



OAG

Office of the Auditor General

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Doug A. Ringler, CPA, CIA
Auditor General

January 12, 2022

The Honorable Steven Johnson
Michigan House of Representatives
Anderson House Office Building, Room 1091
Lansing, Michigan

Dear Representative Johnson:

Enclosed is the information you requested related to novel coronavirus (COVID-19) deaths in long-term care (LTC) facilities in Michigan. We compiled this information using data obtained from the Michigan Department of Health and Human Services' Electronic Death Registration System, Michigan Disease Surveillance System (MDSS), Bridges Integrated Automated Eligibility Determination System, and Community Health Automated Medicaid Processing System, and the Department of Licensing and Regulatory Affairs. Although we have no reason to question the accuracy, we did not audit the data.

Based on additional information obtained subsequent to our October 13, 2021, letter, we updated our reconciliation of total COVID-19 deaths to within 3.2% (see page 2).

Regarding COVID-19 deaths linked to LTC facilities, we identified a total of 8,061, including 7,010 deaths associated within the LTC facility types required to report. LTC facilities self-reported 5,675 of those 7,010 deaths as of July 2, 2021. MDHHS disagreed with 1,511 deaths included in our total because it questioned the reliability of the MDSS address field. Based on our rationale identified on page 4, including conducting further procedures to corroborate the addresses, we contend the address field is reliable. Also, we provided MDHHS with the details for our 8,061 LTC deaths on November 19, 2021. MDHHS indicated it began vetting the deaths directly with LTC facilities. Because their review is in process, we have no information to provide regarding their review. MDHHS also provided the attached response to our letter, dated January 9, 2022. Although we disagree with some of the statements in their response, we provided it for transparency purposes.

We appreciate the opportunity to assist you. If you have further questions, please do not hesitate to contact our office.

Sincerely,

A handwritten signature in black ink that reads "Doug Ringler".

Doug Ringler
Auditor General

Enclosure

Report Fraud/Waste/Abuse

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Background

The novel coronavirus* (COVID-19) is a respiratory disease caused by the SARS-CoV-2 virus. The World Health Organization (WHO) first learned of this new virus on December 31, 2019. On March 10, 2020, the Michigan Department of Health and Human Services (MDHHS) identified the first two presumptive-positive cases of COVID-19 in Michigan.

The WHO defined a COVID-19 death, for surveillance purposes, as:

- A death resulting from a clinically compatible illness, in a confirmed or probable* COVID-19 case*, unless there is a clear alternative cause of death that cannot be related to COVID disease (e.g., trauma).
- There should be no period of complete recovery from COVID-19 between illness and death.

Using the WHO definition, the Centers for Disease Control and Prevention (CDC) developed detailed COVID-19 case surveillance* definitions to set national uniform criteria for public health surveillance*, including clinical conditions for determining whether COVID-19 played a role in the cause of death.

Beginning April 15, 2020, executive orders, epidemic orders, and MDHHS guidance required certain long-term care (LTC) facilities* to report to MDHHS all presumed positive COVID-19 cases and deaths retroactive to January 1, 2020. The following table summarizes Michigan's population of LTC facilities open at any time during the period January 1, 2020 through July 29, 2021 and whether they were required to report (see Exhibit 1 on page 8 for more detailed information):

LTC Facility Type	Total Number of Facilities
Required to Report:	
Licensed nursing home/skilled nursing facilities* (SNFs)	451
Licensed home for the aged (HFA) facilities*	316
Adult foster care facilities* licensed for 13 or more beds (AFC-13)	626
Assisted living facilities*	n/a
Total	1,393
Not Required to Report:	
Adult foster care facilities licensed for 12 or fewer beds (AFC-12)	4,055
Exempt HFA facilities	206
Hospice only SNF	8
Total	4,269

* See glossary at end of letter for definition.

Information Requested and Responses

1. A comprehensive review of all death records to see if nursing homes are correctly self-reporting their death numbers.

We analyzed death certificate data from Michigan's Electronic Death Registration System* (EDRS) and COVID-19 case and death data from the Michigan Disease Surveillance System* (MDSS) and reconciled the total COVID-19 deaths reported on Michigan's Coronavirus Dashboard as of July 2, 2021 (January 1, 2020 through July 2, 2021), as follows:

OAG Reconciliation of Total COVID-19 Deaths (UPDATED)
(January 1, 2020 through July 2, 2021)

MDHHS:	
Unduplicated COVID-19 deaths (confirmed and probable), per Coronavirus Dashboard ⁽¹⁾	20,906
OAG:	
Unduplicated COVID-19 deaths (confirmed [C1] and probable [P1]) ⁽²⁾ , identified in MDSS ⁽¹⁾	20,789
Additional COVID-19 deaths (C2-C4, P2) ⁽²⁾⁽³⁾	788
Subtotal COVID-19 deaths	21,577
Total number of additional COVID-19 deaths	671
Percentage of additional COVID-19 deaths	3.2%

⁽¹⁾ Net of 155 instances in which two or more Investigation IDs in MDSS had the same first name, last name, and date of birth and were identified as a COVID-19 death.

⁽²⁾ See Exhibit 2 on page 9.

⁽³⁾ Via combinations of data from MDSS and EDRS, we identified 788 death certificate records not cited as COVID-19 deaths in MDSS, which met the CDC COVID-19 death surveillance definitions.

* See glossary at end of letter for definition.

2. A proper accounting of all LTC facility deaths to include homes for the aged and adult foster care facilities.

We identified 8,061 total COVID-19 deaths linked to a LTC facility. Our analysis, by LTC facility types required to report to MDHHS and not required to report to MDHHS, and by LTC facility type is as follows:

LTC Facility Type	Self-Reported COVID-19 Deaths	OAG Identified COVID-19 Deaths			Differences	
		Confirmed and Probable ⁽¹⁾	A1 ⁽²⁾	Total		
Required to Report:						
SNFs	4,216	5,153	100	5,253	(1,037)	(19.7%)
HFA facilities	933	910	14	924	9	1.0%
AFC-13	526	590	8	598	(72)	(12.0%)
Other ⁽³⁾	n/a	228	7	235	(235)	n/a
Assisted living facilities ⁽⁴⁾	n/a	n/a	n/a	n/a	n/a	n/a
Total	5,675	6,881	129	7,010	(1,335)	(19.0%)
Undetermined:						
Uncertain facility type ⁽⁵⁾	n/a	127	1	128	(128)	(100.0)%
Total	n/a	127	1	128	(128)	(100.0)%
Not Required to Report:						
AFC-12	n/a	392	4	396	(396)	(100.0)%
Exempt HFA facilities ⁽⁶⁾	n/a	506	10	516	(516)	(100.0)%
Hospice only SNFs	n/a	11	0	11	(11)	(100.0)%
Total	n/a	909	14	923	(923)	(100.0)%
TOTAL	5,675	7,917	144	8,061	(2,386)	(29.6%)

⁽¹⁾ Includes confirmed (C1-C4) and probable (P1-P2) COVID-19 deaths (see Exhibit 2 on page 9)

⁽²⁾ Death certificate identified COVID-19; however, the decedent had only negative COVID-19 test result(s). Due to the negative test result(s), the death is not counted for surveillance reporting purposes.

⁽³⁾ Could not determine specific facility type due to same name and/or address for multiple facility types.

⁽⁴⁾ MDHHS did not obtain any data from these facilities and eliminated the COVID-19 death reporting requirement for these facilities in October 2020. Because these facilities are not required to be licensed, we could not identify a complete listing of them and, therefore, did not include them in our review.

⁽⁵⁾ Could not distinguish between facility required to report and facility not required to report due to same name and/or address.

⁽⁶⁾ HFA facilities that met requirements and were approved to be exempt from licensure requirements. The Department of Licensing and Regulatory Affairs (LARA) does not maintain records of closed exempt HFA facilities.

n/a = not applicable

To identify COVID-19 deaths linked to an LTC facility, we:

1. Compared EDRS data with LTC facility names and addresses obtained from LARA to identify the records where the location of death or current residence identified on the death certificate was an LTC facility.
2. Compared MDSS address fields with LTC facility addresses obtained from LARA to identify the records where the residence was an LTC facility.
3. Reviewed, when necessary, the remaining EDRS and MDSS records with other MDSS data fields, Medicaid beneficiary data in the Bridges Integrated Automated Eligibility Determination System (Bridges), and Medicaid LTC claims in the Community Health Automated Medicaid Processing System (CHAMPS).

Performing only data analytics results in certain data limitations. We were not able to:

- Identify which LTC COVID-19 deaths were specific to LTC facility residents who were transferred to an LTC hub where they subsequently passed away.
- Differentiate COVID-19 deaths that occurred on campus facilities (multiple buildings and/or wings) between different facility types (SNF, HFA facility, assisted living facility, etc.) with the same address.
- Exclude instances where a resident of an LTC facility tested positive for COVID-19, was discharged from the facility, and passed away at home or another location.
- Identify instances where the LTC facility did not have knowledge of a residents' COVID-19 positive diagnosis prior to transferring the resident to the hospital where the resident passed away from COVID related complications prior to their expected return. Prior knowledge of a residents' COVID-19 positive diagnosis was not included in the initial guidance; however, subsequent guidance required the LTC facility's knowledge for it to be considered an LTC facility COVID-19 death.
- Identify when, where, and how the LTC facility resident contracted the COVID-19 infection.

MDHHS disagreed with our methodology to use the "MDSS Address Fields" as the sole source to identify 1,511 COVID-19 deaths linked to a LTC facility, contending that the address fields are unreliable. We contend the "MDSS Address Fields" is reliable, as follows:

- MDHHS uses MDSS to monitor communicable diseases, including using the address fields for case monitoring, contact tracing, geographic reporting, and outbreak area identification purposes.
- MDSS data, including the address fields, is generally obtained through electronically uploading positive laboratory test result data. Therefore, each data element is as reliable as the next.
- We corroborated at least 85% of the 1,511 addresses in the "MDSS Address Fields" using other MDSS data fields, Medicaid beneficiary data in Bridges, and Medicaid LTC claims in CHAMPS.

The following table summarizes the COVID-19 LTC facility deaths by the source we used to identify them (EDRS, MDSS, Bridges, and CHAMPS):

LTC Facility Type	Address Fields				Address Fields and Other ⁽¹⁾		Total
	Address Fields				EDRS	MDSS	
	EDRS and MDSS	EDRS	MDSS	Other ⁽¹⁾			
Required to Report:							
SNF	2,422	1,017	1,095	640	31	48	5,253
HFA facilities	519	158	165	73	3	6	924
AFC-13	359	105	88	34	10	2	598
Other ⁽²⁾	114	40	27	42	12	0	235
Assisted living facilities ⁽³⁾	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total	3,414	1,320	1,375	789	56	56	7,010
Undetermined:							
Uncertain facility type ⁽⁴⁾	66	33	11	14	4	0	128
Total	66	33	11	14	4	0	128
Not Required to Report:							
AFC-12	247	73	57	16	1	2	396
Exempt HFA facilities ⁽⁵⁾	361	82	68	3	2	0	516
Hospice only SNF	2	9	0	0	0	0	11
Total	610	164	125	19	3	2	923
TOTAL	4,090	1,517	1,511	822	63	58	8,061

⁽¹⁾ Based on review of additional MDSS data fields, Medicaid beneficiary data in Bridges, and Medicaid LTC claims in CHAMPS.

⁽²⁾ Could not determine specific facility type due to same name and/or address for multiple facility types.

⁽³⁾ Because these facilities are not required to be licensed, we could not identify a complete listing of them and, therefore, did not include them in our review.

⁽⁴⁾ Could not distinguish between facility required to report and facility not required to report due to same name and/or address.

⁽⁵⁾ HFA facilities that met requirements and were approved to be exempt from licensure requirements. LARA does not maintain records of closed exempt HFA facilities.

n/a = not applicable

3. A review of the MDHHS processes and procedures for obtaining death reports from LTC facilities.

How is a COVID-19 death defined?

COVID-19 deaths identified in MDSS will not directly align with those identified in EDRS because MDHHS used the following methodologies for classifying a COVID-19 death for surveillance and for death certificate reporting purposes:

- MDHHS developed a mortality COVID-19 surveillance protocol based on the CDC case surveillance definitions to track total COVID-19 deaths in MDSS and populate the Michigan Coronavirus Dashboard. Information used to populate and update MDSS as part of case investigations include items such as positive test results, local health department outreach, and death certificate data.

To assist in identifying COVID-19 deaths using the case surveillance definitions, MDHHS conducted the following procedures when EDRS death certificates identified COVID-19 as a cause of death and "natural" as the manner of death, and where the individual was not already identified in MDSS as a COVID-19 death:

- If the decedent had a record in MDSS, MDHHS reviewed the patient status, case disposition, and clinical information; verified the most recent positive test was within 30 days of death; and updated MDSS to indicate the patient was deceased.
- If the decedent did not have a record in MDSS, MDHHS searched COVID-19 negative test results within 90 days of death. If there was a negative test result, MDHHS marked the decedent as not a COVID-19 case due to a negative test result and did not create a record in MDSS. If there was not a negative test result, MDHHS ensured proper death certificate coding and created a new probable COVID-19 record in MDSS.
- Death certificate reporting identifies COVID-19 deaths where the ICD-10 code is U07.1. To ensure that death data is coded consistently nationwide, ICD-10 codes are assigned by the CDC's National Center for Health Statistics based on keyword searches.

How is an LTC COVID-19 death defined and reported?

Similar to the CDC case surveillance definitions for COVID-19 death reporting requirements, MDHHS guidance required certain LTC facilities to report residents with suspected or COVID-19 positive laboratory test results who died in the facility or another location based on current or subsequent information. The guidance allowed the facilities to exclude residents who were not expected to return to the LTC facility, and for whom the facility was not aware of a resident's positive COVID diagnosis prior to being transferred. Also, minor differences existed, such as MDHHS guidance that residents who recovered from COVID-19 should not be reported if they subsequently passed away, regardless of the CDC's 30-day lookback requirement.

MDHHS guidance required LTC facilities to report the total number of COVID-19 resident deaths and did not require them to report detail information, such as name, date of birth, date of death, or social security number of the deceased resident.

MDHHS provided LTC facilities with access to the data platforms necessary to enable reporting. MDHHS obtained licensure information from LARA and required LTC facilities to register with their respective data platforms. MDHHS provided assistance with the registration and reporting processes as needed.

What was MDHHS's process for verifying and posting the LTC COVID-19 self-reported deaths to the Michigan Coronavirus Dashboard?

MDHHS conducted high-level reviews to ensure LTC facilities reported and conducted limited data integrity and reasonableness checks on the data reported. MDHHS performed outreach to LTC facilities that did not report or that were flagged during the data integrity review.

In conjunction with Michigan State University Institute for Health Policy, MDHHS published the self-reported LTC facilities' COVID-19 death data on the Michigan Coronavirus Dashboard.

We verified MDHHS accurately posted to the Michigan Coronavirus Dashboard the 5,675 COVID-19 deaths the LTC facilities self-reported as of July 7, 2021.

4. A review of the vital records reports that MDHHS at one time cross checked with long-term care facility records (reporting).

We obtained an understanding of MDHHS's attempt to quantify LTC facility COVID-19 deaths based on EDRS death certificate records. MDHHS used the location of death field to identify COVID-19 deaths that occurred in an LTC facility and used the location of death and resident address fields to identify COVID-19 deaths of LTC facility residents who died in a hospital. MDHHS completed its first attempt on June 10, 2020 for COVID-19 deaths that occurred from March 1, 2020 through June 1, 2020.

MDHHS attempted this review on three different occasions. On its third attempt, MDHHS identified 2,777 LTC facility COVID-19 deaths from January 1, 2020 through January 31, 2021; however, the self-reported LTC facility COVID-19 deaths on the Michigan Coronavirus Dashboard totaled 5,363 for the same period.

MDHHS acknowledged the following limitations with this review:

- Timing difference between the date of death and when the death certificate is completed.
- Data entry challenges, e.g., the location of death and residence/address fields on the death certificate are input fields (not standardized) subject to variations and/or typos (Road, Rd., RD, etc.). Also, a family member or friend may have provided the decedent's address as their previous home address instead of the current address.

Long-Term Care Facility Information

The following table identifies Michigan's population of long-term care (LTC) facilities as of July 29, 2021, and when they were first required to report COVID-19 deaths:

LTC Facility Type	Date First Required to Report	Number of			
		Active Facilities	Closed Facilities ⁽¹⁾	Total Facilities	Total Beds
Required to Report:					
SNF	April 21, 2020	447	4	451	46,729
HFA	May 22, 2020	309	7	316	23,452
AFC-13	May 22, 2020	606	20	626	12,099
Assisted living facilities ⁽²⁾	May 22, 2020	n/a	n/a	n/a	n/a
Total		<u>1,362</u>	<u>31</u>	<u>1,393</u>	<u>82,280</u>
Not Required to Report:					
AFC-12		3,437	618	4,055	25,192
Exempt HFA ⁽³⁾		206	n/a	206	27,855
Hospice only SNF		7	1	8	98
Total		<u>3,650</u>	<u>619</u>	<u>4,269</u>	<u>53,145</u>

⁽¹⁾ Facilities closed as of July 29, 2021, however, that had been active at some time from January 1, 2020 through July 28, 2021.

⁽²⁾ MDHHS did not obtain any data from these facilities and eliminated the COVID-19 death reporting requirement for these facilities in October 2020. Because these facilities are not required to be licensed, we could not identify a complete listing of them.

⁽³⁾ HFA facilities that met requirements and were approved to be exempt from licensure requirements. LARA does not maintain records of closed exempt HFA facilities.

n/a = not applicable

OAG Methodology to Identify COVID-19 Deaths

1. Populations based on MDHHS's Mortality COVID-19 Surveillance Protocol

Confirmed Deaths:

- C-1 Confirmed COVID-19 cases in MDSS that have been marked as deceased as the result of case investigation.
- C-2 Decedents with a death certificate that identifies a term related to COVID-19 (in Part I or Part II) and are confirmed COVID-19 cases in MDSS, but they were not yet marked as deceased in MDSS.
- C-3 Decedents with pending causes of death that are confirmed cases in MDSS, but they were not yet marked as deceased in MDSS.
- C-4 Decedents with death certificates that do not specifically list a term related to COVID-19 (in Part I or II) that are confirmed cases in MDSS, but they were not yet marked as deceased in MDSS **IF** they died within 30 days of symptom onset (or referral date if symptom onset is not available) **AND** died in a manner of death deemed to be "natural" on the death certificate.

Probable Deaths:

- P-1 Cases that meet the probable COVID-19 case* definition while alive and have subsequently died, as captured by MDSS.
- P-2 Death certificates that list a term related to COVID-19 (in Part I or Part II) where there is no available evidence of a confirmatory test result (positive or negative).

When MDHHS identified a COVID-19 death using methodology items C2, C3, C4, or P2, MDHHS updated the record in MDSS to reflect either a C1 or P1 record. Therefore, ultimately all items reported on the Michigan Coronavirus Dashboard are either a C1 or P1 record in MDSS.

2. OAG Additional Population

- A-1 Death certificate identified COVID-19; however, the decedent had only negative COVID-19 test results. Due to the negative test result, the death is not counted for surveillance reporting purposes; however, the death certificate does meet COVID-19 death certificate reporting.

Source: The OAG compiled the information based on various sources obtained from MDHHS.

* See glossary at end of letter for definition.

adult foster care facilities	Facilities and foster care family homes for adults who are aged, mentally ill, developmentally disabled, or physically disabled who require supervision on an ongoing basis but who do not require continuous nursing care.
AFC-12	Adult foster care facilities licensed for 12 or fewer beds.
AFC-13	Adult foster care facilities licensed for 13 or more beds.
assisted living facilities	Unlicensed establishments that offer community-based residential care for at least three unrelated adults who are either over the age of 65 or need assistance with activities of daily living including personal, supportive, and intermittent health-related services available 24-hours a day.
Bridges	Bridges Integrated Automated Eligibility Determination System.
case surveillance	Case surveillance is foundational to public health practice. It helps to understand diseases and their spread and determine appropriate actions to control outbreaks. Case surveillance occurs each time public health agencies at the local, state, or national levels collect information about a case or person diagnosed with a disease or condition that poses a serious health threat to Americans. These diseases and conditions include infectious diseases, foodborne outbreak, and noninfectious conditions.
CDC	Centers for Disease Control and Prevention.
CHAMPS	Community Health Automated Medicaid Processing System.
clinical criteria	Criteria including: <ul style="list-style-type: none">• Acute onset or worsening of at least two of the following symptoms or signs: fever (measured or subjective), chills, rigors, myalgia, headache, sore throat, nausea or vomiting, diarrhea, fatigue, congestion or runny nose; or• Acute onset or worsening of any one of the following symptoms or signs: cough, shortness of breath, difficulty of breathing, olfactory disorder, taste disorder, confusion or change in mental state, persistent pain or pressure in the chest, pale, gray, or blue-colored skin, lips, or nail beds, depending on skin tone, inability to walk; or• Severe respiratory illness with at least one of the following: clinical or radiographic evidence of pneumonia, acute respiratory distress syndrome (ARDS)
CMS	Centers for Medicare and Medicaid Services.

confirmed COVID-19 case	A COVID-19 case that meets confirmatory laboratory evidence. Confirmatory laboratory evidence is either the detection of SARS-CoV-2 ribonucleic acid in a post-mortem respiratory swab or clinical specimen using a diagnostic molecular amplification test performed by a Clinical Laboratory Improvement Amendments-certified provider or detection of SARS-CoV-2 by genomic sequencing.
Electronic Death Registration System (EDRS)	A Web-based system that allows funeral directors, physicians, medical examiners, and state and local registrars to complete the death certificate process electronically.
epidemiologic linkage	One or both of the following exposures in the prior 14 days: close contact with a confirmed or probable COVID-19 case; or a member of an exposed risk cohort as defined by public health authorities during an outbreak or during high community transmission.
home for the aged (HFA) facility	A supervised personal care facility at a single address, other than a hotel, adult foster care facility, hospital, nursing home, or county medical care facility that provides room, board, and supervised personal care to 21 or more unrelated, nontransient individuals 55 years of age or older. Home for the aged includes a supervised personal care facility for 20 or fewer individuals 55 years of age or older if the facility is operated in conjunction with and as a distinct part of a licensed nursing home.
LARA	Department of Licensing and Regulatory Affairs.
long-term care (LTC) facility	A skilled nursing facility, nursing home, home for the aged, adult foster care facility, or assisted living facility.
MDHHS	Michigan Department of Health and Human Services.
Michigan Disease Surveillance System (MDSS)	A Web-based communicable disease reporting system.
nursing home or skilled nursing facility (SNF)	A nursing care facility, including a county medical facility, that provides organized nursing care and medical treatment to 7 or more unrelated individuals suffering or recovering from illness, injury, or infirmity.
Novel coronavirus (COVID-19)	Coronavirus infectious respiratory disease caused by the SARS-CoV-2 virus.
presumptive laboratory evidence	Detection of SARS-CoV-2 specific antigen in a post-mortem obtained respiratory swab or clinical specimen using a diagnostic test performed by a CLIA-certified provider.
probable COVID-19 case	A COVID-19 case that meets clinical criteria and epidemiologic linkage with no confirmatory laboratory testing performed for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), meets presumptive laboratory evidence, or meets vital records criteria with no confirmatory laboratory evidence for SARS-CoV-2.
public health surveillance	The ongoing, systematic collection, analysis, and interpretation of health-related data essential to planning, implementation, and evaluation of public health practice.

underlying cause of death

The disease or injury which initiated the train of morbid events leading directly to death or the circumstances of the accident or violence which produced the fatal injury.

vital records criteria

Death certificate listing COVID-19 disease or SARS-CoV-2 or an equivalent term as an underlying cause of death or a significant condition contributing to death.

WHO

World Health Organization.