

# Life Time Fitness Health Clubs Outbreaks

## Summary

2/2/2021

### Executive Summary

- In December 2020, we identified outbreaks at two Life Time Fitness Health Club facilities. 14 cases reported visiting the Lakeville location, and 13 reported visiting the Woodbury location.
- Performed additional case finding related to gym outbreaks in November 2020 at Life Time facilities in Lakeville and Woodbury using member and employee visit data provided by Life Time.
- Identified an **additional** 168 cases (98 at Lakeville, 70 at Woodbury) who attended during their incubation period (infectious period).
- Over 50% of the members who visited the gym denied any gym exposure when interviewed about their illness by Minnesota Department of Health (MDH) Case Investigators. Similarly, 40% of employees did not report Life Time as their employer when interviewed about their illness.
- Found multiple instances of non-compliance with isolation guidelines: 57 cases attended after symptom onset date (including 49 attended after test date).
- Found multiple instances of members and employees violating quarantine guidance (household members are in isolation, suggesting the gym attendee should be in quarantine).
- This demonstrates that the current outbreak threshold is an indication that transmission at a larger scale is occurring.
- Considering the high number of infectious people identified at the gyms and that elderly and other risk people are at substantially elevated risk of severe disease due to COVID-19, these populations should consider avoiding gyms and fitness facilities to limit exposures to SARS-CoV-2.

### Gym Outbreaks Detected based on Case Interviews

As of 1/27/2021, the Minnesota Department of Health (MDH) has identified 56 COVID-19 outbreaks identified in gyms in Minnesota, involving 813 cases.

- The threshold for a gym/fitness center outbreak: 7 cases from 7 households within 1 month. Through case interviews we determine that the person attended the gym in the period prior to their symptom onset or test date and that is their likely source of infection. These 7 cases had nothing else in common except their attendance at Life Time.
- 15 of the identified outbreaks occurred at Life Time Facilities
  - 4 have occurred at the Lakeville location (3<sup>rd</sup> outbreak: 14 cases, with onset dates November 15 – December 7).
  - 3 have occurred at the Woodbury location (3<sup>rd</sup> outbreak: 13 cases, with onset dates November 7 – 30).
- When investigating outbreaks or illness clusters for other pathogens, MDH routinely requests information on all patrons, guests, or event participants for the purposes of case finding (e.g., identifying restaurant patrons through reservations, guest lists, or credit card receipts), and different approaches may be used to determine if there were additional cases associated with the

outbreak. Because of the high number of COVID-19 cases, MDH is not routinely able to conduct additional case finding as part of all identified outbreaks.

- MDH reached out to Life Time Fitness, requesting membership visit data for the week of November 14 – 20, 2020, and employee data for November 1 – 30 to evaluate if there were additional outbreak cases at Lakeville and Woodbury locations not captured through case interviews.

## Additional Case Finding Based on Life Time Visit Data

- MDH identified additional cases by matching on date of birth (DOB) as well as at least one of the following: email, phone number, name (both first and last name)
- We also identified a few additional cases with small differences in DOB or name between the case data and data provided by Life Time (interpreted as typos).

## Results

- Based on COVID-19 interview data, MDH classified 14 cases as part of the Lakeville outbreak and 13 cases as part of the Woodbury outbreak.
- Comparing MDH COVID-19 case data against Life Time member and employee visit data, we found 168 additional cases who visited gym during their exposure period or infectious period (98 at Lakeville, 70 at Woodbury).
  - Therefore, including cases identified through MDH surveillance and additional case finding, we identified 112 cases as part of the Lakeville outbreak, and 83 as part of the Woodbury outbreak.
- An additional 86 cases attended the gyms, but their visits did not fall in their exposure periods or infectious periods. Since we were unable to confirm whether they attended the gym during their exposure periods or infectious periods based on the time period we requested, we did not include these cases in our counts.
- Areas of Concern (counts based on Life Time visit data):
  - A high number of cases attended while infectious (88 cases, presenting opportunities for further transmission)
    - A median of 10 infectious members visited Lakeville (range 4 to 14) each day during November 14 – 20
    - A median of 9 infectious members visited Woodbury (range 4 to 13) each day during November 14 – 20
  - Employees worked while infectious most days of the time period reviewed.
    - There was at least 1 infectious employee at Lakeville 5 out of 7 days.
    - There was at least 1 infectious employee at Woodbury 3 out of 7 days.
  - Among the 88 cases that visited while infectious, 57 cases visited facilities after onset date, and 49 cases visited after their test date; therefore, members and employees visited the facility during their isolation periods.
  - Members and employees visited the gym while household members were in isolation due to positive SARS-CoV-2 test (presumably the attendee should have been quarantining).
  - Many employees worked multiple days after symptom onset/test date, including 1 employee who worked 7 different days after onset date.
  - People from multiple households attending via guest pass, likely suggesting poor compliance with physical distancing guidelines (multiple teenagers with different last names all visited a gym on same day, and have the same phone number listed in the Life Time data).

- Less than 50% of the 191 cases were interviewed (high number of cases were Lost to Follow up, or refused interview).
- Accuracy of data gathered from case interviews.
  - 47 interviewed members were asked about gym exposures: only 20 reported attending the gym. 25 denied attending the gym (2 reported “unknown”).
  - Among 10 interviewed employees, only 6 reported Life Time as an employer.

## Limitations

- We are not able to analyze if transmission was associated with specific activities, such as classes, trainings, sports, or using amenities:
  - Case interview data rarely includes this level of detail.
  - Small group and fitness class data did not include class name or dates, so we were unable to investigate whether onset or visit dates suggest transmission in that setting.
- These case numbers are still an underestimate:
  - We likely missed cases with name or DOB differences between MDH and Life Time data.
  - We cannot capture people who were infected but never tested.

## Discussion

- These findings affirm that gyms pose a substantial risk of transmission of SARS-CoV-2, as they are often a repeated exposure (people often visit the gym multiple times per week), and increased exertion during exercise can amplify the spread of SARS-CoV-2 virus among people from different households.
- Considering the high number of infectious people identified at the gyms and that elderly and other high-risk people are at substantially elevated risk of severe disease due to COVID-19, these populations should consider avoiding gyms and fitness facilities to limit exposures to SARS-CoV-2.
- The results validate that cases identified through case interviews are a small proportion of the number of cases with a particular exposure/visiting a particular establishment.
- We recommend that Life Time communicate with members and employees that they should not visit the gym if the person is:
  - Not feeling well, or experiencing symptoms of COVID-19
  - In isolation following a positive test
  - In quarantine due to exposure to a household member or other close contact with COVID-19
  - Awaiting results of a SARS-CoV-2 test if tested due to experiencing symptoms or recent exposure.

## Table – Results

Data Source	Description	Lakeville		Woodbury		Total
		Members*	Employees^	Members*	Employees^	
Case Investigation Only	Cases part of outbreak	8	6	13	0	27
Data from Lifetime records only	Employees		192		117	309
	Employee Records		2,892		1,335	4,227
	Members with 1+ visits	4,458		2,756		7,214
	Visits	12,233		7,881		20,114
	All Cases Found	142	13	114	8	277
	Cases who attended gym, but unclear if they attended during exposure/infectious period	44	1	40	1	86
	Attended during exposure or infectious period	98	12	74	7	191
	Additional cases identified+	91	7	63	7	168
	Exposure period only (not infectious)	64	12	47	6	129
	Infectious Period	43	7	34	4	88
	Infectious, after onset date	25	5	24	3	57
	Infectious, after test date	23	4	19	3	49
	Interviewed	38	5	40	5	88
	Reported attending gym	9	0	11	1	21
	Denied attending gym	11	1	14	1	27
	Reported Unknown	2	0	0	0	2
Unknown/not asked	16	4	15	3	38	
Reported Lifetime as employer		5		1	6	
Final Counts - All Data Sources	Cases part of outbreak	99	13	76	7	195

\*November 14 – 20

^November 1 – 30

+Some cases were identified by both case investigation and data from Lifetime. A few were identified via case investigation, but not Lifetime data.