

VON SONPM COVID-19 Impact Audit

COVID-19 is presenting society and hospitals with unprecedented challenges, risks, and disruptions. The impact on care for infants and families is largely unknown. In response, Vermont Oxford Network (VON) and the American Academy of Pediatrics Section on Neonatal Perinatal Medicine (SONPM) created a tool to help infant care teams understand the impact of COVID-19 in their own units and more broadly in the neonatal community. Our goal is to inform local and national decision-making for program evaluation and quality improvement.

Vermont Oxford Network will provide data collection forms and will operate a web-based secure data portal for electronic data entry and transfer of data without identification of individual participants. Aggregate reporting will appear on the Vermont Oxford Network website.

The audit is comprised of two parts. Your center may complete Part 1 and Part 2, or just Part 2.

1. Part 1, **Confirmed and Suspected Cases on the Audit Date**, requires you to identify the cases of confirmed and suspected COVID-19 for infants born at your hospital or admitted to your hospital within 28 days of birth in all infant care locations in your hospital. We have provided data collection forms that you can use to tally up the totals in each location for entry in the online tool. We suggest that you keep these forms for use in tracking the impact of COVID-19 in your hospital and for identifying cases for review. The time required to complete Part 1 will depend on the number of infant locations in your hospital. Participation in Part 1 of the audit is optional
2. Part 2, **Impact of COVID-19 on Infant Care**, consists of a few simple questions designed to assess the impact of COVID-19 on the care of infants and families. Part 2 also includes a comment box for you to share what you have learned about caring for infants and families affected by COVID-19 with the broader neonatal community. We estimate that completion of Part 2 will take 5 to 15 minutes. All participants will complete Part 2.

Please join us in learning together how COVID-19 impacts the care of infant infants and families. To participate, your center will:

1. Identify an Audit Coordinator
2. Obtain any necessary approvals
3. Pick a day for the audit
4. Choose to complete part 1 and 2 or just part 2.
 - If completing part 1 and part 2:
 - Identify the locations in your hospital where infants receive care
 - Identify all infants born at your hospital or admitted to your hospital within 28 days of birth with confirmed and suspected COVID-19 in those units on the Audit Date
 - Complete the data collection forms in these materials (pp. 3, 4, and 6)
 - Answer the questions on p. 5
 - If completing part 2:
 - Identify the locations in your hospital where infants receive care
 - Answer the questions on p. 5
5. Access the online audit tool
6. Enter the data from the summary data forms
7. Submit

Please refer to the following pages for further details.

Quality Improvement

The audit data can help you track the impact of COVID-19 in your hospital in response to changes in policy and identify opportunities for improvement. Create run charts using the data you have tallied on the data forms. You may choose to collect and tally data for run charts as frequently as you would like. **But the data you submit to the VON SONPM COVID-19 Audit must only be data from the audit day you have chosen within the time period identified by VON SONPM for the monthly audit.**

Questions and Support: Please contact support@vtoxford.org or 1-802-865-4814 ext246

Steps

1. Assign an audit coordinator. The audit coordinator will oversee the audit process. S/he will coordinate communication with your center's local institutional review board (IRB) or governing body and serve as the key contact for the audit, including ensuring that **only one person at your center enters data into the audit tool**. The audit coordinator may or may not be the individual who will collect the data. If the coordinator is not the person who will conduct the audit, assign a separate "data collector."

Please note that multiple people on your team may have received email notification about the audit. Please make sure to coordinate so that **your hospital submits only one audit in each month that you participate**.

2. Obtain any necessary approvals. The Committee on Human Research at the University of Vermont determined that the role of Vermont Oxford Network in these activities is not Human Subjects Research (as recognized by 45 CFR 46.102(f) and OHRP's Guidance on Research Involving Coded Private Information or Biological Specimens). That determination pertains solely to the role of Vermont Oxford Network. It is your responsibility to determine whether a local IRB approval is required.

3. Pick a day for the audit. Your center will choose a single day in the month to perform the audit. Your center does not need to participate in every audit. That decision will be up to you.

4. Choose to complete part 1 and part 2, or just part 2.

If choosing to complete part 1 and part 2:

- *Identify the locations in your hospital where infants receive care.* Definitions are on page 2. Do not include pediatric intensive care locations (PICUs) or delivery rooms/initial resuscitation areas.
- *Identify all infants born at your hospital or admitted to your hospital within 28 days of birth with confirmed or suspected COVID-19 in those units on the day of the audit.* Collect data on the total census in each unit regardless of COVID-19 status and confirmed and suspected COVID-19 cases. Definitions are on p. 4. Data will come from chart review and interviews with staff. We have provided a data collection form on p. 6.
- *Aggregate the cases by infant care location.* Complete the table on p. 4. Provide the census for every infant in every infant care location that you are auditing on the Audit Date and the number of confirmed and suspected COVID-19 cases for infants born at your hospital or admitted to your hospital within 28 days of birth in each location. Refer to detailed instructions on p. 4 for determining census at each location.
- *Answer the impact questions.* Table is on p. 5.

If choosing to complete part 2 only:

- *Identify the locations in your hospital where infants receive care.* Definitions are on page 2. Do not include pediatric intensive care locations (PICUs) or delivery rooms/initial resuscitation areas.
- *Answer the impact questions.* Table is on p. 5.

5. Access the online audit tool. Available from a link at: <https://public.vtoxford.org/covid-19>

6. Enter the data from the summary data forms. Use the tables on pp. 4 and 5 to enter the data into the online audit tool.

7. Submit. Submit the data in the online audit tool. Retain the Patient Case Forms and Data Forms for future case reviews.

Infant Care Locations

1. **Mother Baby Care:** Areas for mothers and well-appearing infants following delivery
2. **Level I Well Baby Nursery¹:** A hospital nursery organized with the personnel and equipment to perform neonatal resuscitation, evaluate and provide postnatal care of healthy infants, provide care for infants born at 35 to 37 weeks' gestation who remain physiologically stable, and stabilize ill infants or infants born at less than 35 weeks' gestational age until transfer to a facility that can provide the appropriate level of neonatal care.
3. **Level II Stepdown Nursery¹:** Level I plus: Provide care for infants born ≥ 32 weeks' gestation and weighing ≥ 1500 g who have physiologic immaturity or who are moderately ill with problems that are expected to resolve rapidly and are not anticipated to need subspecialty services on an urgent basis; Provide care for infants convalescing after intensive care; Provide mechanical ventilation for brief duration (<24 h) or continuous positive airway pressure or both; Stabilize infants born before 32 weeks' gestation and weighing less than 1500 g until transfer to a neonatal intensive care facility.
4. **Level III Neonatal Critical Care¹:** A hospital neonatal intensive care unit (NICU) organized with personnel and equipment to provide continuous life support and comprehensive care for extremely high-risk infants and those with complex and critical illness. Level II capabilities plus: Provide sustained life support; Provide comprehensive care for infants born < 32 weeks' gestation and weighing pediatric surgical specialists, pediatric anesthesiologists, and pediatric ophthalmologists; Provide a full range of respiratory support that may include conventional and/or high-frequency ventilation and inhaled nitric oxide; Perform advanced imaging, with interpretation on an urgent basis, including computed tomography, MRI, and echocardiography.
5. **Level IV Neonatal Critical Care¹:** Critical care area for the care of infants and infants with serious illness requiring Level IV care; area is supervised by a neonatologist. Level III capabilities plus: Located within an institution with the capability to provide surgical repair of complex congenital or acquired conditions; Maintain a full range of pediatric medical subspecialists, pediatric surgical subspecialists, and pediatric subspecialists at the site; Facilitate transport and provide outreach education
6. **Special Units or Wards Created for the Purpose of Caring for Patients with Confirmed or Suspected COVID-19 in which Infants May Receive Care.** Include special units or wards newly created or repurposed specifically for the care of COVID-19 patients. These new units or wards may care for infants exclusively or care for a mixed population that includes infants and other age groups.

NOTE: Please do not include pediatric intensive care units (PICUs) or delivery room/initial resuscitation areas.

Check each that is available in your hospital.

Infant Care Locations	Available In My Hospital
1. Mother baby care	
2. Level I Well baby nursery	
3. Level II Step down neonatal	
4. Level III Neonatal critical care	
5. Level IV Neonatal critical care	
6. Special units or wards created for the purpose of caring for patients with confirmed or suspected COVID-19 in which infants may receive care	

¹ Committee on Fetus and Newborn, American Academy of Pediatrics. Policy Statement: Levels of Newborn Care. *Pediatrics* 2012;130:587-597.

Case Data for Day of Audit for Hospitals Reporting Part 1 and Part 2

Census

- In Location 1, Census includes all infants rooming in with their mothers on the day of the audit. This includes infants with confirmed or suspected COVID-19 and those without confirmed or suspected COVID-19.
- In Locations 2 to 5, Census includes all patients in those locations on the day of the audit. This includes infants with confirmed or suspected COVID-19 and those without confirmed or suspected COVID-19.
- In Location 6, Special Units or Wards Created for the Purpose of Caring for Patients with Confirmed or Suspected COVID-19, the census includes all patients in the location on the day of the audit regardless of age because special units may include populations of mixed ages.

Cases

- **Confirmed:** Infants born in your hospital or admitted to your hospital within 28 days of birth with a positive test for COVID-19 regardless of their postnatal age on the day of the audit
- **Suspected:** Any infant born in your hospital or admitted to your hospital within 28 days of birth regardless of their postnatal age on the day of the audit who was: born to a mother with suspected or confirmed COVID-19; considered to be high risk for COVID-19 because of exposure to an individual with confirmed or suspected COVID-19; or showing signs compatible with COVID-19

Audit Date:

Infant Care Locations	Total Census (see above)	# of Confirmed Infant COVID-19 Cases	# of Suspected Infant COVID-19 Cases
1. Mother baby care			
2. Level I Well baby nursery			
3. Level II Step down neonatal			
4. Level III Neonatal critical care			
5. Level IV Neonatal critical care			
6. Special units or wards created for the purpose of caring for patients with confirmed or suspected COVID-19 in which infants may receive care			

Impact Questions for All Hospitals

The questions in this section are intended to assess the impact of COVID-19 on the care received by all of the infants and families that your hospital serves.

Has your hospital experienced a shortage of any of the following that has significantly impacted the care of infants and families?			
Personal protective equipment (PPE)	Yes	No	Unknown
Beds	Yes	No	Unknown
Medical devices or equipment	Yes	No	Unknown
Medications	Yes	No	Unknown
Has your hospital experienced limitations in the availability or timeliness of COVID-19 testing for infants and families?	Yes	No	Unknown
Has your hospital experienced a shortage of physicians due to staff illness, quarantine or absence due to COVID-19 that has significantly impacted the quality of care for infants and families?	Yes	No	Unknown
Has your hospital experienced a shortage of nurses due to staff illness, quarantine or absence due to COVID-19 that has significantly impacted the quality of care for infants and families?	Yes	No	Unknown
Has your hospital experienced a shortage of respiratory therapists due to staff illness, quarantine or absence due to COVID-19 that has significantly impacted the quality of care for infants and families?	Yes	No	Unknown
Has your hospital experienced a shortage of other providers or allied health professionals due to staff illness, quarantine or absence due to COVID-19 that has significantly impacted the quality of care for infants and families?	Yes	No	Unknown
Have policies at your hospital separating mothers from their infants or restrictions on family visitation due to COVID-19 significantly impacted the quality of care for infants and families?	Yes	No	Unknown

Does your hospital require SARS CoV-2 testing or proof of vaccination of family members to enter the following newborn care locations?

	Yes	No	Unknown	Not Applicable
Mother baby care				
Level I Well baby nursery				
Level II Step down neonatal				
Level III Neonatal critical care				
Level IV Neonatal critical care				
Special units or wards created for the purpose of caring for patients with confirmed or suspected COVID-19 in which infants may receive care				

Does your hospital require SARS CoV-2 testing or proof of vaccination of staff members to enter the following newborn care locations?

	Yes	No	Unknown	Not Applicable
Mother baby care				
Level I Well baby nursery				
Level II Step down neonatal				
Level III Neonatal critical care				
Level IV Neonatal critical care				

Special units or wards created for the purpose of caring for patients with confirmed or suspected COVID-19 in which infants may receive care				
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Will your hospital require all staff without medical contraindications who work in the following newborn care locations to receive a SARS CoV-2 vaccine when vaccines are available?

	Yes	No	Unknown	Not Applicable
Mother baby care				
Level I Well baby nursery				
Level II Step down neonatal				
Level III Neonatal critical care				
Level IV Neonatal critical care				
Special units or wards created for the purpose of caring for patients with confirmed or suspected COVID-19 in which infants may receive care				

Please rate the overall impact of COVID-19 on the ability of your hospital to provide care for infants and families in your hospital.	None	Only minor disruptions to routine care	Unable to provide necessary care to some infants	Unable to provide necessary care to most or all infants
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What is the most important lesson you would like to share about organizing care for or treatment of infants and families with suspected or confirmed COVID-19?	
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Please share a story of a family whose care in your hospital was affected by COVID-19 or changes in care practices due to COVID-19. We welcome stories from around the world, from all disciplines, family advisors, and parents. The story can be about any aspect of the pandemic's effects, such as: confirmed or suspected cases of infection in parents or infants; financial hardship; lost employment or other resources; separation; restricted visitation. We are particularly interested in stories about disproportionately affected populations in the US and internationally, such as minorities, socially disadvantaged, or immigrants. Please do not include any names or other identifiers of people or places.	
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Comments about this or future audits	
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Patient Case Forms (make additional copies as necessary)

Audit Date:

Write a S for a suspected case and a C for a confirmed case.

No.	Local Identifier	Infant Care Locations (see p. 2)					
		1	2	3	4	5	6
1							
2							
3							
4							
5							
6							
7							
8							
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22							
23							
24							
25							
26							
27							
28							
29							
30							
Total C							
Total S							
Total							

Page ___ of ___

Use the information on this form to complete **Table: Case Data for Day of Audit** on p. 5. Retain this information for future case reviews.



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