that we want to make sure we had the correct information and are gathering this information to better understand how COVID-19 was impacting different communities in North Dakota might increase the response rate for those questions.
- Investigate the feasibility of voice-over-IP (VOIP) phones (software-based or physical phones) for team members. Out-of-state area codes were frequently commented on or mentioned as reasons cases didn’t pick-up the first call. VOIP phones would allow calls to come from a 701 area code and have caller ID be NDDoH or UND. Also, this would provide case workers some measure of privacy and allow calls to former employees to be routed to current employees. Depending on the provider and configuration, this might also provide visibility to case worker call logs.
- Review how interaction information was collected and used in order to streamline that process and increase reporting accuracy. Some modifications could be done at the team level; others would need support or programming from the NDDoH. Specific to college / university interactions:
  - Consider using a parent/child format so that there is one college student interaction with sub-interactions for classes and activities.
  - Interactions were created for specific out-of-state institutions – this might be better captured with a single “Out-Of-State College/University” location as no follow-up was completed with those specific institutions.
  - Adding “Trade School” to the education questions would be more inclusive of common post-secondary education opportunities and would clarify to investigators how to handle these locations. While technically they are businesses, they often are not thought of as that classification.
- There might be an opportunity for the NDDoH to review the volume and format of information provided to cases post-interview. Depending on the protocol in effect at that time, cases (who were often sick) received an email with a two-page letter and seven or more pages of additional information in linked PDFs.
- The NDUS student and faculty database has opportunities for improved efficiency – students and staff were in separate “tabs”; staff employees were not included; graduate, commercial aviation, and other types of non-standard students were not always included; and, critically, searching on one individual could return over fifty records.



## TEAM MEMBER REFLECTIONS AND PRAISE

### UND Case Investigator Team Member Reflections and Comments

- **Being a part of this UND COVID-19 team has taught me: No matter how big/small your role, no matter how important/unimportant you think you are, you can make the biggest difference in someone's day.**
- Over the past 2 years, I've been so blessed to be a part of such an amazing team. The friendships I have made with everyone I will never forget!
- One thing I can say about this job is that I worked with a lot of amazing people. People that wanted to make a difference in the fight against Covid.
- The one thing that this team was amazing at was the ability to adapt to the constant changes. Those changes at times came in weekly or day to day and sometimes hour to hour. The support that we received from the leads, the regional managers and the university system was great.
- During the early days, the fall of 2020 of the Covid tracing were some of the most difficult times reaching out to the close contacts. Sometimes thick skin was necessary as they did not want to hear what the "recommendations" were for quarantine. This position has been very rewarding to all that stuck with it to help this pandemic come to an end!
- **This tremendous, challenging, ever-changing journey once again has been a wild poignant, meaningful and important ride of a lifetime!**
- I am grateful that I was selected to participate for this year and a half of North Dakota's fight against Covid
- We've talked about being "physically distant" but needing to maintain social and emotional connections. Some of us needed the reminder to not take the privilege of having these relationships with our family and friends, the privilege of meaningful social interactions, the privilege of a handshake or hug for granted. However, the reminder could have been more subtle than a pandemic, sheesh!
- What really stood out to me was how alone and afraid so many people were. In many cases nobody had told them what to do, or what to expect, or given them any information. For those people to have us to answer all their questions, that was probably the most rewarding thing.
- **This job constantly changed, and we were continually training and how we worked our cases really depended on the surges of the disease and the number of cases. We had an amazing team that adjusted to the rapid changes like champions. Working cases certainly had its triumphs as well as trials.**
- Thank you for the opportunities you have provided me over this year and a half. I have enjoyed my time working for UND and have learned so much. I am also grateful for your kindness and encouragement as well as the kindness of my colleagues.
- It has been wonderful to be a part of your team, and I've enjoyed it very much. I feel this work is important, and I like being able to do something to help.
- It has been so educational and rewarding. THANK YOU for this opportunity to try make a difference in our community!
- I really appreciate the opportunity to help during this trying pandemic. I have enjoyed speaking with people across the state (most of them!) and working with you and the team has been a pleasure.
- It is amazing how you develop friendships and comradery with people from behind a screen. I have so much respect for everyone at the Department of Health, local public health employees, university staff, and healthcare providers that worked tirelessly and long hours to make an impact during this historical event. It was rewarding and although I wish this job would not have been a necessary, I will forever consider it one of my favorites.



## Administrator/Other Non-Team Member Praise

- The team should really be commended for maintaining the high level of case follow up.
- Thank you for your **incredible work!**
- Keep up the great work, I can't thank you and your team enough for all you have done.
- **Know that University of North Dakota and North Dakota University System leaders hear of your remarkable work each and every week. They strongly believe in the work you do and speak of its **impact on keeping our campuses safe**.**
- I am impressed with the work your team does entering vaccination information.
- It is with mixed feelings that I see the end of the contract approaching. Glad that the critical need for case investigation and contact tracing has diminished, sad that we will not be working with your amazing team anymore, and **gratitude for the integral part you played in the efforts to contain the pandemic spread and keep our institutions open**. I consider the case investigation/contact tracing effort to be one of the most successful and encouraging activities of the entire pandemic. I can't express enough gratitude and appreciation for all of your work on this.

## BY THE NUMBERS

### Case and Contact Statistics

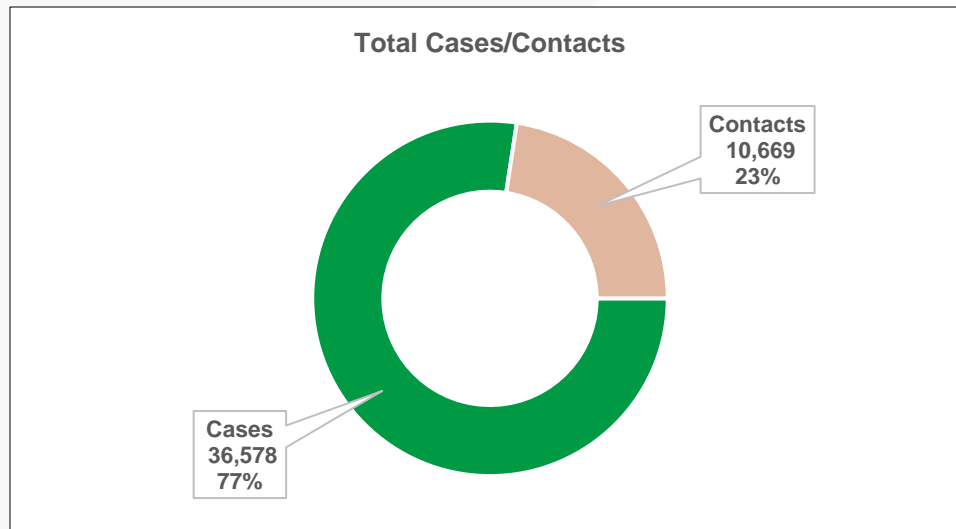
During more than two years of work, teams based at the UND worked to contact, interview, and provide information to over **47,247** individuals who had tested positive for SARS-CoV-2 and been diagnosed with COVID-19 or who had been identified as household or close contacts.

The numbers and charts below help to convey the scope of work, the types of individuals worked with throughout the state, and level of the effort put forward by case workers and managers on the UND teams. A greater level of detail for these headline numbers is available in the spreadsheets found in the appendix of this report.

The data presented here are specific to UND COVID-19 Case Investigation and Contact Tracing Teams from April 2020 through May 2022, and is sourced from the NDDoH's Microsoft Dynamics Contact Tracing App. The data was exported after May 15, 2022, when the UND teams discontinued investigations for college-related cases. As a result of changing protocols, re-assigning some types of records to subject matter experts, and software limitations, the numbers below represent the floor of the effort – complete data would result in higher numbers than those reported here.

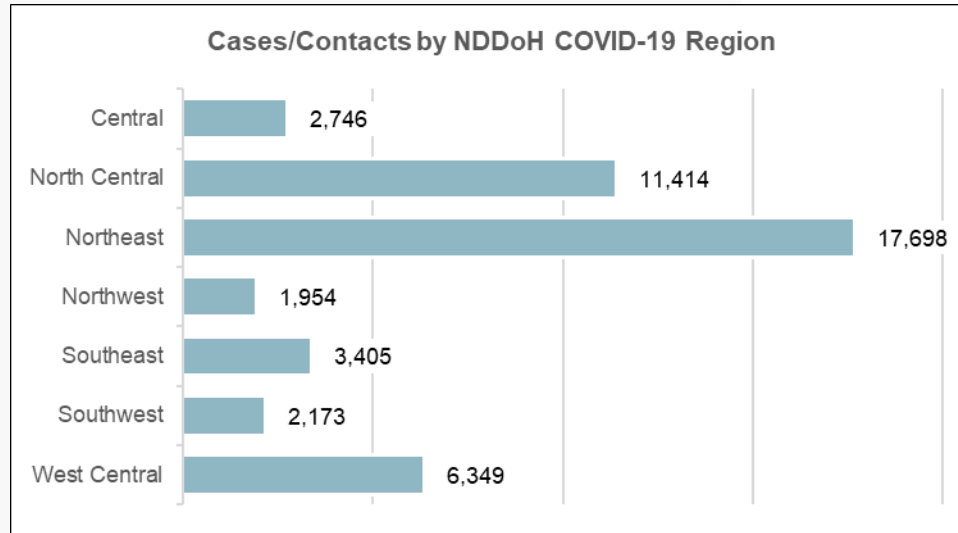
- 36,578 cases were assigned to UND teams for case workers to contact and conduct case investigations and contact tracing (Figure 1).
- Those cases reported over 10,660 household or close contacts, who were also reached out to for interviews by our team.

Figure 1: Total Cases/Contacts



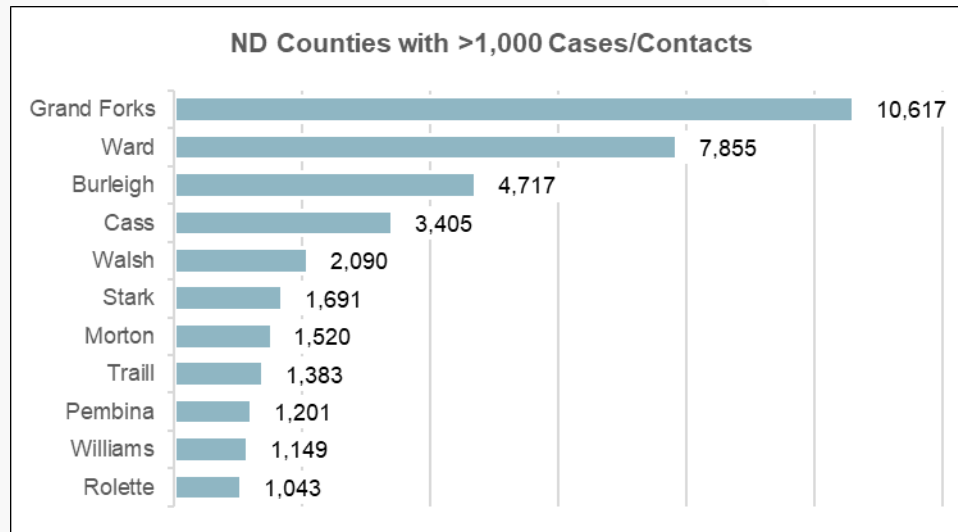
- The NDDoH divided North Dakota into 7 regions to help manage the COVID-19 response. UND teams conducted more than 1,000 case investigations and contact tracing in each of those 7 regions (Figure 2).
- Over 10,000 cases and contacts were contacted in two regions – Northeast (13,640 cases; 4,058 contacts) and North Central (9,018 cases; 2,396 contacts).

Figure 2: Cases/Contacts by NDDoH COVID-19 Region



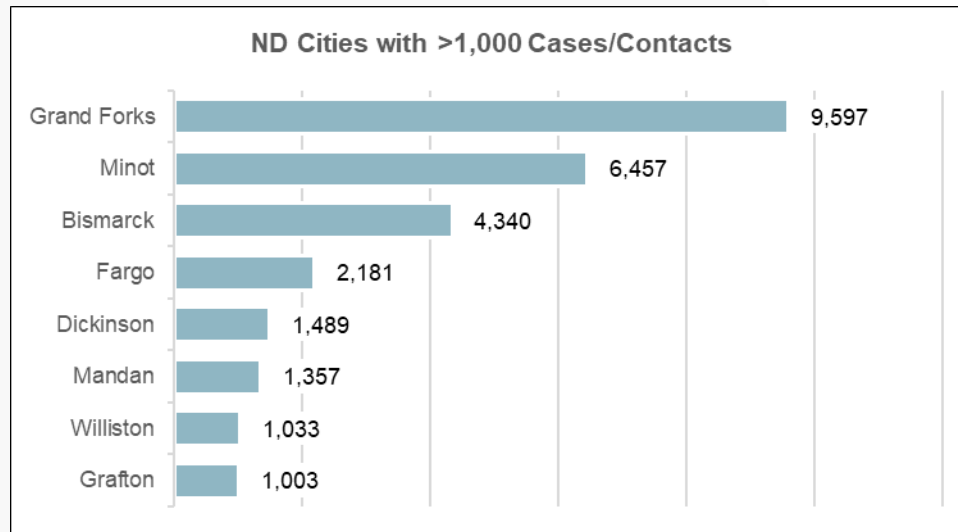
- Case investigations and contact interviews were conducted in all 53 counties in North Dakota (Figure 3).
- The UND teams worked with case and contact numbers greater than 1,000 in 11 ND counties – with Grand Forks (8,213 cases; 2,404 contacts), Ward (6,246 cases; 1,609 contacts), and Burleigh (3,729 cases; 988 contacts) Counties having the highest engagement with our case workers.
- Cases and contacts we worked with in 19 ND counties numbered fewer than 100.

Figure 3: ND Counties with >1,000 Cases/Contacts



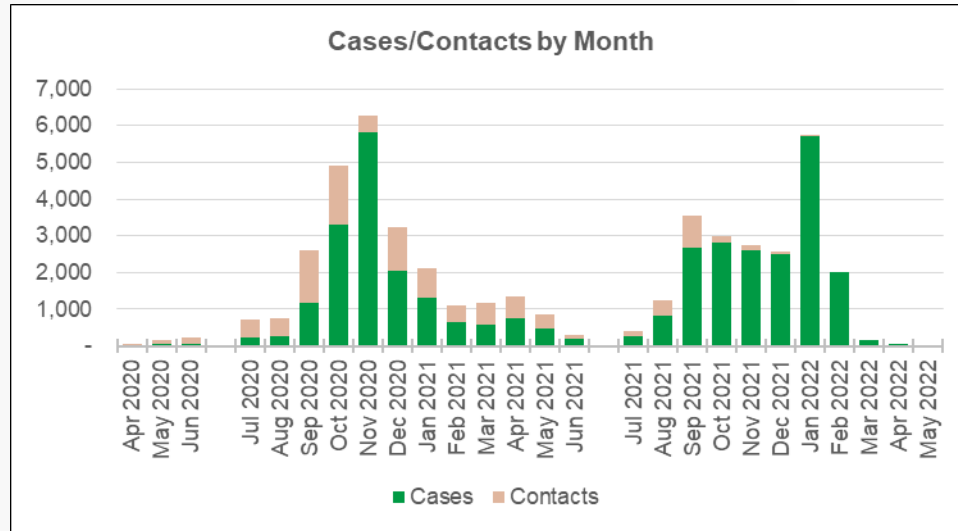
- North Dakota has 357 cities – UND case workers conducted case interviews in 325 cities and reached out to contacts in 237 cities (Figure 4).
- More than 1,000 case and contact interviews were conducted in 8 ND cities.
- Interviews conducted by our team were most frequently in Grand Forks (7,390 cases; 2,207 contacts), Minot (5,155 cases; 1,302 contacts), and Bismarck (2,430 cases; 910 contacts).

Figure 4: ND Cities with >1,000 Cases/Contacts



- Case investigations and contact tracing efforts by UND teams spanned 26-months (Figure 5).
- Peak case investigation months coincided with surges – original (October/November 2020), Delta (September/October 2021), and Omicron (January 2022) – experienced in North Dakota.
- Interviews with contacts did not necessarily follow the same pattern as 1) cases seemed more willing to share contact information ahead of the original surge and at the start of the school year, and 2) contact tracing was suspended or limited to college-related cases during peak case investigation periods.

Figure 5: Cases/Contacts by Month





- UND case workers conducted case investigations with individuals aged 0 through 90+ (Figures 6.1 and 6.2).
- The average case age was 35; the median (middle value), 30; and the mode (most frequent value), 21.
- Cases and contacts in the 18-24-year-old age group were among the top ages contacted for case investigations and contact tracing – 9,724 cases and 2,135 contacts, for an average of 1,694 per age/year.
- Because of the 40-year span, the age group most contacted by UND case workers was 25-64-year-olds (21,181 cases and contacts, or an average of 529 per age/year).

Figure 6.1: Demographics – Cases/Contacts by Age

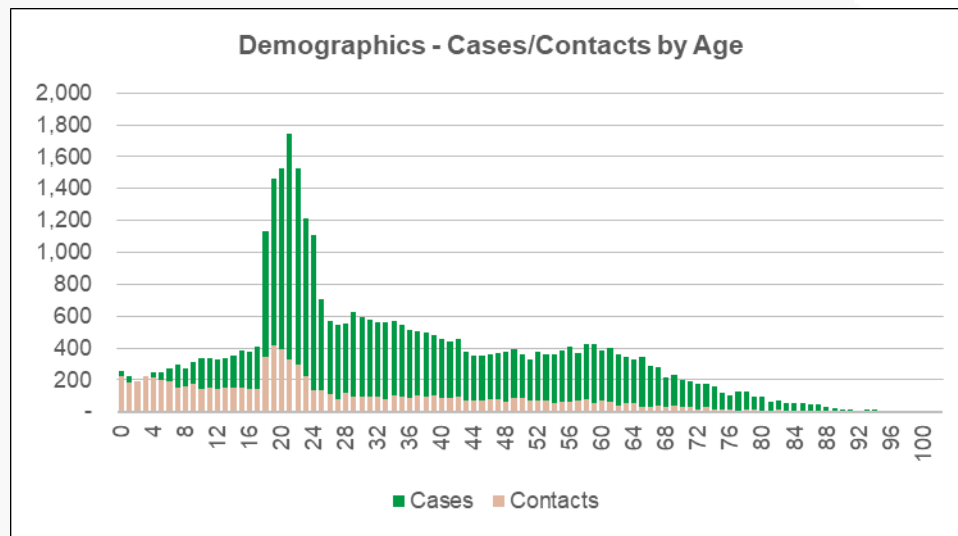
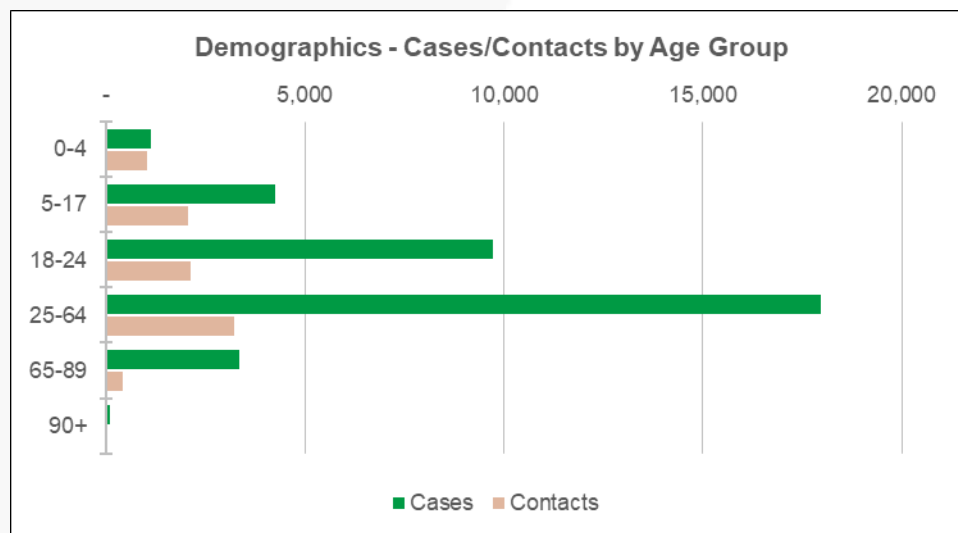


Figure 6.2 Demographics – Cases/Contacts by Age Group



- For cases and contacts who shared demographic information, 51.7% identified as female; 86.1% as white; and 93.5% as non-Hispanic. Cases skewed slightly more female, while contacts were more likely to identify as male (Figures 7.1, 7.2, and 7.3).

Figure 7.1: Demographics – Cases/Contacts by Gender

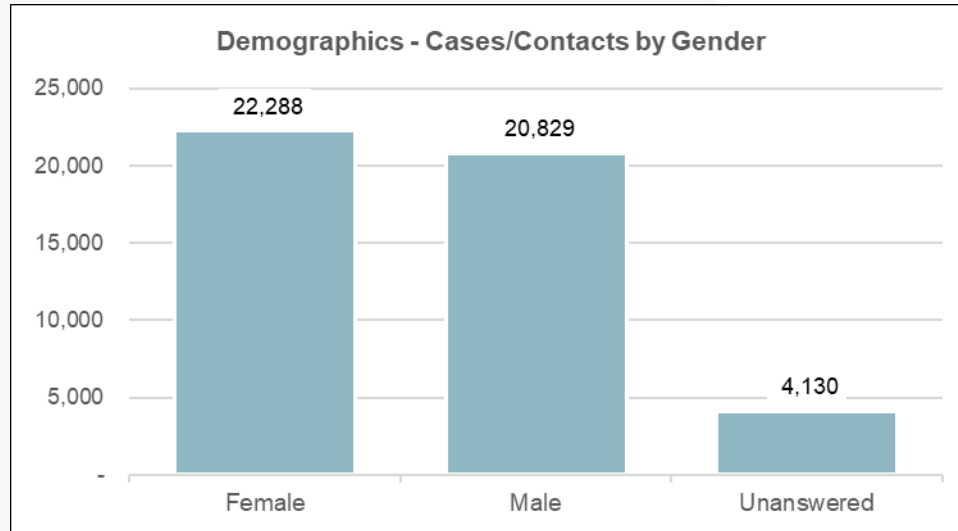


Figure 7.2: Demographics – Cases/Contacts by Race

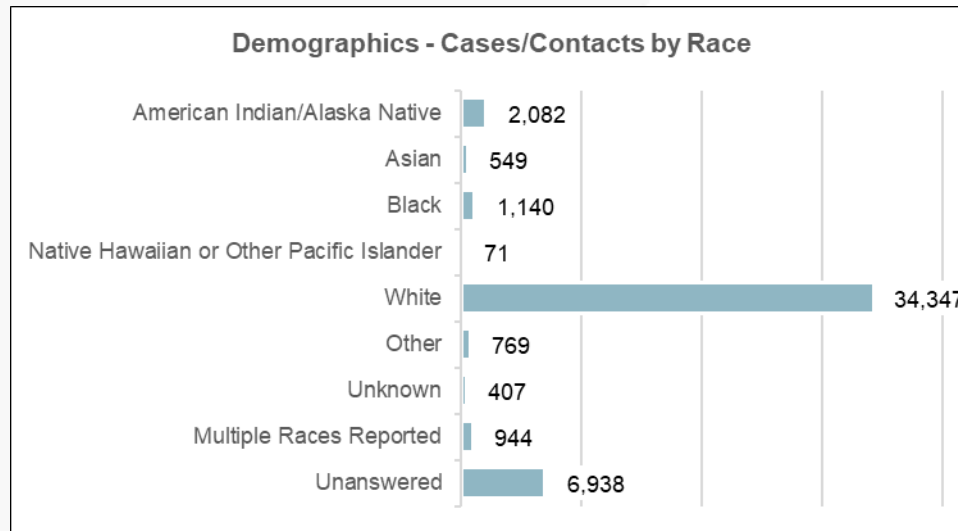
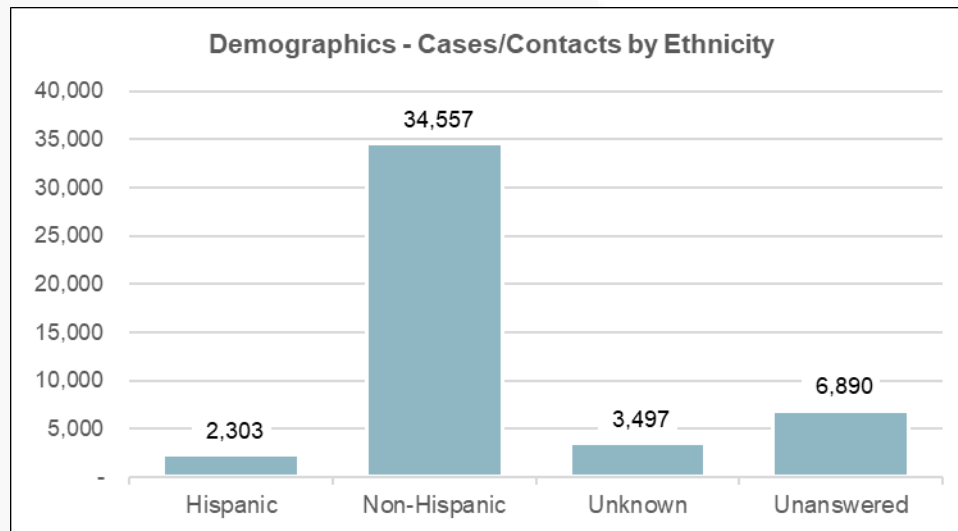
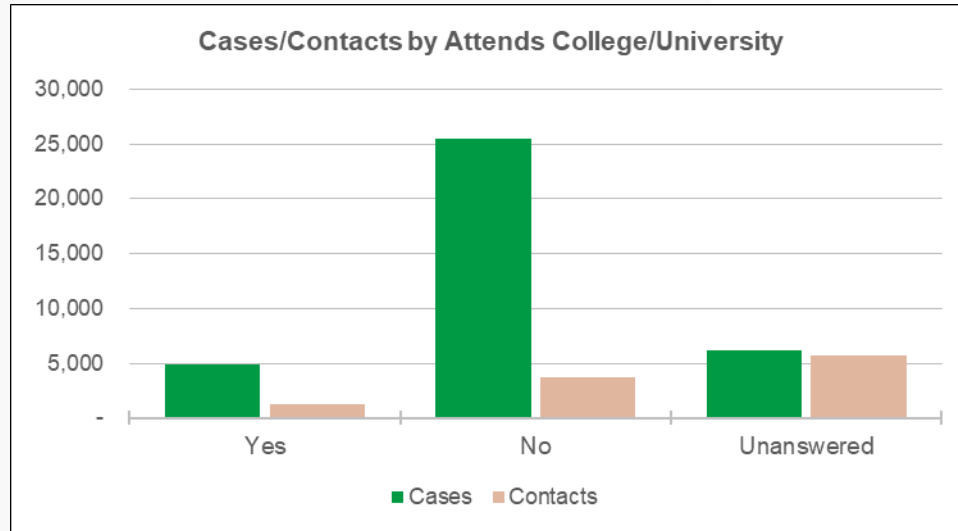


Figure 7.3: Demographics – Cases/Contacts by Ethnicity



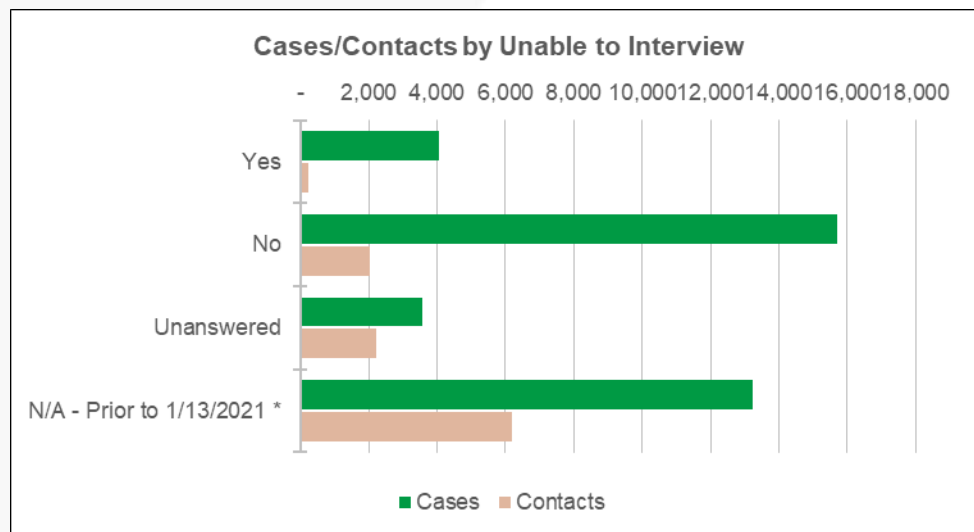
- Out of 47,247 cases and contacts assigned to UND case workers, 13.1% – 4,913 cases and 1,276 contacts for 6,198 total – reported attending a college or university. These numbers include some students who were in North Dakota but were attending an out-of-state institution remotely (Figure 8).

Figure 8: Cases/Contacts by Attends College/University



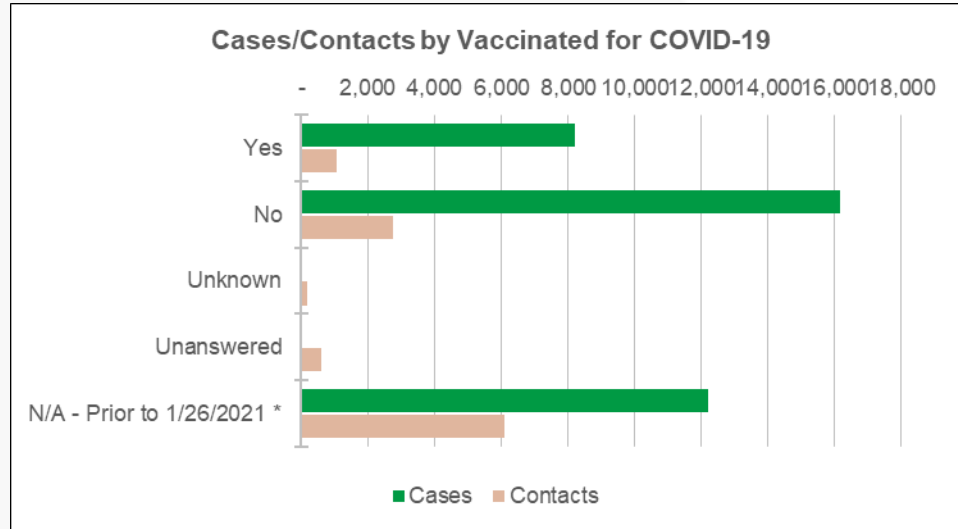
- The NDDoH began tracking when case workers were unable to complete interviews (most commonly if the individual did not answer or refused an interview) in January 2021. For the 27,814 cases and contacts assigned to UND teams after that date, UND case workers reported completing 63.7% (17,729) of interviews attempted (Figure 9).

Figure 9: Cases/Contacts by Unable to Interview



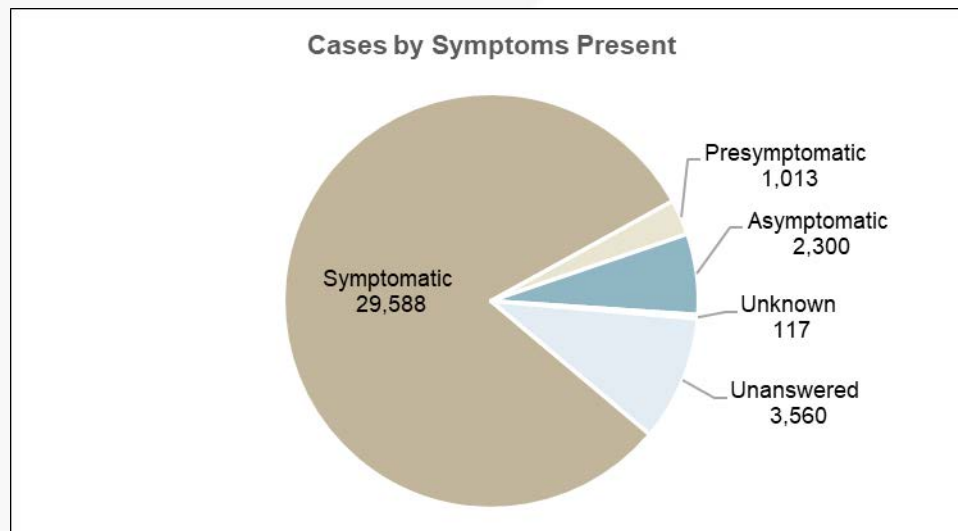
- Of 28,968 cases and contacts identified after Jan. 26, 2021 (when the NDDoH began tracking vaccination status), 31.9% (9,247) were identified as having been vaccinated for COVID-19 (Figure 10).

Figure 10: Cases/Contacts by Vaccinated for COVID-19



- 80.8% of the 36,578 cases assigned to UND teams reported having symptoms (symptomatic) at the time of the case investigation interview; another 2.8% reported developing symptoms (presymptomatic) after their initial interview (Figure 11).

Figure 11: Cases by Symptoms Present



###



## BY THE NUMBERS

### UND and NDUS Response

UND teams were responsible for conducting case investigations and contact tracing for UND and other NDUS colleges and universities except for North Dakota State University. This included students at 11 institutions listed below and employees (faculty and staff) at UND.

Case investigations and contact tracing were handled by UND teams for these NDUS colleges and universities:

University of North Dakota	Dakota College at Bottineau (DCB)
Bismarck State College (BSC)	Lake Region State College (LRSC)
Dickinson State University (DSU)	Minot State University (MSU)
Mayville State University	NDSCS - Wahpeton
NDSCS – Fargo	Williston State College (WSC)
Valley City State University (VCSU)	

The data for this section is sourced from the NDDoH's Microsoft Dynamics Contact Tracing App. The data was exported after May 15, 2022, when the UND teams discontinued investigations for college-related cases and includes interactions that were reported for one of the 11 institutions above during the 27-months between April 2020 and May 2022.

Descriptions of the types of interactions reported on here are included below, above the charts for that interaction type. Our protocol called for creating one interaction for each class or event attended during the 14-days prior to case's onset of symptoms or positive test – this meant that multiple “college / university” interactions (for example) may have been created for one case. That approach changed during the high case rates of the Omicron surge, when only one interaction was created, and any necessary details were included in the notes field for that interaction.

The NDDoH protocol and software relied on individuals reporting and confirming an interaction with a ND college or university; cases or contacts who did not respond to our interview request, did not report an interaction, or for whom an interaction was not required are not included in the numbers below. Also, because of changing protocols, re-assigning some types of records to subject matter experts, and software limitations, the numbers below represent the floor of the effort – complete data would result in higher numbers than those reported here.

More detail behind these numbers is available in the spreadsheets found in the appendix of this report.

Figure 12: Map of Cases/Contact Tracing by Institution

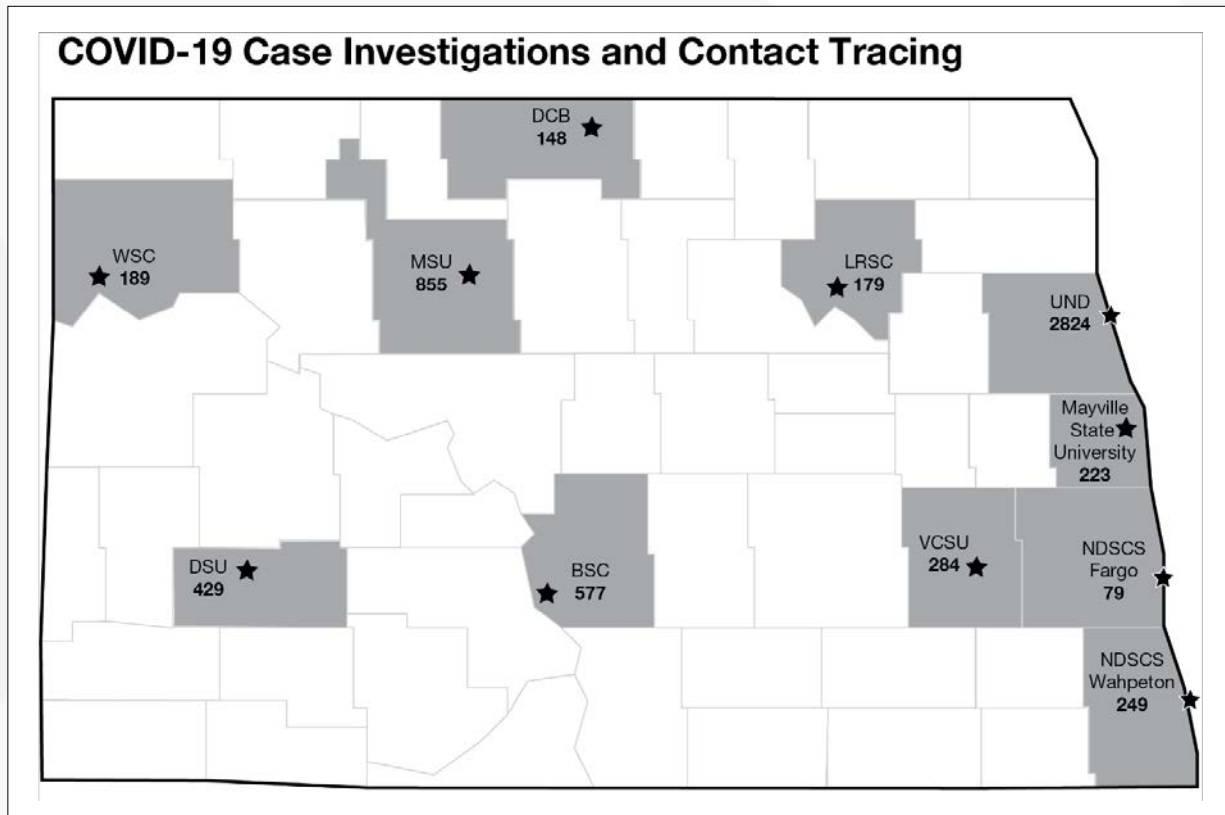
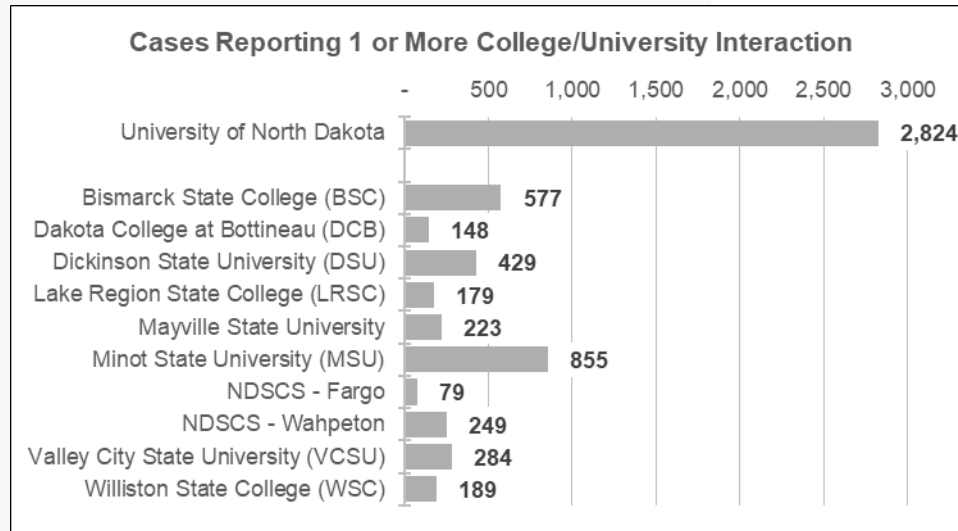


Figure 13: Table of Cases/Contact Tracing by Institution

College/University	Students
University of North Dakota (UND)	2824
Bismarck State College (BSC)	577
Dakota College at Bottineau (DCB)	148
Dickinson State University (DSU)	429
Lake Region State College (LRSC)	179
Mayville State University	223
Minot State University (MSU)	855
North Dakota State College of Science, Fargo (NDSCS - Fargo)	79
North Dakota State College of Science, Wahpeton (NDSCS - Wahpeton)	249
Valley City State University (VCSU)	284
Williston State College (WSC)	189

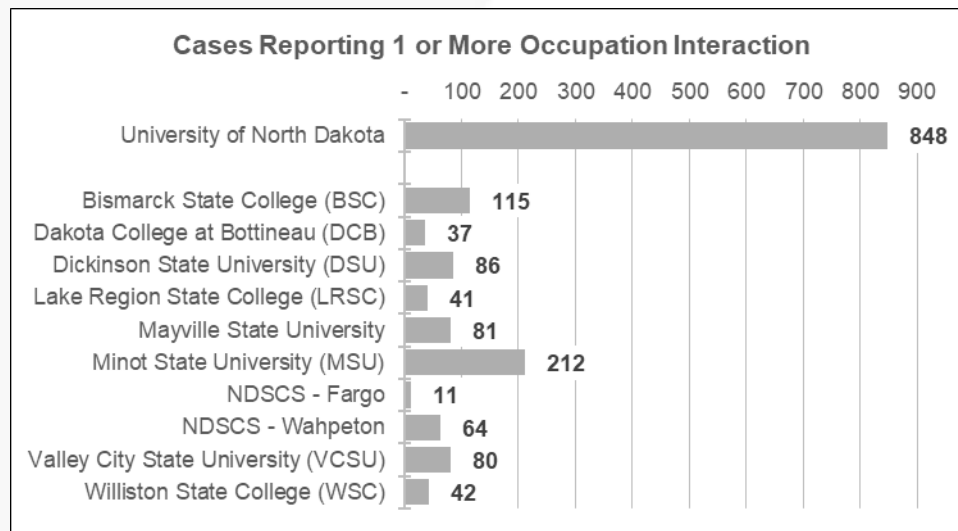
- 6,036 cases reported at least one College / University interaction at one or more ND college or university.
- UND had the most student cases with 2,824 – the other institutions ranged between 79 and 855 (Figure 14).

Figure 14: Cases Reporting 1 or More College/University Interaction



- 1,617 cases reported at least one Occupation interaction (including student employment) at UND or another NDUS institution (Figure 15).
- 848 cases identified themselves as a UND employee (administration, faculty, staff, or student employee).
- Minot State University had the second highest number – 212 – of cases reporting MSU employment.

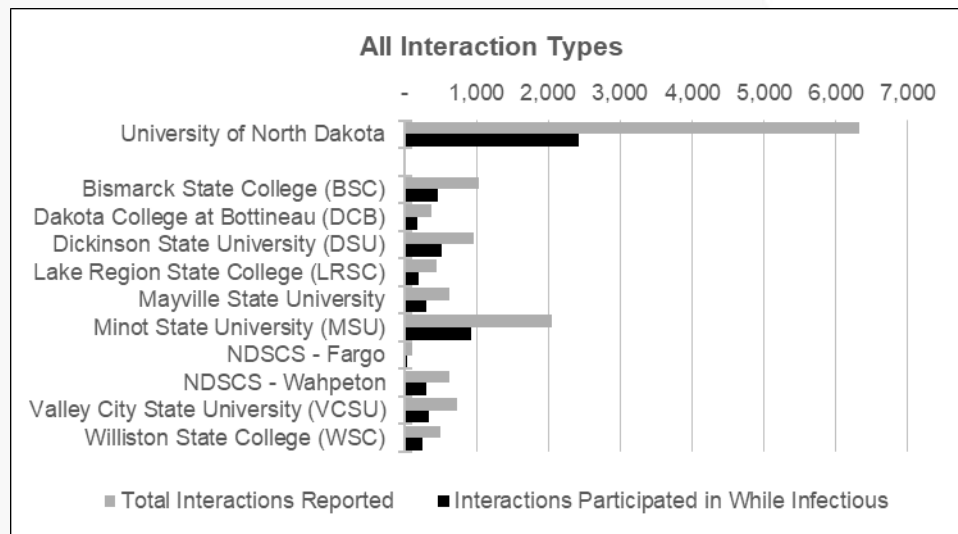
Figure 15: Cases Reporting 1 or More Occupation Interaction





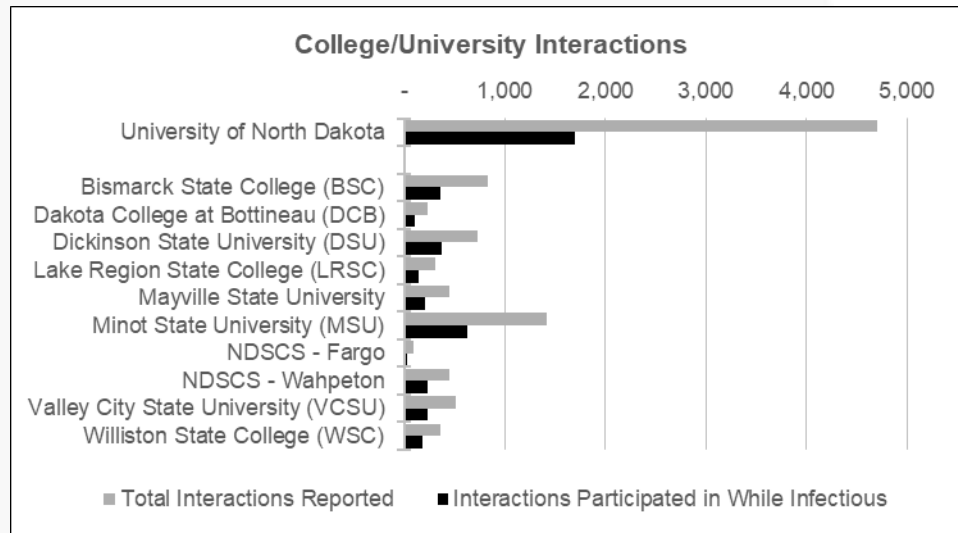
- In total, 9,358 individuals reported a total of 13,761 interactions related to an NDUS institution covered by the UND teams (Figure 16).
- 5,913 of those interactions were reported as having occurred while the case was infectious.
- 8,874 interactions were reported by cases; contacts reported 2,158 interactions.

Figure 16: All Interaction Types



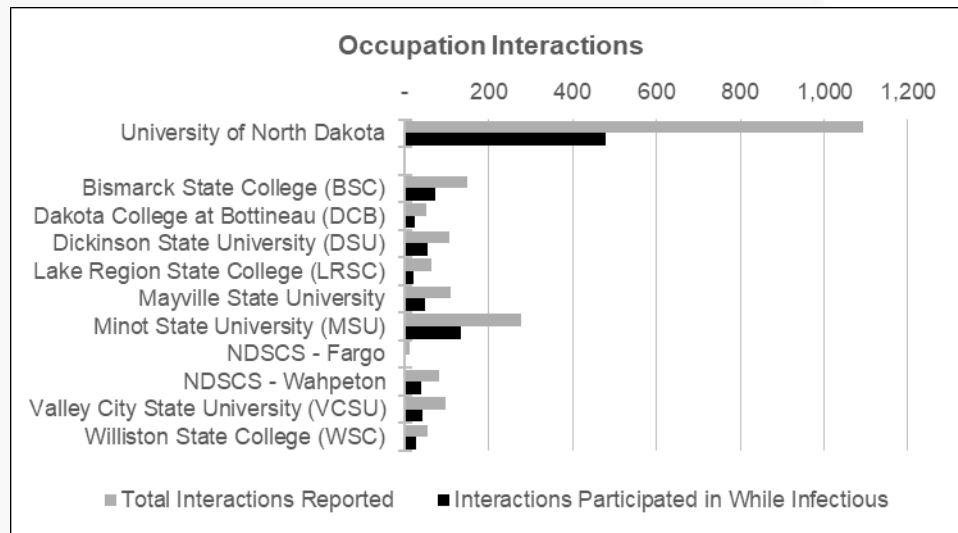
- College / University interactions were created for individuals who reported or confirmed being college or university students (Figure 17).
- 7,652 individuals reported 10,088 UND/NDUS college / university (student) interactions – 4,188 of those interactions occurred while the student was infectious.
- 4,703 interactions (1,698 while infectious) were reported for the University of North Dakota.
- Other NDUS institutions had between 95 (NDSCS – Fargo) and 1,423 (Minot State University) interactions reported.

Figure 17: College/University Interactions



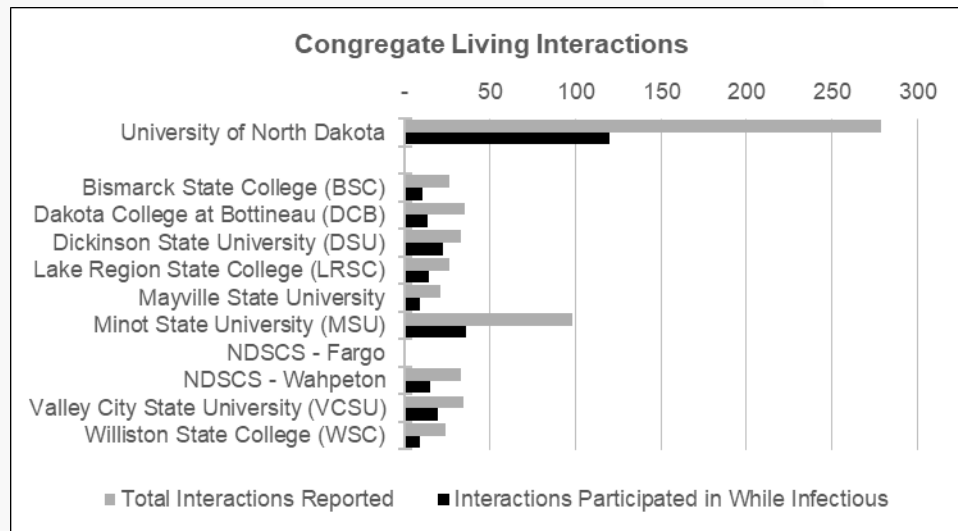
- Occupation interactions were created for individuals who reported or confirmed being an employee (administration, faculty, staff, or student employment) at a college or university (Figure 18).
- 2,006 individuals reported 2,092 UND/NDUS occupation interactions – 942 interactions occurred while the employee was infectious.
- 1,093 interactions (478 while infectious) were reported for the University of North Dakota.
- Other NDUS institutions had between 12 (NDSCS – Fargo) and 277 (Minot State University) interactions reported.

Figure 18: Occupation Interactions



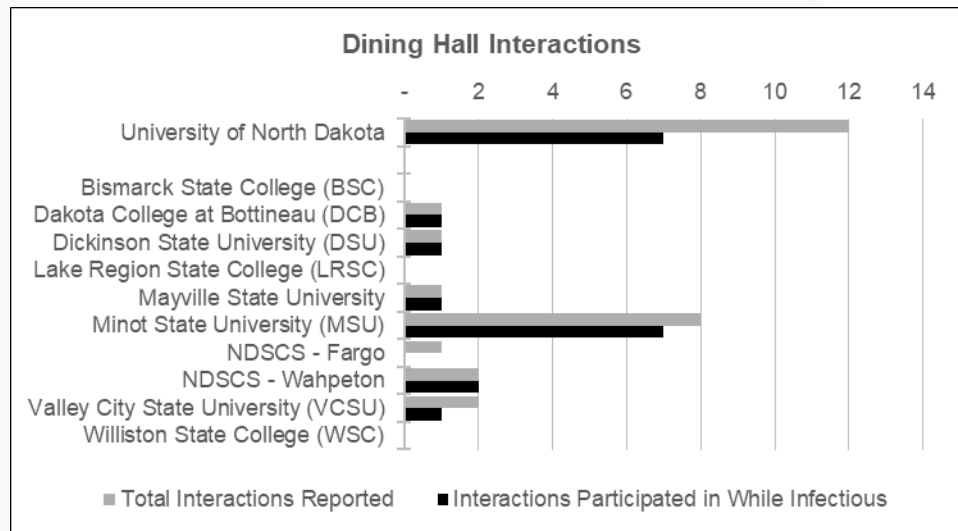
- Congregate Living interactions were created for college or university students who reported living in a residence hall, on-campus apartments, or Greek-system housing (Figure 19).
- 591 individuals reported 609 UND/NDUS congregate living interactions – 267 of those interactions occurred while the student was infectious.
- 279 interactions (120 while infectious) were reported for the University of North Dakota.
- Other NDUS institutions had between 24 (Williston State College) and 98 (Minot State University) interactions reported.

Figure 19: Congregate Living Interactions



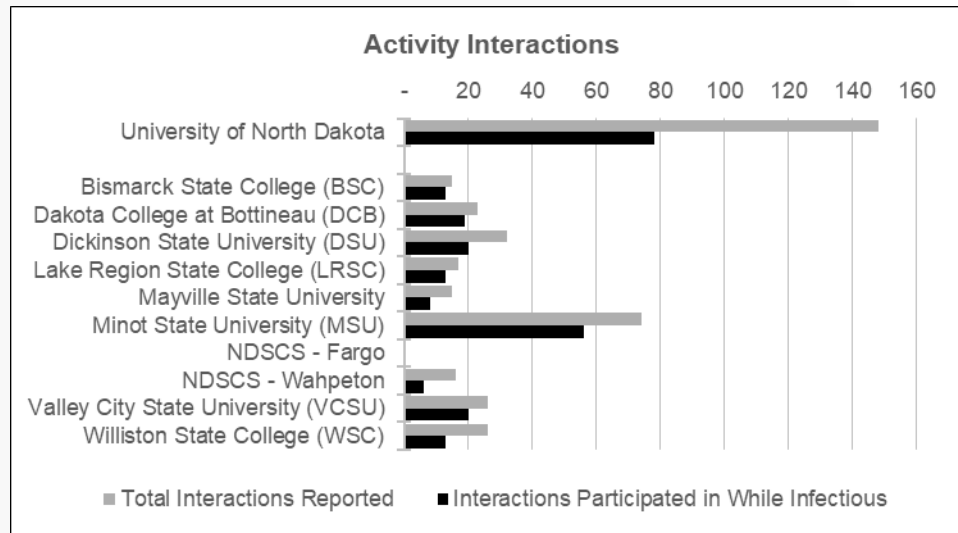
- Dining Hall interactions were created for college or university students who reported eating in-person in an on-campus residence hall dining facility (Figure 20).
- 25 individuals reported 28 UND/NDUS congregate living interactions – 20 of those interactions occurred while the student was infectious.
- 12 interactions (7 while infectious) were reported for the University of North Dakota.
- Other NDUS institutions had between 1 and 8 interactions reported. This was the lowest reported type of campus-related interaction.

Figure 20: Dining Hall Interactions



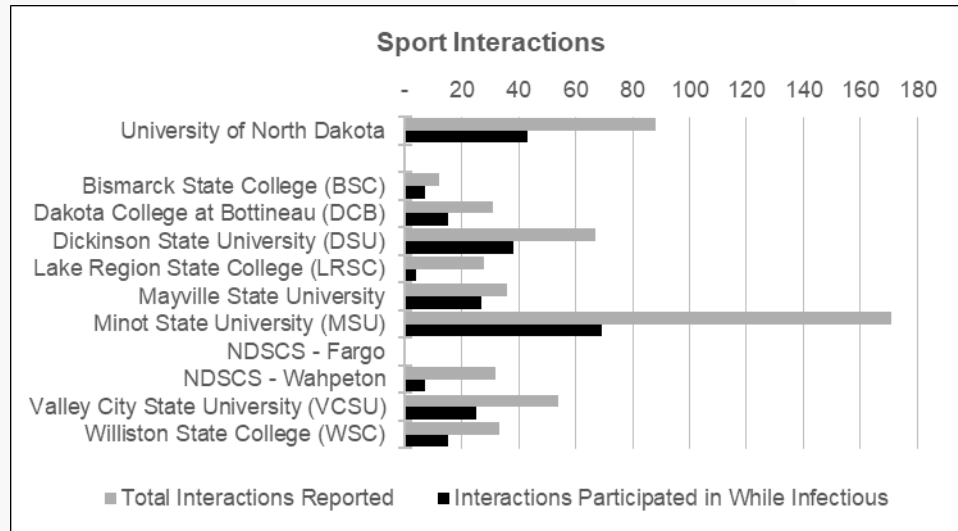
- Activity interactions were created for all other campus related activities – eating at an on-campus fast food restaurant, going to the bookstore, participating in a student organization meeting or event, etc. (Figure 21)
- 306 individuals reported 392 UND/NDUS congregate living interactions – 246 of those interactions occurred while the student was infectious.
- 148 interactions (78 while infectious) were reported for the University of North Dakota.
- Other NDUS institutions had between 15 (Bismarck State College) and 74 (Minot State University) interactions reported.

Figure 21: Activity Interactions



- Sport interactions were created for both participants in and spectators of athletic events (Figure 22).
- 525 individuals reported 552 UND/NDUS congregate living interactions – 250 of those interactions occurred while the student was infectious.
- 88 interactions (43 while infectious) were reported for the University of North Dakota.
- Other NDUS institutions had between 12 (Bismarck State College) and 171 (Minot State University) interactions reported.

Figure 22: Sport Interactions



- The following charts use the same data as the interaction charts above but are configured by institution to provide an overview and comparison of the frequency of different interaction types at that institution (Figures 23.1 to 23.12).

Figure 23.1: Interactions – All UND/NDUS by Type

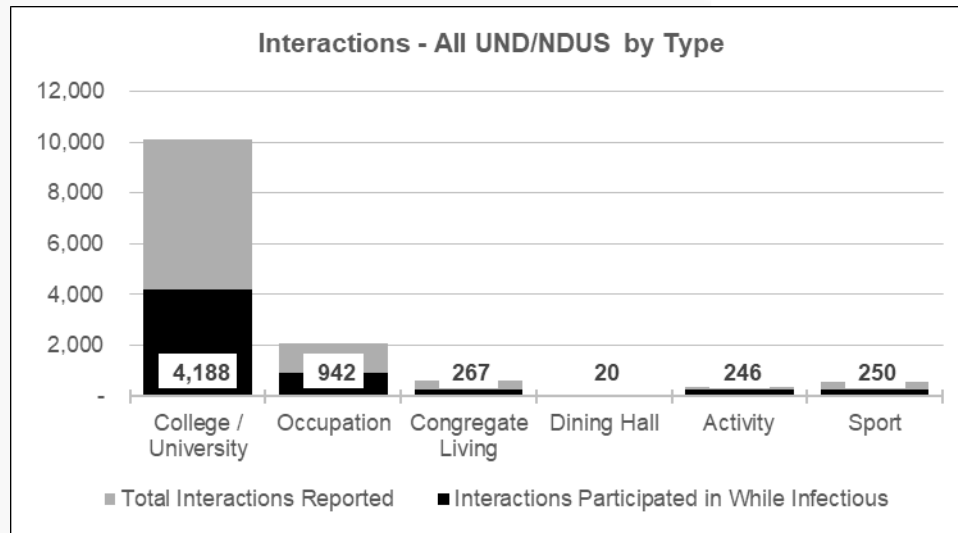


Figure 23.2: Interactions at the University of North Dakota

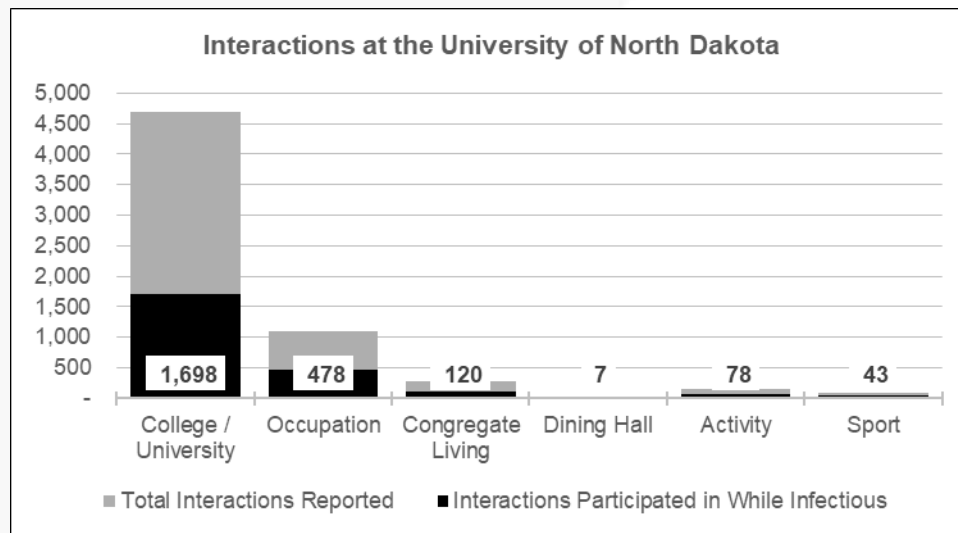




Figure 23.3: Interactions at Bismarck State College

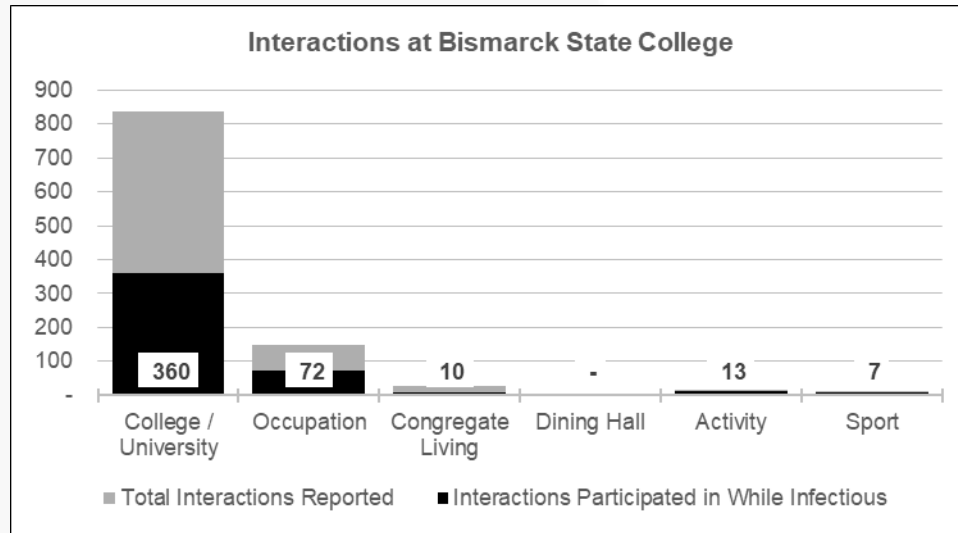


Figure 23.4: Interactions at Dakota College at Bottineau

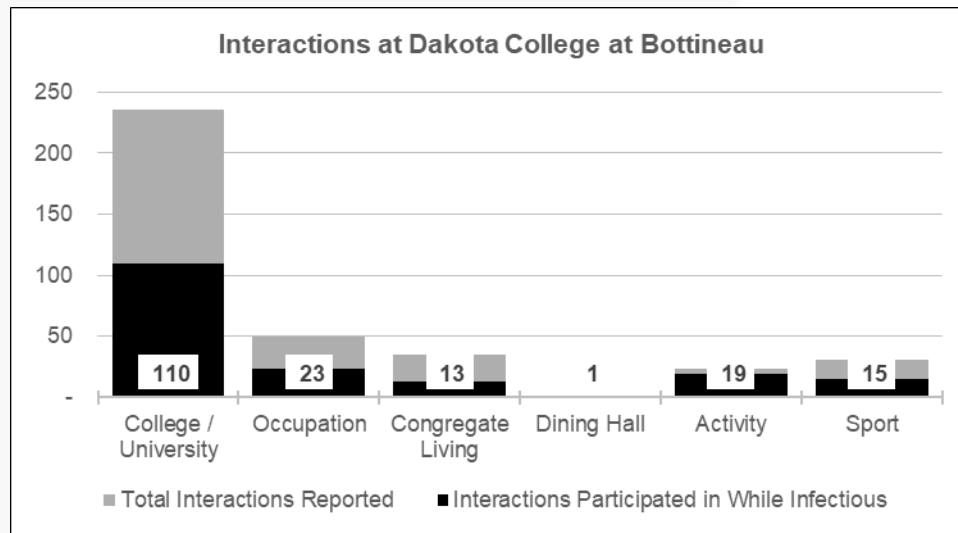


Figure 23.5: Interactions at Dickinson State University

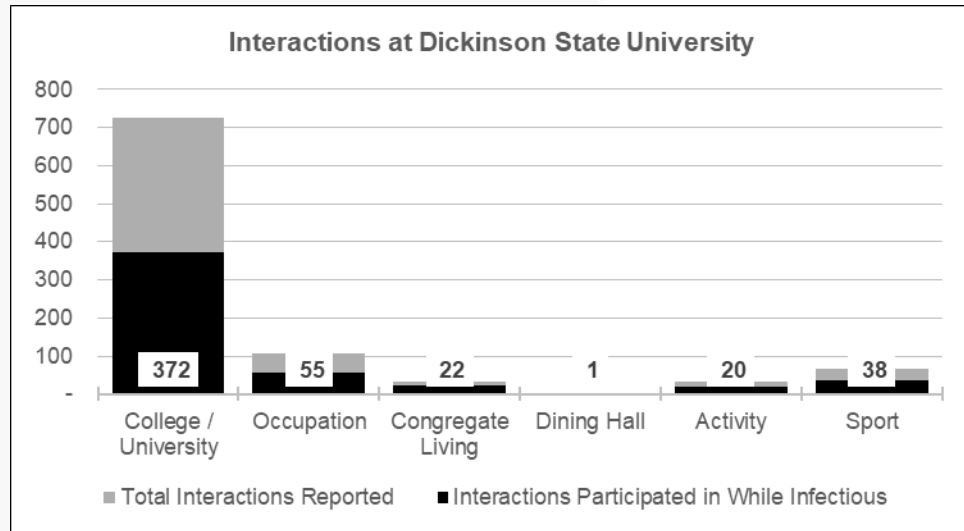


Figure 23.6: Interactions at Lake Region State College

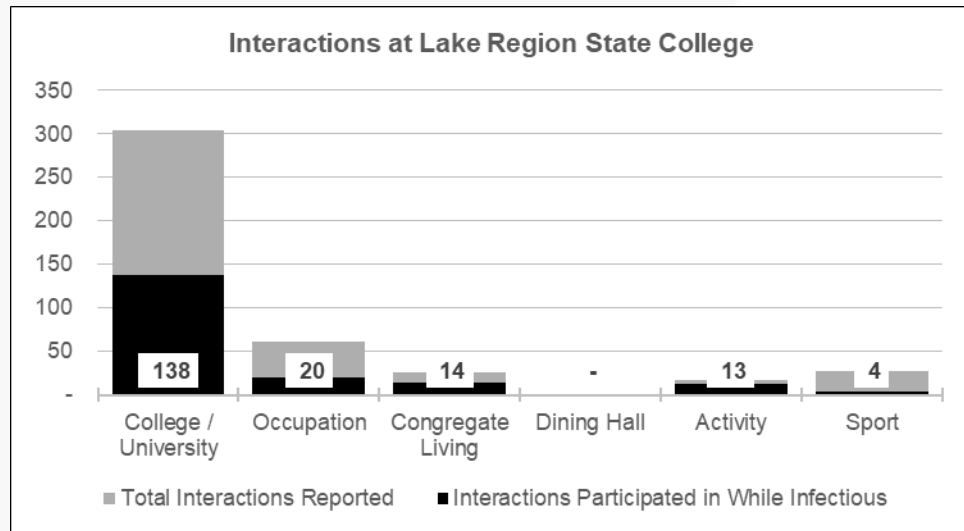


Figure 23.7: Interactions at Mayville State University

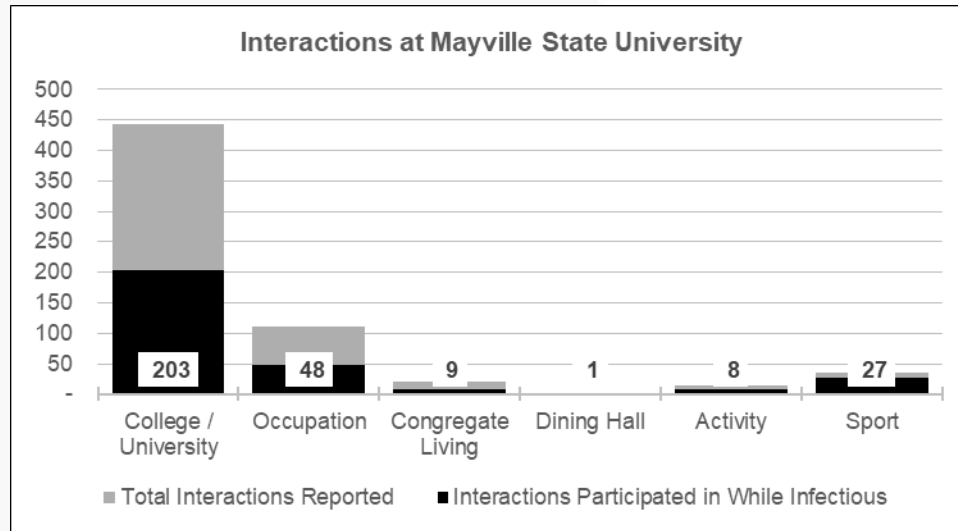


Figure 23.8: Interactions at Minot State University

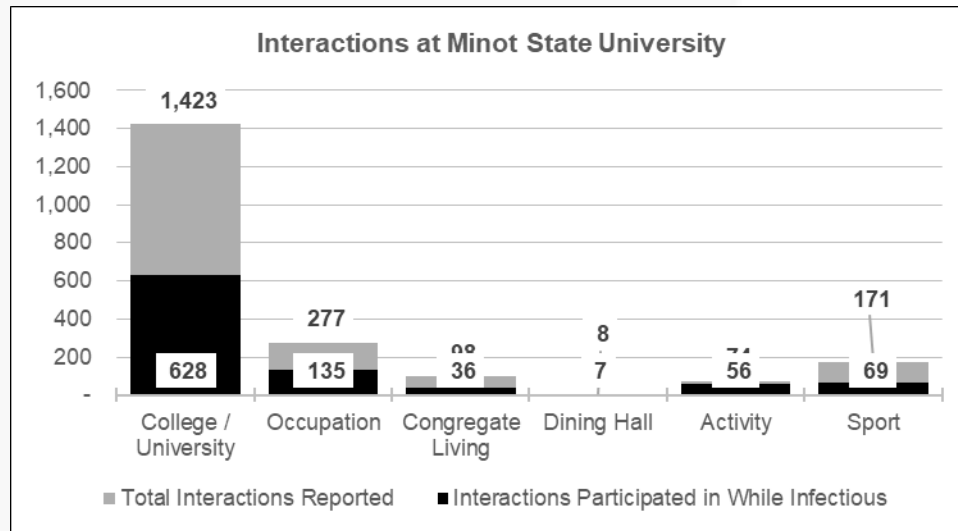


Figure 23.9: Interactions at NDSCS - Fargo

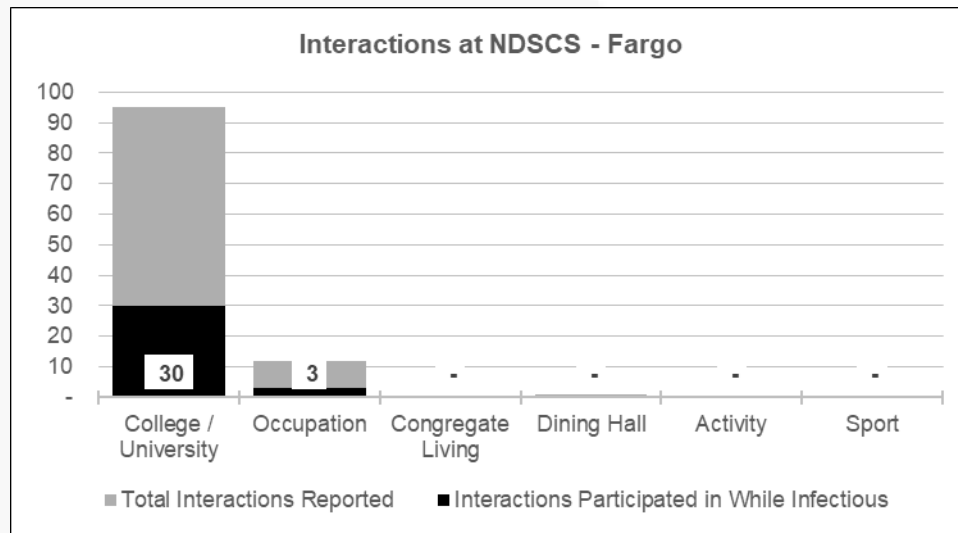


Figure 23.10.: Interactions at NDSCS - Wahpeton

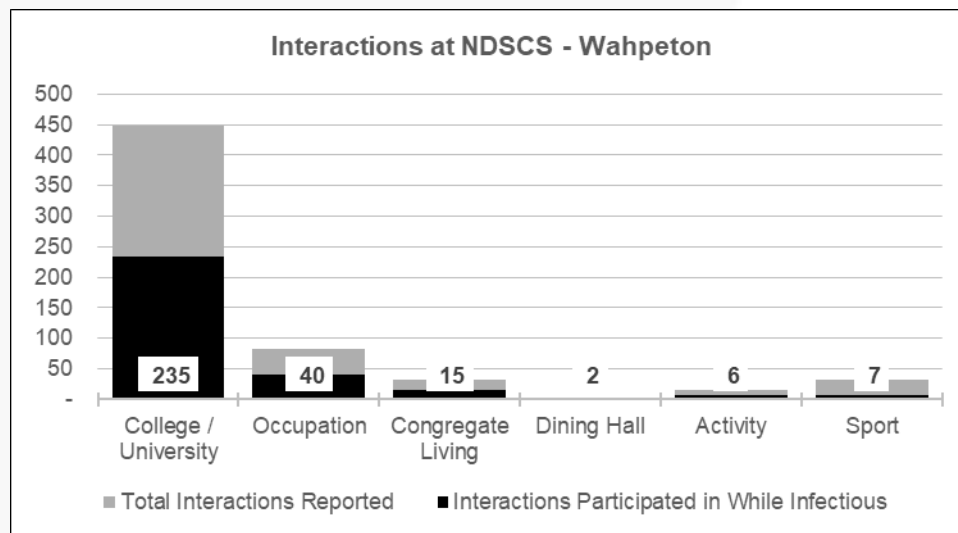


Figure 23.11: Interactions at Valley City State University

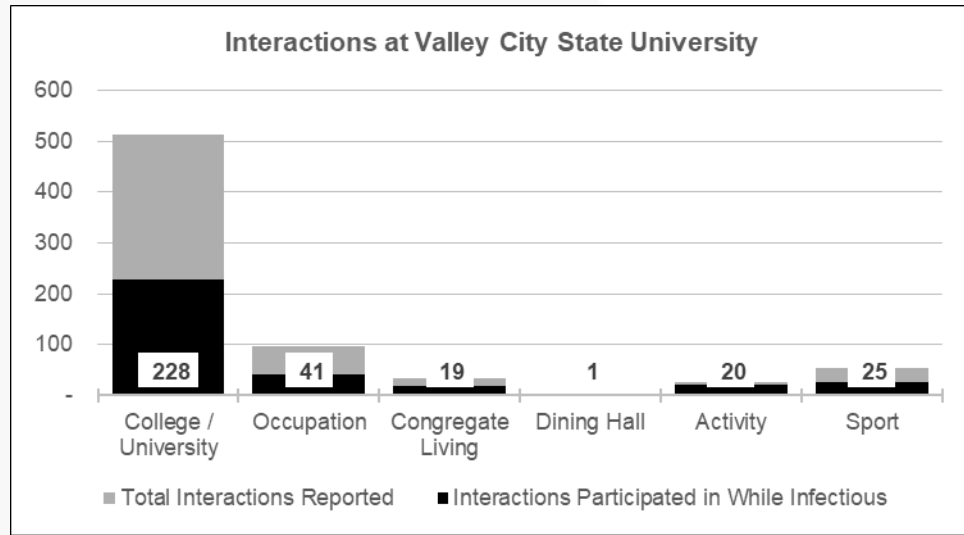
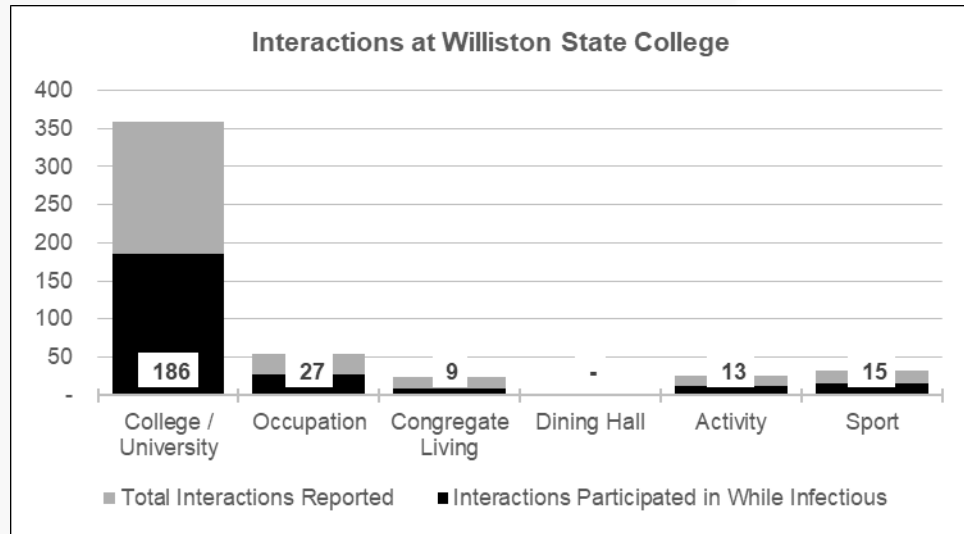


Figure 23.12: Interactions at Williston State College



###

# BY THE NUMBERS

## Team Work Statistics

The data below comes from Sling (an application used by the NDDoH for scheduling employees across all teams working on the COVID-19 response across the state) and UND payroll systems.

The shift and hour information from Sling includes case worker and shift manager hours but does not include team management hours. Payroll information includes all time entered, including shift extensions, meetings, training, and team management.

Neither dataset includes information for volunteer case workers or UND Student Health Services employees who completed case investigations and contact tracing during the initial months of the pandemic response.

More detail behind these numbers is available in the spreadsheets found in the appendix of this report.

- UND team members worked 25,561 shifts and 80,113 hours during the 23-months in which Sling was used for scheduling (Figure 24.1 and 24.2).
- Shifts were typically scheduled in 3-hour blocks (the average shift was 3.1-hours) – but shift managers and case managers often worked multiple shifts on the same day.
- Shifts built to a monthly peak of 2,920 (January 2021) during the original COVID-19 surge but dropped down to around 1,000 shifts per month in response to case numbers declining and changes in case investigation and contact tracing criteria during following surges.

Figure 24.1: # of Scheduled Sling Shifts by Month

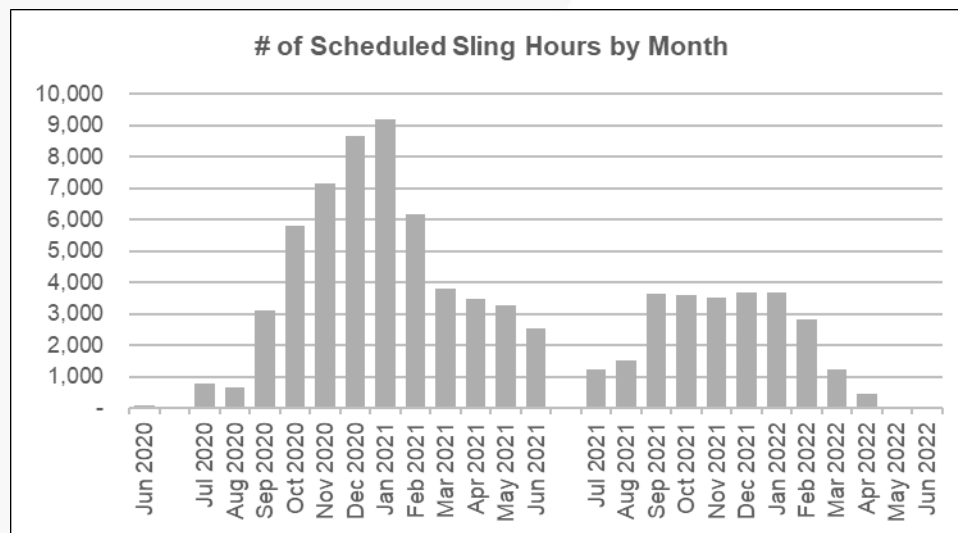
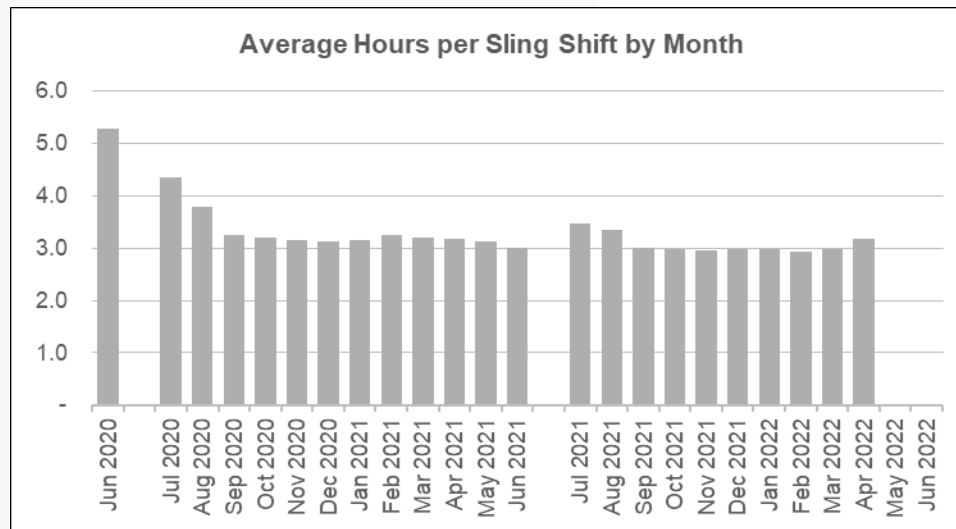


Figure 24.2: Average Hours per Sling Shift by Month



- While inclusive of all hours, the payroll information and trends reflect the same trends as the scheduling information for shifts and hours worked (Figures 25.1, 25.2, and 25.3).
- UND team members working on the COVID-19 response clocked 96,215 hours – 94,973 regular hours and 1,243 overtime hours.
- The number of employees working during any given pay period ranged from 1 to 119, with the most employees working during the Fall 2020 original surge.
- On average, employees worked 30-40 hours per pay period – 15-20 hours per week – with the higher pay period/weekly hours falling during the busier surge periods.

Figure 25.1: Payroll Hours by Pay Period

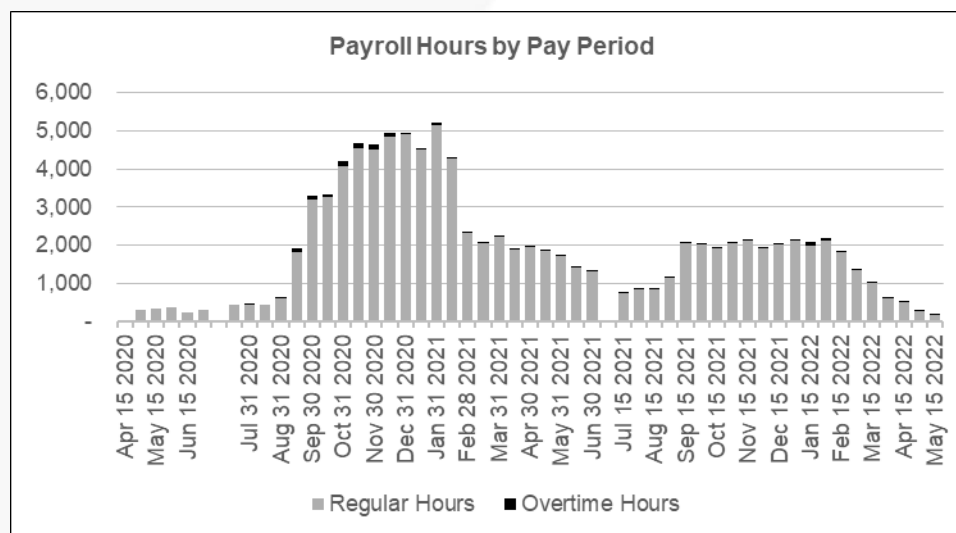


Figure 25.2: # of Employees Working by Pay Period

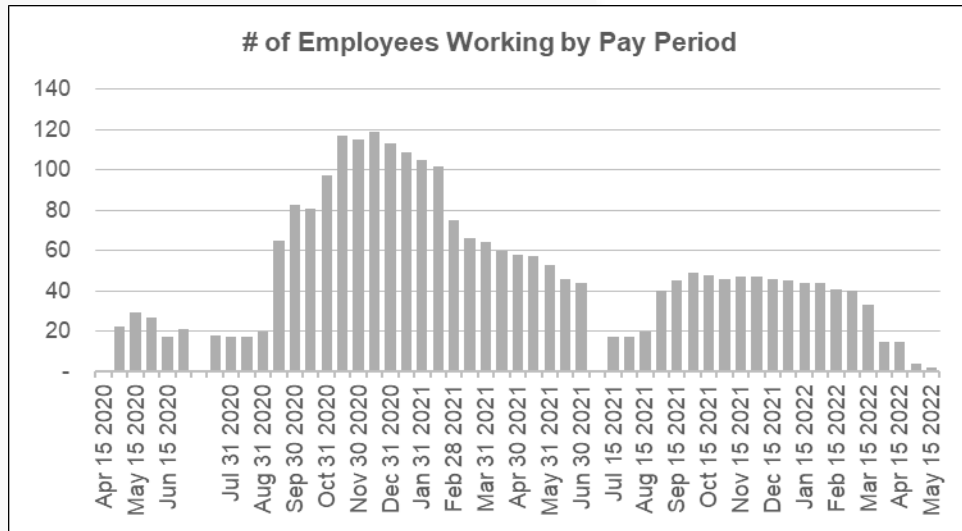
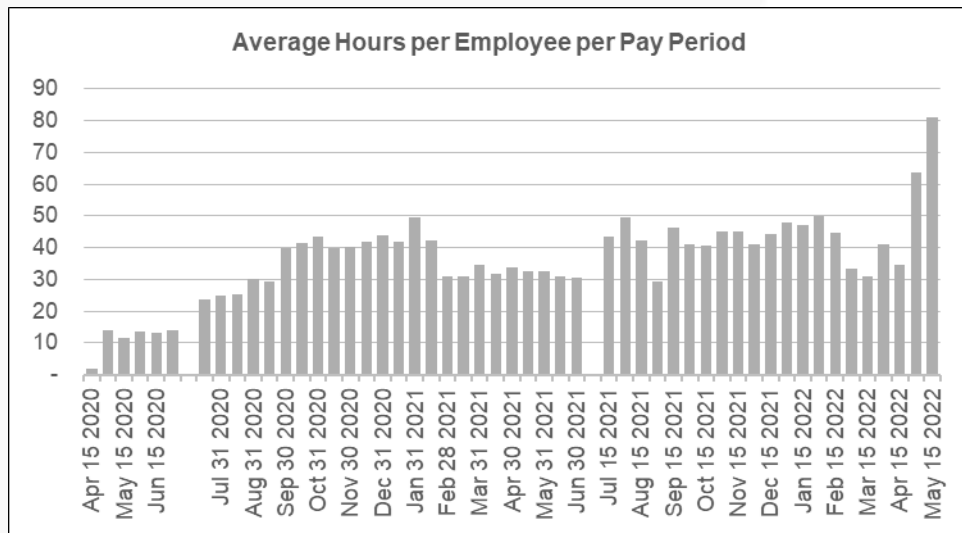


Figure 25.3: Average Hours per Employee per Pay Period



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# North Dakota Department of Health COVID-19 Investigation Protocol & Resource Guide



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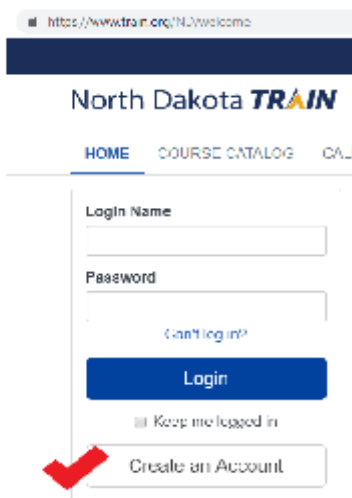
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## How to create your TRAIN account

**Step 1:** Visit [www.train.org/ND](http://www.train.org/ND)

**Step 2:** Create an account, or log-in if you have an existing account. If you already have an account, you will be asked to 'Join another group' see step 4-6.



**Step 3:** Once logged-in, select your name in the upper right corner, select my profile.

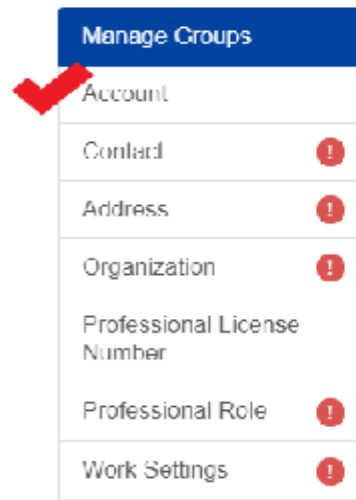


**Step 4:** Select 'Join another group' search by location, select 'North Dakota,' select the group in which you work such as Local Public Health, Hospital/Health Care Facility, etc. Confirm your selections by clicking on save.

**Step 5:** In your profile, select 'Account,' select 'yes' to allow TRAIN to send notifications via e-mail. This step is crucial in receiving course updates. Be sure to select 'Save' at the top of the screen.

### Your Profile is in

Your profile contains all your required settings some site functions incomplete.



**Step 6:** Finish updating the required fields and start training!

## Introduction

SARS-CoV-2 is the virus that causes COVID-19, which is a new strain of coronavirus that has spread throughout the world. Infection with COVID-19 may result in severe symptoms such as: cough, shortness of breath, and fever, among others. Individuals may experience mild or no symptoms (asymptomatic carriers). Case investigation and contact tracing are essential public health mitigation strategies aimed at slowing the spread of COVID-19.

## Definitions

The following are definitions used for case investigation, contact identification, and follow-up.

**Case:** A person who is positive for COVID-19 as confirmed by a PCR or Rapid Antigen Test.

**Probable Case:** A close contact of a confirmed case, who has symptoms compatible with COVID-19, but is not a confirmed positive case.

**Isolation:** Keeping someone who is infected with the virus away from others. Anyone who is deemed a COVID-19 Case, or Probable Case will be placed in isolation.

**Isolation Period:** All individuals who test positive for COVID-19 (i.e., COVID-19 cases) must isolate for a minimum of 5 days if the person is asymptomatic, or if their symptoms are improving and the individual has been fever free without medication for 24 hours at day 5. This period of isolation should be followed by five days of wearing a well-fitted mask while around others. People who are in isolation should stay home and separate themselves from others in the household as much as possible.

**Incubation Period:** The time it takes an individual to develop symptoms after an exposure, the estimated incubation period for COVID-19 is 2-14 days. Majority of SARS-CoV-2 transmission occurs early in the course of illness in the 1-2 days prior to the onset of symptoms and 2-3 after.

**Infectious Period:** The infectious period begins **2 days BEFORE** onset of symptoms (or, for asymptomatic cases, 2 days BEFORE lab specimen date) and continues until the case is released from isolation. If a case is asymptomatic at the time of testing, but becomes symptomatic later, the infectious period begins 2 days BEFORE the onset of symptoms.

**Close Contact:** A close contact is anyone who was within 6 feet of an infectious person for a cumulative total of 15 minutes or more over a 24-hour period. Individuals that may have had direct contact with infectious secretions (e.g., being coughed or sneezed on) of someone with COVID-19 would also constitute as a close contact.

- Wearing a mask will not prevent an individual from being considered a close contact, however if the person is in full personal protective equipment (PPE) during the time of the exposure, then it does not constitute as an exposure.

**Household Contact:** All individuals who live with a person who is positive for COVID-19 (e.g., family members, roommates, intimate contacts, and caregivers).

**Quarantine:** Keeps someone who might have been exposed to COVID-19 away from others, especially people who are at higher risk for getting very sick from COVID-19. Quarantine applies to household and close contacts. Someone in quarantine should stay separated from others outside their household, limiting movement outside of the home or facility where they are staying.

**Reinfection:** Clinical recurrence of symptoms compatible with COVID-19, accompanied by positive PCR test more than 90 days after the onset of the primary infection, supported by close-contact exposure or outbreak settings, and no evidence of another cause of infection.

**Out of Jurisdiction (OOJ):** A case reported to the North Dakota Department of Health that belongs to another jurisdiction (i.e., state).

**Congregate settings:** Crowded public places where close contact with others may occur such as: shopping centers, movie theaters, or stadiums. Also included are living situations such as group homes, long term care facilities, prisons, dorm rooms, and homeless shelters.

**Social distancing:** Also known as “physical distancing”. Individuals should keep physical space between themselves and people living outside of their households. Social distancing practices involve:

- Staying six feet away from others living outside of their household.
- Avoid mass gatherings or crowded places.

**Types of Spread:** Also known as source of exposure. The following terms are used to identify how an individual contracted COVID-19:

- **Close Contact** – An individual who has had direct contact with a COVID-19 positive individual 14 days prior to their symptom onset or lab specimen (test) date, if asymptomatic.
- **Community** – An individual who has had no known contact with a positive COVID-19 case, has not traveled outside of North Dakota, and who may have had a healthcare exposure, or exposure to a cluster of people/event with COVID-19 within 14 days of their symptom onset (or lab specimen date, if asymptomatic), with a positive PCR or antigen test result.

- **Confirmed Travel** – An individual who was out of the state of North Dakota the entire 14 days prior to their symptom onset or lab specimen date, if asymptomatic.
- **Household Contact** – An individual who lives in the same house as a COVID-19 positive individual.
- **Nosocomial** – This term is used primarily for hospital-acquired cases. Patients classified as nosocomial spread should be in hospital care for the 14 days prior to illness onset, or lab specimen date if asymptomatic.
- **Possible Travel** – This term is applied to a positive case when no other reason is identified for how an individual contracted COVID-19 and they were outside the state of ND within 14 days of their symptom onset or lab specimen date, if asymptomatic.

**Up to date:** Means a person has received all recommended COVID-19 vaccines, including any booster dose(s) when eligible.

**Additional Primary Dose:** The additional primary dose of an mRNA COVID-19 vaccine is intended to improve immune response of the primary vaccine series. An additional primary dose of an mRNA COVID-19 vaccine can be administered to individuals with moderately or severely compromised immune systems after completion of an initial 2-dose mRNA COVID-19 primary vaccine series. CDC recommends that moderately or severely immunocompromised individuals receive an additional primary dose of vaccine. An additional primary shot may prevent serious and possibly life-threatening COVID-19 in individuals who may not have responded to their 2-dose mRNA COVID-19 primary vaccine series.

**Booster Dose:** A Booster Dose is administered when an individual has completed their primary vaccine series to enhance or restore protection against COVID-19 which may have decreased over time..

**Primary Series:** FDA-approved or FDA-authorized COVID-19 vaccines

- For children 5 years through 17 years of age, a **primary series** consists of:
  - 2 doses of the **Pfizer-BioNTech** COVID-19 vaccine.
- For persons 18 and older, a **primary series** consists of:
  - A 2-dose series of an mRNA COVID-19 vaccine (Pfizer-BioNTech or Moderna)
  - or
  - A single-dose COVID-19 vaccine (Johnson & Johnson's Janssen vaccine)

**Fully Vaccinated:** a person has received their primary series of COVID-19 vaccines.

- An individual is considered Fully Vaccinated  $\geq$  **14 days after** receipt of:
  - A single-dose vaccine (Johnson & Johnson's Janssen vaccine)
  - The second dose in a 2-dose series (Pfizer, Moderna, or other WHO emergency use approved vaccines)
  - The second dose in a 2-dose "Mix and Match" combination (FDA-approved, FDA-authorized, or other WHO emergency use approved COVID-19 vaccines; doses must be at least 17 days apart)
- A Fully Vaccinated individual who becomes positive for COVID-19 (Case) through laboratory confirmation of a PCR or Rapid Antigen Test is considered a **Breakthrough Case**.

**Fully Vaccinated Date:** The date in which an individual is considered fully vaccinated.

- In Dynamics, a Calculator used to assist in case investigation.
  - Date is calculated based on the *Vaccine Brand* and either the *Date of Second Vaccination*, for Pfizer and Modera, or the *Date of Vaccination*, for Janssen vaccines.
- A CASE is considered Fully Vaccinated if the Specimen Date (Test Date) is  $\geq$  the Fully Vaccinated Date.



- A CONTACT is considered Fully Vaccinated if the Date of Last Exposure to COVID-19 Case is  $\geq$  the Fully Vaccinated Date.

**Breakthrough Case:** an individual who is fully vaccinated and is PCR or Antigen Positive on a Respiratory Specimen (Case) collected  $\geq$  14 days after receipt of a primary series of an FDA-approved or FDA-authorized COVID-19 Vaccine.

- *Receipt of a primary vaccine series = receiving the second dose in a 2-dose series or receipt of one dose of a single-dose vaccine.*

**Breakthrough + Booster Case:** an individual who is fully vaccinated and is PCR or Antigen Positive on a Respiratory Specimen (Case) collected  $\geq$  14 days after receipt of an Additional/Booster Dose of an FDA-approved or FDA-authorized COVID-19 Vaccine (“Fully Boosted”).

- *A Booster Dose must be administered at least 5 months (previously 6 months) after completion of Pfizer or Moderna primary series and 2 months after completion of Janssen primary series, therefore, a **Breakthrough + Booster Case is also a Breakthrough Case, by default.***
- **Note:** *this definition does not distinguish between vaccine recipients who are immunocompromised and are receiving an additional dose versus those who are not immunocompromised and receiving a booster dose.*

**COVID-19 Variant:** A change within the virus or the spikes on the outer surface of the virus.

## Laboratory Testing

**PCR Testing:** The “gold standard” in diagnostic testing. Providers should order PCR testing to diagnose COVID-19. Providers should collect nasal, nasopharyngeal or oropharyngeal swabs for testing.

**Rapid Antigen Test:** Antigen Tests can be used to conduct diagnostic or screening testing. These tests can return results in approximately 15 minutes but are generally less sensitive (84%–97.6%) than viral tests, which detect nucleic acid RT-PCR. Thus, it may be recommended to confirm a rapid antigen test result with a nucleic acid test, especially if the result of the antigen test is inconsistent with the clinical context. When confirming an antigen test with a RT-PCR test it is important that the time interval between collection of samples for the two tests is less than two days, and that there have not been any opportunities for new exposures between them. If an antigen test and a RT-PCR test are done two days apart, the two tests should be considered separate.

**Serologic Assays:** These tests measure antibodies to SARS-CoV-2. They do not replace PCR or antigen testing for diagnosing an active SARS-CoV-2 infection, but they do determine whether the individual being tested was previously infected—even if that person never showed symptoms. There are currently numerous FDA approved serologic assays with sensitivity ranging from 88-99%, specificity from 95-100%, and positive predictive values (PPV) from 50-100%.

**Testing:** Testing guidance is regularly updated on the NDDoH website. Health care providers are encouraged to test patients that present with any symptom(s) of COVID-19. **Additionally, providers should test close contacts 5 days after their last exposure or immediately if symptoms arise.**

If contacts ask about being tested, they can be referred to their primary care provider or local testing site. The North Dakota Department of Health has an updated dashboard with testing events around the state. Encourage close contacts to utilize this dashboard to determine local events nearest to them.

Persons who receive **inconclusive** test results should be retested as soon as possible as an inconclusive result cannot be interpreted as either positive or negative. People should continue to isolate as recommended until a conclusive (positive or negative) result can be obtained.

**Additional information about PCR and serology is on the [NDDoH Fact Sheet](#).**

## Onboarding and Training

The following section details the process developed by the NDDoH to access the disease information system, Dynamics 365, as well as the steps needed to complete and document a case investigation and the information related to identified contacts.

### Training

Please take time to complete the following trainings:

HIPAA:

- Set up your [ND Train account](#).
- Complete required HIPAA Training at the following link <https://www.train.org/ND/course/1047429>.
- Send completed HIPAA training certificate to Patrick Sitter (psitter@nd.gov).

*Johns Hopkins Case Investigation and Contact Tracing Training*

- If you have already completed this, you do not need to take it again.

Review *CDC's Interview Case Investigation Guide*

- This guide will prepare you to collect the necessary information in your case investigation and contact tracing process.

CDC Sponsored COVID-19 CASE INVESTIGATION VIRTUAL TRAINING (Optional, but preferred)

- Register for one of the **Region 2** COVID-19 Case Investigation Virtual Training sessions sponsored by the CDC. These interactive, instructor led trainings will take place over three mornings or afternoons (Tuesday, Wednesday, and Thursday) and will provide case investigators with the interviewing skills needed to perform a thorough case investigation. You and other enrollees will perform mock interviews and your instructor will provide you with feedback on how to improve interviewing skills. The Johns Hopkins trainings are a prerequisite for this course and your certificate must be uploaded when you register.
- To access the training, click on the following link: [https://www.nnditc.org/upcoming\\_classes.html](https://www.nnditc.org/upcoming_classes.html)
- Find the heading for COVID-19 Case Investigation Virtual Training- R2.
- Register for the next available class that best works for your schedule.

\*If there is a long wait for classes, consider completing the training for Contact Tracing Only to get a foundation. Shadowing with a Trainer

- During your onboarding process you will be assigned a trainer to shadow and mentor you. You will also be assigned a case manager during your onboarding, who will provide guidance in your final stage of training and will approve you to move forward as a case worker.

## Accessing Dynamics 365

Before receiving access to Dynamics 365, all users who are not employed by the NDDoH or Local Public Health Units (LPHU) must sign non-disclosure agreements that protect both the User and the NDDoH. These agreements are coordinated between your agency lead and the NDDoH.

Once a user is granted access, the Dynamics 365 production environment can be accessed by the following link:

<https://nddoh-prod.crm9.dynamics.com/>

- Enter the username: XXXXXX@nd.gov
- Utilize the temporary password you received, and you will be prompted to change it.

If you have had access to the system and have issues with your password or other issues logging into Dynamics 365, contact the ND IT Help desk at <https://www.nd.gov/itd/support>

If you are having trouble navigating Dynamics 365, contact your case manager.

## Scheduling

The NDDoH utilizes an online scheduling tool called *SLING* to schedule case workers according to need based on trends in the number of reported cases of COVID-19. Newly onboarded case workers will receive a registration link to join. NDDoH staff will submit a matrix of availability to Patrick Sitter ([patsitter@nd.gov](mailto:patsitter@nd.gov)) as well as a targeted number of hours to be scheduled each week. People working for other agencies should work with their agency or regional case manager for details on how to use the scheduling tool for your situation.

If you are scheduled for a shift on SLING, you will be expected to be available. If you are unavailable for your scheduled shift, let your agency case manager or Patrick Sitter ([patsitter@nd.gov](mailto:patsitter@nd.gov)) know as soon as you can.

## Voicemail

Every case worker should set up a voicemail recording.

- [Link](#) to set up flip phone.
- The voicemail recording should include your name and information for the hotline. Listed below is a potential voicemail script:

*"You have reached (insert name) with the North Dakota Department of Health Case Investigation Team. I am currently unable to answer your call. Please leave your name and number and I will get back to you as soon as I can. If you need an immediate help, please call the North Dakota Department of Health Hotline at 1-866-207-2880. Hotline workers will be available for questions from 8 am to 5 pm Monday through Saturday. Thank you!"*

## Staffing

### Hotline Operator

The role of the Case Investigation & Contact Tracing Hotline Worker includes:

- Answering questions from cases and contacts regarding questions about their isolation/quarantine periods based on the information recorded in Dynamics.
- Providing cases and contacts letters per their request based on their monitoring periods and status.
  - These letters should be uploaded into the timeline in Dynamics and the case worker and case manager originally assigned should be CC'd on the email containing the letter.
- **The Hotline Operator should attempt to complete the Vaccinations Section with a case who calls the hotline. If the case reports having received any COVID-19 vaccinations outside of ND or at the VA, with the National Guard, or on a military the Hotline Operator should request a copy of the case's vaccination record be sent to [brittanyhanson@nd.gov](mailto:brittanyhanson@nd.gov) (see [Vaccinations](#))**
- Answer general questions about COVID-19.

**Hotline number: 1-866-207-2880**

**Hours: Monday-Friday 8 am-5pm**

*\*Holiday hours TBD.*

### Other Roles

**Case Managers:** responsible for the management and assignment of case workers in Dynamics. Case Managers are available to provide technical assistance and guidance on the case investigation process to case workers.

**Case Workers/Investigators:** responsible for the follow-up of assigned cases.

## Pre-case Interview

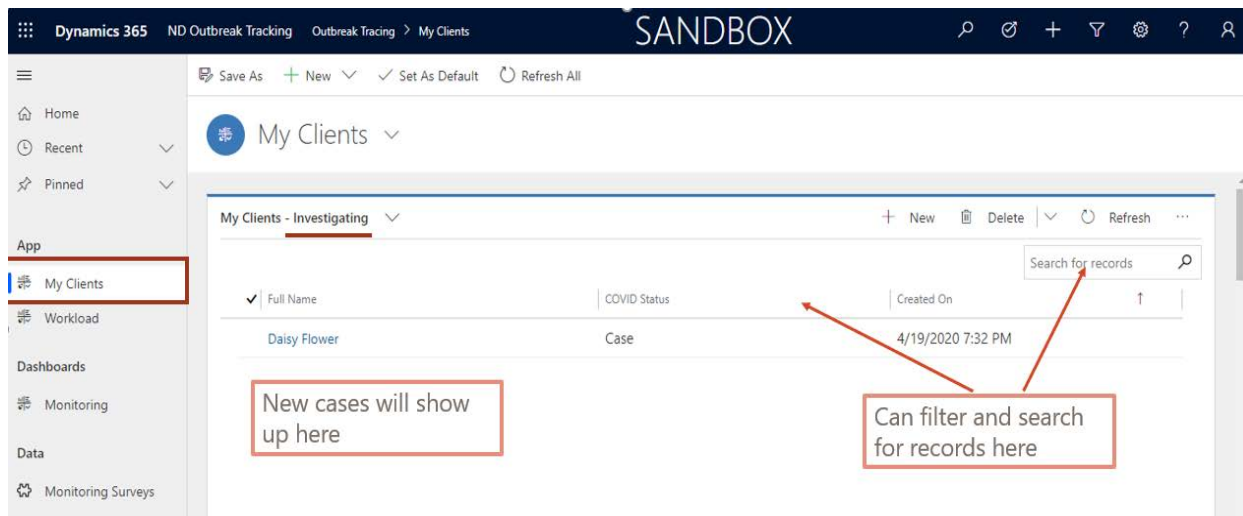
### COVID Statuses and Case Subcategories

Only **CASES** have a subcategory. Close Contacts will have a COVID status of Contact. Case subcategory will be completed when the case comes from Maven. Therefore, case workers will not need to determine if a case is PCR, Antigen, or Reinfection.

COVID STATUS	CASE SUBCATEGORIES	DESCRIPTION
Case	PCR Antigen Contact Reinfection	-Positive by PCR Test -Positive by Rapid Antigen Test -Close contact that develops symptoms -Clinical return of symptoms compatible with COVID-19, accompanied by a positive test more than 90 Days after the onset of the primary infection
Contact	Contact	Close Contact, Household Contacts, etc.
Not a Case		Does not have a positive PCR or Antigen test result
Out of Jurisdiction		Not a resident of North Dakota

## How to Receive a Case to Investigate

It is expected that during every shift you will utilize the **Case Workers to Take Cases** message string in SLING to alert case managers that you are available to take cases.



- Click on the client record to view the information that has been reported about the patient from the disease report.
- Verify that you are moving into the investigation phase by moving the bullseye from **Creation** to **Investigation**.

## Data Capture Through Surveys

Initial surveys will be used to capture demographic and other health and medical related information from cases. Case records will be auto populated or updated within Dynamics to reflect information gathered when cases fill out their surveys on the portal. Cases will also have an opportunity to complete this information on their daily monitoring surveys as well. **Case workers will still need to verify the information but may not have to manually do data entry with the above-mentioned data collections fields.**

**NOTE: Cases who complete their initial survey and report symptoms before the case worker interviews them will automatically have their symptom status set to pre-symptomatic and the onset date as the date they completed the survey. This is due to the symptom accumulation functionality. You MUST verify and update this information.**

## Case Interview

Ensure that you are in a space where you can have about an hour of uninterrupted time to conduct a case investigation. You will be contacting cases to collect information regarding general demographics, living setting, symptoms, clinical history, and occupational history.

Note: If the case is 17 years of age or younger, talk to the parent. Add the name of the parent to the timeline notes. Adolescent cases should also be interviewed to obtain additional information that the parent may not know. Case workers should not discuss cases who are 18 or older with their parents.

Sample scripts to utilize when contacting a case could include:

*"Hello, may I please speak to Sam? My name is John, and I am part of the North Dakota Department of Health COVID-19 Case Investigation Team. I have some questions for you about your recent diagnosis with COVID, is now a good time?"*

If you reach the voicemail of the case, you can leave them a voice message. Here is a sample voice message you can use:

*"Hello, I am John, and I am a part of the North Dakota Department of Health. I am trying to reach Sam regarding a recent health diagnosis. Please give me a call back at 701-xxx-xxxx at your earliest convenience or you can reach the North Dakota Department of Health Hotline at 1-866-207-2880. They will be available from 8 am to 5 pm Monday through Saturday. Thank you!"*

You can also use the same script to send them a text message instead.

Refer to the **Case Investigator's Guide for COVID-19** for more sample language to utilize throughout the investigation.

**When completing the case interview, fill out all the critical fields [see sample below]. Critical fields will be marked with blue icons.**

Onset Date  9/29/2020

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## Case Prioritization

Due to the dramatic volume of omicron cases, the NDDoH is now prioritizing case investigations for the following individuals:

- Ages 5-24 and 65+
- Long term care healthcare workers
- Congregate living setting workers/residents
- Individuals who work in a k-12/UND

\*If time allows, case managers will assign out nonpriority cases.

Case Managers will assign individuals who do not meet case priority to the "CM Overflow" group.

## General Tab

Start by verifying the demographic information with the client. This is an important step because a person's general and demographic information is imported from "Doh COVID- Test Registration" into Dynamics.

General Case Report Contacts Interactions Contact Report Monitoring Surveys System Information Related

### Demographic Information

**Essential demographic information to gather includes: First Name, Last Name, Suffix (if applicable), Birthday, Gender, Race, Tribal Affiliation (if applicable), Ethnicity, Email, Phone Number, and Living Setting.**

- If demographic information is incorrect in Dynamics (e.g., a case name has been misspelled or the date of birth is incorrect) the caseworker should fix the mistake in Dynamics. They should then notify their *case manager* of the error. Case managers need to fix this information in MAVEN as well to avoid additional problems.
- If the case does not have an email address, change the "Preferred Contact Method" to "Phone Call". This will override the "hard stop" function built into Dynamics and this will allow you to move a case into monitoring without an email address.
- Ensure that the case's email address is correct. This field is essential for a case to receive their monitoring surveys.

### Address

Essential residence information to gather: County, Street, City, Zip, and Case self-isolating at this address.

- Verify that the county of residence is correct. Sometimes the county that comes from Maven may not be correct. Verification is especially important when the case lives close to county borders or has a PO Box address. You want the county where the individual physically lives. If the individual lives in a neighboring county other than the usual City-County assignment, select "Yes" to the question "Lives in Neighboring ND County". By default, this checkbox will be unchecked.

### Living Setting

If the case is a resident of a congregate setting, fill out a [congregate living interaction](#) and follow the guidance in the *Special Circumstances* section. Complete all fields that are shown when an individual resides in a congregate setting (resident of hospice, DNR).

- Congregate Living (shared housing facilities): includes long-term care facilities, group homes, jails/prisons, college dorms, fraternities, shelters, etc. Congregate living does not include apartment buildings or hotels.

### Timeline

The timeline is a tool for case workers and case managers to provide important information and updates pertaining to the case investigation. **One can assume if it is not in the timeline, it did not happen.** When

completing a case investigation, contact investigation, or making attempts to reach a case or contact, provide notes in the timeline to offer insight about the investigation, as follows:

Items that should **always** be noted in the timeline:

- **Call attempt-** Include date, time, and if a voicemail and/or text was sent. At this time only **one** call should be made.
- **Letters sent to case,** only if requested.
- **Hospital or clinic encounters-** If case is determined to be hospitalized or seen in the ER before sending to the case worker, the case manager will enter this information in the timeline
- **COVID-19 Vaccination Notes**
  - Document what information you were able to collect from the case about their COVID-19 vaccination status
  - Document if you sent a request to case manager or Breakthrough Team Lead and why
  - Document specific information obtained, such as:
    - **Vaccinated Out of State = Yes**
      - Document the **Name of Clinic/Pharmacy and City/State where COVID-19 Vaccination(s) were received**
      - Document **request for copy of the Case's COVID-19 Vaccination Record**
    - **Vaccinated at the VA, with the National Guard, or on a Military Base = Yes**
      - Document the **Name of Clinic/Pharmacy and City/State where COVID-19 Vaccination(s) were received**
      - Document **request for copy of the Case's COVID-19 Vaccination Record**

Important information to add (if applicable):

- **Case is a minor-** Report the name and telephone number of the parent who provided information.
- **Uncooperative case** - Enter a note in the timeline if the case or contact is uncooperative or unwilling to provide certain information
- **Language barrier-** If the case or contact speaks a different language, identify the language they speak.
- **Interactions-** If further information is provided about a specific interaction, enter a note in the timeline with an explanation
- **Case lost/doesn't have access to their COVID-19 - Vaccination Record/Card**
  - Encourage case to explore ALL means of obtaining their COVID-19 Vaccination Record after the interview.
    - Does Case recall where they received their COVID-19 Vaccination(s)?
      - Case can call the clinic/pharmacy, employee or occupational health contact, register for their medical provider's digital medical record (i.e., MyChart App., ect.), Pharmacy App. or online portal, MyIR Mobile, picture of their COVID-19 Vaccination Card on their phone, or ask a friend/family member, co-worker, supervisor or acquaintance who is not in isolation or quarantine to retrieve their COVID-19 Vaccination Card/Record and send it to them, read the info. off to them or send it in for them.
- **Vaccination Record Look-up Requests-** Document requests for assistance with Vaccination Record Look-up.



## Vaccinations

**At this time, we are asking all cases if they have received COVID-19 vaccine. This includes one and two dose primary series as well as additional and booster doses.**

**Vaccinated for COVID-19: Ask: "Have you received any COVID-19 Vaccinations?"**

- **Yes:** Case reported receiving at least one dose of **any** COVID-19 vaccine
  - Or**
    - Case's COVID-19 Vaccination Record reflects having received at least one dose of **any** COVID-19 vaccine (also seen as Vaccinations Section completed)
- **No:** Case reported not receiving at least one dose of any COVID-19 vaccine
  - Or**
    - No Record of COVID-19 Vaccination(s) were found in NDIIIS or furnished by Case; CM/BTT has determined that the Case is not Vaccinated for COVID-19
      - If a Case who is marked as *Vaccinated for COVID-19 = No* and *Not Vaccinated* is later interviewed, **CW/Hotline should complete Vaccinations Section in full.** If Case is unable to provide **all** the Vaccination Section data or if **Vaccinated Out of State** or with the *VA, National Guard, or on a Military Base*. Case worker/Hotline should **request/obtain a copy of the Case's COVID-19 Vaccination Record.** Case worker/Hotline or Case can send the Record to [brittanyhanson@nd.gov](mailto:brittanyhanson@nd.gov).
- **Unknown:** Case's vaccination status could not be determined:
  - Case was not interviewed
    - Unable to Interview (Refused, Unable to Contact, Incapacitated, ect.)
    - Non-Priority Case – Will not be interviewed
  - AND**
    - There are **no** notes in the Timeline or Description Box containing the case's COVID-19 Vaccination Record
    - Vaccinations Section has not been completed, in part or in full
  - Mark *Unknown* if unable to contact, after the first attempt.
    - There are **no** notes in the Timeline or Description Box containing the case's COVID-19 Vaccination Record *and* Vaccinations Section has not been completed, in part or in full
      1. Send request to CM for assistance in looking-up Case's COVID-19 Vaccination Record
      2. Document Request in Timeline Notes
      3. Mark Case as Unable to Interview and why

**If Vaccinated for COVID-19 = Yes – Complete the following Fields:**

**Date of First Vaccination:** The date the individual received their first dose

**Lot Number of First Vaccination:** The lot number of their first dose (may be located on their COVID-19 Vaccination Record/Card or in a note in the Timeline or the Description Box).

- If the Case is unable to provide a lot number or no lot number is listed on the Case's Record/Card, indicate so in a Timeline Note and send an email to case manager for assistance with looking up the Case's COVID-19 Vaccination Record.
  - If the case manager finds the Case's COVID-19 Vaccination Record and there is no lot number listed, case worker or case manager may enter the NDIIS Vaccination Provider as the lot number: i.e., **1234 - ABC Pharmacy #4321**
  - Please do not enter Unknown, None, Not Listed, or other note.

**Date of Second Vaccination:** The date the individual received their second dose, if applicable

- Please do not enter the anticipated date of the Second Vaccination dose
- **Johnson & Johnson will not have second doses – the Date of Second Vaccination should be left blank for Johnson & Johnson primary series.**
- Enter an additional dose received after the primary series dose of Johnson & Johnson as an Additional Dose in the Additional Dose fields.

**Lot Number of Second Vaccination:** The lot number of their second dose, if applicable (may be located on their COVID-19 Vaccination Record/Card or in a note in the Timeline or the Description Box).

- If the Case is unable to provide a lot number or no lot number is listed on the Case's Record/Card, indicate so in a Timeline Note and send an email to case manager for assistance with looking up the Case's COVID-19 Vaccination Record.
  - If the case manager finds the Case's COVID-19 Vaccination Record and there is no lot number listed, case worker or case manager may enter the NDIIS Vaccination Provider as the lot number: i.e., **1234 - ABC Pharmacy #4321**
  - Please do not enter Unknown, None, Not Listed, or other note.

**Date of Additional Vaccination:** The date the individual received their additional dose, if applicable (this includes additional doses for immunocompromised individuals and booster doses)

- Please do not enter the anticipated date of Additional Vaccination dose

**Lot Number of Additional Vaccination:** the lot number of their second dose, if applicable (may be located on their COVID-19 Vaccination Record/Card or in a note in the Timeline or the Description Box).

- If the Case is unable to provide a lot number or no lot number is listed on the Case's Record/Card, indicate so in a Timeline Note and send an email to case manager for assistance with looking up the Case's COVID-19 Vaccination Record.
- If the case manager finds the Case's COVID-19 Vaccination Record and there is no lot number listed, case worker or case manager may enter the NDIIS Vaccination Provider as the lot number – for Additional Doses, please document the **Brand of the Additional Dose in addition to the lot number: i.e., 1234 - ABC Pharmacy #4321 – Pfizer**
  - Please do not enter Unknown, None, Not Listed, or other note.

**Vaccine Brand:** Select the brand of the first or first and second doses received representing the primary vaccination series from the dropdown menu.

- Moderna
- Pfizer
- AstraZeneca
- Johnson & Johnson
- Send an email to [brittanyhanson@nd.gov](mailto:brittanyhanson@nd.gov)
  - Enter a Timeline Note with the information received and any email notification sent.
  - If the Vaccine Brand received is not listed

- If the Case received mixed Vaccine Brands in their primary series
- Case's COVID-19 Vaccination Record/Card does not reflect a Vaccine Brand

**Vaccinated Out of State: Ask " Did you receive your COVID-19 vaccination(s) in North Dakota?**

- **If the Case received any of their COVID-19 vaccination(s) outside of North Dakota, case worker should request/obtain a copy of their COVID-19 Vaccination Record.**
- By default, this question is set to No. Be sure to change the status to reflect where the Case reports they were vaccinated or where the Case's COVID-19 Vaccination Record reflects they were vaccinated:
  - **Yes:** Case received at least one dose of COVID-19 Vaccine outside of North Dakota
    - **If Vaccinated Out of State = Yes:**
      1. Request a copy of case's COVID-19 Vaccination Record
      2. Enter a Timeline Note with any details Case provides about their vaccination status including the **Name of the Clinic/Pharmacy and City/State where vaccinations were received**
      3. Send the copy of Case's COVID-19 Vaccination Record to [brittanyhanson@nd.gov](mailto:brittanyhanson@nd.gov)
  - **Unknown:** Case's vaccination status could not be determined:
    - Case was not interviewed
      1. Unable to Interview (Refused, Unable to Contact, Incapacitated, ect.)
      2. Non-Priority Case – Will not be interviewed
    - AND**
      3. There are **no** notes in the Timeline or Description Box containing the case's COVID-19 Vaccination Record
      4. Vaccinations Section has not been completed, in part or in full
    - Mark *Unknown* if Vaccinated for COVID-19 = Unknown

**Vaccination Provider(s) and Verified Vaccination Status:** The Breakthrough Team will complete these fields

**COVID-19 Vaccination Record Issues and Breakthrough Case Notification:**

- Case workers should email or use chat to request assistance with COVID-19 Vaccination Record look-up.
- For Case's that report being Fully Vaccinated/Breakthrough Cases or are suspected to be, but meet the criteria below, Case workers should email their request to the Regional Case Manager Team at the same time/in the same email, they send notice to the Breakthrough Team Lead – they should not wait for a Case Manager to reply before sending notice of the Breakthrough Case.
- Any Case with an odd or concerning COVID-19 Vaccination Record can be sent to [brittanyhanson@nd.gov](mailto:brittanyhanson@nd.gov) as well.

If a **Breakthrough or Breakthrough + Booster Case** occurs or is suspected, and **the following criteria is met**, the Case should be emailed to [brittanyhanson@nd.gov](mailto:brittanyhanson@nd.gov)

- Vaccinated Out of State = Yes
  - Includes Vaccinated Out Country
    - CW should request copy of Case's Vaccination Record at the time of investigation
- Vaccine Brand Not Listed

- Vaccinated with the VA, National Guard, or on a Military Base
  - CW should request copy of Case's Vaccination Record at the time of investigation
- Something is **odd** about Vaccine Info. Provided by the Case or as listed in NDIIS
  - Mixed Brands in the Primary Series
  - Interval between doses is off (dates are too close together or very spaced apart as if a dose was missing)
  - Etc., etc., etc..
- Any suspect Breakthrough or Breakthrough + Booster Case that was unable to provide **all** of the information needed to complete the Vaccinations Section
 

**AND**
- A CM has not already provided the Case's COVID-19 Vaccination Record in the Timeline Notes, Description Box or Vaccination Section
 

**AND**
- The Case **DOES NOT provide AT LEAST** the following:
  - **Exact Date(s)**
  - **Vaccine Brand**
  - **Name of the Clinic/Pharmacy and City/State where vaccinations were received (enter in a Timeline Note and include in email)**
    - CC Regional CM Group as a request that they look-up the case's vaccination record – **Do Not wait for a case manager to reply**, notice of the breakthrough case must be timely
  - **Vaccinated for COVID-19 = Yes** <The Case indicated they had received a COVID-19 vaccination so Vaccinated for COVID-19 = Yes

**If any of the above criteria is met, notice of the breakthrough case should be sent as follows:**

Send an email to [brittanyhanson@nd.gov](mailto:brittanyhanson@nd.gov) and **CC Regional Case Manager Team**  
 Enter **Case ID** in the **Subject line**.

Include **any other relevant information** regarding the case's vaccination status in the **body of the email**.

**To:** [brittanyhanson@nd.gov](mailto:brittanyhanson@nd.gov)  
**CC:** Regional CM Team  
**Subject:** C-12345678 (Dynamics case number)

Breakthrough Case – Vaccinated at the VA in Fargo. Case will call tomorrow to get Vaccination details and will send to CW. Case recalls receiving Moderna in March of 2021.

### Vaccinations Examples

Vaccinated for COVID-19  Yes  No  Unknown ×

Date of First Vaccination 6/15/2021

Lot Number of First Vaccination 1822811

Date of Additional Vaccination ---

Lot Number of Additional Vaccination ---

Vaccine Brand Johnson & Johnson

Vaccinated out of State  Yes  No  Unknown ×

Vaccination Provider(s) 9876 - XYZ HEALTH UNIT

Verified Vaccination Status Breakthrough

Vaccinations

Vaccinated for COVID-19  Yes  No  Unknown ×

Date of First Vaccination 6/15/2021

Lot Number of First Vaccination 1822811

Date of Additional Vaccination 10/26/2021

Lot Number of Additional Vaccination 043A21A - Janssen

Vaccine Brand Johnson & Johnson

Vaccinated out of State  Yes  No  Unknown ×

Vaccination Provider(s) 9876 - XYZ HEALTH UNIT  
1234 - ABC PHARMACY #4321

Verified Vaccination Status Breakthrough + Booster

Vaccinations

Vaccinated for COVID-19  Yes  No  Unknown ×

Date of First Vaccination 6/15/2021

Lot Number of First Vaccination 5001 - MINNESOTA STATE IIS

Date of Second Vaccination ---

Lot Number of Second Vaccination ---

Date of Additional Vaccination ---

Lot Number of Additional Vaccination ---

Vaccine Brand Moderna

Vaccinated out of State  Yes  No  Unknown ×

Vaccination Provider(s) 5001 - MINNESOTA STATE IIS

Verified Vaccination Status Partially Vaccinated

Vaccinations

Vaccinated for COVID-19  Yes  No  Unknown

Date of First Vaccination 4/7/2021

Lot Number of First Vaccination ER1234

Date of Second Vaccination 4/29/2021

Lot Number of Second Vaccination EW4321

Date of Additional Vaccination ---

Lot Number of Additional Vaccination ---

Vaccine Brand Pfizer

Vaccinated out of State  Yes  No  Unknown

Vaccination Provider(s) 1234 - XYZ MEDICAL CLINIC EAST GF  
1234 - XYZ MEDICAL CLINIC NORTH

Verified Vaccination Status Partially Vaccinated

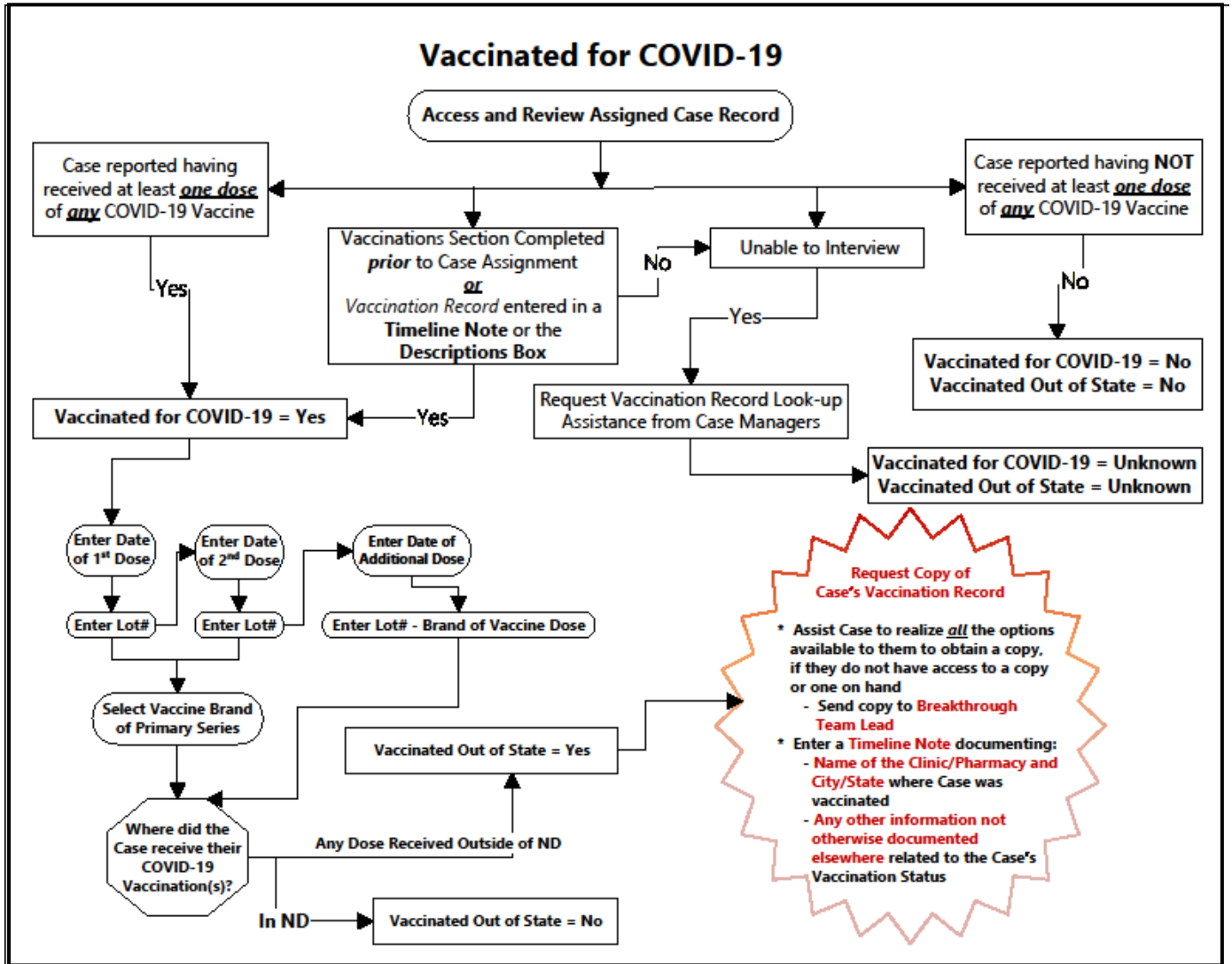
Vaccinations	
Vaccinated for COVID-19	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown <span>✕</span>
Date of First Vaccination	2/2/2021
Lot Number of First Vaccination	ER1234
Date of Second Vaccination	2/23/2021
Lot Number of Second Vaccination	EW4321
Date of Additional Vaccination	---
Lot Number of Additional Vaccination	---
Vaccine Brand	Pfizer
Vaccinated out of State	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown <span>✕</span>
Vaccination Provider(s)	1234 - XYZ MEDICAL CLINIC NORTH 1234 - XYZ MEDICAL CLINIC NORTH
Verified Vaccination Status	Breakthrough

Vaccinations	
Vaccinated for COVID-19	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown <span>✕</span>
Date of First Vaccination	6/15/2021
Lot Number of First Vaccination	5001 - MINNESOTA STATE IIS
Date of Second Vaccination	8/18/2022
Lot Number of Second Vaccination	003J21-2A
Date of Additional Vaccination	---
Lot Number of Additional Vaccination	---
Vaccine Brand	Moderna
Vaccinated out of State	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown <span>✕</span>
Vaccination Provider(s)	5001 - MINNESOTA STATE IIS 1234 - ABC CLINIC SOUTH
Verified Vaccination Status	Breakthrough

Vaccinations	
Vaccinated for COVID-19	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown <span>✕</span>
Date of First Vaccination	2/2/2021
Lot Number of First Vaccination	ER1234
Date of Second Vaccination	2/23/2021
Lot Number of Second Vaccination	EW4321
Date of Additional Vaccination	11/7/2022
Lot Number of Additional Vaccination	016J21-2A - Moderna
Vaccine Brand	Pfizer
Vaccinated out of State	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown <span>✕</span>
Vaccination Provider(s)	1234 - XYZ MEDICAL CLINIC NORTH 1234 - XYZ MEDICAL CLINIC NORTH 3421 - ABC PHARMACY #5678
Verified Vaccination Status	Breakthrough + Booster

Vaccinations	
Vaccinated for COVID-19	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown <span>✕</span>
Date of First Vaccination	2/2/2021
Lot Number of First Vaccination	016C21A
Date of Second Vaccination	3/2/2021
Lot Number of Second Vaccination	003J21-2A
Date of Additional Vaccination	11/30/2022
Lot Number of Additional Vaccination	5001 - MINNESOTA STATE IIS - Pfizer
Vaccine Brand	Moderna
Vaccinated out of State	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown <span>✕</span>
Vaccination Provider(s)	1234 - XYZ MEDICAL CLINIC NORTH 1234 - XYZ MEDICAL CLINIC NORTH 5001 - MINNESOTA STATE IIS
Verified Vaccination Status	Breakthrough + Booster

Vaccinated for COVID-19 Visual Flowchart



## Dynamics-Case Report Tab

### Critical and Time Sensitive Elements

The information in this section is essential to be completed. These are the fields that drive the data that is presented on the NDDoH website regarding case counts and hospitalized or recovered status.

- **Onset Date:** This is the first day the case had symptoms (even minor symptoms count). This field should only be filled out if the case is symptomatic.
  - [For more information go the Onset and Recovery section.](#)
- **Type of Spread:** Due to the current case load, this field can be left blank at this time.
- **Released from Isolation:** This will initially be marked **No** for most cases until they complete their monitoring period. In rare cases an individual could already meet the release from isolation criteria when a case investigation is conducted. Change this item to **YES** so that the case can be closed.
- **Discussed Treatment Options:** Every patient should be triaged for Monoclonal Antibody Treatment. Report N/A if you did not speak with the case directly.
  - If the case received monoclonal antibodies during their infectious period, create a general healthcare interaction and make a note in the case's timeline.
  - [Monoclonal Antibody Clinical Pathway](#)
    - Additional information on Monoclonal Antibody Treatment can be found at [COVID-19 Treatment | Department of Health \(nd.gov\)](#)
- **County:** This will be the county in which the case is reported ([see Determining Residency for more information](#)).
- **Hospitalized:** If the healthcare provider or the case indicate that they were admitted to the hospital for this illness, please report **Yes** in this field. If the case is hospitalized for reasons outside of their COVID-19 symptoms this should be marked **No**.
- **Complete the # of Household Contacts:** Due to the current case load, this field can be left blank at this time. **Vaccinations Section:** Every Case should be asked about their Vaccination Status.
  - Complete the Vaccinations Section with the information provided by the Case or by the Case's COVID-19 Vaccination Record from a Timeline Note or the Description Box.
    - Request assistance with COVID-19 Vaccination Record look-up if the Case does not provide all information needed. Do not leave the Vaccinations Section blank.



## School Investigation

The section is for the School Response Team and should not be filled out by the case worker.

### Onset and Recovery

- **Symptoms Present during illness:** This is a question for the case worker to answer after asking the case about any symptoms that they had leading up to their positive test result. If the case does not report any signs or symptoms of infection as listed in the Symptoms section, choose **Asymptomatic**. If the case indicates that they had any symptoms of infection, choose **Symptomatic**. If the case did not have symptoms when they were tested but develops symptoms by the time that you interview them or they report symptoms on subsequent monitoring surveys, choose **Pre-symptomatic**.
  - Symptom accumulation functionality: Dynamics will accumulate symptoms reported in surveys in the Case Report tab. If an asymptomatic case subsequently develops symptoms during their monitoring period, Dynamics will automatically change the case to Pre-symptomatic and fill in the onset date.
- **Onset Date:** This date is the earliest date the case can recall any symptoms of infection. This date is crucial to the calculation of the date for release from isolation, so it is very important to collect.
  - **If the case is asymptomatic, the onset date field should be left blank. The lab specimen date (in the Maven section) should be used to calculate their isolation and infectious period.** If a case is asymptomatic and goes on to develop symptoms, the onset date should be used to determine the date for release from isolation, not the lab specimen date.
  - If the case is **symptomatic**, the **onset date** should be used to calculate the case's infectious period, even if the symptoms were prior to the test date. Exceptions to this rule include:
    - If the case's symptom onset date is more than 14 days prior to their test date without a period of recovery.
    - If the case had symptoms, and a period of recovery, followed by another onset of symptoms, use the case's second onset date.

Onset and Recovery

Symptoms present during illness  Symptomatic  Asymptomatic  Presymptomatic  Unknown X

Onset Date 4/20/2020 If symptomatic must enter date. If asymptomatic, leave blank

Date of symptom resolution ---

Isolation status at time of interview ---

NOTE: Case Workers will need to verify the symptom onset date and identify whether the case is symptomatic, pre-symptomatic, or asymptomatic. **If “Pre-symptomatic” is selected before the case has been interviewed, the case worker MUST verify and update this information during the initial interview.**

## Outcome-Hospitalizations and Death

Outcome - If Yes answer to Was the patient/case hospitalized, create Interaction for each Hospitalization

Was the patient/case hospitalized? <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown	Did the patient receive mechanical ventilation (MV)/intubation? <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown	Did the patient die as a result of illness? <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown
Was the patient admitted to the intensive care unit (ICU)? <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown	Number of days with mechanical ventilation ---	Death date 10/6/2020 8:00 AM
Did the patient receive ECMO? <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown		Date of death is unknown <input type="radio"/> Yes

Death Status Change Date	10/20/2020 5:05 PM	Date and time automatically generated
Death Verified (NDDoH Central Office Staff Use Only)	<input checked="" type="checkbox"/>	Date Verified is only used by NDDoH office staff

### If the patient/case was hospitalized:

- **If the individual is hospitalized due to COVID-19**, choose **Yes**, and do the following:
  - Create an interaction for each place they were hospitalized. When you create the interaction, it will automatically notify the Hospital SME Team and the HAI team.
    - Document all the information you have about the status of the patient, where they were hospitalized, if they received intensive care and/or mechanical ventilation, the date of admission (8:00 am will auto populate, you do not need to change this) and the date of discharge (8:00 am will auto populate n for this field too)
  - Follow up with the case upon discharge.
  - **Email** your case manager if you are unable to interview the case due to them being hospitalized.
- **If the individual is hospitalized for reasons other than COVID-19** (routine pregnancy/delivery, broken bones, etc.), choose **No**, and do the following:
  - Make a note in the timeline.
  - Create an interaction. When you create the interaction, it will automatically notify the HAI team.
    - Interaction Type: Clinic/Other Medical
  - **If there is an emergency room visit not related to Covid-19**, create an interaction but make sure to choose Clinic/Other Healthcare as the visit type was not hospitalized for COVID-19.
 

**Please note:** ER visits are Clinic/Other Medical unless there for more than 24 hours; some facilities are holding patients in ER as they wait for beds to become available if hospitalizations are busy.

If you are unsure if the individual was hospitalized for COVID-19 or whether a hospitalization interaction should be created, email the Hospital SME Team ([dohcovidhospital@nd.gov](mailto:dohcovidhospital@nd.gov)) for assistance.

**Reminder:** document any ambulance rides (air or ground transport), clinic, and other medical visits.

**Did the patient die as a result of this illness:** this should be defaulted to **"No."**

- If you receive information that the case expired during their illness prior to recovery to baseline, you should do the following:
  - Select **"Yes"** to this question in Dynamics. An automatic date and time stamp will be recorded under the "Death Status Change Date" field.

- o Email your Case Manager and email Levi Schlosser ([lschlosser@nd.gov](mailto:lschlosser@nd.gov)) and email the hospital SME team if they were hospitalized.
- **Death Verification check box**- For use by NDDoH central staff only, **case workers should not complete.**

## Occupations

**Occupation Interactions should ONLY be created if the case works at one of the following:**

1. Healthcare Facility (Hospital/Clinic/ Nursing Home/ Assisted Living/ Basic Care)
2. Congregate Living Setting (Group Home/Corrections Facility/Homeless Shelter)
3. School/Daycare

Include any relevant information in the notes section of the interaction. Be sure to indicate if they worked while infectious.

If the case does not work in the settings listed above, do not create an occupation interaction, and leave the Retired, Unemployed, N/A question as **Yes**.

Send an email notification to the HAI team if the case is a resident/staff of a long-term care, assisted living or basic care.

## School

If a **student or staff/faculty at a K-12 schools is reported as positive for COVID-19**, please investigate the case as you would normally. This also applies to students who are reported as positive for Covid-19 who are homeschooled or engaged in virtual/distance learning.

### CASE REPORT:

School Staff/Faculty

- Select **"No"** to "Retired, Unemployed, N/A".
- Create an Occupation interaction

Child who attends K-12 School

- Select **"Yes"** to "Does the Person Attend School?"
- Create School Interaction (**even if the case did not participate while infectious**)

Email the K-12 School team at [dohcovid\\_school@nd.gov](mailto:dohcovid_school@nd.gov) if:

- A school aged case (5-18) was closed due to being unable to contact or parent/guardian being unwilling to provide information.
- A case's monitoring end date is extended.

\*Otherwise, you **do not** need to email the school team with a positive school aged case. Rather, ensure, your interaction is completed and provide any additional information into the Notes section of the interaction.

**If you need to reach the school response team by phone, please call (888) 788-2510.**

- This number is for the School COVID Coordinator (SCC) on call and should not be shared with parents or members of the public. It can however be shared with the school identified COVID-19 Point of Contact and Local Public Health Departments.

## Childcare Facilities

Due to the current case load, NDDoH case workers are not working up cases that are aged 0–4-year-old. Therefore, we are not completing case follow up or interactions for childcares. The childcare response team is available for questions.

**If you need to reach the childcare response team by phone, please call (701) 328-8625.**

- This number is for the Childcare SME on call and should not be shared with parents or members of the public. It can however be shared with childcares and local public health departments.

## Universities

**Case managers-** assign cases suspected to be college students due to testing location, age (18-24), or other factors to the designated investigation team. Select the university team name as the Case Worker field. The assigned case will then appear in the dashboard view of the university team, to be reassigned and investigated by a university team member.

- Assign suspected college student cases in the following counties to the **UND University Team:** (Mayville State), Richland (NDSCS), Burleigh (BSC), Stark (DSU), Ramsey (Lake Region), Ward (Minot), Bottineau (Dakota College), Williams (Williston State), and Grand Forks (UND). The UND University Team will also be investigating UND faculty and staff.
- Assign suspected college students in Cass County (NDSU) to the **NDSU University Team.**
- Assign suspected college students from Barnes County (Valley City State University) to **City/ Valley City Public Health.** If City/Valley Public Health is at capacity, cases can be assigned to the **UND University Team.**

Cases sent to the college teams will be cross-referenced using the NDUS student database—BEFORE initiating the interview. Once the college team confirms that the case is a college student, they will investigate the case. If the case is not a college student, the college team may send the case back to the DoH Case Manager depending on the college team’s capacity.

**DoH case workers-** if it is determined in an interview that the case attends college or university or is a faculty member, complete the following steps:

- Select “**Yes**” to “Does the person Attend College/University?”
- [Complete a university interaction.](#)
- Complete the “Student Athlete” field. If the case is a Student Athlete, complete an interaction.
- **If the case attends/works a public university:**
  - Email the UND Team at [undcovid@und.edu](mailto:undcovid@und.edu) to inform them you have interviewed a college/university student. Unless they work/attend NDSU, then email Sandy Nasr ([snasr@nd.gov](mailto:snasr@nd.gov))
  - Put a note in the Timeline.
- If the case attends a private university, **notify the appropriate Point of contact for the university (listed below).**

## Other University Testing Contacts

### ***Tribal***

#### **Cankdeska Cikana Community College**

Dr. Cynthia Lindquist  
president@littlehoop.edu  
701-776-4055  
Fort Totten, ND 58335

#### **Turtle Mountain Community College**

Dr. Donna Brown  
dbrown@tm.edu  
O: 701-477-7978

Belcourt, ND 58316

#### **Sitting Bull College**

Laurel Vermillion, PhD  
Laurel.vermillion@sittingbull.edu  
701-854-8014  
Fort Yates, ND

#### **Nueta Hidatsa Sahnish College**

Twyla Baker, Ph.D  
tbaker@nhsc.edu  
direct- 701-627-8095

#### **United Tribes Technical College**

Leander R. McDonald, PhD  
lmcdonald@uttc.edu  
O: 701-255-3285  
C. 701-955-2343

### ***Private***

#### **University of Mary**

Alex Cournoyer  
701-355-8026  
[stlife@umary.edu](mailto:stlife@umary.edu)

#### **University of Jamestown**

Dustin Jensen  
701-252-3467 ext 5442  
[Dustin.Jensen@uj.edu](mailto:Dustin.Jensen@uj.edu)  
Mobile 701-320-5719  
\*Main campus Jamestown, satellite Fargo

**University Team** - Once a case manager assigns a case to the university team, the case will be listed under the **"All Active- Cases to be Assigned"** view, under the university team's monitoring dashboard.

- The **"All Active- Cases to be Assigned"** view indicates all assigned cases to a university team.
- The "All Assigned by Location" view shows all College/University interactions the University team is responsible for by university location.

The university team member must first reassign a case to himself or herself as the case worker before proceeding with a case investigation. Once the case worker is reassigned, the case will drop from the university team's list of cases to be assigned.

## Health and Medical Information

Due to the high volume of cases, case workers do not need to ask about pre-existing health conditions at this time. Rather, this information will be completed by the Hospital Team if the case was hospitalized.

## Clinical History

Due to the current case load, these fields can be left blank at this time.

## Travel

Travel Cases: Cases who report any commercial travel while infectious with COVID-19, i.e., **2 days BEFORE** onset of symptoms (or, for asymptomatic cases, 2 days BEFORE lab specimen date) and continues until the case is released from isolation.

The following steps should be taken if travel case is identified:

- Notify the group travel email of any travel cases **that flew commercially while infectious**, email the Case ID to dohCOVIDtravel@nd.gov.

CDC travel guidance which NDDoH also recommends can be found at: <https://www.cdc.gov/coronavirus/2019-ncov/travelers/travel-planner/index.html>

## Care 19 Alert or Diary

Due to the current case load, these fields can be left blank at this time.

## Share Permissions

Given that we are not contact tracing at this time, leave these fields blank.

## Interactions

### How to create an interaction

In each section of the case report where an interaction may need to be created, the option to create a new interaction will appear:

Occupations

Retired, Unemployed, \*  
N/A **No**

**+ New Interaction** Add Existing Interaction

Group By: (no grouping) ▾

✓ Primary, Secondary, or Tertiary Occupation ↑ ▾ | Name ▾ | Location Type ▾ | Participated during Infectious Period ▾ | Location ▾ | Is this a health care setting? ▾

No data available.

Page 1

You may also create a new interaction by navigating the "Interaction" tab of the case files. Here you can view all the active interactions that have been created for this individual.

The screenshot shows the 'First Last Person' interface. At the top, there is a 'Tracing Process' bar with stages: Creation (28 Min), Investigation, Monitoring, and Closed. Below this is a navigation menu with 'Interactions' highlighted. A '+ New Interaction' button is visible in the top right of the table area. The table below has the following columns: Start Date, End Date, Type of Interaction, Person, COVID Status, Name, Location Type, and Location. The table contains three rows of data:

Start Date	End Date	Type of Interaction	Person	COVID Status	Name	Location Type	Location
---	---	College / University	First Last	---	NDSU Student	University	NDSU - North Dakota State I
5/19/2021 8:0...	5/19/2021 2:0...	Travel / Public Transporta...	First Last	---	Flight from Atlanta	Other	---
5/19/2021 8:0...	5/19/2021 2:0...	Clinic / Other Medical	First Last	---	Monoclonal Antibody Tre...	Hospital	TIOGA MEDICAL CENTER

## How to create a new account

If you are unable to find a particular location while entering an interaction, please contact the relevant SME team to have an account created.

## Other Notifications

please enter each as an Interaction.

- o Creating an interaction will notify the HAI team, therefore you do not need to email the HAI team.

**It is also important that you review the case's monitoring and isolation period with them.** For more information regarding this process, see the [Post Interview Discussion section](#).

**Interviewing Tips:** It is difficult to recall people you have been in contact with and places you have been in the past, it is helpful to use a process with cases to help them recall recent interactions. Instead of asking questions like "What did you do in the morning?", Try asking them to walk you through their day in sequential order. Doing so will help make remembering details easier. Begin with "What did you do after you got up this morning?" or "What did you do after work? Did you go anywhere?"

## Close and Household Contacts

Cases need to inform their household and close contacts of their exposure and will need to instruct them on how to properly quarantine or self-monitor. Therefore, a portion of every case investigation should be spent instructing the case on passing along accurate information to their close contacts.

## Criteria for Quarantine of Close and Household Contacts

**Review the quarantine guidance with the case so they are prepared to provide this guidance to their household and close contacts.**

**Close contacts:** should quarantine for **5 days** after their date of last exposure to a case followed by 5 days of strict mask use.

**Household contacts:** should quarantine during the case's isolation period (**5 days**) plus the recommended quarantine period for close contacts (**5 days**) followed by **5 days** of strict masking.

- In rare circumstances, if a household close contact can completely avoid contact with a case, then the contact may start their quarantine period immediately and not have to wait until the case completes the isolation period. The case and contact must have separate bathrooms and bedrooms and have no contact with one another. Case workers should not suggest this as an option, but if asked, it can be allowed. Case workers should ask probing questions about how contact with one another will be avoided and explain the consequences therein of not adhering to that protocol.

\* If a 5-day quarantine is not feasible, it is imperative than an exposed person wear a well-fitting mask at all times when around other for 10 days after an exposure.

### Exemptions to Quarantine:

- **Vaccinated Close Contacts** (in public settings) that have had an exposure to someone with COVID-19 (i.e., close contacts) **are NOT Required to QUARANTINE** if they meet the following criteria:
  - Have received a booster
  - Have been fully vaccinated and are not eligible for a booster
  - Are 5-17 years old and are fully vaccinated

For this exemption to apply, one must be asymptomatic. If one develops symptoms at any time, begin isolation, and stay at home. It is also recommended that one gets tested on day 5 following an exposure

Healthcare workers should consult with their occupational health administrator after an exposure. In general, healthcare workers can be exempt from quarantine if they are asymptomatic and are boosted. However, every health system has a different protocol and is largely dependent on staffing.

- **Previously positive within 90 days:** if **close or household contacts** are previous COVID-19 cases, they do not need to quarantine or be retested for up to 90 days from symptoms onset date for initial COVID-19 infection or lab specimen date, if asymptomatic in initial COVID-19 infection,



as long as they do not develop symptoms again. For more information, check the [Special Circumstances](#).

- **Masked contacts:** are exempt from quarantine if both the case and the close contact consistently and correctly wore a mask at all times during the **exposure and if the contact remains asymptomatic. It is recommended that the close contact get tested on day 5 following an exposure.** If the individual was wearing full personal protective equipment (PPE) at the time of exposure, it does not count as an exposure.
  - **Note: This guidance does not apply to household contacts or to health care settings.** Household contacts need to quarantine. Healthcare settings need to continue following their infections control policies and procedures.

\*It is recommended that anyone who is exempt from quarantine wear a well-fitted mask for 10 days following their last exposure.



[https://www.health.nd.gov/sites/www/files/documents/Files/MSS/coronavirus/Quarantine\\_and\\_Isolation-Flow\\_Charts.pdf](https://www.health.nd.gov/sites/www/files/documents/Files/MSS/coronavirus/Quarantine_and_Isolation-Flow_Charts.pdf)

## Post Interview Discussion

### Monitoring for Cases and Contacts

The last step in the interview is to discuss the importance of isolation with the case and how ongoing monitoring will occur. Monitoring the health of cases and contacts will be done daily using the [Monitoring Surveys in Dynamics](#). Cases should be encouraged to fill out emails daily, especially in the days leading up to their monitoring end date. The bullseye must remain on **Monitoring**, the monitoring status should be set to Monitoring, and the Preferred Method of Contact to Email to trigger email surveys to the cases or contacts. Do not offer text or telephone monitoring unless the individual does not have an email. Notify the case that they will receive a daily email survey. If they do not see the email survey in their inbox, instruct them to check their junk inbox or search for an email from the state of North Dakota - *State of ND, DoNotReply <donotreply@messages.nd.gov>*.

- Minimum recommended monitoring includes twice-daily temperature checks and a daily symptom log. Inform the case that you will communicate with them if they fail to complete their monitoring surveys. You should also inform the case that someone from the department will call them on the last day of their isolation to determine if they meet the criteria for release. Lastly, be sure to give the case your name and phone number in case he/she has any questions in the future.
- Case self-reporting symptoms using email surveys: case workers should check monitoring info daily in order to determine release from isolation dates and to update any other info if required.
- If case is unable to access email monitoring surveys, case workers can continue to communicate using traditional methods. Mark the preferred method of contact as phone or text in the [General Tab](#) section.
- Daily monitoring surveys will be **automatically created** each day in the [Monitoring Surveys](#) tab regardless of if the case/contact is receiving the surveys via email or not. You should not need to create a daily survey. If you do: select + New Monitoring Survey in the [Monitoring Surveys](#) tab. This will allow for the client to maintain compliance with monitoring.
- If an asymptomatic case becomes symptomatic during monitoring, case workers must go back into the case report and change it to pre-symptomatic, add an onset date and add symptom information for the case. Pre-symptomatic cases must isolate 10 days from onset of symptoms, not from positive test date. The isolation dates will need to change accordingly to reflect removal discontinuation of isolation for symptomatic cases.

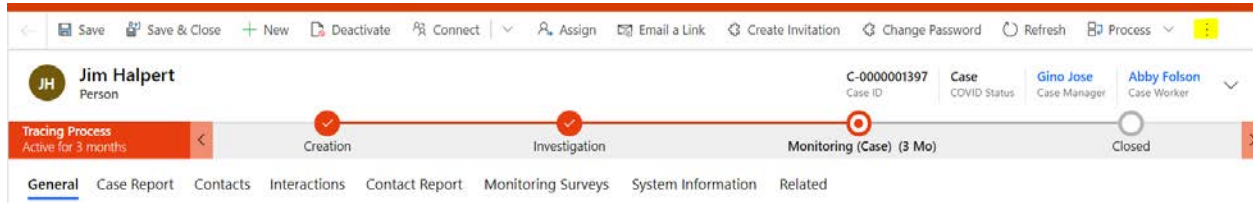
### Case Close Team

Cases are now closed automatically after 5 days have passed from their onset/lab date. Therefore, case workers **do not** need to manually close cases. If a case worker wants to monitor a case for longer than 5 days (i.e. if they have significant symptoms) you can put the MED as far out as 10 days. Furthermore, hospital cases, congregate living settings, and long-term care cases will be automatically set to 10 days.

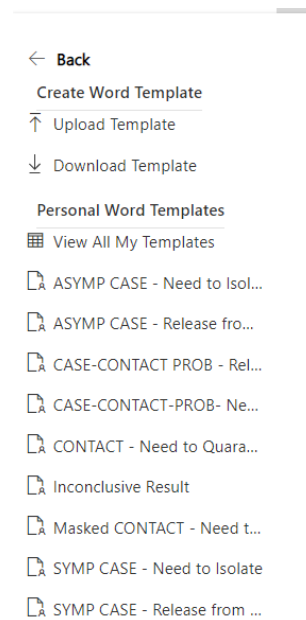
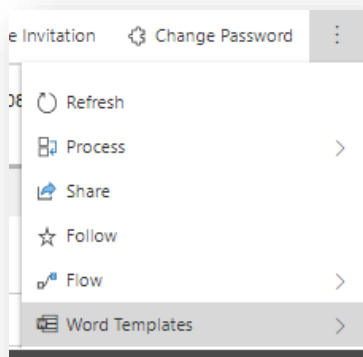
\*Note- we are no longer sending release from isolation letters and do not have a formal release from isolation phone call.

## Letters

Cases may receive a letter **if one is requested**. This letter will notify the case of their isolation dates, provide them with information regarding COVID-19, and give them instructions for notifying close contacts. To access letters in Dynamics, click on the three dots in the upper right-hand corner.



A drop-down menu will appear, select “Word Template” and then select the appropriate letter (“**ASYMP CASE- Need to Isolate**” or “**SYMP CASE Need to Isolate**”).



Download the appropriate letter, convert the document to a PDF, and email it to the case.

## Release from Isolation Criteria

### Symptomatic Cases

#### Symptom-based release strategy:

- At least **5 days** have passed *since symptoms first appeared* (onset) **AND**

- At least 24 hours have passed *since last fever* without the use of fever-reducing medications **AND**
- Symptoms (any COVID symptoms, not just respiratory) **are improving**.



**Test-based release strategy:** A symptom-based strategy is preferred due to people testing positive for prolonged periods of time, but the inability to culture virus. A test-based strategy should very rarely be used, if ever.

- Negative results of an FDA Emergency Use Authorized COVID-19 molecular assay for detection of SARS-CoV-2 RNA from at least two consecutive upper respiratory specimens collected at least 24 hours apart (total of two negative specimens).

## Asymptomatic Cases

Patients with laboratory-confirmed COVID-19 who have not had any symptoms, health care providers might use either:

**Time-based release strategy (preferred):** **At least 5 days** have passed since the date of their first positive COVID-19 diagnostic test, assuming they have not subsequently developed symptoms since their positive test. Because of the absence of symptoms, it is not possible to gauge where these individuals are in the course of their illness.

**Test-based Strategy:** Except for rare situations, this strategy is no longer recommended to determine when to allow individuals to return to work.

### Healthcare Personnel (HCP) & Congregate Living Setting Employees:

Case workers should advise healthcare personnel/congregate living setting employees to **consult with their occupational health representative regarding when they can return to work because return to work guidelines may vary**. More specifically, this means that a healthcare worker can be released from isolation to the general population (i.e., can go to the grocery store) but may not be able to be return to work.

- Occupational health representatives will use the following NDDoH guidance: [Health Care Worker Return to Work.pdf \(nd.gov\)](#)

## Special Circumstances

### Previously Positive Cases

- Persons previously diagnosed with COVID-19 who remain asymptomatic after recovery, retesting is not recommended within 3 months after the date of symptom onset for the initial COVID-19 infection. In addition, quarantine is not recommended in the event of close contact with an infected person.
- Persons who develop new symptoms consistent with COVID-19 during the 3 months after the date of initial symptom onset, if an alternative etiology cannot be identified by a provider, then the person may warrant retesting; consultation with infectious disease or infection control expert is recommended.

### Out of Jurisdiction (OOJ) Cases

All OOJs will be sent to the state that they report living in when they are tested.

### Cases That Leave ND During Their Isolation Period Against Public Health Advice

If there is a case that leaves North Dakota to return to their other residency (e.g., oil-field worker leaves ND to TX) during their isolation period, the case should be closed in Dynamics. Mark the case as Monitoring Ended, release them from isolation and enter the date they leave ND as the isolation end date. In the General Tab indicate that the case is not Maintaining Isolation.

If a case chooses to fly while in their isolation period:

- They need to be made aware that non-compliance will get them placed on the no-fly list.

- If non-compliant, notify your case managers and please email Robert Peters at [rpeters@nd.gov](mailto:rpeters@nd.gov) and he will add them to the DGMQ no-fly list.

The screenshot shows a 'Monitoring Details' form with the following fields:

- Monitoring Status: Monitoring
- Compliance: (locked icon) Compliance ---
- Maintaining Isolation: No (circled in red)
- Symptomatic: ---
- Last Response Received: ---
- Preferred Contact Method: Automated Email

## Non-compliant cases

**Cases that are unable to be reached-** Attempt to call the case **one time**, documenting the attempt in the timeline. If you do not hear back from the case by the end of your shift, close them out.

## Variants

The North Dakota Department of Health is conducting sequencing on COVID-19 specimens using randomized and targeted sampling methodology. **Sequencing results are for surveillance purposes only and are not reported to the provider or the patient.** CDC and private labs are also performing sequencing according to their own criteria.

### Vaccine Effectiveness Against COVID-19 Variants:

Scientists are working to determine the effectiveness of the available COVID-19 vaccines against COVID-19 variant strains. Vaccine effectiveness varies depending on the strain.

### Variant of Interest, Concern, or High Consequence

A variant of interest has been suspected of being more infectious and an increased threat to our population. Many attributes can cause a variant to become a variant of interest including specific mutation types and predicted ability of the virus to transmit within a population.

Variants of interest can become variants of concern when there is evidence of increased disease severity, transmissibility, or other concerning attributes.

<i>Variant Type</i>	<i>WHO Label</i>	<i>Country First Identified</i>	<i>Attributes</i>
B.1.617.2 and AY lineages	Delta	India	-Increased transmissibility -Reduction in neutralization by post vaccination sera
B.1.1.529 and BA lineages	Omicron	South Africa	-Potential increased transmissibility

			-Potential reduction in neutralization by post vaccination sera
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Variants of concern can become a variant of high consequence when there is clear evidence of demonstrated failure in use of preventative measures such as vaccines, antiviral medications, and monoclonal antibody therapy.

**Currently there are no variants that have risen to the level of Variant of High Consequence.**

### Long Term Care/Basic Care/Assisted Living

Long term care (LTC) facilities have large groups of vulnerable individuals housed together. This makes follow up with any case (resident or worker) in these facilities extremely important. A group of facility coaches is in place to lead these investigations within the facility. Case workers and case managers still play an important role in this process. The duties of the involved individuals are explained below:

#### Case Manager:

- Receive results from lab.
- Assign case to case worker.

Create an interaction and notify the HAI COVID Team ([dohcovidhai@nd.gov](mailto:dohcovidhai@nd.gov)) of location worked, onset of symptoms (if any) and last day of work at each facility. The HAI team will work with the facility on assessing level of exposure to their coworkers and residents.

#### Case Worker:

- Conduct *initial interview* with positive HCW to work on contacts **outside** of work setting- Follow the positive HCW as a confirmed case.
- Ask where they work and notify the *HAI team* (if your case manager hasn't) of those locations, onset of symptoms if any and last days of work for each facility the HCW works at. The HAI team will work with the facility on assessing level of exposure to their coworkers and residents.

#### HAI COVID Team:

- Receive results from lab.
- Notify facility of positive resident or HCW cases and verify resident(s) is in droplet precautions and/or staff is furloughed.
- Email key staff with summary of positives broken out by residents/HCWs at the end of the day.
- Email summary with recommendations to [dohcovidhai@nd.gov](mailto:dohcovidhai@nd.gov) and case manager.
- Ongoing follow-up and communications with facility as needed and to notify of additional cases making sure ability to continue to cohort and dedicate staff as well as PPE/staffing needs.
- Calls from the public regarding family or loved ones in LTC should be send to the following:
  - Concerns about Quality of Care should go to Health Facilities at (701)-328-2352

- Questions or concerns about visitor restrictions, staffing, or resident transfer should go to the VP3 State Regional Coordinators during normal business hours at the number or email provided below:
  - Rosanne Schmidt – (701) 328-8234 or [rosschmidt@nd.gov](mailto:rosschmidt@nd.gov)
  - Seth Fisher – (701) 328-8232 or [sefisher@nd.gov](mailto:sefisher@nd.gov)
  - Jan Kamphuis – (701) 328-8239 or [jkamphuis@nd.gov](mailto:jkamphuis@nd.gov)
- If there are specific infection prevention questions email the question and call back name and number to [dohcovidhai@nd.gov](mailto:dohcovidhai@nd.gov) – someone from the HAI COVID team will pick up the question.

## Group Homes

### Case Manager:

- Receive results from lab.
- Assign case to case worker.
- Create an interaction, this will notify the HAI Team.

If known, include the following: onset of symptoms, if any, and last day of work if applicable.

### Case Worker:

- Conduct initial interview with positive staff.
- Follow the positive staff as a confirmed case.
- Create an interaction (if your case manager hasn't), this will notify the HAI Team.

If known, include the onset of symptoms, if any, and last days of work for each facility if applicable.

### HAI COVID TEAM

- Notify group home of positive resident or staff.
- Work with facility on testing planning.
- Make sure facility has appropriate PPE.
- Review processes in place to prevent transmission.

## Homeless Individuals

### Case Manager:

- Receive results from lab.
- Assign case to case worker.
- Notify Robert Peters ([rpeters@nd.gov](mailto:rpeters@nd.gov)) of location, onset of symptoms if any and last day of work if applicable.
- Link each case in Maven to the exposure site.
- Work with Human Service Zone contact to refer individual in for temporary housing.

### Case Worker:

- Conduct initial interview with positive HCW to work on contacts outside of work setting. Follow the positive HCW as a confirmed case.
- Notify Robert Peters ([rpeters@nd.gov](mailto:rpeters@nd.gov)) of group home location (if your case manager hasn't), onset of symptoms if any and last days of work for each facility if applicable.

### Robert Peters:

- Notify shelter of positive resident or staff.
- Work with facility on testing planning.



- Make sure facility has appropriate PPE.

## Correctional Facilities

Case managers or case workers should create an interaction of any cases in a correctional facility, this will notify the HAI COVID Team ([dohcovidhai@nd.gov](mailto:dohcovidhai@nd.gov)). *Case Managers should link these events to an exposure site in Maven following the guidance.*

## Active Military

If the case is active military notify the *case manager* immediately. The case manager will notify the appropriate U.S. Air Force Base personnel.

## Non-English-Speaking Cases

If the case does not speak English, the use of a language interpretive service, Language Line, is available.

### Access to the interpretive line:

**Step 1:** Call 1 888-338-7394

**Step 2:** Enter Account Number **28201**, followed by # sign

**Step 3:** Select 1 to be connected directly to your Spanish interpreter, or  
Select 2 to be connected directly to your Russian Interpreter, or  
Select 3 to be connected directly to your Vietnamese interpreter, or  
Select 4 to be connected directly to your Somali Interpreter, or  
Select 9 for all other languages.

- **If you require a 3<sup>rd</sup> party call, press 9 to reach a Customer Service Representative**

**Step 4:** Enter Program ID (see below, select appropriate program), followed # sign.

- **Program ID:**

- COVID-19 Hotline: 30101
- Disease Control Contact Tracing: 30103

## Public Assistance/Wrap-around Services

Cases and/or contacts may need assistance or wrap-around services during isolation and/or quarantine period. If a case or contact needs assistance, notify your case manager to reach out to the *local public health unit administrator* in that area. Information about services for homeless individuals can be found in the Special Circumstances section.

## At-home Self Covid-19 Testing

These tests are available by prescription or retail and online without a prescription. These tests can be either molecular (PCR) or antigen tests that detect current infection.

- Test results DO NOT need to be reported to the North Dakota Department of Health (NDDoH)

- The North Dakota Department of Health cannot validate results from home testing kits. If you need validated results or a letter stating you tested positive or negative, you will need to seek testing from your health care provider or from a state or local public health testing site.

If an individual tests positive on an at-home test they should follow the recommended isolation guidance and should not seek out additional testing due to the current availability of testing in the state.

For more information on home testing, please visit:

- [Home Testing or Self-Testing Guidance | Department of Health \(nd.gov\)](#)
- [Self-Testing | CDC](#)

## Discordant Results

A discordant result takes place when a PCR and an antigen test result do not have the same result. If the Antigen test is negative and the PCR is positive, the PCR test result should be used. If the antigen test is positive and the PCR is negative, case workers should notify the case manager region.

\*If there are further questions regarding discordant results, reach out to Brenton Nesemeier (bnesemeier@nd.gov) or Abby Folsom (afolsom@nd.gov).

### COVID Team Contact Information (Does Not Include Case Investigators)

<i>Employee Name</i>	<i>Telephone #</i>	<i>Email Address</i>	<i>Region/Location</i>	<i>Program/Role</i>
<b>COVID Program Manager</b>				
Folson, Abby	701-516-2850	afolson@nd.gov		COVID Program Manager
<b>COVID Administrative Staff</b>				
Brendel, Mary "Grace"	701-328-2283	mbrendel@nd.gov		Admin. Asst./Data Entry
Lafferty, Rene	NO PHONE	rlafferty@nd.gov		Data Entry Support
Markwed, Jen	701-328-2351	jennifermarkwed@nd.gov		Admin. Asst./Data Entry
Peterson, Ginny	701-328-2288	ginnypeterson@nd.gov		Data Entry Support
Sitter, Patrick	701-319-0903	patsitter@nd.gov		Workforce Resources Coord.
<b>Computer Info. Specialist</b>				
NDIT Service Now	701-328-4470	<a href="#">NDIT Service Portal</a>	NDIT	<a href="#">NDIT Service Portal</a>
<b>COVID Dynamics Coordinator</b>				
Fosu, John	701-955-2395	jfosu@nd.gov		COVID Dynamics Coord.
<b>COVID Vaccine Manager</b>				
Galbraith, Jenny	701-328-2335	jlgalbraith@nd.gov		COVID Vaccine Manager
<b>COVID Vaccine Coordinators</b>				
Bjugstad, Andrew	701-955-5140	abjugstad@nd.gov		COVID Vaccine Coordinator
Eberhardt, Michelle	701-595-1551	mieberhardt@nd.gov		COVID Vaccine Coord (PrepMod)
Schweitzer, Allison	701-955-5286	aschweitzer@nd.gov		COVID Vaccine Coordinator
Vetter, Kristin	701-955-5375	kristenvetter@nd.gov		COVID Vaccine Coordinator
<b>COVID Vaccine Data Epi</b>				
Patel, Neha	701-328-2401	nehapatel@nd.gov		COVID Vaccine Data Epi
<b>HAI (Healthcare Assoc. Inf.)</b>				
Salzer, Faye	701-333-8389	fsalzer@nd.gov		HAI/AR Activities & IP Coordinator
Appiah, Eric	701-425-8231	eappiah@nd.gov		HAI COVID IP Consultant
Cabahug, Carla	701-425-8835	ccabahug@nd.gov		HAI COVID IP Consultant
Glatt, Katelyn	701-425-6820	katelynglatt@nd.gov		HAI COVID IP Consultant
Griffith, Katherine "Shea"	701-214-7350	katgriffith@nd.gov		HAI COVID Nurse Consultant
Hanson, Brittany	701-425-7979	brittanyhanson@nd.gov		HAI Breakthrough Cases
Lennick, Nicole (Lead)	701-425-7798	nlennick@nd.gov		HAI COVID IP Consultant Lead

Messer, Morgan	701-425-6118	mmesser@nd.gov		HAI COVID IP Consultant
Sacayanan, Maria	701-934-0043	msacayanan@nd.gov		HAI COVID IP Consultant
Vonasek, Becky	701-450-8306	rvonasek@nd.gov		HAI COVID IP Consultant
Walters, Sherry	701-934-0199	sherrywalters@nd.gov		Lead Hospital SME/COVID IP
Wormsbecker, Candy	701-425-8658	candywormsbecker@nd.gov		HAI COVID IP Consultant
<b>HAI Data Surveillance</b>				
Chappell, Ronna	701-516-2439	rchappel@nd.gov		HAI Data Surveillance
Kruger, Amy	701-450-8372	amkruger@nd.gov		HAI Data Surveillance
McDonald, Molly	701-595-4057	mollymcdonald@nd.gov		HAI Data Surveillance
Rufsvold, Fallon	701-595-4474	frufsvold@nd.gov		HAI Data Surveillance
Somerville, Molly	701-989-5789	msomerville@nd.gov		HAI Data Surveillance
Thompson, Laurie	701-934-4559	lauthompson@nd.gov		HAI Data Surveillance
<b>SME's (Subject Matter Experts)</b>				
Fraser, Abbey (Lead)	701-202-5201	abbeyfraser@nd.gov		K-12 and Childcare SME Lead
Johnson, April (Lead)	701-425-6451	apriljohnson@nd.gov		Childcare SME
Reinarts, Angela	701-595-1182	areinarts@nd.gov		Childcare SME/HAI Data Flow
Cronquist, Elaine	701-498-0068	ecronquist@nd.gov		K12 Data Analyst
Beilke, Jenna (Lead)	701-955-4427	jbeilke@nd.gov		K12 Education SME
Billadeau, Brooke	701-498-0853	bbilladeau@nd.gov		K12 Education SME
Fisher, Valerie	701-955-8920	vfischer@nd.gov		K12 Education SME
Huber, Deb	701-955-8936	dhuber@nd.gov		K12 Education SME
Ivanov, Ruth	701-595-1592	rivanov@nd.gov		K12 Education SME
Mahlum, Sonja	701-955-8726	smahlum@nd.gov		K12 Education SME
Nygaard, Penny	701-955-8802	pnygaard@nd.gov		K12 Education SME
Roman, Ruth	701-214-8837	rroman@nd.gov		K12 Education SME
LaHaise, Mary	701-934-3060	mlahaise@nd.gov		Hospital SME
Walters, Sherry (Lead)	701-934-0199	sherrywalters@nd.gov		Hospital SME
Peters, Robert (Lead)	701-319-8876	rpeters@nd.gov		Travel SME/Homeless SME
Folson, Abby	701-516-2850	afolson@nd.gov		University SME
Erickstad, Sarah (Lead)	701-595-1682	sierickstad@nd.gov		Workplace SME
Weiss, Doris	701-450-8273	doweiss@nd.gov		Workplace SME
<b>COVID Case Managers</b>				
Anderson, Melissa	701-226-7138	melissa.anderson@nd.gov	Central Region	Case Manager

Ianello, Maggie	701-955-2551	mianello@nd.gov	Central Region	
Lembke, Kristina	701-516-7293	Klembke@nd.gov	North Central Region	Case Manager
Nelsen, Katelyn	701-516-2969	knelsen@nd.gov	North Central Region	Case Manager
Nordstrom, Jhoana	701-204-3724	jnordstrom@nd.gov	West Central Region	Case Manager
Wolford, Brianna	701-516-6873	bwolford@nd.gov	West Central Region	Case Manager
Havon, Amanda	701-319-0512	ahavon@nd.gov	Northeast Region	Case Manager
Reed, Jesslyn	701-204-3945	jesreed@nd.gov	Northeast Region	Case Manager
Reali, Christopher	612-965-4700	Christopher.reali@und.edu	UND	UND Team Co-Lead
Vonasek, Emily	218-791-3743	Emily.vonasek@und.edu	UND	UND Team Co-Lead
Issendorf, Traci	701-319-6247	tissendorf@nd.gov	Northwest Region	Case Manager
Knight, Jordan	701-516-7431	joknight@nd.gov	Northwest Region	Case Manager
McShane, Kelly	701-516-2671	kmcshane@nd.gov	Northwest Region	Case Manager
Laubenstein, Abigail	701-946-8750	amlaubenstein@nd.gov	Southeast Region	Case Manager
Nasar, Sandy	701-319-5664	snasr@nd.gov	Southeast Region	Case Manager (NDSU)
Wilson, DeAnn	701-516-6445	dewilson@nd.gov	Southeast Region	Case Manager
Nash, Shannon	701-450-8270	shanash@nd.gov	Southwest Region	Case Manager
Swartz, Sarah	701-215-1379	saswartz@nd.gov	Southwest Region	Case Manager
Kilgore, Marie	701-946-8171	mkilgore@nd.gov	FLOAT	Case Manager
Magelky, Theresa	701-450-8355	thmagelky@nd.gov	FLOAT	Case Manager
<b>Tribal Liaisons</b>			<b>Primary</b>	<b>Secondary</b>
Abe, Sonya	No phone	Sabe@nd.gov	MHA	Standing Rock
Parisien, Hunter	No phone	dlhparisien@nd.gov	Standing Rock	MHA
Smith, Cheyenne	No phone	cmsmith@nd.gov	Turtle Mountain	Spirit Lake & Sisseton
Thongpet, Jamie	No phone	jthongphet@nd.gov	Spirit Lake-Sisseton	Turtle Mountain
<b>DC Field Epidemiologists</b>				
Jose, Gino	701-328-9760	gjose@nd.gov	Bismarck	
Duncan, Crystal	701-516-6589	cduncan@nd.gov	Devils Lake	
Kontz, Heather	701-770-2178	hkontz@nd.gov	Dickinson/Williston	
Nesemeier, Brenton	701-241-1386	bnesemeier@nd.gov	Fargo	Division Director
Unger, Luke	701-226-7862	lukeunger@nd.gov	Fargo	
VACANT	701-787-8130	VACANT	Grand Forks	
Schmidt, Jennifer	701-320-5644	jmschmidt@nd.gov	Jamestown	
VanBruggen, Deanna	701-805-8189	deavanbruggen@nd.gov	Jamestown	

Larson, Linda	701-838-3340	llarson@nd.gov	Minot	
<b>COVID19 Data Quality</b>				
Aafedt, Cynthia	701-425-3111	caafedt@nd.gov		Data Quality Coordinator
Pross, Nancy	701-955-4514	npross@nd.gov		Data Quality Coordinator
Schwindt, Elijah	701-595-3572	eschwindt@nd.gov		Data Quality Coordinator
Woolston, Jeannie	701-955-2195	jwoolston@nd.gov		Data Quality Coordinator
<b>CDC Employees</b>				
Aguilar, Olenka	No Phone	oaguilar@nd.gov		COVID Data Analyst (Imms)
Allen, Jessica	515-782-0736	jessicaallen@nd.gov		COVID Health Educator (Imms)
Galler, Nicole	701-561-3235	ngaller@nd.gov		COVID Epidemiologist
Muazzam, Sana	No Phone	smuazzam@nd.gov		COVID Data Analyst
<b>Data Surveillance – Ben Schram</b>				
Jungels, Ciara	701-805-8567	cjungels@nd.gov		COVID Data Surveillance
Schultz, Lynn	701-934-4127	lschultz@nd.gov		COVID Data Surveillance
Noah, Gretchen	701-934-6323	gnoah@nd.gov		COVID Data Surveillance
<b>Reinfection Surveillance</b>				
Blankenbaker, Chrissy	701-955-2211	cblankenbaker@nd.gov		COVID Data Surveillance
Hanson, Jill	701-946-8765	jilhanson@nd.gov		COVID Data Surveillance
Ness, Jessica	701-425-8763	jesness@nd.gov		COVID Data Surveillance
Jablonski, Madelyn	701-214-9375	mjablonski@nd.gov		COVID Data Surveillance
<b>Breakthrough Surveillance</b>				
Finch, Bonnie	701-934-3717	bfinch@nd.gov		COVID Breakthrough Surveillance
Fritz, Peter	701-805-8099	pfritz@nd.gov		COVID Breakthrough Surveillance
Hanson, Brittany (Lead)	701-425-7979	brittanyhanson@nd.gov		COVID Breakthrough Surveillance
Haugen, Andrea	701-934-4867	aahaugen@nd.gov		COVID Breakthrough Surveillance
Larkin, Jadie	701-319-5420	jlarkin@nd.gov		COVID Breakthrough Surveillance
Lillestol, Benji	701-450-8347	blillestol@nd.gov		COVID Breakthrough Surveillance
Pedigo, Karen	701-516-6360	kpedigo@nd.gov		COVID Breakthrough Surveillance
Rufsvold, Fallon	701-595-4474	frufsvold@nd.gov		COVID Breakthrough Surveillance
Walseth, Annette	701-955-4719	awalseth@nd.gov		COVID Breakthrough Surveillance
<b>COVID Death Reporting</b>				
Schlosser, Levi	701-328-3341	lschlosser@nd.gov		Respiratory and Syndromic Surveillance (Disease Control)

## Resources



### FirstLink 24-Hour Phone Service

#### Helpline

- 2-1-1 or 235-SEEK or Text Zip Code to 898-211
- Information and Referral
- Potential Wait Time for Caller

#### Suicide Lifeline

- 1-800-273-8255 (TALK)
- Suicide Intervention
- Routed to Nearest Available Call Center

#### All Phone Lines

- Free
- Non-judgmental
- Emotional Support
- 24/7

#### 24 Hour Helpline:

2-1-1 or 701-235-7335 (SEEK)  
or text zip code to 898-211

#### National Suicide Prevention Lifeline:

1-800-273-8255 (TALK)

#### Website:

[www.myfirstlink.org](http://www.myfirstlink.org)

Free telephone and texting service available 24 hours a day.  
Listening and Support- Provides a supportive, non-judgmental listening ear to anyone in need of support.

Information and Referral about Health and Human Services, Nonprofit Organizations and Government Agencies. Available to North Dakota and Clay County, Minnesota

#### UND Case Manager Email:

[undcovid@und.edu](mailto:undcovid@und.edu)

#### National Guard Manager Email:

[grpdohndngcm@nd.gov](mailto:grpdohndngcm@nd.gov)

#### SME Group Email

##### Addresses:

Business:

[dohcovidbusiness@nd.gov](mailto:dohcovidbusiness@nd.gov)

Daycare:

[dohcovidchildcare@nd.gov](mailto:dohcovidchildcare@nd.gov)

HAI:

[dohcovidhai@nd.gov](mailto:dohcovidhai@nd.gov)

Hospital:

[dohcovidhospital@nd.gov](mailto:dohcovidhospital@nd.gov)

School:

[dohcovid\\_school@nd.gov](mailto:dohcovid_school@nd.gov)

Camp:

[dohcovidyouthcamp@nd.gov](mailto:dohcovidyouthcamp@nd.gov)

Travel:

[dohcovidtravel@nd.gov](mailto:dohcovidtravel@nd.gov)

#### Case Worker Regions Email

##### Addresses:

Central Region:

[dohcasemgrscentral@nd.gov](mailto:dohcasemgrscentral@nd.gov)

North Central Region:

[dohcasemgrsnc@nd.gov](mailto:dohcasemgrsnc@nd.gov)

Northeast Region:

[dohcasemgrsne@nd.gov](mailto:dohcasemgrsne@nd.gov)

Northwest Region:

[dohcasemgrsnw@nd.gov](mailto:dohcasemgrsnw@nd.gov)

Southeast Region:

[dohcasemgrsse@nd.gov](mailto:dohcasemgrsse@nd.gov)

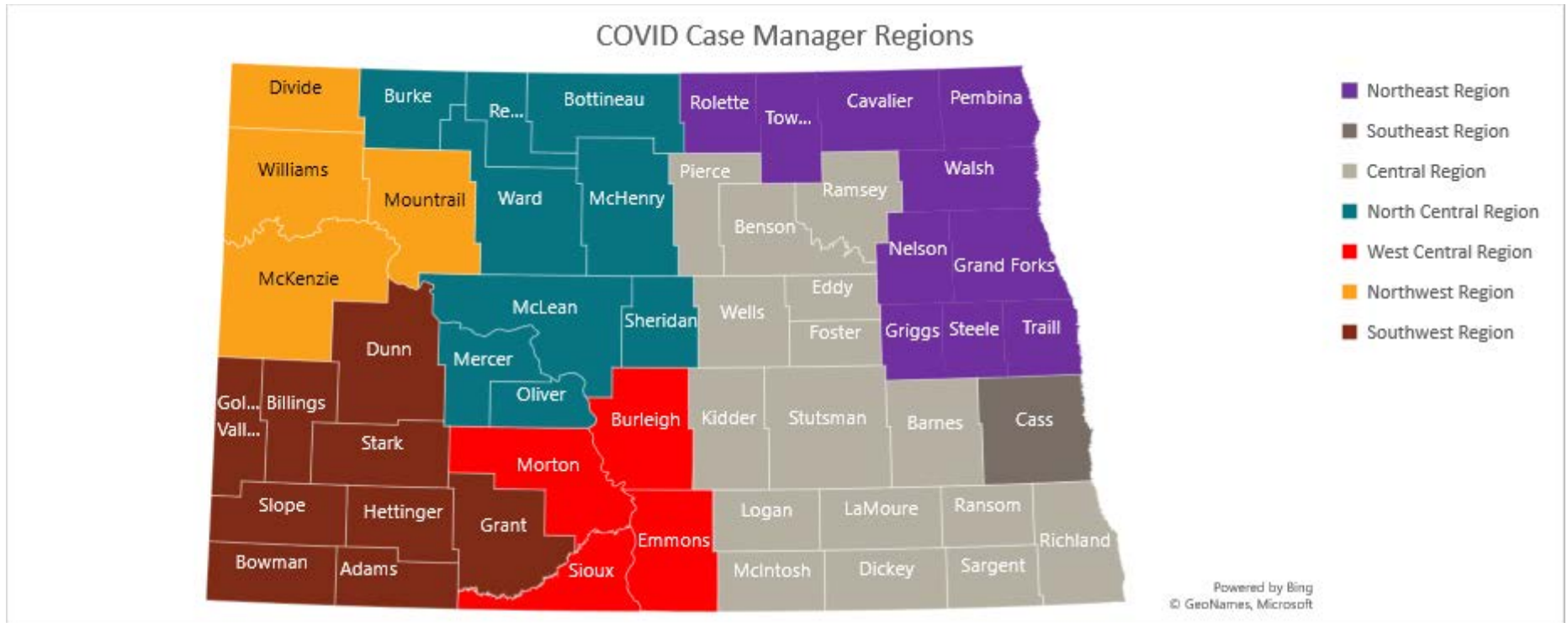
Southwest Region:

[dohcasemgrssw@nd.gov](mailto:dohcasemgrssw@nd.gov)

West Central Region:

[dohcasemgrswc@nd.gov](mailto:dohcasemgrswc@nd.gov)

# COVID-19 Case Manager Regions



Northeast	Southeast	Central	North Central	West Central	Northwest	Southwest
<a href="mailto:dohcasemgrsne@nd.gov">dohcasemgrsne@nd.gov</a>	<a href="mailto:dohcasemgrsse@nd.gov">dohcasemgrsse@nd.gov</a>	<a href="mailto:dohcasemgrscentral@nd.gov">dohcasemgrscentral@nd.gov</a>	<a href="mailto:dohcasemgrsnc@nd.gov">dohcasemgrsnc@nd.gov</a>	<a href="mailto:dohcasemgrswc@nd.gov">dohcasemgrswc@nd.gov</a>	<a href="mailto:dohcasemgrsnw@nd.gov">dohcasemgrsnw@nd.gov</a>	<a href="mailto:dohcasemgrssw@nd.gov">dohcasemgrssw@nd.gov</a>



## Interaction Examples

Type of Interaction	Other	Contact Person	<b>Name</b>	Contact Person's Role	<b>Description of Role</b>
Name	<b>Name of Summer Camp</b>	Contact Person's Email Address	<b>example@email.com</b>	Contact Person's Phone Number	<b>(123) 456-7890</b>
Location Type	<b>Other</b>	Notified Contact Person	---		
Location	Camp_Cass	In the 14 days prior to illness (if asymptomatic, date tested) did the case participate in this activity or event wh...			
Sanctioned by Location	---	Participated in this activity or event? ---			
Person	First Last	NOTES			
Start Date and Time (If Known)	---	---			
End Date and Time (If Known)	---				
Participated during Infectious Period	<b>Yes</b>				
List dates Participated during Infectious Period	<b>6/21/21, 6/22/21</b>				

Type of Interaction	Occupation	Contact Person	<b>Name</b>	Contact Person's Role	<b>Description of Role</b>
Name	<b>Name of Summer Camp</b>	Contact Person's Email Address	<b>example@email.com</b>	Contact Person's Phone Number	<b>(123) 456-7890</b>
Location Type	<b>Other</b>	Notified Contact Person	---		
Location	Camp_Cass	In the 14 days prior to illness (if asymptomatic, date tested) did the case participate in this activity or event wh...			
Sanctioned by Location	---	Participated in this activity or event? ---			
Person	First Last	NOTES			
Start Date and Time (If Known)	---	---			
End Date and Time (If Known)	---				
Participated during Infectious Period	<b>Yes</b>				
List dates Participated during Infectious Period	<b>6/21/21, 6/22/21</b>				

Type of Interaction	*  Clinic / Other Medical
Name	* ER Visit
Location Type	* Hospital
Location	*  ALTRU HOSPITAL (Grand Forks)
Sanctioned by Location	---
Person	First Last
Start Date and Time (If Known)	5/19/2021 8:00 AM
End Date and Time (If Known)	5/19/2021 2:00 PM
Participated during Infectious Period	Yes

Type of Interaction	*  Hospitalized for COVID
Name	* Hospitalization
Location Type	* Hospital
Location	*  ALTRU HOSPITAL (Grand Forks)
Sanctioned by Location	---
Person	First Last
Start Date and Time (If Known)	5/19/2021 8:00 AM
End Date and Time (If Known)	5/21/2021 8:00 AM
Participated during Infectious Period	Yes

Type of Interaction	*  Clinic / Other Medical
Name	* Monoclonal Antibody Treatment
Location Type	* Hospital
Location	*  TIOGA MEDICAL CENTER
Sanctioned by Location	---
Person	First Last
Start Date and Time (If Known)	5/19/2021 8:00 AM
End Date and Time (If Known)	5/19/2021 2:00 PM
Participated during Infectious Period	Yes

Type of Interaction	*  Congregate Living
Name	* Resident
Location Type	* Skilled Nursing
Location	*  Augusta Place - a Prospera Co...
Sanctioned by Location	---
Person	First Last
Start Date and Time (If Known)	---
End Date and Time (If Known)	---
Participated during Infectious Period	Yes

Type of Transportation	Plane
Company Name	American Airlines
Flight Number	AA1234
Seat Number	17A
Departure Time	8:00AM
Departure Location	Atlanta
Arrival Location	Fargo

Type of Interaction	*  Occupation
Name	* HCW
Location Type	* Skilled Nursing
Location	*  Augusta Place - a Prospera Co...
Sanctioned by Location	---
Person	First Last
Start Date and Time (If Known)	---
End Date and Time (If Known)	---
Participated during Infectious Period	Yes

Type of Interaction	* <b>School</b>
Name	* <b>Student - Grade</b>
Location Type	* <b>School</b>
Location	+ <b>Lincoln Elem School (Beach)</b>
Sanctioned by Location	---
Person	<b>First Last</b>
Start Date and Time (If Known)	---
End Date and Time (If Known)	6/22/2021 8:00 AM
Participated during Infectious Period	+ <b>Yes</b>
List dates Participated during Infectious Period	<b>6/21/21, 6/22/21</b>

Type of Interaction	* <b>Occupation</b>
Name	* <b>Teacher - Grade/Subject</b>
Location Type	* <b>School</b>
Location	+ <b>Lincoln Elem School (Beach)</b>
Sanctioned by Location	---
Person	<b>First Last</b>
Start Date and Time (If Known)	---
End Date and Time (If Known)	6/22/2021 8:00 AM
Participated during Infectious Period	+ <b>Yes</b>
List dates Participated during Infectious Period	<b>6/21/21, 6/22/21</b>

Type of Interaction	* <b>School</b>
Name	* <b>Student - Homeschooled/Virtual</b>
Location Type	* <b>School</b>
Location	+ <b>Homeschool or Virtual/Distance Ed...</b>
Sanctioned by Location	<b>Fargo Public Schools</b>
Person	<b>First Last</b>
Start Date and Time (If Known)	---
End Date and Time (If Known)	6/22/2021 8:00 AM
Participated during Infectious Period	+ <b>Yes</b>
List dates Participated during Infectious Period	<b>6/21/21, 6/22/21</b>

Type of Interaction	* <b>Occupation</b>
Name	* <b>Staff - Title of Work</b>
Location Type	* <b>School</b>
Location	+ <b>Lincoln Elem School (Beach)</b>
Sanctioned by Location	---
Person	<b>First Last</b>
Start Date and Time (If Known)	---
End Date and Time (If Known)	6/22/2021 8:00 AM
Participated during Infectious Period	+ <b>Yes</b>
List dates Participated during Infectious Period	<b>6/21/21, 6/22/21</b>

Type of Interaction	* <b>College / University</b>
Name	* <b>NDSU Student</b>
Location Type	* <b>University</b>
Location	+ <b>NDSU - North Dakota State U...</b>
Sanctioned by Location	---
Person	<b>First Last</b>
Start Date and Time (If Known)	---
End Date and Time (If Known)	---
Participated during Infectious Period	<b>Yes</b>

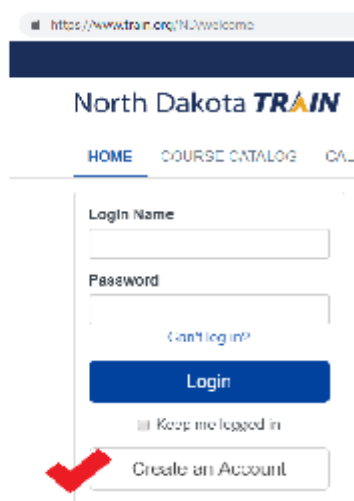
## ND Train Account Creation



### How to create your TRAIN account

**Step 1:** Visit [www.train.org/ND](http://www.train.org/ND)

**Step 2:** Create an account, or log-in if you have an existing account. If you already have an account, you will be asked to 'Join another group' see step 4-6.



**Step 3:** Once logged-in, select your name in the upper right corner, select my profile.

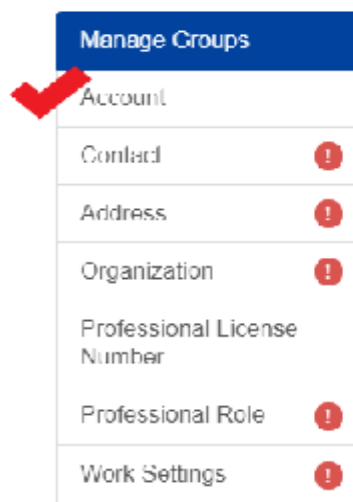


**Step 4:** Select 'Join another group' search by location, select 'North Dakota,' select the group in which you work such as Local Public Health, Hospital/Health Care Facility, etc. Confirm your selections by clicking on save.

**Step 5:** In your profile, select 'Account,' select 'yes' to allow TRAIN to send notifications via e-mail. This is step is crucial in receiving course updates. Be sure to select 'Save' at the top of the screen.

#### Your Profile Is in

Your profile contains all your sy required settings some site funn incomplete.



**Step 6:** Finish updating the required fields and start training!

**North Dakota Department of Health's**  
**University of North Dakota**  
**UND Covid-19 DOH University Team**  
**Case Investigation & Contact Tracing Team**

**Policies and Procedures-Updated**

**12/16/21**

*Disclaimer: This protocol manual is subject to change with state policy changes, new CDC guidance, new protocol implemented by state and by this team. This is a reference tool to help case workers do their best in case investigations and will be updated as managers see fit.*

## Purpose of This Document

In the following pages, you will find policies and procedures of the University of North Dakota (UND) North Dakota Department of Health (NDDoH) Case Investigation and Contact Tracing Team. Know that this is a “living document” that will be updated periodically as needed. This is meant to be a supplement to the NDDoH Contact Tracing Protocol. Please know that we are here to support you in this very important work. We know that this job is not always easy but know that we appreciate you, and the time that you put in.

## Information about This Team

People on our team are employees of UND, under NDDoH contract. Due to the nature of this, our team functions a bit differently than NDDoH and therefore, while we follow the NDDoH's policy, we have a separate set of procedures that are outlined in the coming pages. If you ever have a question or are unsure about something feel free to message a UND case manager. We are here to help and support you!

Please see the most recent [NDDoH COVID-19 Protocol Manual](#) in Microsoft Teams in the *Files* section on our *Team* page.

## Contact Information for the UND Team Leaders

Please email or message in Microsoft Teams

**Team Leads:**

**Shift Managers:**

## ND COVID-19 Hotline Phone Number

**1-866-207-2880**

## ND DoH IT Help Desk

**701-328-4470**

## Process of a Typical Shift

1. Clock in
  - a. Please clock in/out via UND's employee self-service.
  - b. If you have difficulty punching in/out please email your team lead for assistance. Remember to punch in for all time that you are working.
2. Log on to Dynamics365 and email
  - a. Dynamics365 (Dynamics or D365) is the software used for case management and case investigation: Dynamics365

- b. Your UND email address is used for communication with your teamcase managers, regional case managers, and cases
- c. The nd.gov email address is only for logging on to Dynamics, do not use this email to correspond with anyone or for any other function other than to log on to Dynamics. Set an auto-reply to instruct otherstoemail you at your und.edu email address

### 3. Log on to Microsoft Teams

- a. Teams is used for regular communication between the case workerand case managers
- b. It is expected that you will be “available” on Teams throughout yourshift, do not appear “offline” if you are working
  - i. If you do not respond in teams to check-ins or messages fromCM on duty within 15 minutes or have an appropriate explanation, you will be asked to clock out and be taken off the shift.
- c. Check Teams main page for posts since your last shift
- d. Go to the left-hand side of the screen, click the *Teams* button (inbetween the *Chat* and *Assignments* buttons)
- e. There will be a post section and a files section, look throughtheposts since the last time you worked
- f. You will be assigned into a group chat initiated by the shift manager on duty, if you are not added to a group chat within 10 minutes of the startof your shift, please check sling for manager on duty and contactthem

### 4. Check your caseload

### 5. Complete follow up work with current cases or contacts as needed

### 6. Case investigation

- a. The case manager will communicate via teams group chat when there are cases available, please let them know when you are readyfor a case or what you are working on.
- b. It is expected that you will complete case investigations whileyouare waiting for cases to get back to you
- c. Please let the case manager on duty know when you are readyformore cases.
- d. You need to continue to work cases throughout your shift, you are notpaid to sit for 2 hours waiting for cases to call back
- e. Email out appropriate notifications to case managers (see sectionwhen to email UND case managers with information aboutcases)

## Sling

- This site is used to schedule shifts and for various chats, including help and support and dynamics.
- A manager will communicate when sling shifts will be posted for you to take, along with any guidelines on amount of shifts or hour allowance for each employee.

- Please do not use the *Case Workers Needed to Take Cases* chat, feel free to use the others
  - The UND campus team shift managers will get or have cases for you, please let them know at the start of shift where you are at with your workload and if you are available to take a case.

## Productivity Expectations

- It is expected that you are available to take cases when you are scheduled for Sling shift.
- The rough estimate of cases you should be able to take while on shift can vary greatly. The general expectation is 1 case per 1 hour.

## Quality Control Assessments

- Your files are looked at by a variety of people including our team managers, QC from the state, the interaction team, the vaccination team to name a few. Please look over your work regularly to ensure the least amount of errors as possible.

## Communication

- When working remotely communication is key.
- We would rather you over communicate with us than not communicate enough
- Send us a message in Teams if you ever have a question or concern, email works too (especially if it isn't as urgent), if we don't know the answer we will find one or direct you to someone that has an answer

## Hours, Overtime, and Holiday Pay, Lunch Break

- You may not work overtime hours. In the rare event overtime is necessary to complete your work please let your manager know and it will need to be approved.
- You will schedule yourself in sling hours will vary, the team lead will provide direction on number of hours available to you. This number of hours worked may vary from case worker to case worker.
  - UND students will be schedule up to 20 hours per week.
- Pay Schedule can be found at und.edu under: payroll calendar
- Holidays
  - Holiday pay is time and a half
- Required Lunch break: If you work 5 consecutive hours or more, you are required to take a 30 minute unpaid lunch break before or at the 5 hour mark, please communicate the time you are taking your break to the shift manager on duty. This break may not be taken at the end or beginning of a shift.

## Probable Cases

Someone showing symptoms but does not have a test confirmed case

- This will be common place among HH contacts
- We will not be conducting a case interview for probable cases.
- Strongly recommend that they get tested and outline isolation guidelines with them answer any



questions.

Other Notes:

- Negative rapid/antigen testing but still have symptoms should consider getting a PCR test.
- False positives are very low on PCR and rapid testing – slightly higher on antigen tests.

## Isolation and Quarantine definitions

Isolation: 10 days from day zero (symptom onset or test date: day zero)

- Asymptomatic: 10 days from specimen date (Example tested on 11/16, isolation end date of 11/26)
- Symptomatic: 10 days from symptom onset (symptoms started 11/16, tested 11/18, isolation end date of 11/26)
- Pre-symptomatic: (when someone tests while asymptomatic, but then later develops symptoms): 10 days from symptom onset (tested on 11/16 while asymptomatic, developed symptoms after test on 11/18, isolation end date of 11/28), infectious period is still 48 hours prior to testing.
  - If case reports symptoms in initial survey, system defaults to symptom onset being the date they completed the survey, you will need to verify symptom onset date with case and change appropriately
- Change from pre-symptomatic to symptomatic as needed

\*\*Isolation is no longer mandated by the state, it is important to use the term recommended not required when speaking to cases.\*\*

## Quarantine: in all situations starts after the individual was last exposed

- ALL CONTACTS NEED TO HAVE THEIR MONITORING END DATE SET FOR 14 DAYS FROM LAST EXPOSURE
  - Monitoring still needs to occur even if the individual is released early or vaccinated.
- Send the “Contact-need to quarantine letter out” for HHC and CC, but DO NOT send a release from quarantine letter
- “Normal quarantine”: 14 days from last exposed
- Shorten quarantine options only for ASYMPTOMATIC contacts.
- Release on day 7 at 11:59 pm
  - Must be asymptomatic
  - Must have a negative test that was taken no sooner than day 5.
  - Release on day 10 at 11:59pm (with no test)
  - Individuals must still be monitored for 14 days from last exposure.

## Unable to Make Contact with Cases/Contacts

- Attempt each case 2 times daily for 2 days.
  - Send the case a text after each call and voicemail as well, regardless, of the day or multiple attempts to reach them. If there’s an email address for the case in Dynamics try sending them an email
  - Double check the number to make sure you dialed it correctly
  - Document incorrect numbers in the timeline, note the wrong number in your note.

Let the shift manager on duty know so they can help you find additional contact information.

- Contacts- Attempt to call them 2 times daily for 2 days.
  - Send the contact a text after each call and voicemail as well, regardless of the day or multiple attempts to contact
  - If there's an email address for the contact in Dynamics try sending them an email
  - If unable to reach note in timeline attempts and close.

## Closing Cases you have not been able to reach after trying 2 x for 2 days.

- If unable to reach the case after exhausting all forms of communication, please let the manager on duty know, by sending an email to them.
  - Include case number, body of email should say unable to reach after attempting 2 times daily for two days. If school age, include that in your email also!!
  - Mark unknown to vaccination
  - Mark unable to interview: yes, Reason: Unable to contact
  - Close the case.

## Holiday/social Interactions

- Social interactions will be created for University cases only, and only in the event they are affiliated with the university (took place on campus)
- Ask: **“Have you gathered with anyone from outside your household for a holiday event?”**
- If 'yes' then (regardless if they attended during their infectious period or not)
  - Make an interaction
  - Type of interaction: Activity
  - Name: name or description of event
  - Location type: Other
  - Location: holiday\_County (they are pre-made, start typing holiday and select for the appropriate county)
  - Note field: estimate of how many people (Including case) attended
- Social interactions
  - Ask case “what types of places or events have they attended within the last two weeks?”
  - Enter interactions for each activity  
Type of interaction: activity
- Enter interactions for each activity
  - Type of interaction: Activity
  - Name: name or description of event
  - Location Type: Other
  - Location: Type of gathering.
  - Note field: estimate of how many people (including case) attended while infectious.

event types:

- **\*Large Events/Social Gatherings (20+ people in attendance):** Includes concerts, parties, in-home/private gatherings, festivals, fairs, etc. Could include a work holiday party.
- **\*Small Events/Social Gatherings (Under 20 people in attendance):** Includes concerts, parties, in-home gatherings, etc, with people who do not live in your home, could include having overnight guests, etc. Could include a work holiday party.
- **\*Holiday:** Includes family gatherings to celebrate winter holidays, generally in home, would include exchange of gifts, meals, etc.
- **Dine-in Restaurant:** Includes dine in service in a restaurant, bar/grill, etc. Generally where a meal was consumed in public.
- **Bar:** Includes establishments in which services is limited to those 21+ only.
- **Sports Club/Gym:** Includes gyms, clubs where people exercise alone or with others in a class or through private instruction.
- **Sporting Event (Participant and Spectator)\*\*:** Includes being a participant or spectator to events where sports practices and competitions are held. Includes K-12 and university.
- **Church/Religious:** Includes attending church, mass or other religious service. Could include bible study, choir practice or other events held within a church or other religious site.
- **Wedding:** Includes being a participant or attendee of a wedding.
- **Funeral:** Includes attending a funeral, viewing, etc.
- **Conference/Meeting:** Includes conferences or meetings that were held in rooms where social distancing is not maintained and event is unique from day to day working conditions.

\* If Event Type is starred, enter the number of attendees in the notes.

\*\* For Sporting Events, select the type of sport within the Sport tab of the interaction:

Sport  | v

Sport (Other) ---

## Translator Services

- Have case's phone number and info ready
- If the case does not speak English, the use of a language interpretive service is available.
  - Access to the interpretive line:
    - Step 1: Call 1 888-338-7394
    - Step 2: Enter Account Number 28201, followed by # sign
    - Step 3: Select 1 to be connected directly to your Spanish interpreter, or Select 2 to be connected directly to your Russian Interpreter, or Select 3 to be connected directly to your Vietnamese interpreter, or Select 4 to be connected directly to your Somali Interpreter, or Select 9 for all other languages
      - If you require a 3rd party call, press 9 to reach a Customer Service Representative
    - Step 4: Enter Program ID (see below, select appropriate program), followed #sign.
      - Program ID: o COVID-19 Hotline: 30101 o Disease Control Contact Tracing: 30103
  - (\*\*All information on translators located on page 16 of stateprotocol)

## Hospitalized Cases

- Attempt to complete interview with case. If you are unable to, do not call the hospital, the NDDoH would like to avoid having us call the hospitals currently due to the large number of covid-19 case admitted.
- If you cannot reach the case let the shift manager know. Set monitoring date (see bullet point below on monitoring end date) and place in monitoring until we hear that the case has been discharged.
- Hospitalized cases do not need to complete the daily monitoring surveys as they are under professional care. Caseworkers should continue to review the case record regularly to check for

updates. If there have been no updates for a few days, you may ask shift manager to request a hospitalization request.

- Monitoring end dates should be set at 10 days to start, If a case is significantly older or severely ill, you may move the end of monitoring date out to the full 20-day maximum.
- After the case is discharged, the case worker should resume regular monitoring through the monitoring end date.

Please continue to let the shift manager know if you have a hospitalized case - they will notify the case manager, Hospital SME Team, and the HAI Team. Include if the case is hospitalized for COVID or for a Non-COVID reason. Also include the estimated monitoring end date if you have extended it to the full 20-days.

## Active Military & Inmate Cases

- Please communicate with the team's manager on duty regarding if a case is active military. Conduct interview with them and collect all non-military close contacts, and social events that took place off base.
- Send notification by email to shift manager.

## Jail or Correctional Facility

- If the case is currently in jail let the manager on duty know and they will take it from you.
- If it is an employee of jail or correctional facility let the manager on duty know, but you can proceed with interview as normal, email manager after so that the info can get passed on to the correct team.

## Breakthrough cases-UPDATED!

**If a case is fully vaccinated and tests positive for covid-19 they are a breakthrough case.**

- Conduct Case interview, enter all information as normal including vaccine information.
- Attach copy of vaccination card to the timeline if possible for all breakthrough cases.
- For children under 5 be sure to mark no to is case vaccinated, they are not eligible for the vaccine at this time.

You do not need to send email to manager on shift anymore, they (the NDDoH) can see that information as long as you answer yes to that vaccine question in dynamics. \*\*Please note we must always enter a value for vaccination status, yes, no or unknown.

If you have questions or a breakthrough case or any case does not know their vaccination information we can request that information be looked up, please reach out to your shift manager in those situations.

## When to email the UND Shift Managers with information about Cases & when no email is necessary.

---

***When a case attended in person or online classes at College/University while infectious or worked at a college or university while infectious:***

Subject line: Notice of case in a university setting

- D365 Case ID (C-#):                      C- Student name & DOB:

- Name of College/University:
  - If the case was student, teacher or other faculty/staff:
  - Is the case symptomatic or asymptomatic?
  - Symptom onset date/end isolation date
    - Onset:            End of isolation date:
  - Did they attend class or any events or work on campus while infectious:
    - If yes list classes attended and location (room and building number) while infectious class name, date and times class occurred, and name of professor-please be specific.
    - If yes to events list event details including sports
    - If yes to work on campus list details and if you contact employer on campus
  - Does this case live in a congregate setting (ex: dorms, sorority/fraternity)
  - Name of dorm and room number, name of sorority or fraternity:
  - Has case self-reported to university?
  - Include list of Close Contacts for all university notifications: name, date of birth, estimated end of quarantine date vaccination or masked contact status. Include only close contacts that are affiliated with the University also include if those close contacts are vaccinated or not. (ex. Staff, faculty, other students, dorm roommates etc.) See examples below:
  - *Student name dob*- unvaccinated close contact estimated end date (10 days from last exposure unless they test then it will change.)
  - *Student name dob*- Vaccinated close contact
  - *Student name dob*-masked close contact.
  - If you cannot reach a contact, it is important we get that notification of the contact to the university point of contact as quickly as we can.
    - After you finish a university case interview, please attempt to reach the Close and Household contacts, if you are unable to reach them at the time. List the names on the university notification email as directed with a note that says could not reach, will continue to try.
    - Contacts should be attempted 2 times daily over 2 days before we close them.
    - When we do reach that university affiliated close or household contact send another
    - Email notification to the shift manager
  - Title your email: Additional information on contacts
  - {name and date of birth of source case}-already reported
  - Close or HHC {Name, DOB, Vaccination or mask status, end of quarantine date(10 days from last exposure)}
  - *\*Please always send notification of any college students by email to CM on duty*
  - Fill out 'Interaction Details' tab, 'University' tab. Make sure to create a SEPARATE interaction for each college class (and activity) and get as much detail as possible for cases (ex: Math 101, Knutson Center Rm #302, ProfessorWilliams 10:00-11:00am)
  - Make sure to get information if they are living in a congregate setting like a dorm
  - Encourage the student and unvaccinated close contacts only to self-report to their specific college link or person. (Links and information for reporting to all colleges can be found on our main teams page.)
- 

When a case took a flight while infectious:

Subject line: Case Report in a Travel Setting

D365 Case ID (C-#)

- Symptom onset

- The flight information:

Airline used and flight number

Departure and arrival information- airport departed and the time departed, airport arrived at and time arrived

Seat number

**\*\*Make sure you fill out the interactions tab with as much information as possible\*\***

---

When a Case is an Active member of the Military

- Subject line: Notice of active Military case
- D365 Case ID number: C-
- Name and location of Base:
- Symptomatic/Asymptomatic:
- Dates and times worked while infectious:
- Has Military (Base public health) been in contact with the case?: (yes or no)

***Please report anything else you think needs to be reported to the CM on duty or ask questions. we come upon many different scenarios when conducting case interviews and it is better to ask then not!***

---

When a case is pregnant-Do Not need to send Email

- Fill out maternal tab in dynamics
  - No need to send us an email with this information.
- 

When a case attended a healthcare appointment or is a healthcare worker (HCW):

- Do Not need to Send Email Notification
- We do not need emails for this anymore unless they are a resident of a
- Skilled Nursing Facility, Long Term Care, or Assisted Living. If they live in one of those settings please send notification email to the Shift manager.
- Notice of case in LTC, SNF, assisted living facility
  - Name of healthcare facility:
  - Dates and times there while infectious:

***\*It is very important our interactions are detailed and accurate for all Healthcare workers and patients please continue to be diligent in entering interactions for healthcare workers, and any medical appointments etc.***

---

When a case went to a Childcare or School while infectious: Do not need to send notification

DO NOT need to send an email notification to the shift manager.

Please Create an interaction for the school or childcare exposure or employee.

**\*\*If it is a k-12 age child and we are unable to contact them after trying 2x for 2 days, please send an email to the shift manager including case number, that we could not reach, and they are school age.**

---

## Media Protocol

If you are approached by the media for an interview, please let know we have protocol we need to follow and will direct them to the media contact at the Department of Health.

## Types of investigations

### State Cases (Non-University Cases)

- See state protocol found in our teams files.
- Vaccine information
  - It is very important that you enter all vaccine information that is reported to you or listed in the timeline on the case, even if incomplete please enter what you know and note anything additionally in the timeline.
  - Request a picture of vaccination card and attach it to the timeline.
  - If the case is vaccinated out of state please note in the timeline, the location, and state they were vaccinated in.

### University Cases

**University Students from below (on-campus, off campus, & at home):**

- Bismarck- Mayville State - Lake Region – UND(students and staff/faculty)
- NDSCS in Wahpeton – Dickinson State University - Minot State University -
- Dakota College Bottineau- Valley City State University-Williston College

**To Complete:**

- The Entire General Tab (including vaccine information)
  - Make sure to answer unable to contact: no if you are able to complete an interview.
  - If there is a name change/correction, date of birth, or address change –notify Shift manager
  - If they are home for semester OR the upcoming break – keep their University address as their primary and put the address they are staying at in the Timeline
- Vaccine information
  - It is very important that you enter all vaccine information that is reported to you or listed in the timeline on the case, even if incomplete please enter what you know and note anything additionally in the timeline.
  - Request a picture of vaccination card and attach it to the timeline.
  - If the case is vaccinated out of state please note in the timeline, the location, and state they were vaccinated in.
- The Case Report Tab
  - Complete the case report regardless of where they are living.
  - You do not need to complete the care 19 section on the case report

Symptoms- you do not need to list out the case's specific symptoms. All you need to do is select if they are symptomatic or not.

- Ask about and enter in dynamics all university affiliated social interactions for cases that have taken place within 14 days of onset.
- Report all university cases to the CM on shift
- For occupation- Ask the following question, or in a childcare, school, University, healthcare, homeless shelter, jail or group home setting
  - If yes fill out an interaction and send email notification to your shift manager
  - If no do not ask more about their occupation or fill out an interaction.
- Collect all university affiliated work close contacts
- Send self-reporting links/information to case by email (each university has one, not just UND) links are posted in teams files
- Please discuss/determine if they qualify for Monoclonal Antibody Treatments and provide information. (See doc posted in our teamsfiles)
- The Close Contacts Tab
  - Collect all university affiliated close contacts (social, household, and work)
  - Before entering contacts into the system, be sure to search Dynamics for an existing file
    - If contact exists in dynamics use that record, select begin investigation and add to your case file changing date of estimated end of quarantine due to exposure to your case(if changes) and note in timeline the change.
    - If contact is in dynamics was a case and is within 90 days of last positive, add on your file but select investigation not warranted.
    - If contact does not exist in dynamics add contact place in investigation and gather info as described below.
    - If contact exists as a previous case outside of 90 day window, create a new contact noting in the time line it is an intentional duplicate place into investigating and follow up with contact. Do not reactivate the old case.
- Verify the spelling with the case and/or with the contact when you call them (write down names and numbers at first if you're not sure of spelling)
- Call all University affiliated HHC & close contacts and complete:
  - Their general tab
    - Including congregate living interaction if applicable
    - Including covid-19 vaccine information
  - Their contact report tab
    - Date of last exposure
    - Date monitoring ends
    - Date quarantining ends
    - Masked close contact
    - Tested negative for covid-19 for early release self yes, date tested
  - Ask if symptomatic



- Ask if enrolled in university if yes, and unvaccinated or not a masked contact send self-reporting link
  - Create interaction for university
  - Include HHC & Close Contacts (First, Last name, Birthday, vaccinations, masked CC status, and estimated end of quarantining date) in your email to the shift manager (see template)
  - Place them in monitoring.
- **\*\*If they are a student at a university not listed above – they still need a university interaction created and email to CM on duty\*\***

## Interview when University cases are passed to us for follow-up

Occasionally we receive partially worked up/interviewed university cases, please follow guidance below in this situation.

- Verify all information already collected including adding any university affiliated HHC, Close contacts, social interactions and update as needed
- Follow up with case to identify and enter any activity interactions on campus such as library, wellness center, cafeteria and any other activities on campus.
- Contact employers for university students—other teams will not have made notification to employers of university students
- Provide self-reporting link to cases and unvaccinated contacts as needed
- Email Shift manager on duty for notification of university student and university affiliated contacts.

## Physical Letter Requests

When case does not have email or requests a physical copy email the case manager on duty the following:

- C-# (D365 Case ID)
- MAVEN ID
- Populated letter in PDF form
- Double check that the dates populated and are correct before sending the email
- Enter the address in the body of the letter.

**\*\*We do not send letters to cases we cannot reach, if we cannot verify their name and date of birth we do not send physical letters out anymore. Note in the timeline you have been unable to reach them, let the shift manager know and close them.**

## Closing Cases/Releasing from isolation/quarantine

**Our Case Closing manager handles releases for our team, you do not need to call and release cases.**

- In the event you are asked to call and release cases these are the guidelines. (only if instructed to close, directions will be provided to you by Kristin or another Shift manager)

### Cases

- Call one time, follow up with email to case and isolation release letter.
  - The state has asked that we now send letters of release to cases, despite the fact that we cannot determine if they meet criteria or not.

### Contacts

- Send email only—we do not provide release from quarantine letters to contacts.

## Congregate Living Setting

- If the case is a resident of a congregate setting, the case worker should change to yes and create an interaction in dynamics. Complete all fields that are shown when an individual resides in a congregate setting (resident of hospice, DNR).
- Congregate living (shared housing facilities): include residents of long-term care facilities, group homes, jails/prisons, college dorms, fraternities, shelters.
- Congregate living does not include places such as apartment buildings, or hotels.
- Report university congregate living interactions to the shift manager asap, there are many steps to follow up with, specifically for sorority and fraternity congregate living settings.

## Entering Class Interactions for University students

Interactions for College/University Students

*This is a revision to the Class Interactions section of our policies and procedures all other policies and procedures for university cases (pages 14-20) remain the same.*

Going forward, we only need to create three types of interactions for college/university students: 1) a general College / University Interaction (*see below*) for students that includes all classes and other activities that the student participated in during their infectious period; 2) a Congregate Living Interaction (*page 17*) for students who live in residence halls, sororities, or fraternities; and 3) Activity Interactions (*pages 19-20*) for any student athletes with practice and/or game interactions.

General Interactions for University Students – Includes Class and Activity Information

Create an interaction for the case with the following inputs:

Interaction Type: College / University

Name: Student

Location Type: University

Location: (*name of college or university*)

Please use the NOTES box in the lower right corner of the Interactions screen to add information about classes – course number and name of class, building name, room number, dates attended, time of class, and professor – and extracurricular or intramural activities. We still need the details for these events, but you no longer need to create a separate interaction for each class or activity. This should make both data entry and email notifications easier – you can simply include all the necessary interaction information in the NOTES box and then copy and paste that into an email to the shift managers.

Dynamics 365 | ND Outbreak Tracking

Search

Save Save & Close + New Flow

**New Interaction** - Unsaved

Interaction Details Activity Clinical Rotation Class Congregate Living Dining Hall Healthcare Exposure Occupation Sport Travel / Public Transportation

Type of Interaction *	College / University
Name *	Student
Location Type *	University
Location +	University of North Dakota
Sanctioned by Location	---
Person	---
Start Date and Time (If Known)	11/29/2021 8:00 AM
End Date and Time (If Known)	12/9/2021 8:00 AM
Participated during Infectious Period +	Yes
List dates Participated during Infectious Period	12/8-9/2021
Counts for Morbidity	---

Contact Person	---	Contact Person's Role	---
Contact Person's Email Address	---	Contact Person's Phone Number	---
Notified Contact Person	---		

In the 14 days prior to illness (if asymptomatic, date tested) did the case participate in this activity or eve...

Participated in this activity or event? **Yes**

NOTES

**Classes attended:**  
Econ 102, Intro to Macro Economics, 12/8/21, 1pm-2pm, Gamble 110, Dr. Zhivago  
PSci 101, Intro to Government, 12/9/21, 2pm-3:30pm, Gamble 120, Dr. Doolittle

**Other activities:**  
Quidditch League, 12/8/2021, 4pm-8pm, Wellness Center (RecSports/Intramurals)

## Entering Interactions for University Sports

If they are student athletes but have not participated in any practice/games in the past month, we do not create an activity interaction for them but mention it in the timeline notes.

Please see examples below, enter info applicable to the specific college or sport you are working with.

### For Practice:

Type of Interaction: Activity

Name: Softball Practice(or other sport)- Player or Coach

Location Type: Other

Location: Sportingevent\_County the practice took place in.

Sanctioned by Location: UND- University of North Dakota (or applicable college)

Start Date: 2/5/2021 (applicable dates)

End Date: 2/8/2021 (applicable dates)

Participated during infectious period: Yes/No

List Dates participated during infectious: 2/6-2/8 (applicable dates) Notes:

Total number of attendees, place where the practice took place

\*\*If team practices every day you can just enter one interaction for that and list dates and times of practice in notes field.

**For Games:**

Type of Interaction: Activity

Name: Team name1 vs Team name2 Softball Game (or applicable sport) - Player or Coach or

SpectatorLocation Type: Other

Location: Sportingevent\_County (where the game took place)

Sanctioned by Location: -- college name or Game Venue

Start Date: 2/5/2021 (applicable dates)

End Date: 2/5/2021(applicable dates)

Participated during infectious period: Yes/No

Notes: Total number of attendees, game venue if not mentioned in the Sanctioned by location

## Email Templates for Case Worker emails to managers

### Email Template to send to shift manager if **not able to reach a university case**

To: (Appropriate Shift Manager on Duty)

Subject: Unable to reach case

---

Case number C-

Student name and DOB:

University Case attends:

Monitoring End date:

We were unable to reach this case for interview.

### Email Template to send to shift manager **after completing interview with College/University student**

To: (Appropriate Shift manager on duty)

Subject: Case in University Setting

---

Case Number C-

Student Name and DOB:

University Case Attends:

Onset date:                      Estimated Monitoring End Date:

Did case attend class while infectious & Date(s) attended:

Other interactions on campus & Date(s) attended while infectious  
(athletics, dining hall, dorm, Greek housing, on campus occupation):

Has case self-reported:

### Email to Shift manager for College student that **attends a private university** (ex. Jamestown college, UMary or colleges we do not trace for)

To: (Appropriate Shift Manager on Duty)

Subject: Notice of student in a private university setting

---

Case Number C-

Student name and DOB:

University Case attends:

Dates attended while infectious:

End of monitoring date:

**Email to shift manager when School age K-12 Unable to reach or deny interview**

To: (Appropriate Shift Manager on Duty)

Subject: Unable to reach school age case

---

Case number C-

We were unable to reach this case for interview.

**Email to shift manager when Case took a flight while infectious**

To: (Appropriate Shift Manager on Duty)

Subject: Case report for commercial flight

---

Case number C-

Dates case traveled while infectious:

**Email to shift manager when Active military Member**

To: (Appropriate Shift Manager on Duty)

Subject: Notice of Active Military Case

---

Case number C-

Name and location of Base:

Dates and times worked while infectious:

Has military (Base public health been in contact with case? (yes or no)

**Email to shift manager when LTC, SNF, Assisted living facility**

To: (Appropriate Shift Manager on Duty)

Subject: Notice of case in LTC, SNF, Assisted Living facility

---

Case Number C-

Name of healthcare facility lived in:

Dates and times there while infectious:

## Email to send to each positive University Case's

Thank you for taking the time to speak with me today.

Please use this link to complete your school's requirements for self-reporting: **[insert link for case's college or university]**

As we discussed, it is important to notify anyone in your household, among your friends, or at your workplace who you may have been in close contact with during your illness that they may need to quarantine. Your infectious period started two days before your symptoms or two days before you tested positive if you are not experiencing symptoms. Your close contacts are people who were less than 6 feet away from you for a cumulative total of 15 minutes or more over a 24-hour period during your infectious period. In addition to your college or university, you should also notify (if applicable) your employer, school, and childcare, as they may have a process to identify other close contacts to you within those environments.

You can access additional information about isolation and identifying close contacts by using the following links.

**[North Dakota Department of Health](#)**

[NDDoH | What to Do If You Tested Positive for COVID-19](#)

[NDDoH | Factsheet for People with COVID-19](#)

[NDDoH | Contact Notification Guide](#)

[NDDoH | COVID-19 Isolation and Quarantine Calculator](#)

**Centers for Disease Control and Prevention**

[CDC | COVID-19 Quarantine and Isolation](#)

We've included some suggested messages below that you might find easy to cut-and-paste into an email or text to alert your close contacts. If any of your close contacts attend or work at your college or university, please ask them to be sure to self-report to the school using the information or link in the COVID-19 section of the school's website.

We appreciate your help and wish you well. If you have any questions, you can reach out to me or call the ND Department of Health COVID-19 Hotline at 1-866-207-2880 from 8 a.m. to 5 p.m. - Monday through Friday.

Thanks, again, and please take care,

**[name]**

**[phone number]**

Case Worker, UND / NDDoH COVID-19 Case Investigations

**Email**

---

I have tested positive for COVID-19, and you might be a close contact. The North Dakota Department of Health (NDDoH), in coordination with the Centers for Disease Control and Prevention, recommends different guidance for close contacts based on their vaccination status at the time of exposure. The NDDoH has asked me to share the links below that provide more information on who should quarantine and for how long they should quarantine.

**North Dakota Department of Health**

[NDDoH | What to Do If You Are a Close Contact](#)

[NDDoH | Factsheet for People Who Are Close Contacts](#)

[NDDoH | COVID-19 Isolation and Quarantine Calculator](#)

**Centers for Disease Control and Prevention**

[CDC | COVID-19 Quarantine and Isolation](#)

[CDC | How to Protect Yourself & Others](#)

For questions about quarantine and monitoring periods, please contact the NDDoH Hotline at 866-207-2880 (Monday-Friday 8:00 AM-5:00 PM).

**Text**

---

I have tested positive for COVID-19, and you might be a close contact. Here are some links that have information about the possible need for you to quarantine:

[www.health.nd.gov/](http://www.health.nd.gov/)

[www.cdc.gov/coronavirus/](http://www.cdc.gov/coronavirus/)

You can also call the NDDoH Hotline at 866-207-2880 (M-F, 8am-5pm).

## REPORTING LINKS TO PROVIDE to STUDENTS

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### **University of North Dakota**

Students - [UND.edu/covid-19/student-reporting-procedures.html](https://und.edu/covid-19/student-reporting-procedures.html)

Employees - [UND.edu/covid-19/employee-reporting-procedures.html](https://und.edu/covid-19/employee-reporting-procedures.html)

### **Bismarck State College**

[cm.maxient.com/reportingform.php?BismarckState&layout\\_id=75](https://cm.maxient.com/reportingform.php?BismarckState&layout_id=75)

### **Dakota College Bottineau**

No self-reporting link, please ask students to notify their instructors/coach/associate dean's office directly.

### **Dickinson State University**

ON-campus students call Student Life at: 701-561-0560

OFF-campus students call Student Health at: 701-401-5088

### **Lake Region State College**

[lpsc.qualtrics.com/jfe/form/SV\\_eXuJOz4I38agDit](https://lpsc.qualtrics.com/jfe/form/SV_eXuJOz4I38agDit)

### **Mayville State University**

[mayvillestate.qualtrics.com/jfe/form/SV\\_bBeGOXsYr2tGn6l](https://mayvillestate.qualtrics.com/jfe/form/SV_bBeGOXsYr2tGn6l)

### **Minot State University**

[form.jotform.com/210044458513044](https://form.jotform.com/210044458513044)

### **North Dakota State College of Science**

[ndscs.qualtrics.com/jfe/form/SV\\_79utBNUwHWEIm7X](https://ndscs.qualtrics.com/jfe/form/SV_79utBNUwHWEIm7X)

### **Valley City State University**

[onestop.vcsu.edu/support/catalog/items/140](https://onestop.vcsu.edu/support/catalog/items/140)

### **Williston State College**

Student should work directly with instructor. For arranging accommodations, contact LeeAnn Clark, [leeann.clark@willistonstate.edu](mailto:leeann.clark@willistonstate.edu), 701-774-4224

**UND COVID-19 Case Investigation Teams - Statistics - Total Cases and Contacts**

	SMHS Team 2020-2021			Student Health Team 2020-2021			Combined Team 2021-2022			All Teams - 2020-2022		
	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total
<b>Record Count</b>	<b>11,992</b>	<b>5,519</b>	<b>17,511</b>	<b>4,969</b>	<b>3,345</b>	<b>8,314</b>	<b>19,617</b>	<b>1,805</b>	<b>21,422</b>	<b>36,578</b>	<b>10,669</b>	<b>47,247</b>
First Record Date	4/23/2020	4/26/2020		5/13/2020	5/14/2020		7/1/2021	7/5/2021				
Last Record Date	6/29/2021	2/14/2022		6/30/2021	1/14/2022		5/13/2022	1/19/2022				

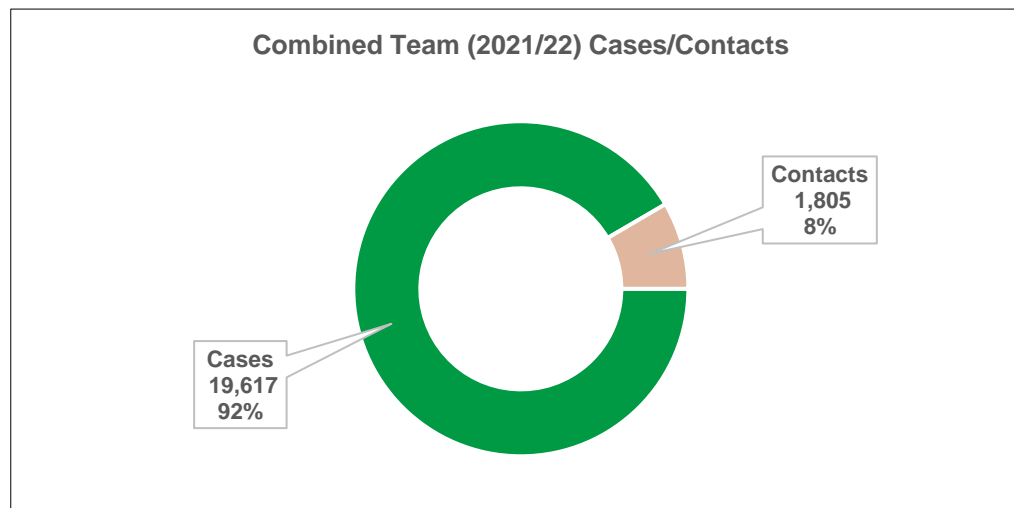
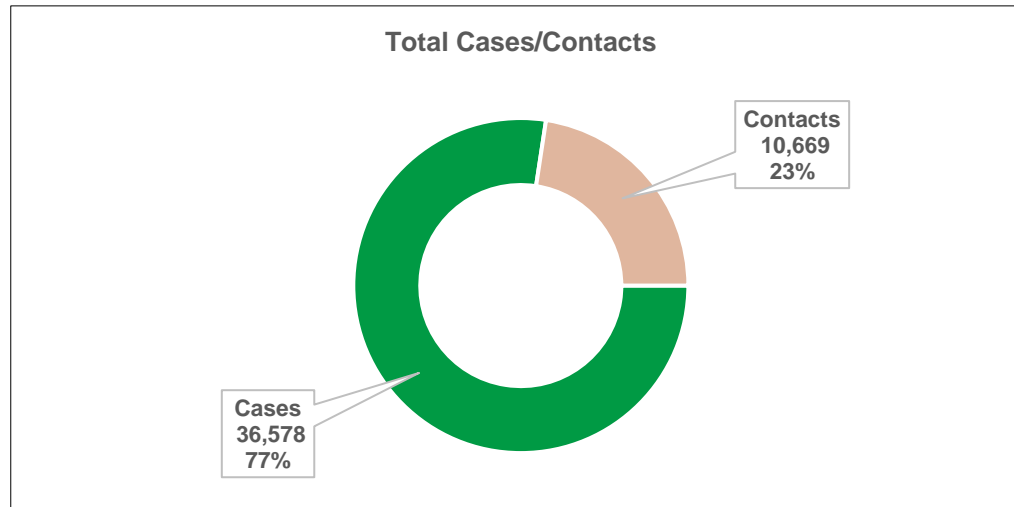
**Notes:**

*These data are for case and contact records still assigned to case workers on May 23, 2022. Records may have been reassigned for several reasons, including household grouping, reinfection, contacts becoming cases, merging records, re-assignment to a regional case manger or an SME team, or case worker resigning or being terminated. Because of record reassignments, case and contact numbers should be considered a minimum number of completed or attempted interviews and questions answered. Case and contact numbers include records where an interview was completed and records where case workers were unable to interview the individual. Case and contact numbers for the Student Health Team include case investigations and contact tracing completed by SHS staff in the initial months of the pandemic.*



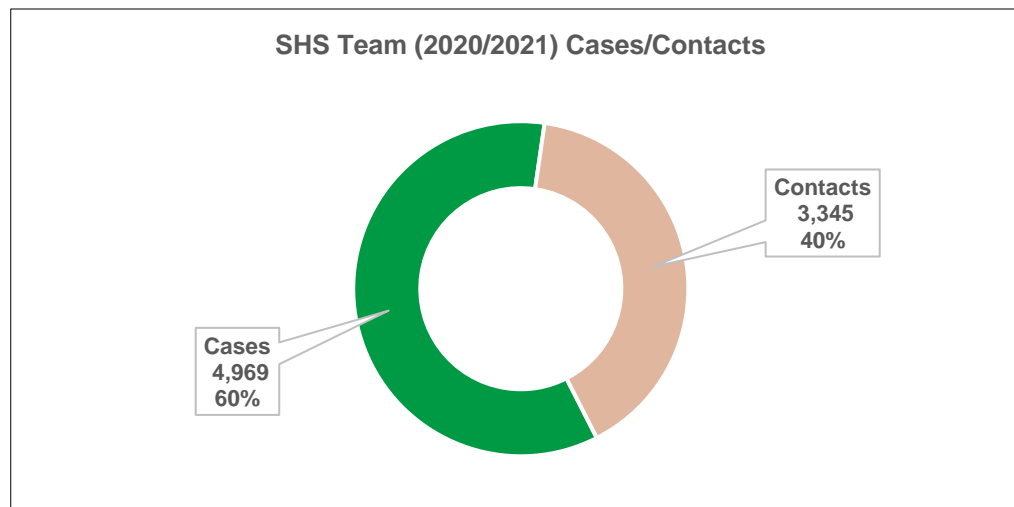
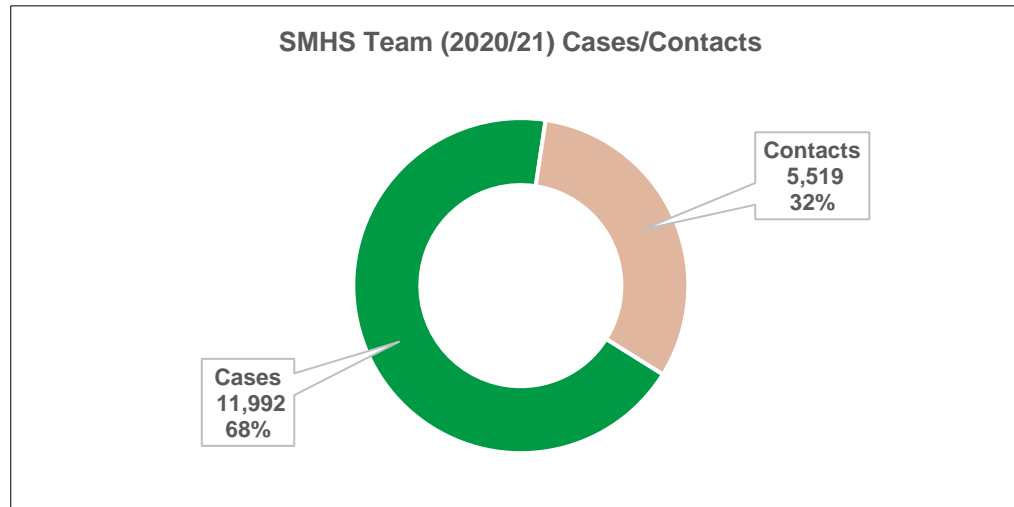
## Case and Contact Charts - Totals

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## Case and Contact Charts - Totals

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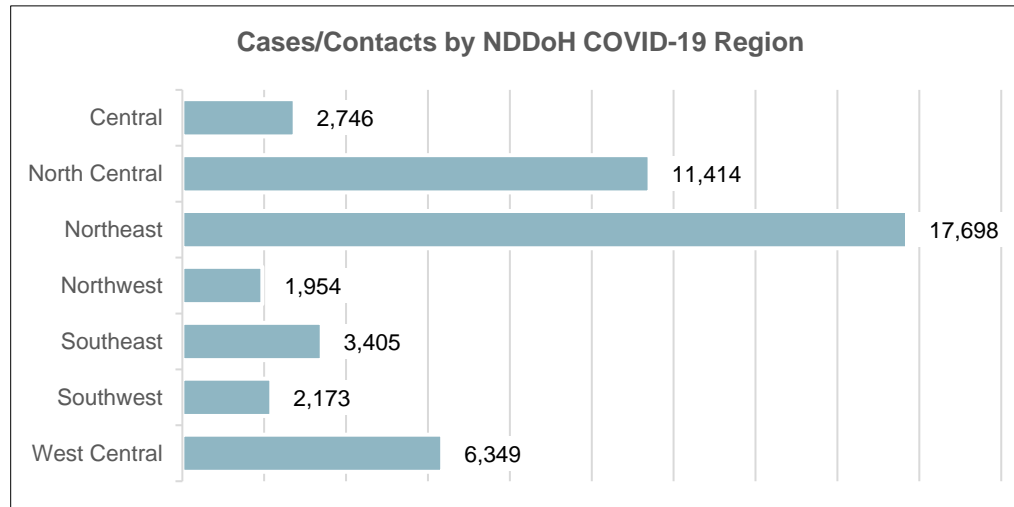
**UND COVID-19 Case Investigation Teams - Statistics - Cases and Contacts by Region**

	SMHS Team 2020-2021			Student Health Team 2020-2021			Combined Team 2020-2021			Totals		
	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total
<b>Total</b>	<b>11,992</b>	<b>5,519</b>	<b>17,511</b>	<b>4,969</b>	<b>3,345</b>	<b>8,314</b>	<b>19,617</b>	<b>1,805</b>	<b>21,422</b>	<b>36,578</b>	<b>10,669</b>	<b>47,247</b>
Max Cases / Contacts	5,259	1,815	6,725	3,555	1,911	5,466	4,826	681	5,507	13,640	4,058	17,698
Any Count	7	7	7	7	7	7	7	7	7	7	7	7
Zero Count	-	-	-	-	-	-	-	-	-	-	-	-
> 0 and <100	1	1	1	1	1	-	-	2	-	-	-	-
>= 100	6	6	6	6	6	7	7	5	7	7	7	7
>= 500	3	3	4	1	1	3	7	1	7	7	3	7
>= 1,000	3	2	3	1	1	1	7	-	7	7	3	7
>= 2,500	2	-	2	1	-	1	4	-	4	4	1	5
>= 5,000	1	-	2	-	-	1	-	-	2	3	-	3
>= 10,000	-	-	-	-	-	-	-	-	-	1	-	2
<b>NDDoH COVID-19 Region</b>												
Central	267	115	382	299	219	518	1,705	141	1,846	2,271	475	2,746
North Central	4,283	1,815	6,098	165	138	303	4,570	443	5,013	9,018	2,396	11,414
Northeast	5,259	1,466	6,725	3,555	1,911	5,466	4,826	681	5,507	13,640	4,058	17,698
Northwest	227	137	364	227	180	407	1,076	107	1,183	1,530	424	1,954
Southeast	41	36	77	54	60	114	3,152	62	3,214	3,247	158	3,405
Southwest	363	165	528	208	120	328	1,251	66	1,317	1,822	351	2,173
West Central	1,541	900	2,441	452	279	731	3,014	163	3,177	5,007	1,342	6,349
OOJ	11	6	17	9	6	15	12	3	15	32	15	47
Unanswered	-	879	879	-	432	432	11	139	150	11	1,450	1,461

Sorted by region, alphabetically; top 2 record counts highlighted in gray.

## Case and Contact Charts - by Region

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**UND COVID-19 Case Investigation Teams - Statistics - Cases and Contacts by County**

	SMHS Team 2020-2021			Student Health Team 2020-2021			Combined Team 2020-2021			Totals		
	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total
<b>Total</b>	<b>11,992</b>	<b>5,519</b>	<b>17,511</b>	<b>4,969</b>	<b>3,345</b>	<b>8,314</b>	<b>19,617</b>	<b>1,805</b>	<b>21,422</b>	<b>36,578</b>	<b>10,669</b>	<b>47,247</b>
Max Cases / Contacts	2,976	1,171	4,147	2,444	1,280	3,724	3,554	477	4,031	8,213	2,404	10,617
Any Count	51	50	51	52	49	53	53	41	53	53	52	53
Zero Count	2	3	2	1	4	-	-	12	-	-	1	-
> 0 and <100	34	39	32	41	44	40	33	38	31	24	36	19
>= 100	17	11	19	11	5	13	20	3	22	29	16	34
>= 500	5	3	8	1	1	2	7	-	7	14	3	16
>= 1,000	3	1	4	1	1	1	4	-	5	8	2	11
>= 2,500	1	-	2	-	-	1	3	-	3	4	-	4
>= 5,000	-	-	-	-	-	-	-	-	-	2	-	2
>= 10,000	-	-	-	-	-	-	-	-	-	-	-	1
<b>ND Counties - 53 Total</b>												
Grand Forks	2,215	647	2,862	2,444	1,280	3,724	3,554	477	4,031	8,213	2,404	10,617
Ward	2,976	1,171	4,147	133	97	230	3,137	341	3,478	6,246	1,609	7,855
Burleigh	1,137	673	1,810	336	196	532	2,256	119	2,375	3,729	988	4,717
Cass	41	36	77	54	60	114	3,152	62	3,214	3,247	158	3,405
Walsh	952	259	1,211	302	184	486	344	49	393	1,598	492	2,090
Stark	268	113	381	165	88	253	996	61	1,057	1,429	262	1,691
Morton	361	200	561	112	81	193	722	44	766	1,195	325	1,520
Traill	466	147	613	284	173	457	272	41	313	1,022	361	1,383
Pembina	425	135	560	149	93	242	317	82	399	891	310	1,201
Williams	143	95	238	146	121	267	583	61	644	872	277	1,149
Rolette	655	97	752	156	67	223	61	7	68	872	171	1,043
McLean	327	156	483	5	3	8	392	35	427	724	194	918
Mercer	330	151	481	6	7	13	361	12	373	697	170	867
Bottineau	199	82	281	10	16	26	287	29	316	496	127	623
Stutsman	65	16	81	49	47	96	389	12	401	503	75	578
McHenry	206	131	337	6	3	9	177	15	192	389	149	538
Richland	22	10	32	100	38	138	275	18	293	397	66	463
McKenzie	38	18	56	52	34	86	258	33	291	348	85	433
Ramsey	27	17	44	53	53	106	226	14	240	306	84	390
Towner	180	54	234	59	23	82	70	3	73	309	80	389
Barnes	16	15	31	22	16	38	247	69	316	285	100	385
Cavalier	130	40	170	47	35	82	95	17	112	272	92	364
Mountrail	42	22	64	26	24	50	208	12	220	276	58	334
Steele	112	43	155	36	17	53	53	1	54	201	61	262
Renville	85	45	130	2	2	4	62	4	66	149	51	200
Nelson	68	29	97	46	18	64	29	2	31	143	49	192
Burke	81	41	122	1	2	3	57	2	59	139	45	184
Griggs	56	15	71	32	21	53	31	2	33	119	38	157
Benson	14	7	21	8	19	27	95	7	102	117	33	150
Ransom	12	3	15	5	14	19	82	9	91	99	26	125
Sheridan	45	22	67	1	-	1	44	3	47	90	25	115
Oliver	34	16	50	1	8	9	53	2	55	88	26	114

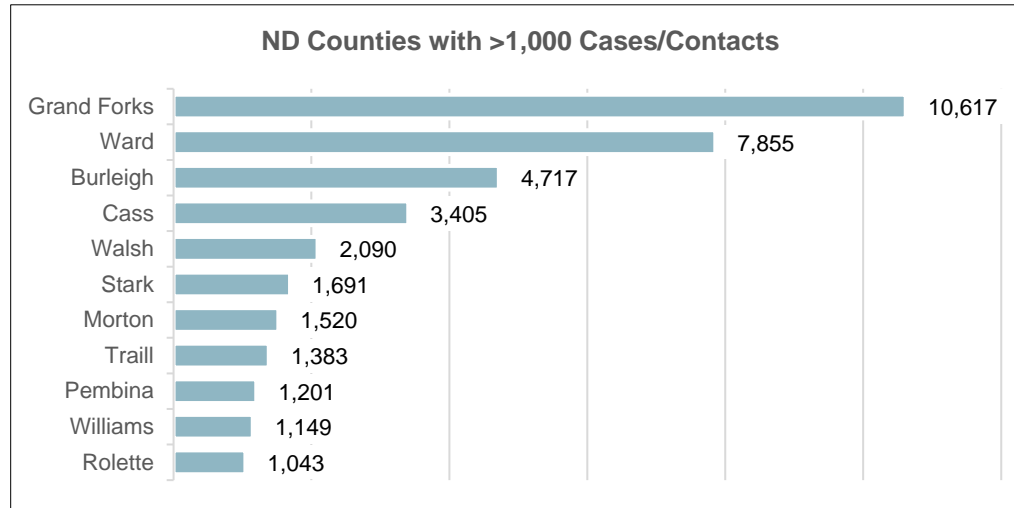
**UND COVID-19 Case Investigation Teams - Statistics - Cases and Contacts by County**

	SMHS Team 2020-2021			Student Health Team 2020-2021			Combined Team 2020-2021			Totals		
	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total
<b>Total</b>	<b>11,992</b>	<b>5,519</b>	<b>17,511</b>	<b>4,969</b>	<b>3,345</b>	<b>8,314</b>	<b>19,617</b>	<b>1,805</b>	<b>21,422</b>	<b>36,578</b>	<b>10,669</b>	<b>47,247</b>
Dunn	21	15	36	5	4	9	65	2	67	91	21	112
Pierce	17	2	19	12	12	24	57	4	61	86	18	104
Bowman	20	10	30	12	11	23	39	3	42	71	24	95
Emmons	35	17	52	3	1	4	31	-	31	69	18	87
Wells	14	6	20	3	1	4	53	1	54	70	8	78
Sargent	4	2	6	8	2	10	61	-	61	73	4	77
Foster	16	8	24	6	6	12	36	1	37	58	15	73
Hettinger	11	6	17	7	6	13	43	-	43	61	12	73
Adams	12	7	19	10	6	16	37	-	37	59	13	72
LaMoure	4	5	9	10	4	14	49	-	49	63	9	72
Eddy	13	9	22	7	3	10	25	1	26	45	13	58
McIntosh	19	3	22	5	1	6	27	2	29	51	6	57
Golden Valley	20	11	31	3	-	3	21	-	21	44	11	55
Kidder	16	6	22	6	2	8	21	3	24	43	11	54
Dickey	-	-	-	-	1	1	43	-	43	43	1	44
Grant	7	-	7	4	4	8	29	-	29	40	4	44
Divide	4	2	6	3	1	4	27	1	28	34	4	38
Logan	8	6	14	5	-	5	19	-	19	32	6	38
Sioux	8	10	18	1	1	2	5	-	5	14	11	25
Billings	4	3	7	1	1	2	15	-	15	20	4	24
Slope	-	-	-	1	-	1	6	-	6	7	-	7
OOJ	11	6	17	9	6	15	12	3	15	32	15	47
Unanswered	-	879	879	-	432	432	11	139	150	11	1,450	1,461

Sorted by total of all cases and contacts, descending; top 5 record counts highlighted in gray.

## Case and Contact Charts - By County

---



**UND COVID-19 Case Investigation Teams - Statistics - Cases and Contacts by City**

	SMHS Team 2020-2021			Student Health Team 2020-2021			Combined Team 2020-2021			Totals		
	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total
<b>Total</b>	<b>11,992</b>	<b>5,519</b>	<b>17,511</b>	<b>4,969</b>	<b>3,345</b>	<b>8,314</b>	<b>19,617</b>	<b>1,805</b>	<b>21,422</b>	<b>36,578</b>	<b>10,669</b>	<b>47,247</b>
Max Cases / Contacts	2,374	920	3,294	2,269	1,194	3,463	3,173	441	3,614	7,390	2,207	9,597
Any Count	242	196	250	176	141	188	310	117	311	325	237	326
Zero Count	115	161	107	181	216	169	47	240	46	32	120	31
<b>ND Cities with Cases/Contacts</b>												
> 0 and <100	225	192	225	169	138	179	288	114	289	282	227	276
>= 100	17	4	25	7	3	9	22	3	22	43	10	50
>= 500	4	3	5	1	1	1	8	-	8	9	3	11
>= 1,000	3	-	3	1	1	1	4	-	4	6	2	8
>= 2,500	-	-	2	-	-	1	2	-	2	3	-	3
>= 5,000	-	-	-	-	-	-	-	-	-	2	-	2
<b>ND Cities - 357 Total</b>												
Grand Forks	1,948	572	2,520	2,269	1,194	3,463	3,173	441	3,614	7,390	2,207	9,597
Minot	2,374	920	3,294	124	90	214	2,657	292	2,949	5,155	1,302	6,457
Bismarck	1,048	625	1,673	308	180	488	2,074	105	2,179	3,430	910	4,340
Fargo	31	16	47	38	34	72	2,032	30	2,062	2,101	80	2,181
Dickinson	227	85	312	150	77	227	895	55	950	1,272	217	1,489
Mandan	313	187	500	96	71	167	650	40	690	1,059	298	1,357
Williston	121	87	208	136	110	246	525	54	579	782	251	1,033
Grafton	506	88	594	147	68	215	176	18	194	829	174	1,003
West Fargo	6	12	18	11	19	30	795	19	814	812	50	862
Mayville	134	35	169	166	92	258	126	33	159	426	160	586
Other - OOJ or Misspelled	712	382	1,094	204	217	421	614	88	702	1,530	687	2,217
Unanswered	30	765	795	14	385	399	9	94	103	53	1,244	1,297

Sorted by total of all cases and contacts, descending; top 5 record counts highlighted in gray.

**Notes**

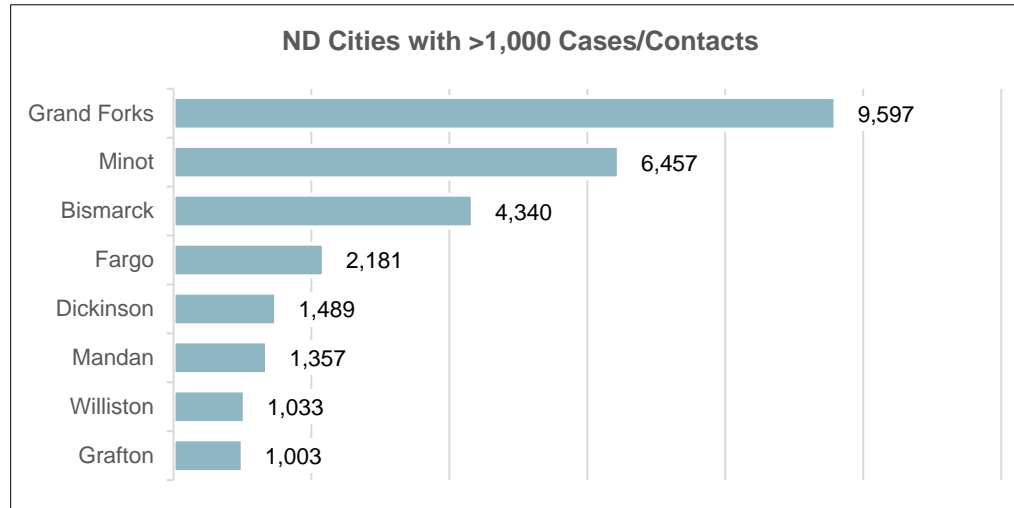
Top 10 cities, sorted on total cases and contacts, shown.

City name is a text field in Dynamics - case workers may have entered incorrect or alternate spellings (i.e. Michigan/Michigan City) for some locations.



## Case and Contact Charts - By City

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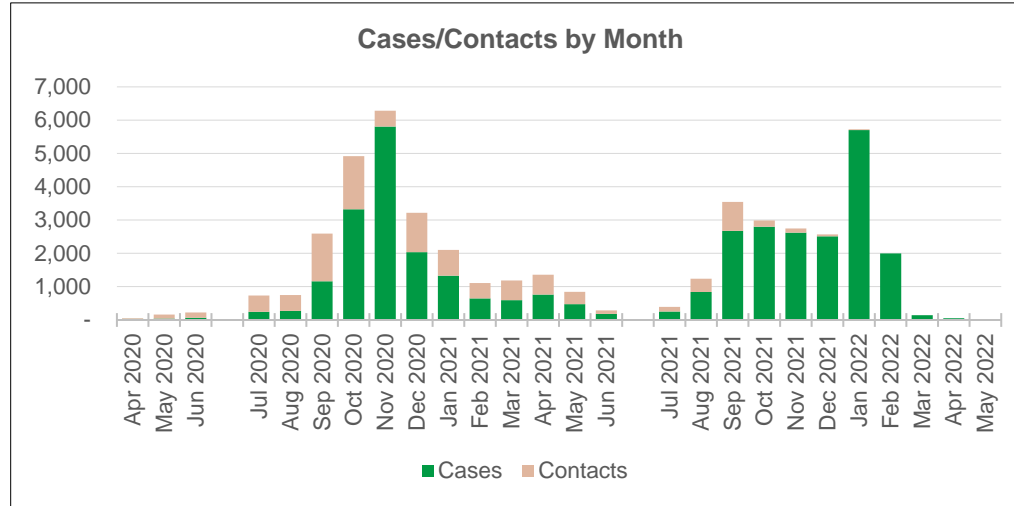


**UND COVID-19 Case Investigation Teams - Statistics - Cases and Contacts by Month**

Month	SMHS Team 2020-2021			Student Health Team 2020-2021			Combined Team 2020-2021			Totals		
	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total
<b>Total</b>	<b>11,992</b>	<b>5,519</b>	<b>17,511</b>	<b>4,969</b>	<b>3,345</b>	<b>8,314</b>	<b>19,617</b>	<b>1,805</b>	<b>21,422</b>	<b>36,578</b>	<b>10,669</b>	<b>47,247</b>
Highest Monthly Count	4,284	962	4,288	1,525	703	1,995	5,701	870	5,728	5,809	1,599	6,283
April 2020	33	18	51	-	2	2	-	-	-	33	20	53
May 2020	32	98	130	7	22	29	-	-	-	39	120	159
June 2020	59	144	203	6	16	22	-	-	-	65	160	225
July 2020	234	453	687	8	40	48	-	-	-	242	493	735
August 2020	260	412	672	11	65	76	-	-	-	271	477	748
September 2020	857	962	1,819	302	470	772	-	-	-	1,159	1,432	2,591
October 2020	2,428	896	3,324	894	703	1,597	-	-	-	3,322	1,599	4,921
November 2020	4,284	4	4,288	1,525	470	1,995	-	-	-	5,809	474	6,283
December 2020	1,266	699	1,965	772	483	1,255	-	-	-	2,038	1,182	3,220
January 2021	765	438	1,203	563	338	901	-	-	-	1,328	776	2,104
February 2021	425	303	728	224	158	382	-	-	-	649	461	1,110
March 2021	403	388	791	191	205	396	-	-	-	594	593	1,187
April 2021	458	323	781	303	273	576	-	-	-	761	596	1,357
May 2021	349	287	636	123	87	210	-	-	-	472	374	846
June 2021	139	94	233	40	13	53	-	-	-	179	107	286
July 2021	-	-	-	-	-	-	252	142	394	252	142	394
August 2021	-	-	-	-	-	-	837	400	1,237	837	400	1,237
September 2021	-	-	-	-	-	-	2,676	870	3,546	2,676	870	3,546
October 2021	-	-	-	-	-	-	2,801	184	2,985	2,801	184	2,985
November 2021	-	-	-	-	-	-	2,622	125	2,747	2,622	125	2,747
December 2021	-	-	-	-	-	-	2,513	57	2,570	2,513	57	2,570
January 2022	-	-	-	-	-	-	5,701	27	5,728	5,701	27	5,728
February 2022	-	-	-	-	-	-	1,998	-	1,998	1,998	-	1,998
March 2022	-	-	-	-	-	-	143	-	143	143	-	143
April 2022	-	-	-	-	-	-	50	-	50	50	-	50
May 2022	-	-	-	-	-	-	24	-	24	24	-	24

Sorted by year/month, chronologically; top 2 months highlighted in gray.

## Case and Contact Charts - By Month



**UND COVID-19 Case Investigation Teams - Statistics - Cases and Contacts by Age**

	SMHS Team 2020-2021			Student Health Team 2020-2021			Combined Team 2020-2021			Totals		
	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total
<b>Total</b>	<b>11,992</b>	<b>5,519</b>	<b>17,511</b>	<b>4,969</b>	<b>3,345</b>	<b>8,314</b>	<b>19,617</b>	<b>1,805</b>	<b>21,422</b>	<b>36,578</b>	<b>10,669</b>	<b>47,247</b>
Age - Average	40	27		31	26		33	24		35	26	
Age - Median	38	23		23	21		26	20		30	21	
Age - Mode	29	3		19	19		21	18		21	19	
Age - Max	101	94		102	90		101	93		102	94	
<b>Age Group</b>												
0-4	281	631	912	65	262	327	790	143	933	1,136	1,036	2,172
5-17	1,216	1,239	2,455	276	488	764	2,772	331	3,103	4,264	2,058	6,322
18-24	1,437	517	1,954	2,407	1,025	3,432	5,880	593	6,473	9,724	2,135	11,859
25-64	7,573	1,887	9,460	1,912	840	2,752	8,483	486	8,969	17,968	3,213	21,181
65-89	1,421	246	1,667	285	131	416	1,656	35	1,691	3,362	412	3,774
90+	52	5	57	15	2	17	35	2	37	102	9	111
<i>Unanswered</i>	12	994	1,006	9	597	606	1	215	216	22	1,806	1,828
<b>Age at Time of Infection/Contact</b>												
0	63	127	190	14	65	79	178	33	211	255	225	480
1	56	110	166	14	48	62	151	29	180	221	187	408
2	55	119	174	10	46	56	122	25	147	187	190	377
3	53	146	199	15	51	66	158	23	181	226	220	446
4	54	129	183	12	52	64	181	33	214	247	214	461
5	51	127	178	8	50	58	186	23	209	245	200	445
6	61	116	177	14	43	57	195	30	225	270	189	459
7	63	94	157	22	33	55	215	25	240	300	152	452
8	71	101	172	16	27	43	186	34	220	273	162	435
9	70	113	183	13	36	49	228	29	257	311	178	489
10	81	85	166	24	32	56	229	23	252	334	140	474
11	89	81	170	20	44	64	229	27	256	338	152	490
12	103	91	194	19	39	58	209	17	226	331	147	478
13	97	79	176	27	40	67	214	30	244	338	149	487
14	115	97	212	27	37	64	210	20	230	352	154	506
15	132	99	231	15	32	47	236	22	258	383	153	536
16	151	83	234	27	32	59	200	26	226	378	141	519
17	132	73	205	44	43	87	235	25	260	411	141	552
18	148	71	219	265	125	390	723	152	875	1,136	348	1,484
19	198	72	270	426	212	638	842	131	973	1,466	415	1,881
20	182	82	264	419	201	620	923	106	1,029	1,524	389	1,913
21	238	86	324	421	156	577	1,089	88	1,177	1,748	330	2,078
22	244	66	310	392	165	557	895	62	957	1,531	293	1,824
23	214	85	299	269	105	374	731	33	764	1,214	223	1,437
24	213	55	268	215	61	276	677	21	698	1,105	137	1,242
25	247	62	309	148	45	193	309	26	335	704	133	837
26	234	64	298	90	29	119	249	15	264	573	108	681
27	208	47	255	80	24	104	256	11	267	544	82	626
28	224	68	292	65	28	93	265	21	286	554	117	671
29	272	56	328	64	23	87	292	13	305	628	92	720

**UND COVID-19 Case Investigation Teams - Statistics - Cases and Contacts by Age**

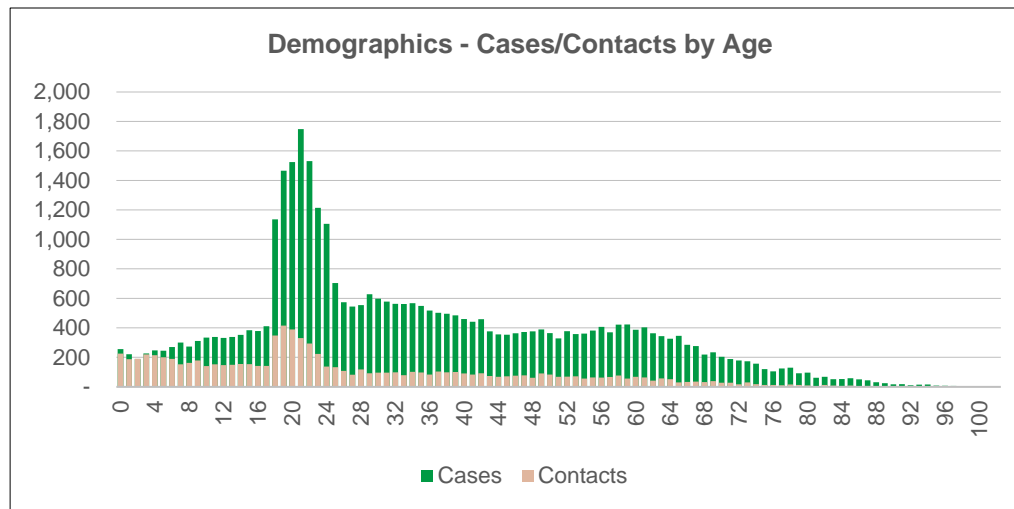
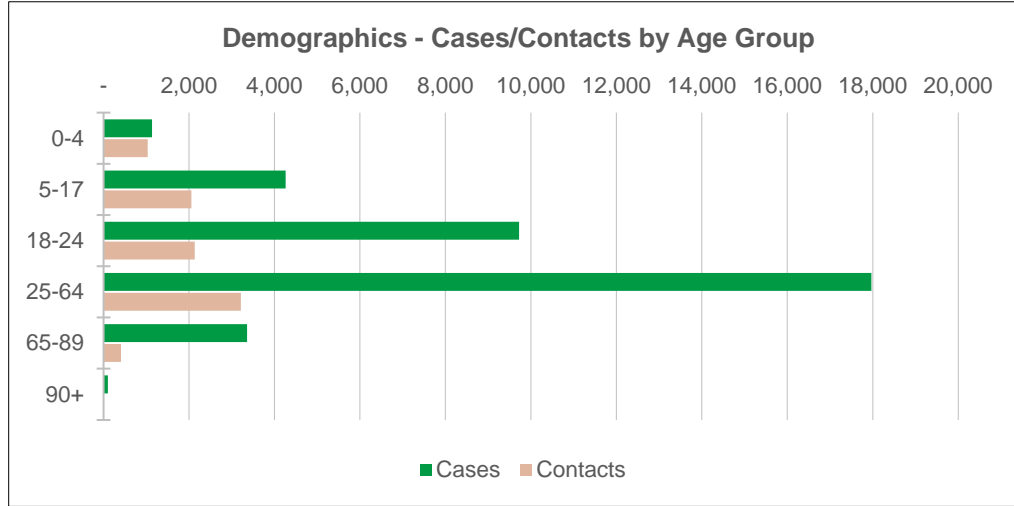
	SMHS Team 2020-2021			Student Health Team 2020-2021			Combined Team 2020-2021			Totals		
	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total
<b>Total</b>	<b>11,992</b>	<b>5,519</b>	<b>17,511</b>	<b>4,969</b>	<b>3,345</b>	<b>8,314</b>	<b>19,617</b>	<b>1,805</b>	<b>21,422</b>	<b>36,578</b>	<b>10,669</b>	<b>47,247</b>
30	250	60	310	82	19	101	265	17	282	597	96	693
31	254	66	320	52	18	70	272	12	284	578	96	674
32	226	65	291	59	21	80	278	12	290	563	98	661
33	227	43	270	49	21	70	285	14	299	561	78	639
34	232	61	293	59	25	84	276	15	291	567	101	668
35	223	60	283	47	22	69	278	15	293	548	97	645
36	211	47	258	56	21	77	250	15	265	517	83	600
37	226	56	282	56	28	84	220	19	239	502	103	605
38	227	56	283	43	23	66	225	19	244	495	98	593
39	161	53	214	44	35	79	280	12	292	485	100	585
40	168	61	229	40	18	58	251	11	262	459	90	549
41	178	45	223	32	19	51	231	19	250	441	83	524
42	184	56	240	43	22	65	231	14	245	458	92	550
43	178	41	219	30	18	48	168	14	182	376	73	449
44	146	37	183	33	18	51	176	13	189	355	68	423
45	162	38	200	39	25	64	152	8	160	353	71	424
46	149	46	195	31	20	51	183	9	192	363	75	438
47	159	46	205	41	18	59	172	13	185	372	77	449
48	181	36	217	38	14	52	157	11	168	376	61	437
49	178	48	226	32	30	62	179	12	191	389	90	479
50	162	33	195	31	33	64	171	17	188	364	83	447
51	142	38	180	35	18	53	151	12	163	328	68	396
52	150	41	191	43	18	61	184	10	194	377	69	446
53	170	43	213	37	19	56	150	9	159	357	71	428
54	169	31	200	39	13	52	153	12	165	361	56	417
55	183	31	214	35	23	58	163	9	172	381	63	444
56	178	41	219	36	19	55	192	2	194	406	62	468
57	162	41	203	41	17	58	166	9	175	369	67	436
58	188	53	241	47	14	61	187	9	196	422	76	498
59	197	36	233	36	15	51	190	5	195	423	56	479
60	161	41	202	40	18	58	186	9	195	387	68	455
61	179	47	226	37	10	47	187	6	193	403	63	466
62	148	25	173	34	9	43	181	7	188	363	41	404
63	148	32	180	33	18	51	162	7	169	343	57	400
64	131	36	167	35	12	47	160	3	163	326	51	377
65	142	23	165	32	5	37	172	2	174	346	30	376
66	119	20	139	26	10	36	140	3	143	285	33	318
67	120	17	137	28	14	42	128	4	132	276	35	311
68	96	14	110	21	15	36	101	3	104	218	32	250
69	117	22	139	17	12	29	100	4	104	234	38	272
70	88	17	105	16	7	23	99	3	102	203	27	230
71	82	19	101	15	8	23	91	-	91	188	27	215
72	83	10	93	16	6	22	79	1	80	178	17	195
73	71	17	88	12	10	22	90	3	93	173	30	203
74	68	7	75	6	7	13	83	4	87	157	18	175
75	52	7	59	9	5	14	59	-	59	120	12	132

**UND COVID-19 Case Investigation Teams - Statistics - Cases and Contacts by Age**

	SMHS Team 2020-2021			Student Health Team 2020-2021			Combined Team 2020-2021			Totals		
	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total
<b>Total</b>	<b>11,992</b>	<b>5,519</b>	<b>17,511</b>	<b>4,969</b>	<b>3,345</b>	<b>8,314</b>	<b>19,617</b>	<b>1,805</b>	<b>21,422</b>	<b>36,578</b>	<b>10,669</b>	<b>47,247</b>
76	42	5	47	4	5	9	59	2	61	105	12	117
77	47	7	54	13	2	15	64	1	65	124	10	134
78	54	13	67	7	2	9	68	1	69	129	16	145
79	36	8	44	10	4	14	45	-	45	91	12	103
80	29	6	35	9	1	10	58	2	60	96	9	105
81	24	5	29	6	-	6	31	-	31	61	5	66
82	26	8	34	5	4	9	37	-	37	68	12	80
83	23	4	27	-	3	3	28	1	29	51	8	59
84	16	4	20	7	2	9	29	-	29	52	6	58
85	29	3	32	7	5	12	22	-	22	58	8	66
86	21	2	23	7	-	7	22	-	22	50	2	52
87	15	3	18	6	2	8	23	1	24	44	6	50
88	11	4	15	1	1	2	19	-	19	31	5	36
89	10	1	11	5	1	6	9	-	9	24	2	26
90 - 102	52	5	57	15	2	17	35	2	37	102	9	111
<i>Unanswered</i>	12	994	1,006	9	597	606	1	215	216	22	1,806	1,828

Sorted by age, chronologically; top 10 record counts highlighted in gray.

## Case and Contact Charts - By Age



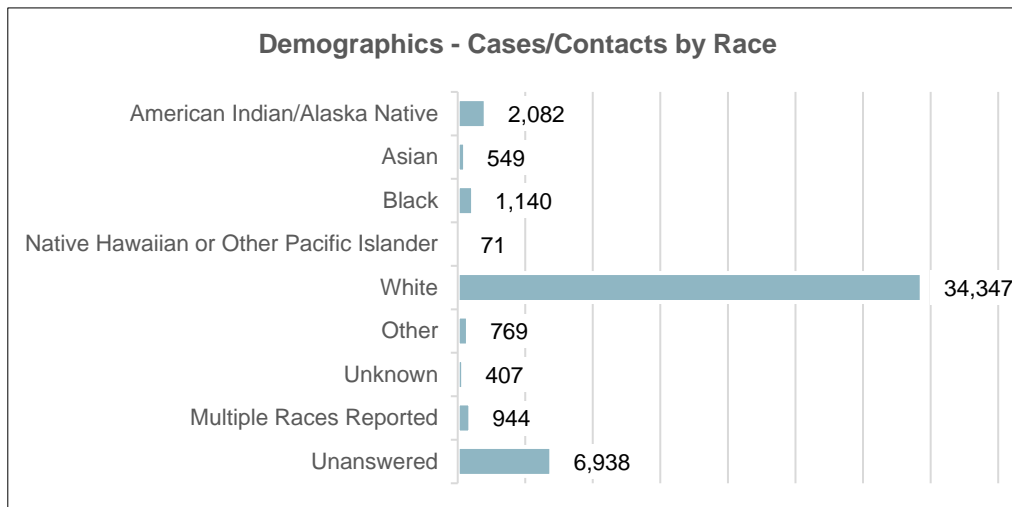
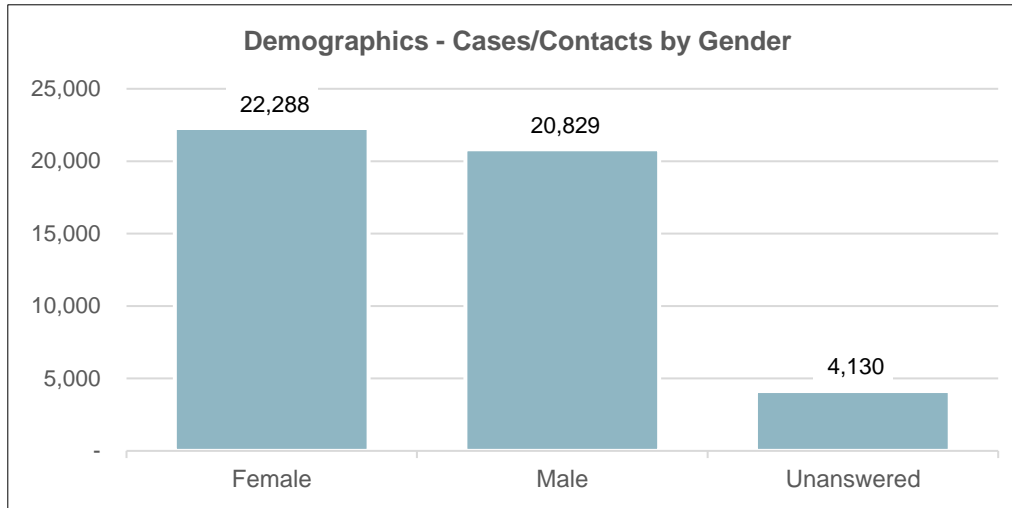
**UND COVID-19 Case Investigation Teams - Statistics - Cases and Contacts by Demographics**

	SMHS Team 2020-2021			Student Health Team 2020-2021			Combined Team 2020-2021			Totals		
	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total
<b>Total</b>	<b>11,992</b>	<b>5,519</b>	<b>17,511</b>	<b>4,969</b>	<b>3,345</b>	<b>8,314</b>	<b>19,617</b>	<b>1,805</b>	<b>21,422</b>	<b>36,578</b>	<b>10,669</b>	<b>47,247</b>
<b>Gender</b>												
Female	6,012	2,175	8,187	2,522	1,344	3,866	9,401	834	10,235	17,935	4,353	22,288
Male	5,482	2,465	7,947	2,317	1,541	3,858	8,217	807	9,024	16,016	4,813	20,829
Unanswered	498	879	1,377	130	460	590	1,999	164	2,163	2,627	1,503	4,130
<b>Race</b>												
American Indian/Alaska Native	778	224	1,002	256	138	394	628	58	686	1,662	420	2,082
Asian	129	41	170	83	30	113	245	21	266	457	92	549
Black	312	139	451	134	84	218	437	34	471	883	257	1,140
Native Hawaiian or Other Paci	10	6	16	7	5	12	34	9	43	51	20	71
White	9,205	3,551	12,756	3,900	2,230	6,130	14,173	1,288	15,461	27,278	7,069	34,347
Other	186	80	266	108	62	170	302	31	333	596	173	769
Unknown	28	13	41	16	8	24	330	12	342	374	33	407
Multiple Races Reported	219	73	292	112	47	159	469	24	493	800	144	944
Unanswered	1,125	1,392	2,517	353	741	1,094	2,999	328	3,327	4,477	2,461	6,938
<b>Ethnicity</b>												
Hispanic	606	251	857	282	145	427	919	100	1,019	1,807	496	2,303
Non-Hispanic	8,946	3,275	12,221	3,955	2,105	6,060	14,937	1,339	16,276	27,838	6,719	34,557
Unknown	2,262	51	2,313	691	28	719	449	16	465	3,402	95	3,497
Unanswered	178	1,942	2,120	41	1,067	1,108	3,312	350	3,662	3,531	3,359	6,890

Sorted alphabetically within group; no highlighting applied.

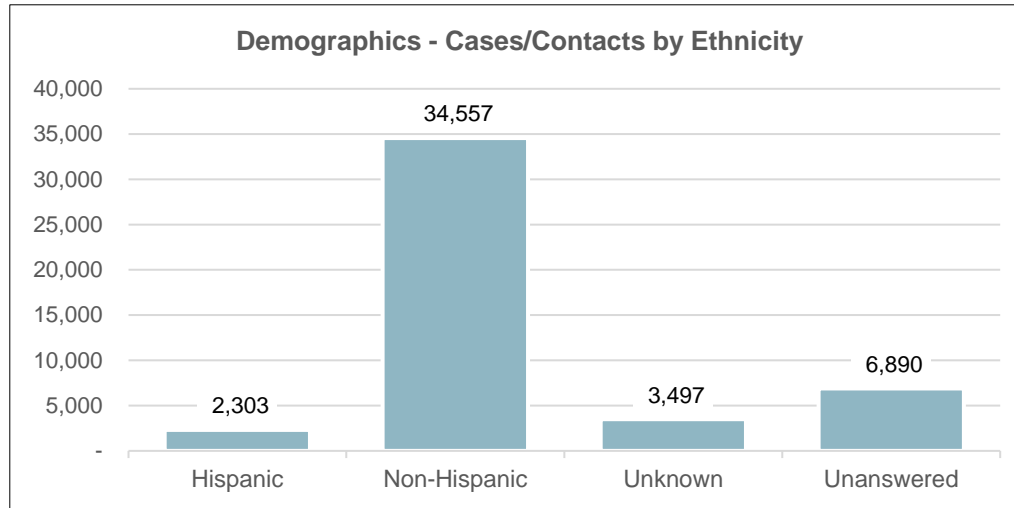


## Case and Contact Charts - By Demographics



## Case and Contact Charts - By Demographics

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**UND COVID-19 Case Investigation Teams - Statistics - Cases and Contacts by Attendance and Congregate Living**

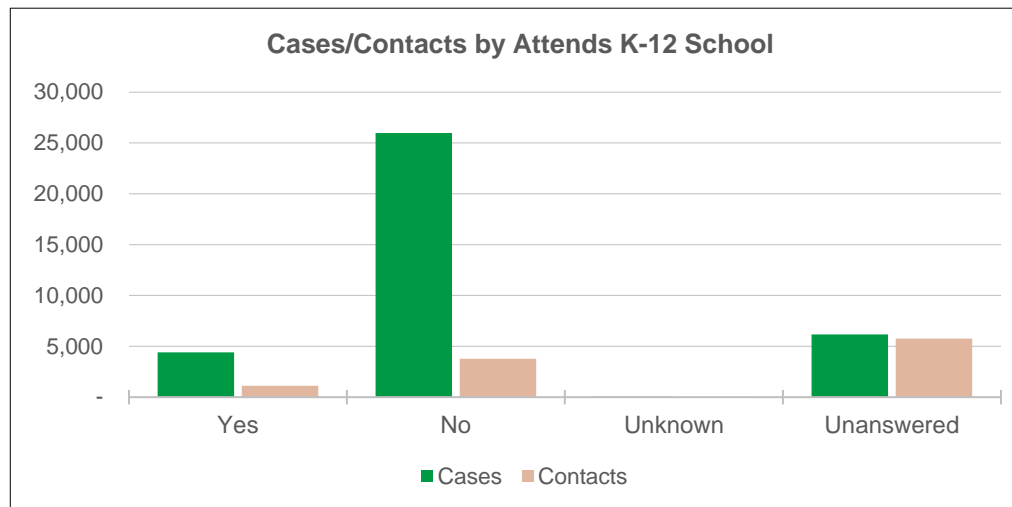
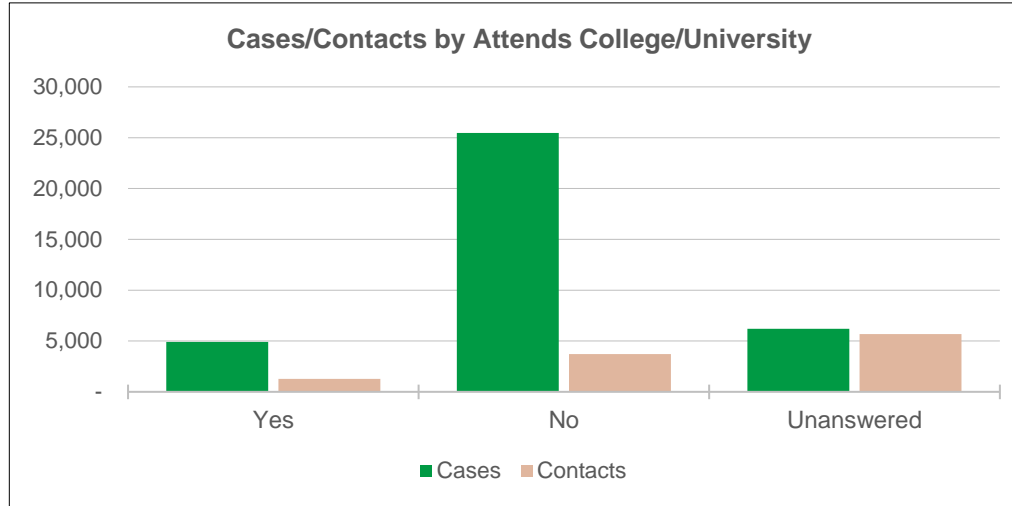
	SMHS Team 2020-2021			Student Health Team 2020-2021			Combined Team 2020-2021			Totals		
	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total
<b>Total</b>	<b>11,992</b>	<b>5,519</b>	<b>17,511</b>	<b>4,969</b>	<b>3,345</b>	<b>8,314</b>	<b>19,617</b>	<b>1,805</b>	<b>21,422</b>	<b>36,578</b>	<b>10,669</b>	<b>47,247</b>
<b>Attends College / University</b>												
Yes	628	126	754	1,666	715	2,381	2,619	435	3,054	4,913	1,276	6,189
No	9,299	1,982	11,281	2,903	1,059	3,962	13,268	669	13,937	25,470	3,710	29,180
Unanswered	2,065	3,411	5,476	400	1,571	1,971	3,730	701	4,431	6,195	5,683	11,878
<b>Attends K-12 School</b>												
Yes	1,130	638	1,768	294	272	566	2,971	209	3,180	4,395	1,119	5,514
No	8,681	1,542	10,223	3,913	1,357	5,270	13,380	870	14,250	25,974	3,769	29,743
Unknown	10	10	20	5	12	17	30	10	40	45	32	77
Unanswered	2,171	3,329	5,500	757	1,704	2,461	3,236	716	3,952	6,164	5,749	11,913
<b>Attends Childcare</b>												
Yes	164	182	346	35	74	109	551	35	586	750	291	1,041
No	9,357	2,004	11,361	4,089	1,564	5,653	15,201	1,039	16,240	28,647	4,607	33,254
Unknown	13	7	20	2	9	11	14	6	20	29	22	51
Unanswered	2,458	3,326	5,784	843	1,698	2,541	3,851	725	4,576	7,152	5,749	12,901
<b>Congregate Living</b>												
Yes	173	40	213	328	216	544	422	114	536	923	370	1,293
No	11,819	5,479	17,298	4,641	3,129	7,770	19,195	1,691	20,886	35,655	10,299	45,954
Unanswered	-	-	-	-	-	-	-	-	-	-	-	-

Sorted alphabetically within group; no highlighting applied.

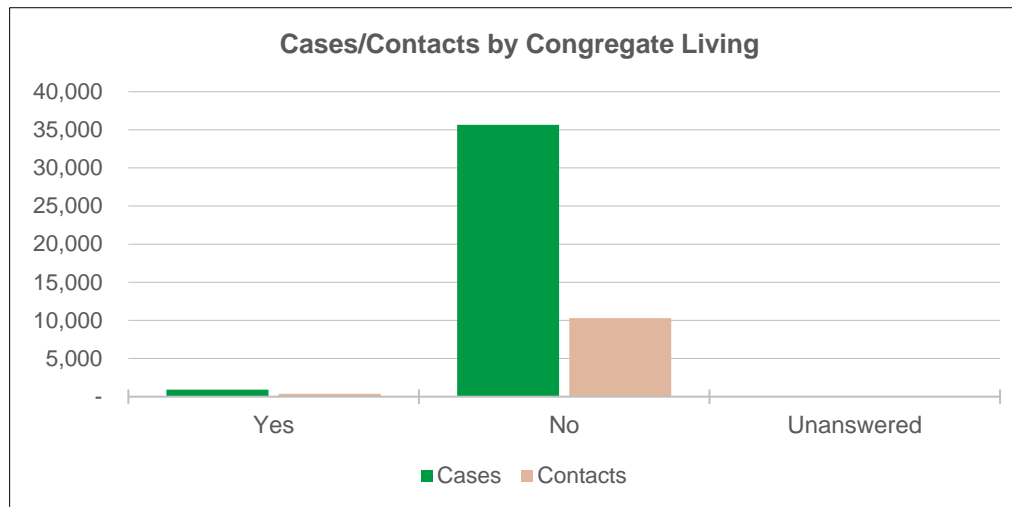
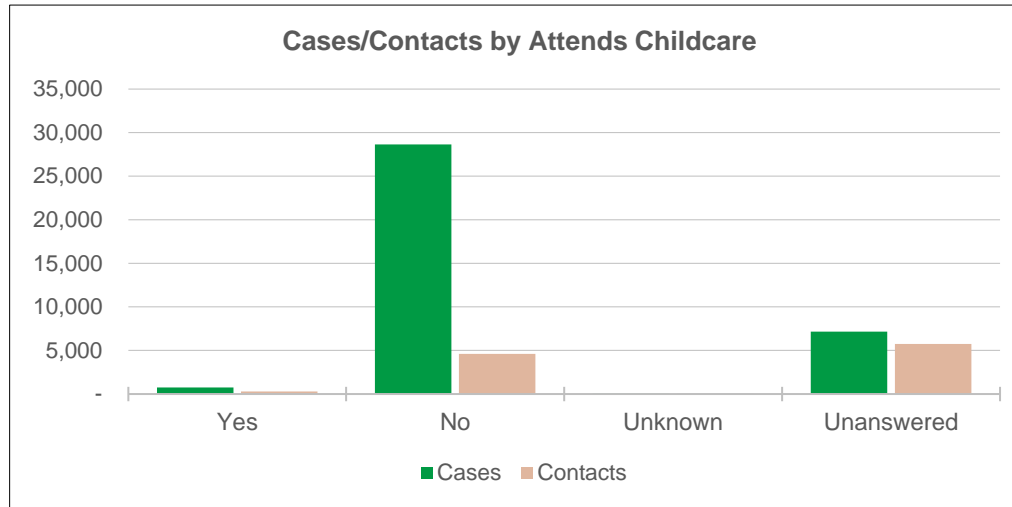
**Notes:**

College/University attendance includes private and out-of-state institutions; childcare and K-12 school attendance Yes/No answers were reported by the parents of the case or contact. Congregate Living includes some senior living situations, group homes, and long-term care, as well as residence halls.

## Case and Contact Charts - By Education and Congregate Living



## Case and Contact Charts - By Education and Congregate Living



**UND COVID-19 Case Investigation Teams - Statistics - Cases and Contacts by Interview Status / Vaccinated / Type of Spread**

	SMHS Team 2020-2021			Student Health Team 2020-2021			Combined Team 2020-2021			Totals		
	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total
<b>Total</b>	<b>11,992</b>	<b>5,519</b>	<b>17,511</b>	<b>4,969</b>	<b>3,345</b>	<b>8,314</b>	<b>19,617</b>	<b>1,805</b>	<b>21,422</b>	<b>36,578</b>	<b>10,669</b>	<b>47,247</b>
<b>Unable to Interview *</b>												
Yes	294	38	332	133	44	177	3,631	137	3,768	4,058	219	4,277
No	705	439	1,144	210	200	410	14,789	1,386	16,175	15,704	2,025	17,729
Unanswered	1,417	1,196	2,613	959	757	1,716	1,197	282	1,479	3,573	2,235	5,808
N/A - Prior to 1/13/2021 *	9,576	3,846	13,422	3,667	2,344	6,011	-	-	-	13,243	6,190	19,433
<b>Vaccinated for COVID-19 *</b>												
Yes	202	201	403	95	165	260	7,893	691	8,584	8,190	1,057	9,247
No	2,796	1,219	4,015	1,639	702	2,341	11,708	847	12,555	16,143	2,768	18,911
Unknown	3	18	21	-	8	8	4	138	142	7	164	171
Unanswered	20	310	330	7	161	168	12	129	141	39	600	639
N/A - Prior to 1/26/2021 *	8,971	3,771	12,742	3,228	2,309	5,537	-	-	-	12,199	6,080	18,279
<b>Type of Spread</b>												
Close Contact	2,916	137	3,053	1,067	132	1,199	2,438	8	2,446	6,421	277	6,698
Community	6,774	11	6,785	2,998	98	3,096	9,124	12	9,136	18,896	121	19,017
Possible Travel	39	-	39	16	-	16	36	-	36	91	-	91
Household Contact	2,111	270	2,381	825	123	948	2,831	68	2,899	5,767	461	6,228
Nosocomial	27	1	28	4	-	4	11	-	11	42	1	43
Under Investigation	2	14	16	-	-	-	118	-	118	120	14	134
Confirmed Travel	18	-	18	8	-	8	26	-	26	52	-	52
Unanswered	105	5,086	5,191	51	2,992	3,043	5,033	1,717	6,750	5,189	9,795	14,984

Sorted alphabetically within group; no highlighting applied.

**Notes:**

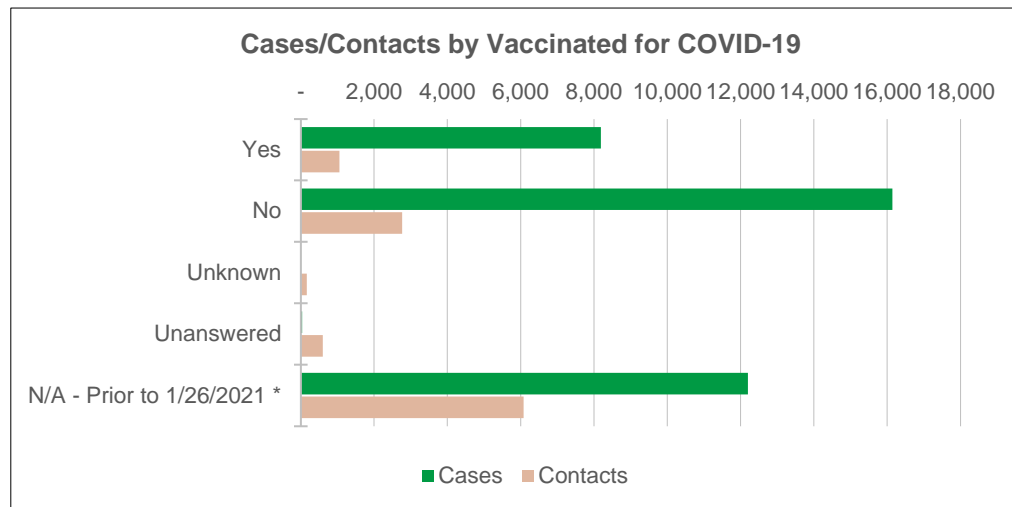
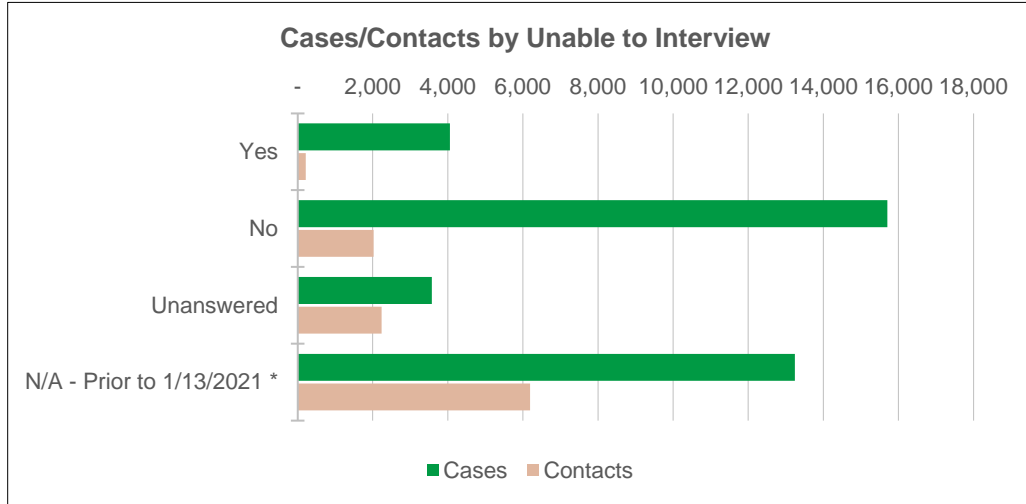
Unable to Interview and Vaccinated for COVID-19 questions were added in January 2021.

For Unable to Interview, Yes = was unable to reach case/contact, No = interview completed.

Unvaccinated status may be overstated due to incomplete reporting (VA and US Military do not report to NDIIS) or out-of-state vaccination location.

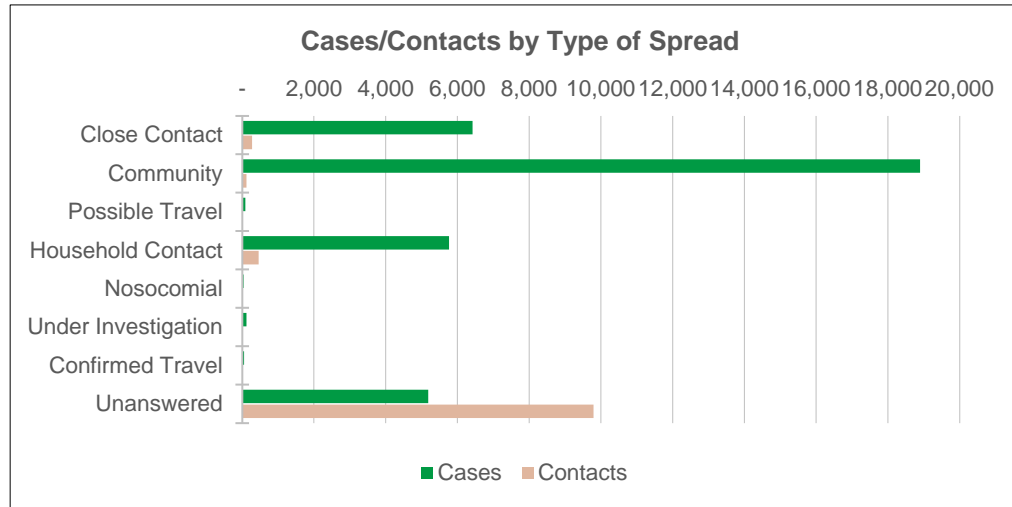
Community became the default Type of Spread when contact tracing was suspended.

## Case and Contact Charts



## Case and Contact Charts

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**UND COVID-19 Case Investigation Teams - Statistics - by Symptom and Hospitalization Status**

	SMHS Team 2020-2021			Student Health Team 2020-2021			Combined Team 2020-2021			Totals		
	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total	Cases	Contacts	Total
<b>Total</b>	<b>11,992</b>	<b>5,519</b>	<b>17,511</b>	<b>4,969</b>	<b>3,345</b>	<b>8,314</b>	<b>19,617</b>	<b>1,805</b>	<b>21,422</b>	<b>36,578</b>	<b>10,669</b>	<b>47,247</b>
<b>Symptomatic</b>												
Yes	7,211	-	7,211	2,873	-	2,873	13,080	-	13,080	23,164	-	23,164
No	3,722	-	3,722	1,619	-	1,619	1,414	-	1,414	6,755	-	6,755
Unanswered	1,059	-	1,059	477	-	477	5,123	-	5,123	6,659	-	6,659
<b>Symptoms Present</b>												
Symptomatic	10,261	-	10,261	4,171	-	4,171	15,156	-	15,156	29,588	-	29,588
Presymptomatic	454	-	454	214	-	214	345	-	345	1,013	-	1,013
Asymptomatic	911	-	911	435	-	435	954	-	954	2,300	-	2,300
Unknown	14	-	14	6	-	6	97	-	97	117	-	117
Unanswered	352	-	352	143	-	143	3,065	-	3,065	3,560	-	3,560
<b>Hospitalized for COVID-19</b>												
Yes	525	-	525	105	-	105	494	-	494	1,124	-	1,124
No	10,892	-	10,892	4,596	-	4,596	15,648	-	15,648	31,136	-	31,136
Unknown	21	-	21	5	-	5	28	-	28	54	-	54
Unanswered	554	-	554	263	-	263	3,447	-	3,447	4,264	-	4,264

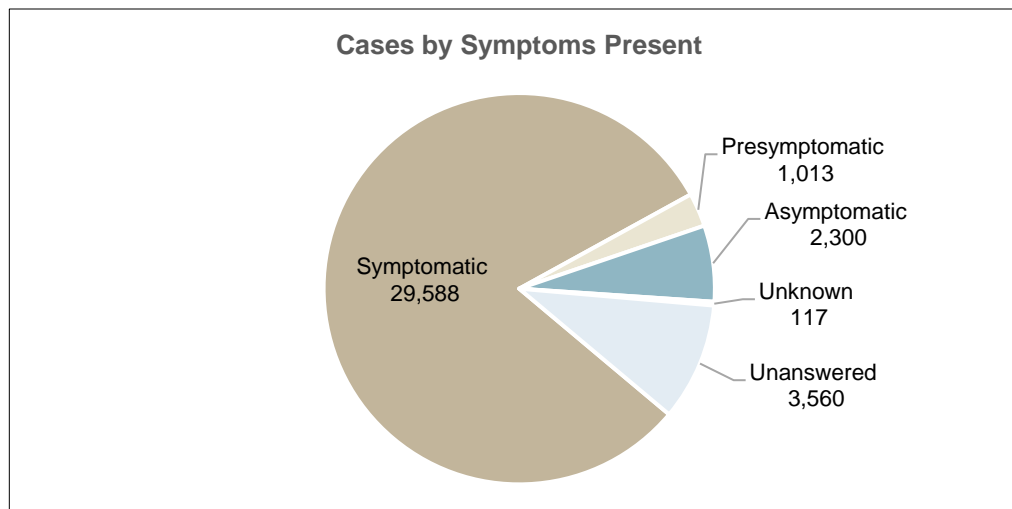
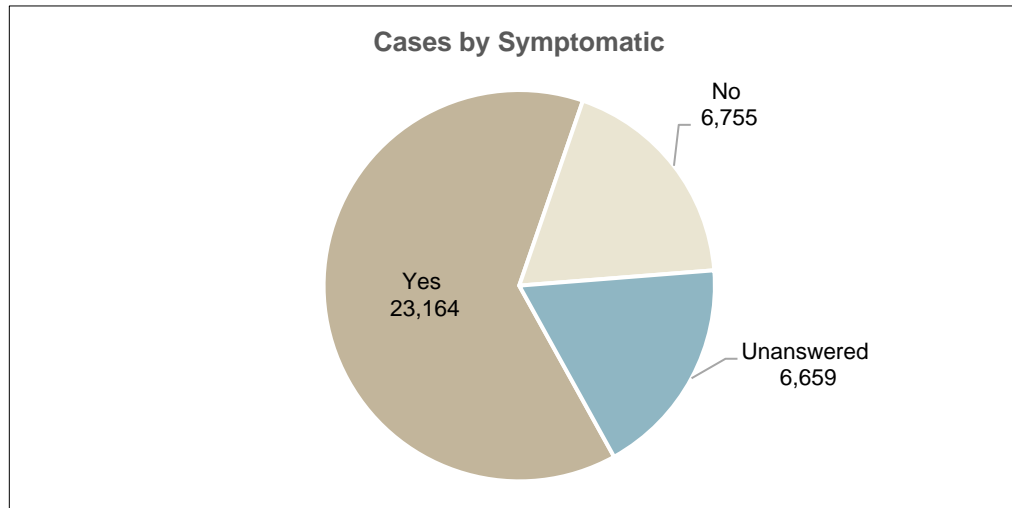
Sorted alphabetically within group; no highlighting applied.

**Notes:**

Contacts were not typically asked these questions.

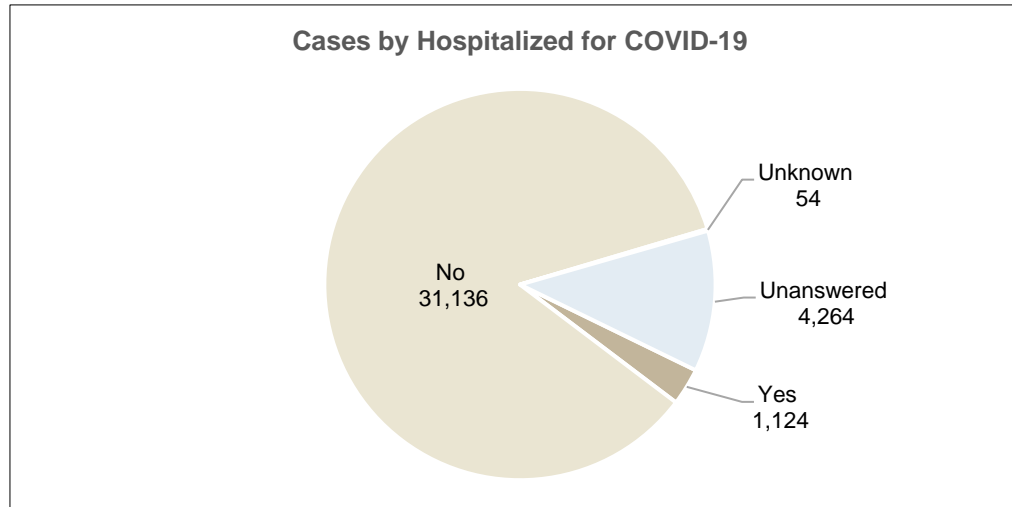
## Case and Contact Charts

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## Case and Contact Charts

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**Cases Reporting 1 or More College/University Interaction - by Month by Institution**

Month	# of Cases Reporting At Least 1 Interaction	University of North Dakota	Bismarck State College (BSC)	Dakota College at Bottineau (DCB)	Dickinson State University (DSU)	Lake Region State College (LRSC)	Mayville State University	Minot State University (MSU)	NDSU - Fargo	NDSU - Wahpeton	Valley City State University (VCSU)	Williston State College (WSC)
<b>College / University</b>	6,036	2,824	577	148	429	179	223	855	79	249	284	189
March 2020	1	1	-	-	-	-	-	-	-	-	-	-
April 2020	-	-	-	-	-	-	-	-	-	-	-	-
May 2020	1	1	-	-	-	-	-	-	-	-	-	-
June 2020	1	1	-	-	-	-	-	-	-	-	-	-
July 2020	37	35	-	-	-	-	-	-	-	-	1	1
August 2020	442	346	9	4	49	4	3	10	1	1	14	1
September 2020	679	202	96	7	69	11	6	163	6	41	14	64
October 2020	745	335	71	36	31	22	47	107	6	30	43	17
November 2020	1,082	495	95	23	73	35	38	171	16	54	61	21
December 2020	234	76	29	5	11	8	33	28	3	18	19	4
January 2021	136	60	14	3	9	2	7	22	2	5	9	3
February 2021	78	33	12	1	4	4	3	13	2	2	2	2
March 2021	86	35	8	3	5	11	4	7	-	3	7	3
April 2021	124	67	10	-	5	10	4	15	2	5	4	2
May 2021	32	4	1	-	2	2	-	12	2	3	-	6
June 2021	5	-	3	-	-	-	-	1	-	-	-	1
July 2021	9	4	1	-	-	-	1	2	-	-	-	1
August 2021	109	37	17	2	19	2	4	8	2	5	8	5
September 2021	308	133	45	5	23	11	10	29	1	12	27	12
October 2021	213	86	18	2	25	1	8	31	7	10	13	12
November 2021	200	76	25	10	19	1	10	30	1	9	11	8
December 2021	156	86	17	2	3	3	6	15	6	8	7	3
January 2022	1,054	501	82	41	79	48	32	155	21	36	41	18
February 2022	236	163	21	4	3	3	5	26	-	5	1	5
March 2022	25	16	2	-	-	-	-	7	-	-	-	-
April 2022	22	14	-	-	-	1	2	-	1	2	2	-
May 2022	21	17	1	-	-	-	-	3	-	-	-	-

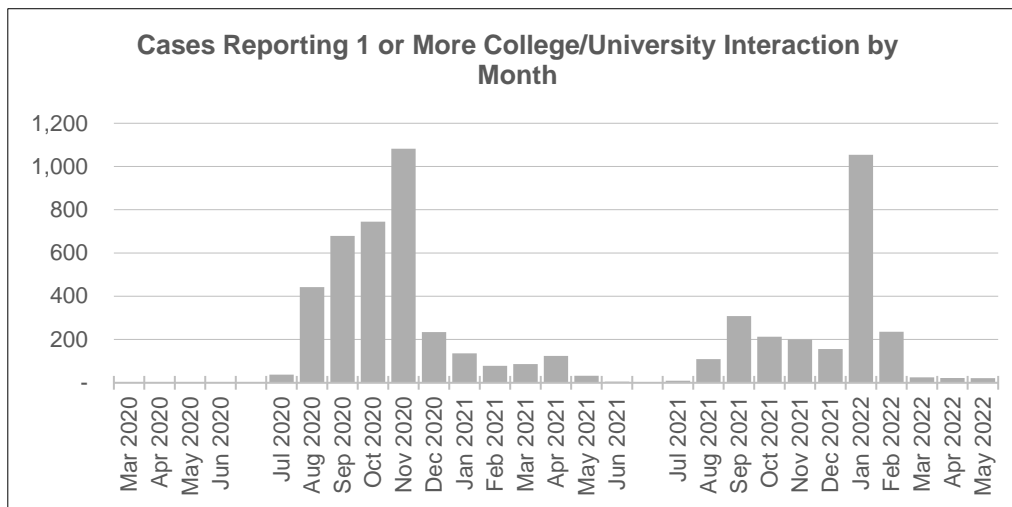
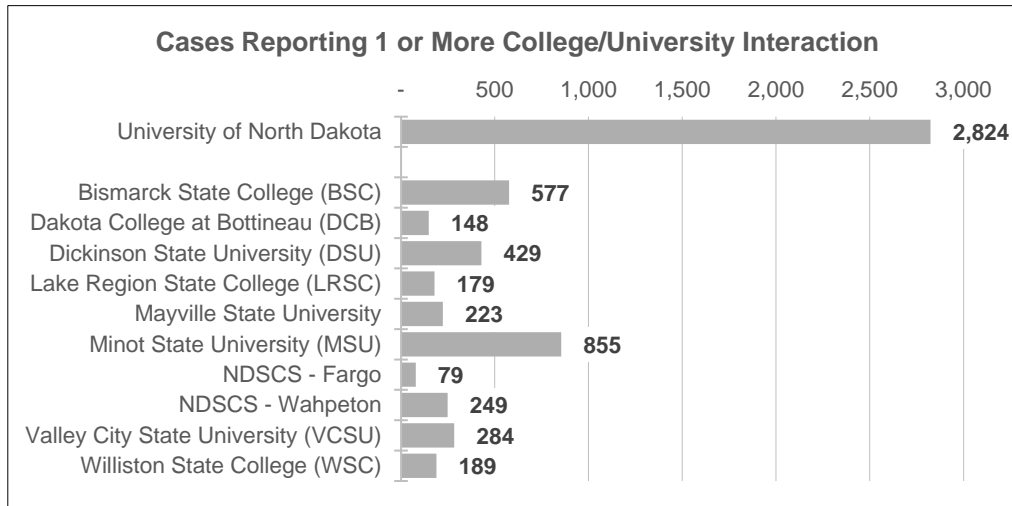
Note: NDSU interactions are not included in these data.

**Cases Reporting 1 or More Occupation Interaction - by Month by Institution**

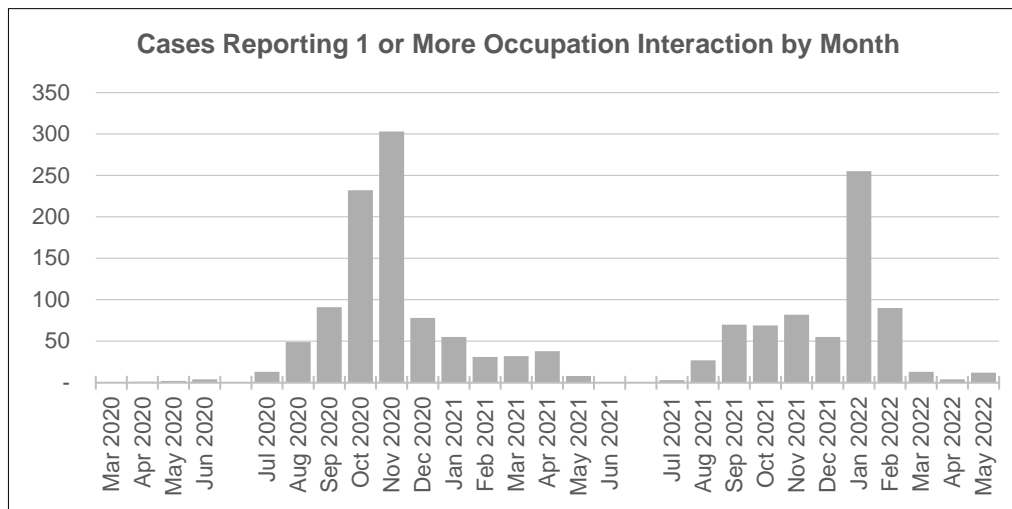
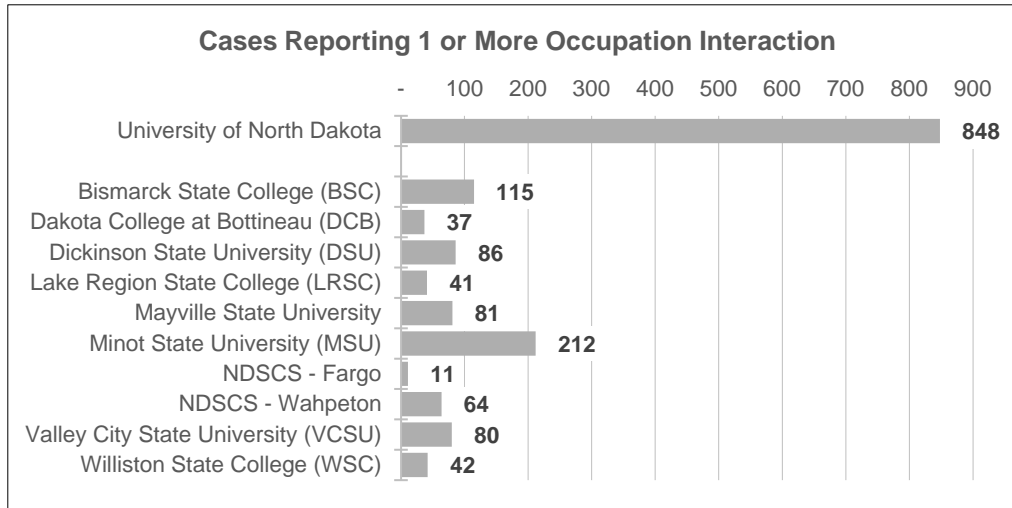
Month	# of Cases Reporting At Least 1 Interaction	University of North Dakota	Bismarck State College (BSC)	Dakota College at Bottineau (DCB)	Dickinson State University (DSU)	Lake Region State College (LRSC)	Mayville State University	Minot State University (MSU)	NDSU - Fargo	NDSU - Wahpeton	Valley City State University (VCSU)	Williston State College (WSC)
<b>Occupation</b>	1,617	848	115	37	86	41	81	212	11	64	80	42
March 2020	-	-	-	-	-	-	-	-	-	-	-	-
April 2020	1	1	-	-	-	-	-	-	-	-	-	-
May 2020	2	1	-	-	-	-	1	-	-	-	-	-
June 2020	4	3	-	-	-	-	-	1	-	-	-	-
July 2020	13	10	-	-	1	-	1	-	-	-	-	1
August 2020	49	30	2	-	8	-	1	4	-	1	3	-
September 2020	91	32	7	4	7	-	-	27	1	4	3	6
October 2020	232	119	16	9	6	5	11	40	-	8	8	10
November 2020	303	160	15	4	11	7	20	40	2	12	26	6
December 2020	78	23	7	2	4	5	14	6	1	7	6	3
January 2021	55	29	2	1	1	3	7	6	-	4	2	-
February 2021	31	16	3	3	2	1	-	3	-	2	1	-
March 2021	32	15	3	-	1	2	3	4	-	1	2	1
April 2021	38	23	7	-	1	-	-	3	-	4	-	-
May 2021	8	6	1	-	-	-	-	1	-	-	-	-
June 2021	-	-	-	-	-	-	-	-	-	-	-	-
July 2021	3	1	-	-	-	-	1	1	-	-	-	-
August 2021	27	16	4	-	2	-	1	-	-	1	2	1
September 2021	70	38	8	2	7	-	1	7	1	1	2	3
October 2021	69	28	4	1	10	2	3	10	1	5	3	2
November 2021	82	41	5	3	9	4	2	8	-	1	6	3
December 2021	55	29	4	1	2	4	1	8	-	3	2	1
January 2022	255	146	18	6	13	6	12	26	5	7	12	4
February 2022	90	59	7	1	1	2	2	14	-	1	2	1
March 2022	13	7	2	-	-	-	-	3	-	1	-	-
April 2022	4	4	-	-	-	-	-	-	-	-	-	-
May 2022	12	11	-	-	-	-	-	-	-	1	-	-

Note: NDSU interactions are not included in these data.

**By Month Interaction Charts**



**By Month Interaction Charts**



## All Interaction Types by Institution

All Interaction Types	Total Interactions Reported	Interactions Participated in While Infectious	Cases Reporting Interactions	Contacts Reporting Interactions	College Students Reporting Interactions
<b>Total Interactions</b>	<b>13,761</b>	<b>5,913</b>	<b>8,874</b>	<b>2,158</b>	<b>9,563</b>
<b>Individuals</b>	<b>9,358</b>				
University of North Dakota	6,323	2,424	4,080	1,121	4,510
Bismarck State College (BSC)	1,037	462	737	121	734
Dakota College at Bottineau (DCB)	376	181	247	57	265
Dickinson State University (DSU)	966	508	626	98	646
Lake Region State College (LRSC)	437	189	268	78	292
Mayville State University	627	296	357	98	377
Minot State University (MSU)	2,051	931	1,342	285	1,421
NDSU - Fargo	108	33	91	8	90
NDSU - Wahpeton	614	305	373	97	405
Valley City State University (VCSU)	725	334	458	121	502
Williston State College (WSC)	497	250	295	74	321

Note: NDSU interactions are not included in these data.



## College/University Interactions

College / University	Total Interactions Reported	Interactions Participated in While Infectious	Cases Reporting Interactions	Contacts Reporting Interactions	College Students Reporting Interactions
<b>Total Interactions</b>	<b>10,088</b>	<b>4,188</b>	<b>6,055</b>	<b>1,548</b>	<b>7,574</b>
<b>Individuals</b>	<b>7,652</b>				
University of North Dakota	4,703	1,698	2,829	853	3,671
Bismarck State College (BSC)	836	360	579	88	667
Dakota College at Bottineau (DCB)	236	110	148	32	180
Dickinson State University (DSU)	727	372	430	72	498
Lake Region State College (LRSC)	304	138	181	42	222
Mayville State University	444	203	224	65	286
Minot State University (MSU)	1,423	628	861	188	1,046
NDSCS - Fargo	95	30	79	7	87
NDSCS - Wahpeton	449	235	249	62	312
Valley City State University (VCSU)	512	228	284	89	367
Williston State College (WSC)	359	186	191	50	238

## Occupation Interactions

Occupation	Total Interactions Reported	Interactions Participated in While Infectious	Cases Reporting Interactions	Contacts Reporting Interactions	College Students Reporting Interactions
<b>Total Interactions</b>	<b>2,092</b>	<b>942</b>	<b>1,623</b>	<b>376</b>	<b>630</b>
<b>Individuals</b>	<b>2,006</b>				
University of North Dakota	1,093	478	851	192	384
Bismarck State College (BSC)	148	72	115	27	25
Dakota College at Bottineau (DCB)	50	23	37	11	10
Dickinson State University (DSU)	106	55	87	13	28
Lake Region State College (LRSC)	62	20	42	18	12
Mayville State University	110	48	81	24	33
Minot State University (MSU)	277	135	212	49	77
NDSCS - Fargo	12	3	11	1	2
NDSCS - Wahpeton	82	40	64	16	15
Valley City State University (VCSU)	97	41	80	14	28
Williston State College (WSC)	55	27	43	11	16

## Congregate Living Interactions

Congregate Living	Total Interactions Reported	Interactions Participated in While Infectious	Cases Reporting Interactions	Contacts Reporting Interactions	College Students Reporting Interactions
<b>Total Interactions</b>	<b>609</b>	<b>267</b>	<b>439</b>	<b>148</b>	<b>569</b>
<b>Individuals</b>	<b>591</b>				
University of North Dakota	279	120	212	58	257
Bismarck State College (BSC)	26	10	20	6	26
Dakota College at Bottineau (DCB)	35	13	20	12	32
Dickinson State University (DSU)	33	22	23	10	33
Lake Region State College (LRSC)	26	14	17	6	22
Mayville State University	21	9	15	5	20
Minot State University (MSU)	98	36	65	29	92
NDSCS - Fargo	-	-	-	-	-
NDSCS - Wahpeton	33	15	25	8	33
Valley City State University (VCSU)	34	19	28	6	34
Williston State College (WSC)	24	9	14	8	20

## Dining Hall Interactions

Dining Hall	Total Interactions Reported	Interactions Participated in While Infectious	Cases Reporting Interactions	Contacts Reporting Interactions	College Students Reporting Interactions
<b>Total Interactions</b>	<b>28</b>	<b>20</b>	<b>23</b>	<b>2</b>	<b>25</b>
<b>Individuals</b>	<b>25</b>				
University of North Dakota	12	7	10	2	12
Bismarck State College (BSC)	-	-	-	-	-
Dakota College at Bottineau (DCB)	1	1	1	-	1
Dickinson State University (DSU)	1	1	1	-	1
Lake Region State College (LRSC)	-	-	-	-	-
Mayville State University	1	1	1	-	1
Minot State University (MSU)	8	7	5	-	5
NDSCS - Fargo	1	-	1	-	1
NDSCS - Wahpeton	2	2	2	-	2
Valley City State University (VCSU)	2	1	2	-	2
Williston State College (WSC)	-	-	-	-	-

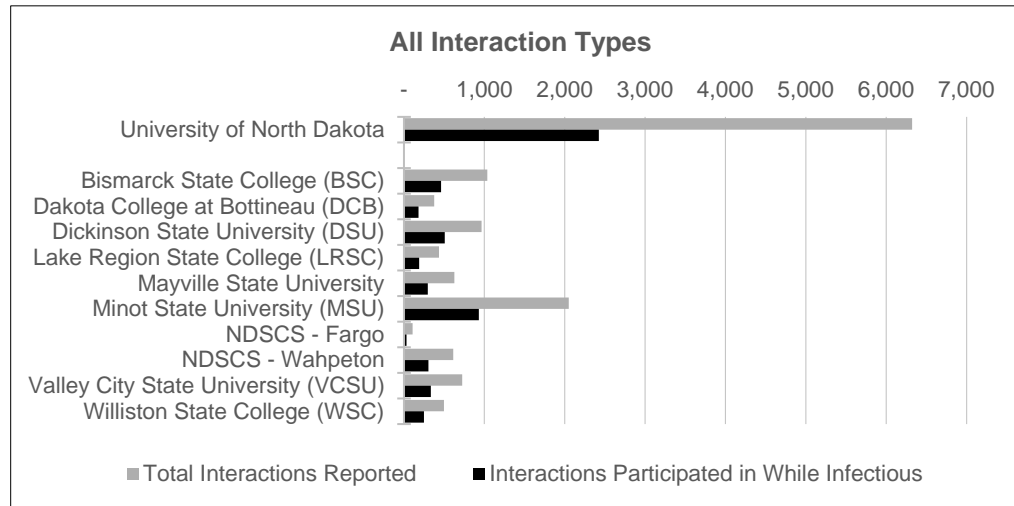
## Activity Interactions

Activity	Total Interactions Reported	Interactions Participated in While Infectious	Cases Reporting Interactions	Contacts Reporting Interactions	College Students Reporting Interactions
<b>Total Interactions</b>	<b>392</b>	<b>246</b>	<b>282</b>	<b>17</b>	<b>259</b>
<b>Individuals</b>	<b>306</b>				
University of North Dakota	148	78	101	11	104
Bismarck State College (BSC)	15	13	12	-	7
Dakota College at Bottineau (DCB)	23	19	12	-	11
Dickinson State University (DSU)	32	20	25	1	24
Lake Region State College (LRSC)	17	13	14	-	12
Mayville State University	15	8	11	-	8
Minot State University (MSU)	74	56	53	2	44
NDSCS - Fargo	-	-	-	-	-
NDSCS - Wahpeton	16	6	13	-	13
Valley City State University (VCSU)	26	20	22	2	20
Williston State College (WSC)	26	13	19	1	16

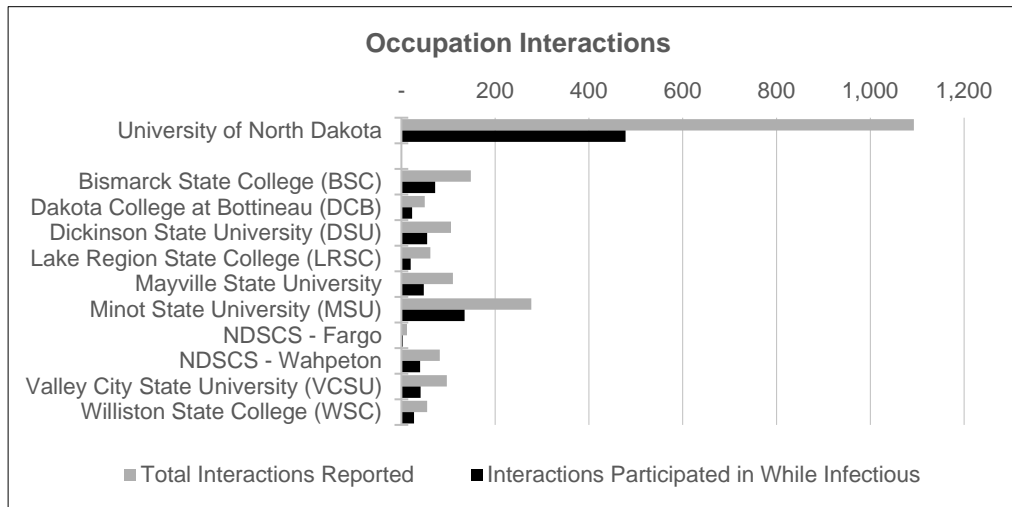
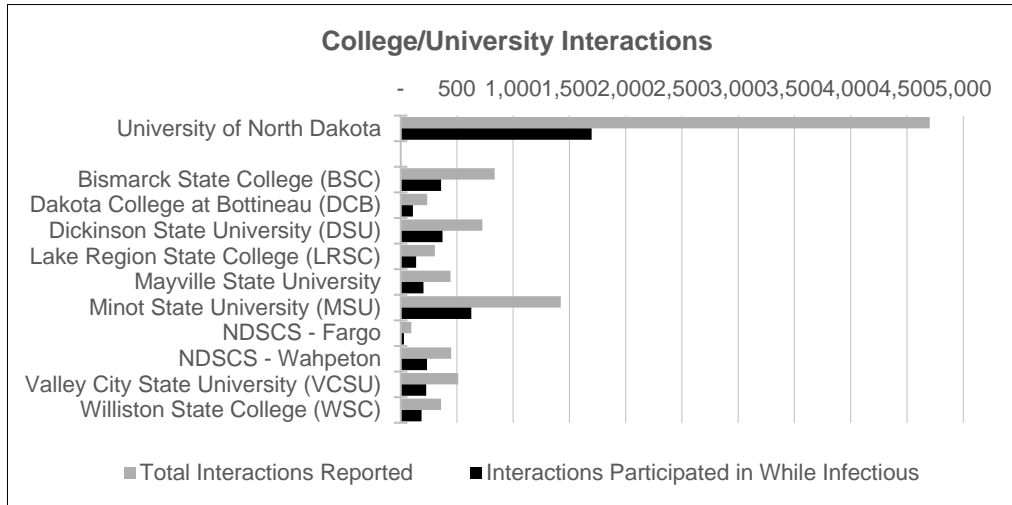
## Sport Interactions

Sport	Total Interactions Reported	Interactions Participated in While Infectious	Cases Reporting Interactions	Contacts Reporting Interactions	College Students Reporting Interactions
<b>Total Interactions</b>	<b>552</b>	<b>250</b>	<b>452</b>	<b>67</b>	<b>506</b>
<b>Individuals</b>	<b>525</b>				
University of North Dakota	88	43	77	5	82
Bismarck State College (BSC)	12	7	11	-	9
Dakota College at Bottineau (DCB)	31	15	29	2	31
Dickinson State University (DSU)	67	38	60	2	62
Lake Region State College (LRSC)	28	4	14	12	24
Mayville State University	36	27	25	4	29
Minot State University (MSU)	171	69	146	17	157
NDSCS - Fargo	-	-	-	-	-
NDSCS - Wahpeton	32	7	20	11	30
Valley City State University (VCSU)	54	25	42	10	51
Williston State College (WSC)	33	15	28	4	31

## By Interaction Type Interaction Charts

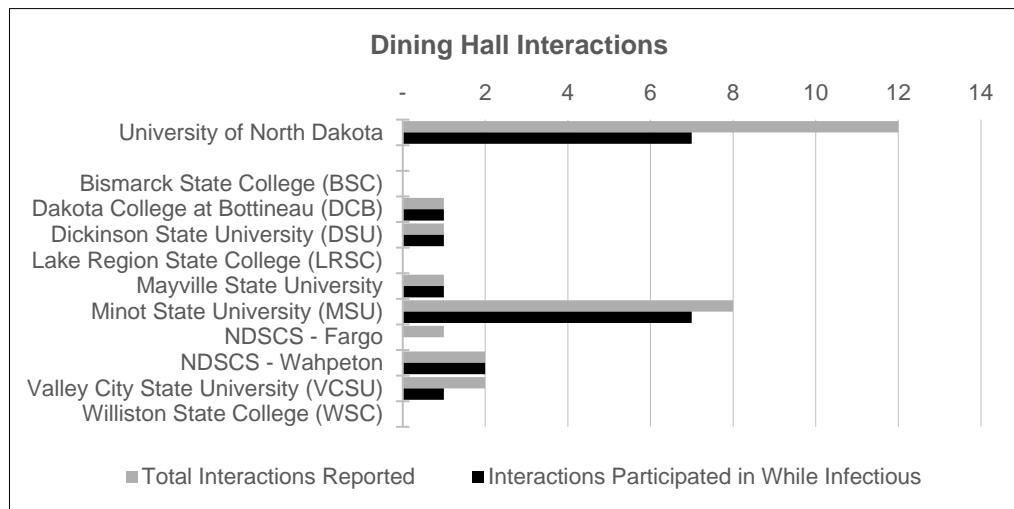
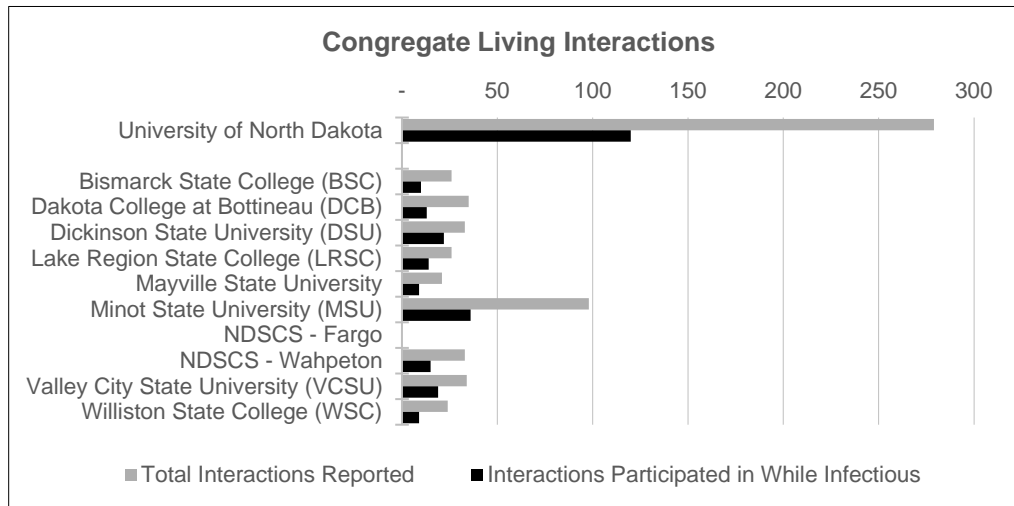


**By Interaction Type Interaction Charts**

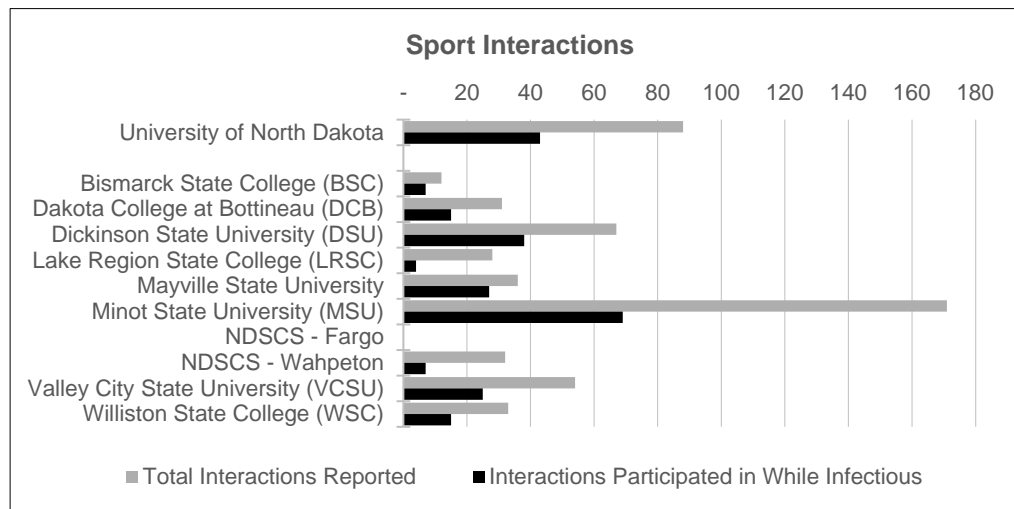
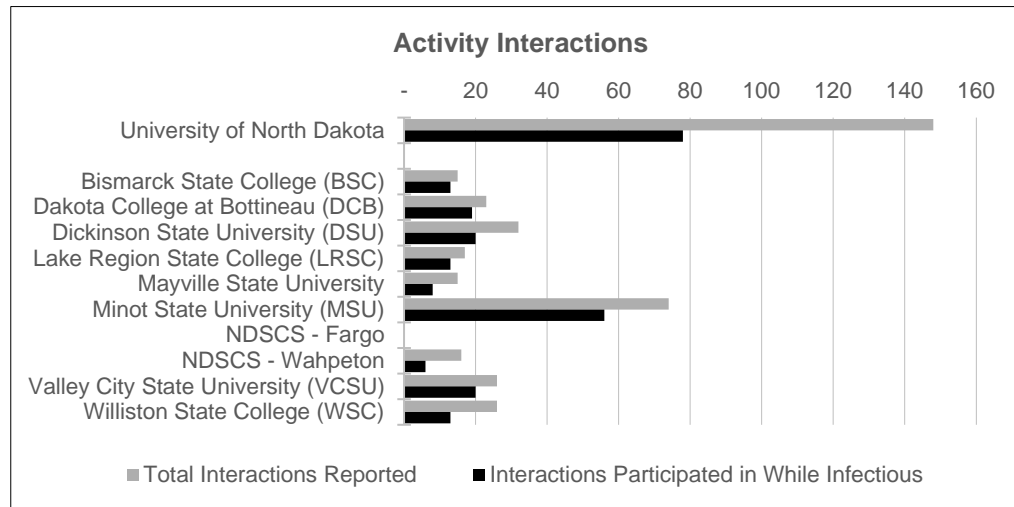




**By Interaction Type Interaction Charts**



**By Interaction Type Interaction Charts**



## All UND/NDUS Interactions by Type of Interaction

All UND/NDUS Interactions	Total Interactions Reported	Interactions Participated in While Infectious	Cases Reporting Interactions	Contacts Reporting Interactions	College Students Reporting Interactions
<b>Total Interactions</b>	<b>13,761</b>	<b>5,913</b>	<b>8,874</b>	<b>2,158</b>	<b>9,563</b>
<b>Individuals</b>	<b>9,358</b>				
College / University	10,088	4,188	6,055	1,548	7,574
Occupation	2,092	942	1,623	376	630
Congregate Living	609	267	439	148	569
Dining Hall	28	20	23	2	25
Activity	392	246	282	17	259
Sport	552	250	452	67	506

Note: NDSU interactions are not included in these data.

## University of North Dakota Interactions

University of North Dakota	Total Interactions Reported	Interactions Participated in While Infectious	Cases Reporting Interactions	Contacts Reporting Interactions	College Students Reporting Interactions
<b>Total Interactions</b>	<b>6,323</b>	<b>2,424</b>	<b>4,080</b>	<b>1,121</b>	<b>4,510</b>
<b>Individuals</b>	<b>4,500</b>				
College / University	4,703	1,698	2,829	853	3,671
Occupation	1,093	478	851	192	384
Congregate Living	279	120	212	58	257
Dining Hall	12	7	10	2	12
Activity	148	78	101	11	104
Sport	88	43	77	5	82

### Bismarck State College Interactions

<b>Bismarck State College (BSC)</b>	<b>Total Interactions Reported</b>	<b>Interactions Participated in While Infectious</b>	<b>Cases Reporting Interactions</b>	<b>Contacts Reporting Interactions</b>	<b>College Students Reporting Interactions</b>
<b>Total Interactions</b>	<b>1,037</b>	<b>462</b>	<b>737</b>	<b>121</b>	<b>734</b>
<b>Individuals</b>	<b>812</b>				
College / University	836	360	579	88	667
Occupation	148	72	115	27	25
Congregate Living	26	10	20	6	26
Dining Hall	-	-	-	-	-
Activity	15	13	12	-	7
Sport	12	7	11	-	9

### Dakota College at Bottineau Interactions

<b>Dakota College at Bottineau (DCB)</b>	<b>Total Interactions Reported</b>	<b>Interactions Participated in While Infectious</b>	<b>Cases Reporting Interactions</b>	<b>Contacts Reporting Interactions</b>	<b>College Students Reporting Interactions</b>
<b>Total Interactions</b>	<b>376</b>	<b>181</b>	<b>247</b>	<b>57</b>	<b>265</b>
<b>Individuals</b>	<b>227</b>				
College / University	236	110	148	32	180
Occupation	50	23	37	11	10
Congregate Living	35	13	20	12	32
Dining Hall	1	1	1	-	1
Activity	23	19	12	-	11
Sport	31	15	29	2	31

### Dickinson State University Interactions

Dickinson State University (DSU)	Total Interactions Reported	Interactions Participated in While Infectious	Cases Reporting Interactions	Contacts Reporting Interactions	College Students Reporting Interactions
<b>Total Interactions</b>	<b>966</b>	<b>508</b>	<b>626</b>	<b>98</b>	<b>646</b>
<b>Individuals</b>	<b>597</b>				
College / University	727	372	430	72	498
Occupation	106	55	87	13	28
Congregate Living	33	22	23	10	33
Dining Hall	1	1	1	-	1
Activity	32	20	25	1	24
Sport	67	38	60	2	62

### Lake Region State College Interactions

Lake Region State College (LRSC)	Total Interactions Reported	Interactions Participated in While Infectious	Cases Reporting Interactions	Contacts Reporting Interactions	College Students Reporting Interactions
<b>Total Interactions</b>	<b>437</b>	<b>189</b>	<b>268</b>	<b>78</b>	<b>292</b>
<b>Individuals</b>	<b>305</b>				
College / University	304	138	181	42	222
Occupation	62	20	42	18	12
Congregate Living	26	14	17	6	22
Dining Hall	-	-	-	-	-
Activity	17	13	14	-	12
Sport	28	4	14	12	24

### Mayville State University Interactions

Mayville State University	Total Interactions Reported	Interactions Participated in While Infectious	Cases Reporting Interactions	Contacts Reporting Interactions	College Students Reporting Interactions
<b>Total Interactions</b>	<b>627</b>	<b>296</b>	<b>357</b>	<b>98</b>	<b>377</b>
<b>Individuals</b>	<b>379</b>				
College / University	444	203	224	65	286
Occupation	110	48	81	24	33
Congregate Living	21	9	15	5	20
Dining Hall	1	1	1	-	1
Activity	15	8	11	-	8
Sport	36	27	25	4	29

### Minot State University Interactions

Minot State University (MSU)	Total Interactions Reported	Interactions Participated in While Infectious	Cases Reporting Interactions	Contacts Reporting Interactions	College Students Reporting Interactions
<b>Total Interactions</b>	<b>2,051</b>	<b>931</b>	<b>1,342</b>	<b>285</b>	<b>1,421</b>
<b>Individuals</b>	<b>1,284</b>				
College / University	1,423	628	861	188	1,046
Occupation	277	135	212	49	77
Congregate Living	98	36	65	29	92
Dining Hall	8	7	5	-	5
Activity	74	56	53	2	44
Sport	171	69	146	17	157

### NDSCS - Fargo Interactions

NDSCS - Fargo	Total Interactions Reported	Interactions Participated in While Infectious	Cases Reporting Interactions	Contacts Reporting Interactions	College Students Reporting Interactions
<b>Total Interactions</b>	<b>108</b>	<b>33</b>	<b>91</b>	<b>8</b>	<b>90</b>
<b>Individuals</b>	<b>99</b>				
College / University	95	30	79	7	87
Occupation	12	3	11	1	2
Congregate Living	-	-	-	-	-
Dining Hall	1	-	1	-	1
Activity	-	-	-	-	-
Sport	-	-	-	-	-

### NDSCS - Wahpeton Interactions

NDSCS - Wahpeton	Total Interactions Reported	Interactions Participated in While Infectious	Cases Reporting Interactions	Contacts Reporting Interactions	College Students Reporting Interactions
<b>Total Interactions</b>	<b>614</b>	<b>305</b>	<b>373</b>	<b>97</b>	<b>405</b>
<b>Individuals</b>	<b>391</b>				
College / University	449	235	249	62	312
Occupation	82	40	64	16	15
Congregate Living	33	15	25	8	33
Dining Hall	2	2	2	-	2
Activity	16	6	13	-	13
Sport	32	7	20	11	30

### Valley City State University Interactions

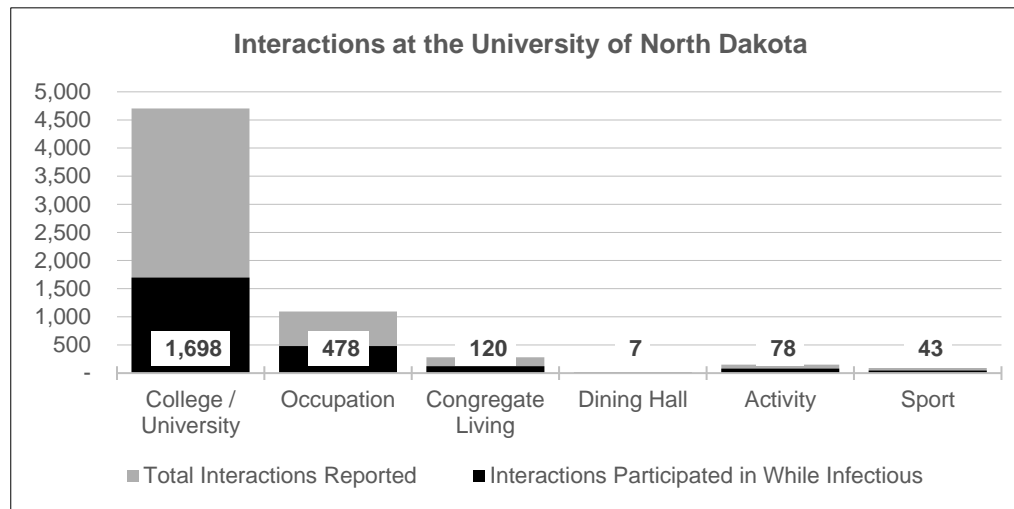
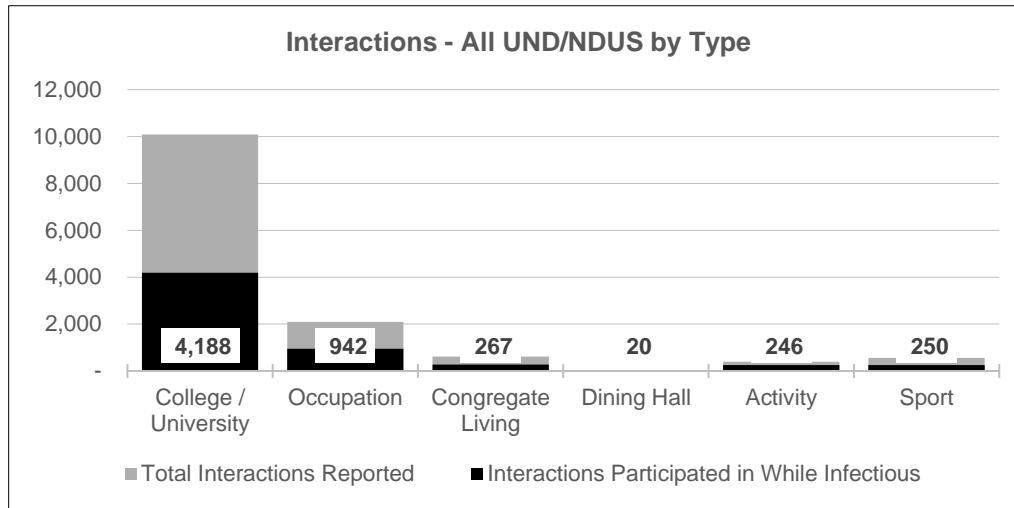
Valley City State University (VCSU)	Total Interactions Reported	Interactions Participated in While Infectious	Cases Reporting Interactions	Contacts Reporting Interactions	College Students Reporting Interactions
<b>Total Interactions</b>	<b>725</b>	<b>334</b>	<b>458</b>	<b>121</b>	<b>502</b>
<b>Individuals</b>	<b>463</b>				
College / University	512	228	284	89	367
Occupation	97	41	80	14	28
Congregate Living	34	19	28	6	34
Dining Hall	2	1	2	-	2
Activity	26	20	22	2	20
Sport	54	25	42	10	51

### Williston State College Interactions

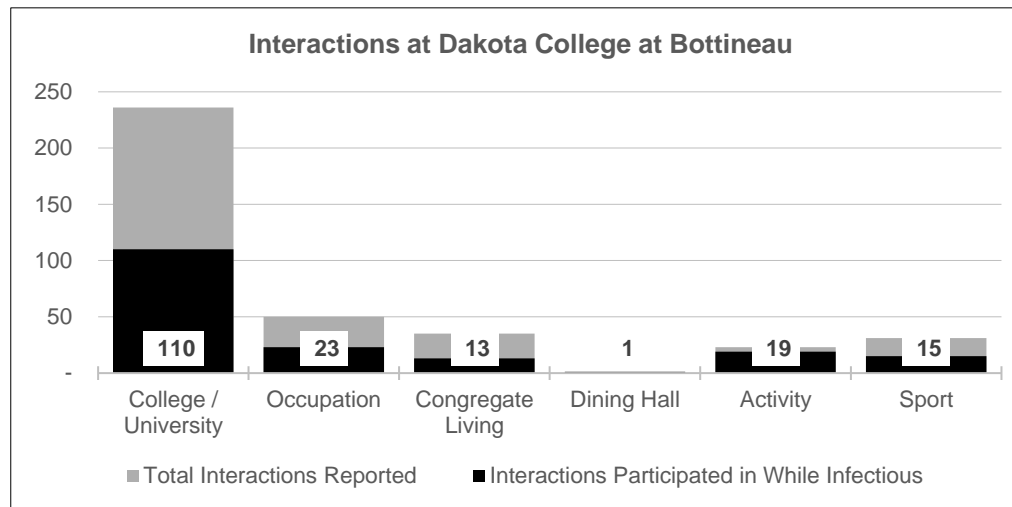
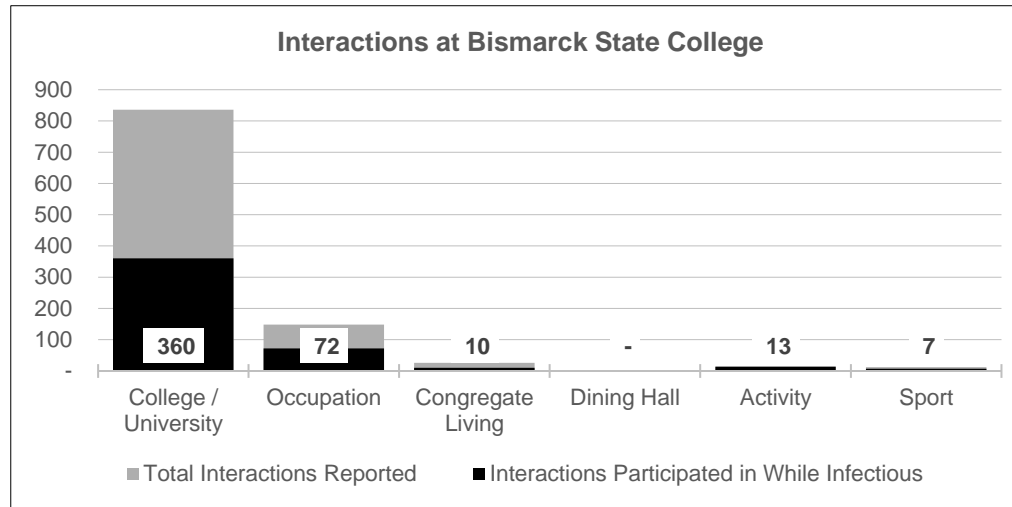
Williston State College (WSC)	Total Interactions Reported	Interactions Participated in While Infectious	Cases Reporting Interactions	Contacts Reporting Interactions	College Students Reporting Interactions
<b>Total Interactions</b>	<b>497</b>	<b>250</b>	<b>295</b>	<b>74</b>	<b>321</b>
<b>Individuals</b>	<b>301</b>				
College / University	359	186	191	50	238
Occupation	55	27	43	11	16
Congregate Living	24	9	14	8	20
Dining Hall	-	-	-	-	-
Activity	26	13	19	1	16
Sport	33	15	28	4	31



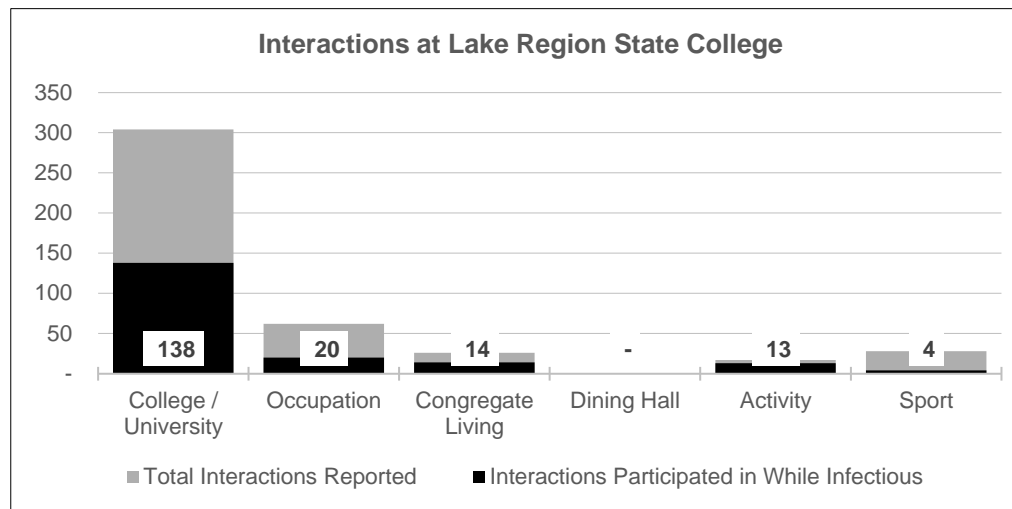
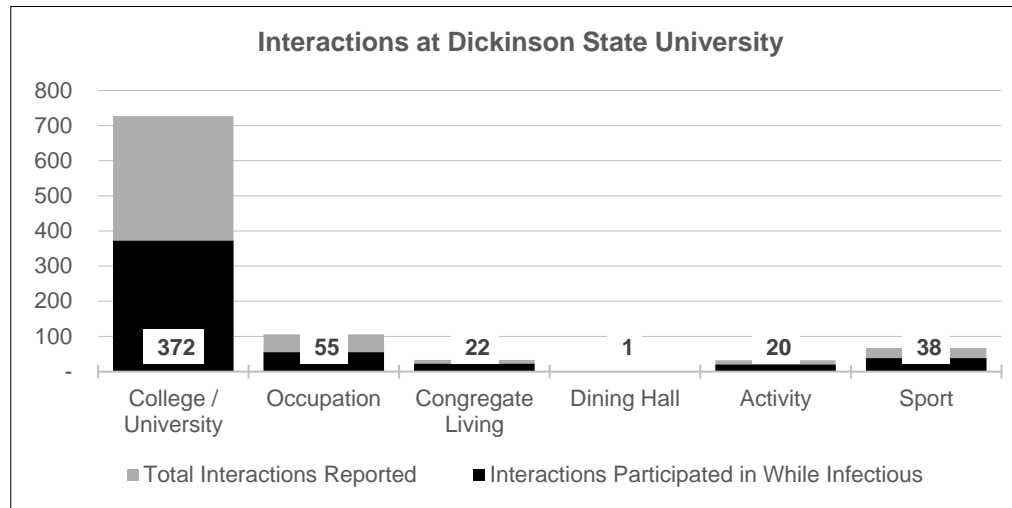
**By Institution Interaction Charts**



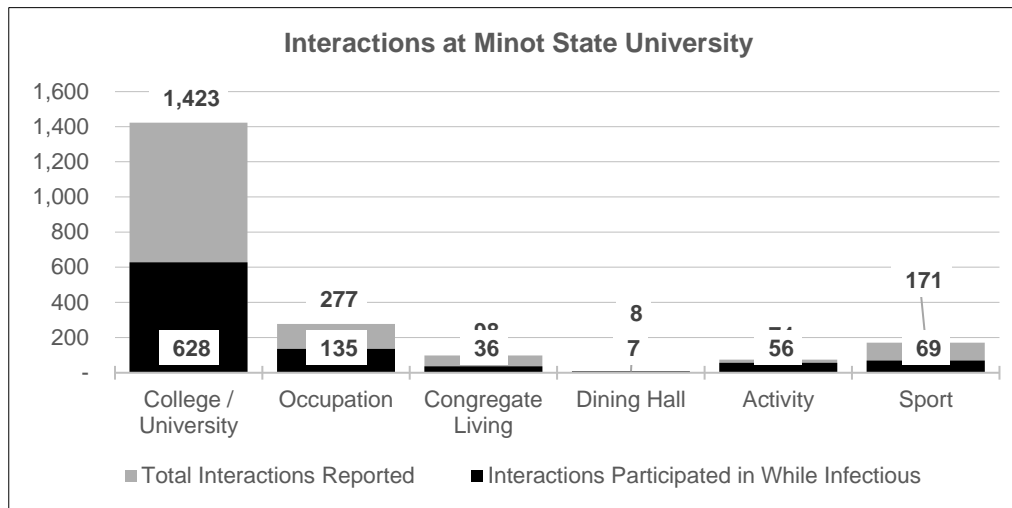
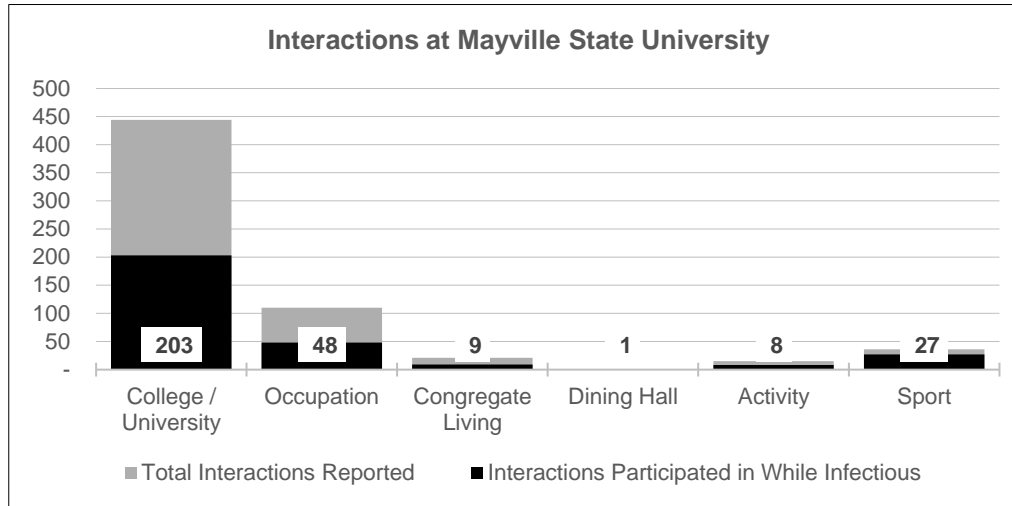
## By Institution Interaction Charts



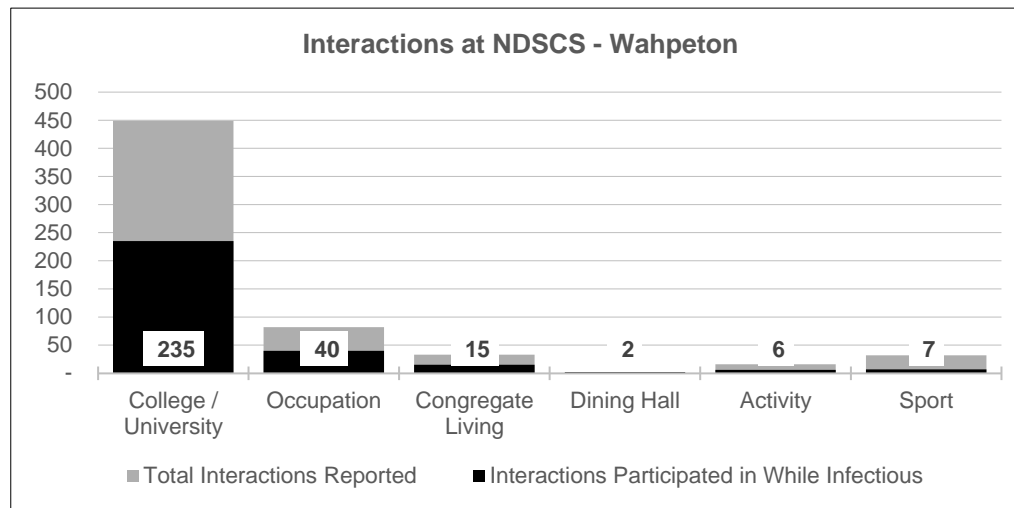
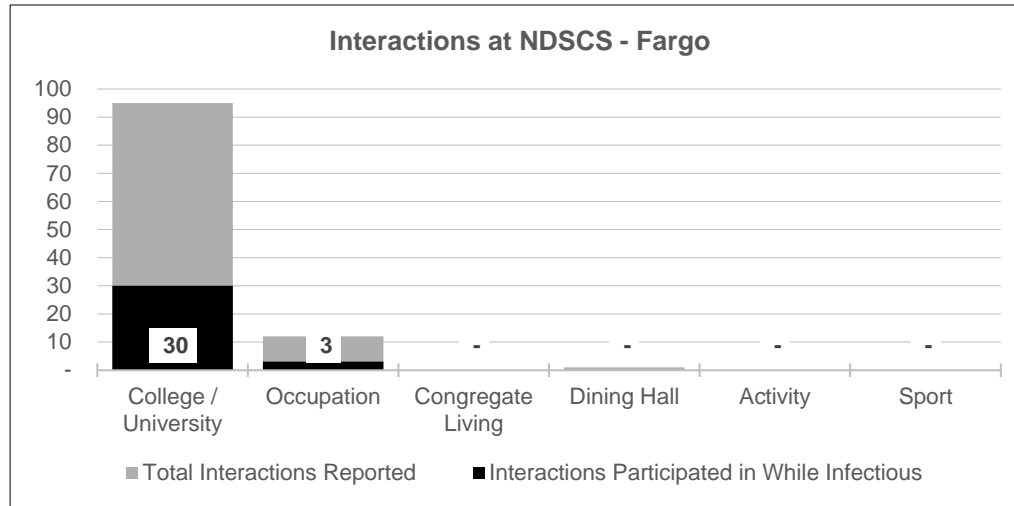
## By Institution Interaction Charts



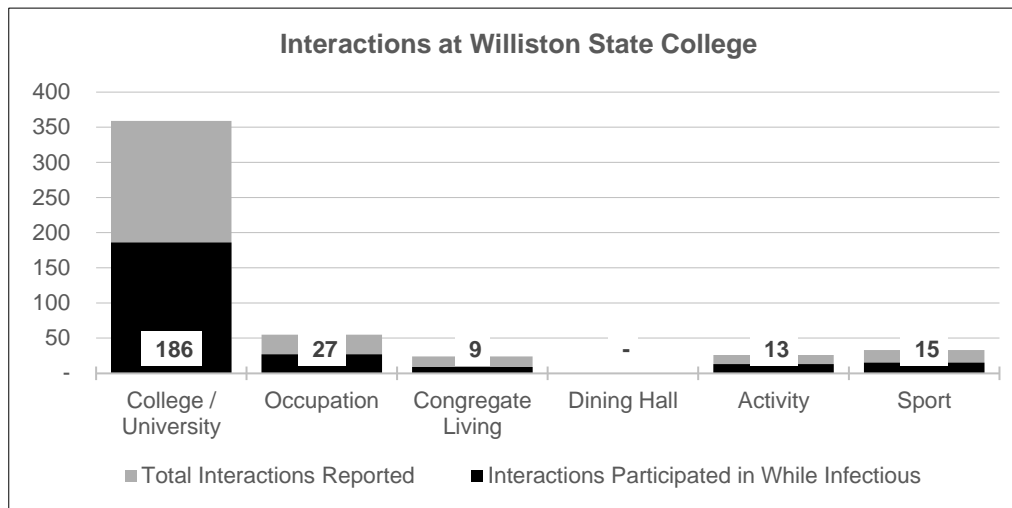
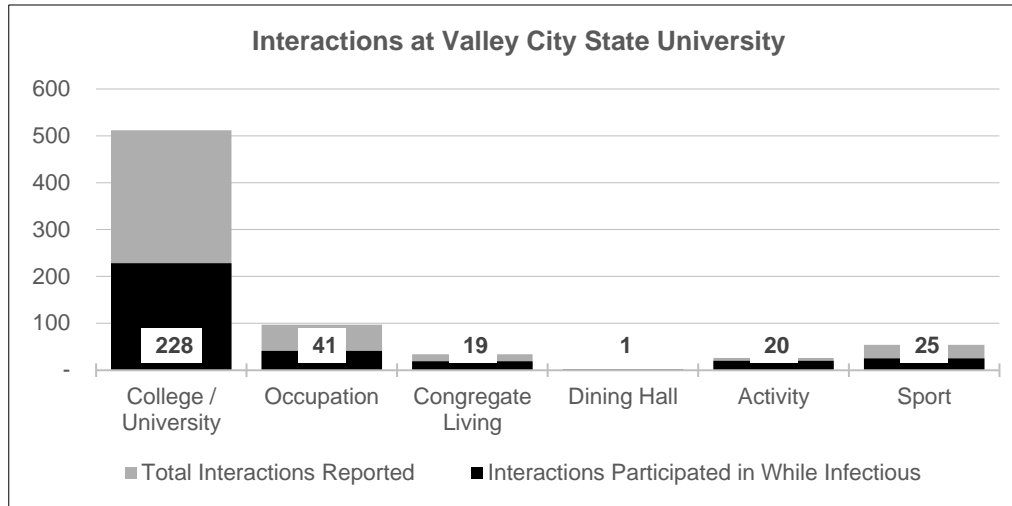
**By Institution Interaction Charts**



**By Institution Interaction Charts**



**By Institution Interaction Charts**



**UND COVID-19 Case Investigation Teams - Payroll by Pay Period**

<b>Pay Period End</b>	<b>Employees Working</b>	<b>Regular Hours</b>	<b>Overtime Hours</b>	<b>Total Hours</b>	<b>Avg Hrs Per Employee Per Pay Period</b>
<b>Totals</b>		<b>94,973</b>	<b>1,243</b>	<b>96,215</b>	
4/15/2020	1	2	-	2	2.0
4/30/2020	22	303	-	303	13.8
5/15/2020	29	335	-	335	11.5
5/31/2020	27	365	-	365	13.5
6/15/2020	17	221	-	221	13.0
6/30/2020	21	293	-	293	13.9
7/15/2020	18	425	-	425	23.6
7/31/2020	17	420	1	421	24.8
8/15/2020	17	426	-	426	25.1
8/31/2020	20	600	1	601	30.0
9/15/2020	65	1,822	90	1,912	29.4
9/30/2020	83	3,183	130	3,313	39.9
10/15/2020	81	3,275	71	3,346	41.3
10/31/2020	97	4,074	129	4,203	43.3
11/15/2020	117	4,551	132	4,682	40.0
11/30/2020	115	4,521	119	4,640	40.3
12/15/2020	119	4,852	111	4,963	41.7
12/31/2020	113	4,919	26	4,944	43.8
1/15/2021	109	4,509	31	4,540	41.7
1/31/2021	105	5,156	60	5,216	49.7
2/15/2021	102	4,287	15	4,302	42.2
2/28/2021	75	2,321	4	2,325	31.0
3/15/2021	66	2,046	6	2,052	31.1
3/31/2021	64	2,206	2	2,208	34.5
4/15/2021	60	1,900	4	1,905	31.7
4/30/2021	58	1,954	4	1,959	33.8
5/15/2021	57	1,861	2	1,864	32.7
5/31/2021	53	1,726	4	1,730	32.6
6/15/2021	46	1,426	2	1,428	31.0
6/30/2021	44	1,324	12	1,336	30.4
7/15/2021	17	739	0	740	43.5
7/31/2021	17	843	1	843	49.6
8/15/2021	20	848	1	849	42.4

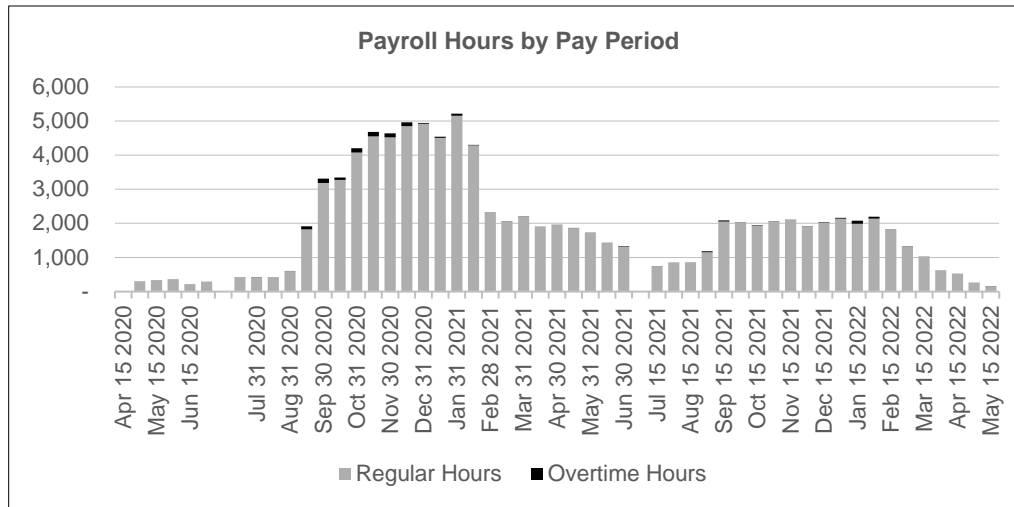
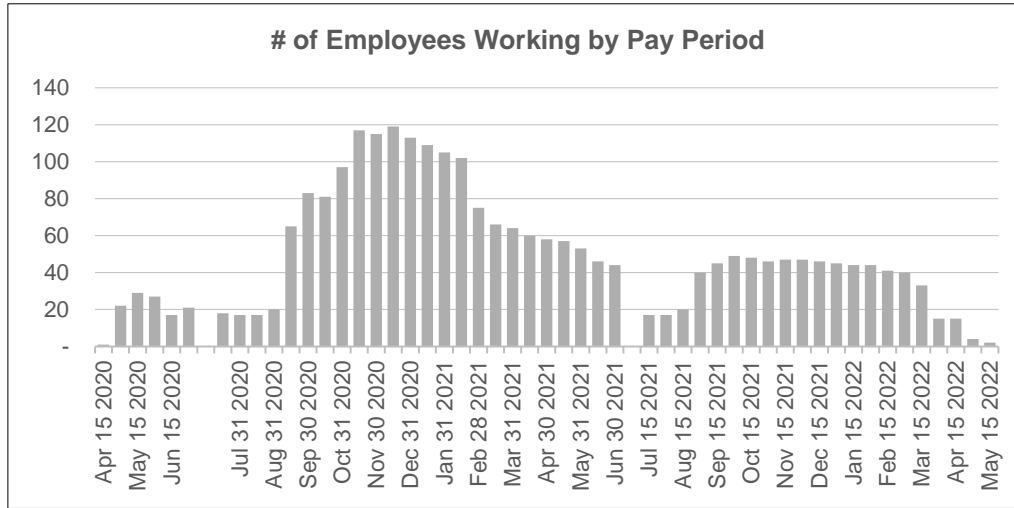
## UND COVID-19 Case Investigation Teams - Payroll by Pay Period

Pay Period End	Employees Working	Regular Hours	Overtime Hours	Total Hours	Avg Hrs Per Employee Per Pay Period
8/31/2021	40	1,152	28	1,180	29.5
9/15/2021	45	2,054	33	2,087	46.4
9/30/2021	49	2,011	9	2,020	41.2
10/15/2021	48	1,932	14	1,946	40.5
10/31/2021	46	2,065	1	2,066	44.9
11/15/2021	47	2,107	5	2,112	44.9
11/30/2021	47	1,918	3	1,921	40.9
12/15/2021	46	2,018	11	2,028	44.1
12/31/2021	45	2,136	24	2,160	48.0
1/15/2022	44	1,990	86	2,076	47.2
1/31/2022	44	2,137	57	2,194	49.9
2/15/2022	41	1,822	6	1,828	44.6
2/28/2022	40	1,332	5	1,337	33.4
3/15/2022	33	1,020	1	1,021	30.9
3/31/2022	15	615	1	616	41.1
4/15/2022	15	515	1	516	34.4
4/30/2022	4	254	0	255	63.7
5/15/2022	2	160	2	162	81.0

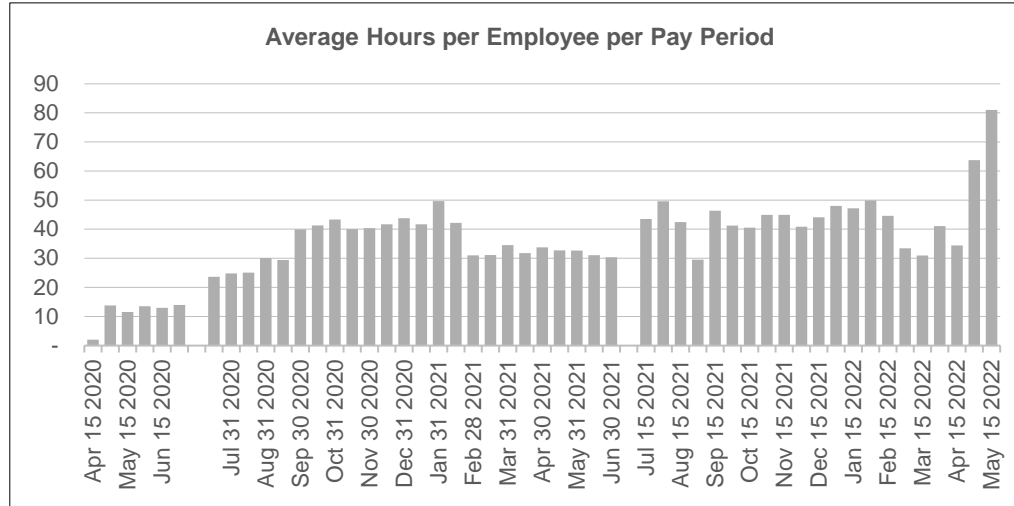
Sorted by year/month, chronologically; top 5 months highlighted in gray.



**By Pay Period Payroll Data Charts**



## By Pay Period Payroll Data Charts



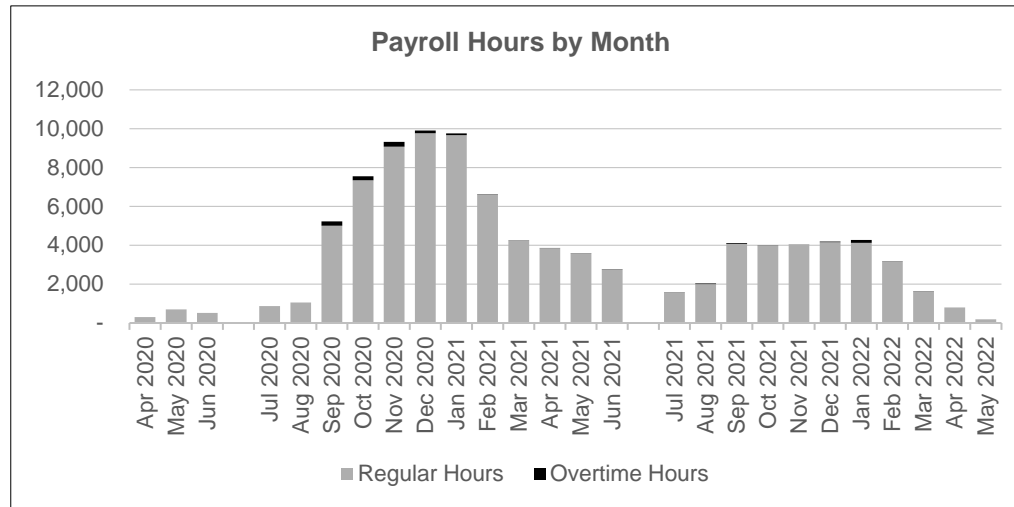
## UND COVID-19 Case Investigation Teams - Payroll by Month

Month	Regular Hours	Overtime Hours	Total Hours
<b>Totals</b>	<b>94,973</b>	<b>1,243</b>	<b>96,215</b>
April 2020	305	-	305
May 2020	699	-	699
June 2020	513	-	513
July 2020	845	1	846
August 2020	1,027	1	1,027
September 2020	5,006	219	5,225
October 2020	7,349	200	7,549
November 2020	9,072	250	9,322
December 2020	9,770	136	9,907
January 2021	9,665	91	9,756
February 2021	6,608	19	6,627
March 2021	4,252	9	4,261
April 2021	3,855	9	3,863
May 2021	3,587	6	3,593
June 2021	2,750	14	2,763
July 2021	1,582	1	1,583
August 2021	2,000	29	2,029
September 2021	4,065	41	4,107
October 2021	3,997	14	4,012
November 2021	4,025	8	4,032
December 2021	4,154	34	4,188
January 2022	4,127	143	4,271
February 2022	3,154	11	3,166
March 2022	1,636	1	1,637
April 2022	770	1	771
May 2022	160	2	162

*Sorted by year/month, chronologically; top 5 months highlighted in gray.*

*\* May 2022 only includes the first pay period - May 1-15, 2022.*

## By Month Payroll Data Charts

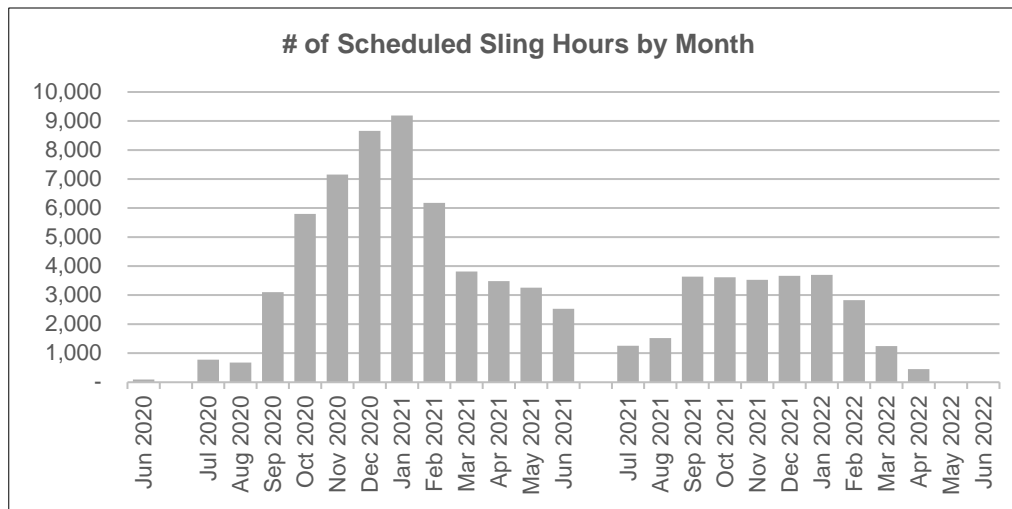
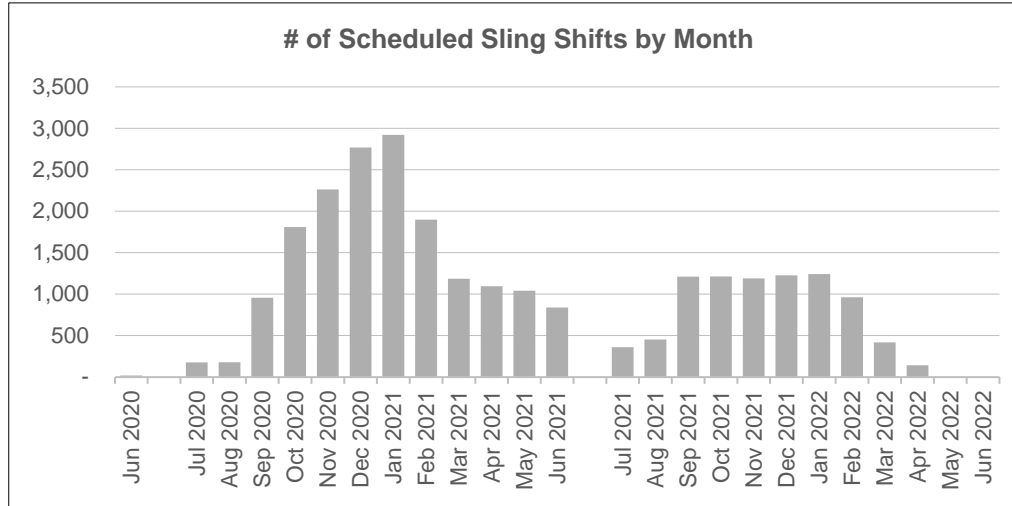


**Sling - Scheduled Shifts and Hours - June 2020 through April 2022**

<b>Month</b>	<b>Shifts</b>	<b>Hours</b>	<b>Avg Shift Hours</b>
<b>TOTAL</b>	<b>25,561</b>	<b>80,113</b>	<b>3.1</b>
June 2020	17	90	5.3
July 2020	177	771	4.4
August 2020	179	677	3.8
September 2020	956	3,099	3.2
October 2020	1,809	5,799	3.2
November 2020	2,262	7,155	3.2
December 2020	2,769	8,659	3.1
January 2021	2,920	9,192	3.1
February 2021	1,897	6,178	3.3
March 2021	1,186	3,810	3.2
April 2021	1,095	3,481	3.2
May 2021	1,041	3,254	3.1
June 2021	839	2,526	3.0
July 2021	360	1,251	3.5
August 2021	453	1,518	3.4
September 2021	1,210	3,634	3.0
October 2021	1,213	3,613	3.0
November 2021	1,190	3,527	3.0
December 2021	1,226	3,666	3.0
January 2022	1,242	3,697	3.0
February 2022	961	2,826	2.9
March 2022	418	1,244	3.0
April 2022	141	449	3.2
May 2022	-	-	-
June 2022	-	-	-

*Sorted by year/month, chronologically; top 5 months highlighted in gray.*

**Sling Data Charts**



## Sling Data Charts

