

# COVID – 19 Testing: One Team, One Purpose

**Bryan Health**  
1600 South 48<sup>th</sup> Street Lincoln,  
Nebraska 68506

Angela Herbert MSN, RN  
Quality and Patient Safety Director  
Organizational Quality  
[angela.herbert@bryanhealth.org](mailto:angela.herbert@bryanhealth.org)  
402-481-8142

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## **Leadership and Planning**

The World Health Organization (WHO) began monitoring Coronavirus-related pneumonia in China in late 2019 and by January 30, 2020 had declared the novel coronavirus a global health emergency. On January 21, the Centers for Disease Control (CDC) confirmed the first person in the United States to have COVID-19. By March 13 a national emergency was declared in the United States. Closer to home, Lancaster County reported its first confirmed COVID-19 case on March 20. In the preceding weeks, leaders at Bryan Health had begun emergency response planning, including Drive Thru Testing, supporting Bryan's vision to relentlessly earn the reputation for quality care that is leading edge, proven and personalized. Bryan Health leaders recognized the need to collaborate with public and community leaders with the shared goal of flattening the curve and preventing cases from exceeding the capacity of the health care system. Identification of cases was imperative and through collaboration with physicians and community leaders a convenient, safe, reliable/accurate testing strategy was identified, aligning with Bryan Health's mission to advance the health of individuals in our region.

Through the collaborative efforts of a multidisciplinary team and strong support from the executive team, two options for COVID-19 testing were identified. Bryan Health opened the first COVID-19 drive through clinic in Nebraska on March 24. On April 24 the first Mobile Testing clinic was held in Crete, Nebraska after public health officials identified a growing need for testing in vulnerable populations and specific industries.

## **Process of Identifying Need**

During the month of March the nation experienced rising challenges with availability of Personal Protective Equipment (PPE), lab supplies, testing sites and fear. Bryan Health, along with the Health Departments, community providers, Lancaster County Medical Society, and the Nebraska Hospital Association (NHA) acknowledged the need to limit community spread. Testing was identified as a key strategy. Recognizing the limited testing capabilities available, Bryan Health began logistical planning for a drive thru testing site. Multiple work sessions were held with a multidisciplinary team consisting of 22 departments (Attachment 1). Working six to seven days a week members of the team worked tirelessly to develop a plan that would be ready to operationalize if a community need materialized. Approximately two weeks after plans began, on a dreary March day the first drive thru testing site was open and served 60 patients. Since the Nebraska Public Health Lab was prioritized for hospitalized patients and had limited capacity this took a burden off of the public health system as well as empowering local providers to have a safe and effective way to get patients tested. Collaboration and timely communication with the Health Departments to optimize contact tracing and limit community spread.

The Bryan Health team continued to move forward and address logistical considerations across the organization and the community. Some of these considerations included:

- Staff safety: how to protect staff from exposure, much was unknown about the spread of COVID-19 at this time.
- Location: recommendations for an off-site location.

- Identifying persons eligible for testing: requirements for COVID-19 testing as recommended by the CDC and State health officials.
- Lab processes: aligning with a reference lab, availability of lab testing supplies, reagents, swabs.
- Protocol and procedure development for testing: provider required to order, procedure to insure consistency.
- Screening, scheduling, and registration process: RNs required to evaluate symptoms and exposure history and act accordingly.
- Notification of results: patients, providers, health departments.
- Availability of PPE: limit exposure risk while considering availability of PPE supplies.
- Environmental considerations: staff protection from the elements such as snow, rain, heat, tents, water, umbrellas, gloves, hats.
- Staff for operations: leaders, Information Technology (IT), nursing, scheduling center, respiratory therapists, lab technologists, security.
- Training/Competencies: PAPR (powered-air purifying respirator) and PPE use, specimen collections, workflow, computer tasks, results process, process improvement huddles.
- Community needs: lab availability, local support for crowd control, emergency activation.
- Education and Interpreter services: education pamphlets including self-isolation instructions, in-person interpreters, electronic devices for interpreter services.

- Communication: providers, community, health departments, internal, managing media, signage at sites.
- Safety: on site security, Lincoln Police Department, Lincoln Fire Department.
- Electronic medical record: scheduling, ordering, results routing, reporting, physician notification.
- Health Department notifications: telephone notification for positives.

Health System leaders secured needed supplies and the community donated a number of essentials; such as reusable PAPRs, gown materials, face shields, and later a recreation vehicle for the Mobile Clinic. Willing staff were deployed from hospital departments and heroically responded to the need. Despite the unknown, staff demonstrated resiliency and determination and achieved the goals. Once testing supplies were available and the community need was such, the plan was activated and within 24 hours a testing dress rehearsal was underway. Within 48 hours, tents were up and staff were testing persons meeting the requirements for COVID-19 testing.

Screening process: Persons who had completed an online screening through Bryan Health ezVisit obtained virtual care and diagnosis. Screening questions were based on national standards such as symptom presence, travel history, medical history and age then reviewed by a registered nurse. If criteria was met, a protocol was initiated and the patient was contacted to schedule testing.

Testing process: Upon arrival at the testing site, persons were greeted by registration staff in PAPR to confirm appointment, received the Drive Thru Testing for Covid-19 instruction pamphlet and instructed to remain in their vehicle at all times. Education pamphlets were

available in four different languages and followed guidance from the Centers for Disease Control (CDC) (Attachment 3). The person was then directed to drive up to the Influenza tent for a rapid influenza test. Results were processed on site while the patient remained in the car. The persons testing negative for influenza were instructed to move forward to the Rapid Pathogen Panel (RPP) tent to be swabbed a second time for a respiratory panel. Verbal instructions were provided by a registered nurse (RN) or a respiratory therapist (RT) in a PAPR including self-isolation, good handwashing and when they could expect the results with a call from a nurse. If the influenza test was positive they were directed to return to home with instructions. In the first two days of testing, only one influenza test returned positive. All other persons were tested for RPP and if negative went on to be tested for COVID-19. By day three of testing, leaders quickly determined to stop all influenza and RPP testing and perform only COVID-19 testing.

Reporting process: A results call center was established and staffed with RNs who would manage results in the electronic health record (EHR) system. Once results were listed in the system, the RN notified the patient of their results, offered support and instructed on next steps and resources. Patients testing positive were instructed on the latest recommendations for isolation as guided by the CDC and the State Health Department. In addition to isolation information, guidance was provided if symptoms worsened. The Bryan Incident Command Center and the appropriate Health Departments were notified. The Health Departments followed up to conduct contact tracing. If the patient was negative, instructions were also provided.

## **Process Improvement Methods**

The process for COVID-19 testing at the Drive Thru and Mobile Clinics was continuously improved with input from those doing the work and processing the results. The team followed the Plan Do Study Act (PDSA) Model throughout. Once the Drive Thru testing clinic was initiated, on site staff performing testing process would participate in a thirty-minute pre and post huddle. During those times, leaders would review the Red Rules and the written steps each role had so the front line staff had knowledge of the entire process. Red Rules, or critical points the team consistently repeated during huddles and while at the clinic, included good handwashing, two patient identifiers and all persons staying in their vehicle. Laminated Role Cards (Attachment 2) with detailed steps were posted at each station: security check in, registration, influenza tent and RPP tent. During post huddles, input was provided by staff suggesting improvements and any other relevant information (Attachment 4). These proposed revisions to the workflow would be discussed (PLAN) and if adopted (DO), would be trialed the next day with the directive to the staff to provide feedback (STUDY) at the post huddle. If a desired outcome was achieved, revisions were made to the Role Cards and the new workflow would be included in the Pre Huddles (ACT). On day one of testing sixty patients were swabbed in four hours utilizing twenty-three staff. At present, 120 patients are tested in a 2.5 hours with eleven staff. Engaging in this process improvement methodology not only improved the service and made it more efficient, it also empowered the staff to identify opportunities for improvement in striving to produce the best outcome for patients, for staff and for the community at large. Throughout there have been minimal wait times for patients.

Standardizing processes within the Drive Thru Clinic was a priority for staff to not only provide excellent service but to also be consistent and efficient in the work being done.

Through Bryan Health's previous learnings in quality improvement work, staff quickly took steps to improve the workflow. This included scripted specific tasks during huddles, creating designated equipment locations, and developing checklists for set up and take down of the clinics (Attachment 5). This allowed flexibility in roles for staff in any of the processes.

The same PDSA model was used with leaders during weekly multidisciplinary team meetings. Problems or requests from the community leaders were objectively stated, suggestions were offered, and a plan was agreed upon and implemented the following day. Attendance was taken and minutes were sent out to all team members from numerous departments. The changes were then analyzed at the next meeting and a decision was made on whether to permanently implement or have further discussions.

In the first week of testing, team leads from many disciplines such as Lab and Information Technology (IT) were present on site for "At the Elbow" support. If there was a considerable change in workflow, such as a new process with IT and the electronic health record (EHR) system, we would complete a dress rehearsal prior to hours of operation and mitigate any barriers, avoiding work-stoppage while caring for patients. In the first 4-6 weeks, the workflow process changed many times due to different factors such as workflow improvement, requirements for testing, orders, reporting and lab supply limitations. With frequent changes, there was high risk for process failures and adverse outcomes. By the end of the fifth week, steps had been revised 17 times. Even small changes and improvements were tracked. The staffing pool changed often so this process of updating the Role Cards and



reviewing workflow changes during each huddle helped hardwire a process that proved to be efficient and easy to follow for any staff assisting in testing. Rarely, would specimens be insufficient but with each 'specimen insufficient' report came reassessment of competencies.

A few weeks after the drive thru was initiated Bryan Health conducted an analysis of those being served through analysis of zip codes and collaboration with Public Health leaders. Several underserved populations and at-risk populations were identified. Extended care facilities, high risk industries, and some specific cultural centers were amongst those lacking access to adequate testing. This helped inform deployment of the mobile testing clinic.

Reference labs began to become inundated with tests as the virus spread and testing capabilities increased. Results began having a turnaround-time (TAT) of greater than 5-7 days at times. Bryan leaders were continually evaluating and in discussion with the reference lab to address this concern and elevate the need to add additional lab centers to process the increased number of tests. There were numerous changes made as a result.

## **Results**

As of August 3rd Bryan Health's Drive Thru and Mobile testing program has tested 11,664 patients from local and 72 Nebraska counties. Through process improvements and available lab resources, the Drive Thru and Mobile testing capacity went from 223 persons/week to 1376 persons during the week of the surge. At times two drive thru testing sessions were held. The Bryan Health team was consulted for guidance when the National Guard began testing, as well as when another hospital in the community started drive through testing. The work with the National Guard resulted in an ongoing collaboration to optimize testing across the state. The drive thru provided easy testing access for both Bryan Health

providers and employees as well as other first responders and health care workers. The Lancaster County Health Department has relied on Bryan Health consistently to help get COVID-19 screening done for at risk populations.

Staff and patient safety were of top concern throughout. To date, there have been no staff exposures. Patients have reported feeling well taken care of and appreciated the friendly nature of the staff. There have been three incidents where emergency services were contacted and patients were taken by ambulance to our Emergency Department (ED) for acutely ill symptoms. The results center staff who call patients and route results to providers have played a very important role in the success of the clinics. During one such call to give a patient a positive COVID-19 test result in another community, the nurse recognized the extreme shortness of breath the patient was experiencing. The RN was able to keep the patient on the phone line while simultaneously using interpreter services to obtain patient's consent to be transported to Bryan. She informed EMS of the situation and gave instructions of where to transport him. He was intubated upon arrival to the ED after a close call with death. Testing a large number of patients in the community is believed to have helped flatten the curve in the region and make a positive impact on the community spread rate; and even more importantly lives have been touched and health has been impacted through this work. Some patient testimonies that help to exemplify this:

- *“Going to the COVID-19 testing site was surreal....I cried! Not because I was sick but because of the dedication and professionalism of the folks working at the site...from the first gentleman who greeted us to the medical personnel who prepared/performed the testing. I'm so very thankful for each of them, for Bryan Health and to be living in Lincoln, NE. Thank you! God Bless and keep you all well.”*

- *“My visit was for the drive-through corona virus testing. Everyone I interacted with was fantastic. They explained what they were going to do and what was going to happen, which probably wasn't easy in those hazmat suits.”*
- *“I was extremely impressed by how the team organized the COVID-19 testing. It was extremely efficient, and I felt listened to and heard.”*

### **Lessons Learned, Replicability, Sustainability**

Since the beginning of this pandemic a great deal has been learned about COVID-19. Drive Thru testing services continue 6 days a week and will continue while the need remains. The successes and challenges have been incorporated into a surge plan for Bryan Health. There are many lessons learned from this experience but a few stand out for the team, such as the workflows changing so frequently. One proposal for future dynamic changes is to have a designated 'Change Day' so if non-urgent revisions to the workflow were needed; it was a timed, and implemented on an identified 'Change Day'. Another learning would be streamlined communication regarding who should be tested and when. This criteria changed throughout the process and sometimes was thought to be confusing.

Bryan Health worked with other local hospitals and with the National Guard in providing best practices for COVID-19 testing and was able to be replicated with adaptation. Resiliency of the staff doing this work in extreme conditions – from snow to high heat and humidity; coupled with their willingness and commitment to go into situations no one had ever experienced reflects the Bryan values and exemplifies *One Team with One Purpose*. The staff often speak of the sense of purpose and pride they feel and how glad they are to help support the community. The opportunity to serve our community at a time of such need evokes pride and satisfaction for everyone who has been involved in this important work.

## References

Coronavirus Disease 2019 (COVID-19) <https://www.cdc.gov/coronavirus/2019-ncov/index.html>

Coronavirus Disease 2019 (COVID-19) [dhhs.ne.gov/Pages/Coronavirus.aspx](https://dhhs.ne.gov/Pages/Coronavirus.aspx)

## **Attachment 1: Planning and Operational Teams Represented**

### **Bryan Health Teams:**

- Organizational Quality
- LifePointe Leaders
- Facilities
- Security
- Laboratory
- Distribution
- Nursing Staffing
- Human Resources
- Nutrition and Dining Services
- Information Technology (IT) PC Support
- IT Epic Team (Ambulatory, Beaker, Cadence, Orders, Grand Central, Report Writing)
- IT Network Team
- IT Firewall Team
- IT Project Manager
- Urgent Care and Bryan Physician Network
- Patient Access
- Hospital Billing
- Patient Financial Services
- Management Accounting
- Advancement
- Foundation
- Senior Executive Team
- Physicians
- Consultants in Infectious Disease, LLC

### **Outside Organizations and Vendors:**

- Trafcon
- Lincoln Tent and Awning
- Epic
- Leach Camper Sales
- LabCorp
- NPHL (Nebraska Public Health Lab)
- Nebraska National Guard
- Madonna Rehabilitation Hospital
- Lincoln Police Department


### **Donations:**

- Holiday Inn Express Dining
- Pickleman's
- Sampson Construction reusable PAPR
- Anonymous Donor for Recreation Vehicle

## Attachment 2: Role Card

### COVID Computer Steps

Required PPE: mask, scrubs

1. Log into Epic
  - a. Role = Clinic RN/MA
  - b. Department = BPN Bryan Urgent Care
2. Navigate to the Schedule 
3. Double click on the patient's name
4. Navigate to Order Inquiry (more → Order Inquiry)
5. The Order Inquiry screen will appear. Select the Nurse Collect Orders [33436]
6. Click the "My default" box in the lower left corner so you don't have to do this for every patient.
7. Click Accept
8. Highlight the "2019 Novel Coronavirus (COVID19), NAA" order
9. Click "Collect Specimen"
10. Click Print Labels
  - a. Make sure the first letter of the last name is not cut off. If it is, write the last names on the label.
11. Click Collect All
12. Click Receive
13. Click Accept
14. Back on the schedule page, with patient's name still highlighted, click "sign encounter"

### Specimen Management: Concerns can be directed to Micro 15074

#### Set Up

1. At 1300ish the courier will deliver collection kits and coolers (6)
2. Place one ice packs from fridge in empty coolers
3. Label collection kit cooler "Not yet collected"

#### End of Day

1. Courier will arrive at 1600 to pick up collected specimen
2. When they arrive, ensure specimen count has been completed by charge nurse and runner.
3. Have Runner walk all coolers including the "not yet collected" cooler (with all the unused kits in it) to the courier
4. Extra ice packs should be walked to the large white fridge in LifePointe for overnight

**MAINTAIN A 6 FOOT DISTANCE FROM VEHICLE.**

## Attachment 3: Bryan Health Drive Thru and Mobile Clinic Education Brochure

### Bryan Health Drive-Thru Clinic

**Testing Process – What You Can Expect**

- You will remain in your car and drive through the station to receive the testing. Please turn off your car while you wait.
- Testing will be for COVID-19.
- Testing will be billed to your insurance. We also have options for patients who need financial assistance.

**Additional Information You Need to Know**

- Our staff will be in protective gear.
- Vehicle must be under 8 feet high.
- No bathrooms.
- No pets allowed in your vehicle.
- In the event of severe weather, the Drive-Thru Clinic will close. We will call you to reschedule your appointment.

**Bryan Health**  
Bryan LifePoint Campus  
7501 S. 27th St.  
Lincoln, NE 68512  
bryanhealth.org

**Bryan Health**

**DRIVE TO THE TESTING STATION TO TEST FOR COVID-19.**

**WHAT TO EXPECT**

A special nasal swab is used to take a sample of secretions from the back of your nose and throat.

You will be asked to tilt your head back for the swab. The person doing the test will insert the swab into one of your nostrils as you remain still. The swab will be rotated gently for a few seconds before it is removed. This is to allow the swab to collect a large enough sample to be tested.

You will go home after the test and self-isolate.

**COVID-19 Test Results**  
A nurse will call you when your test results are available.

### Bryan Health Mobile Clinic

**COVID-19 Testing**

- You will be assigned a card with a number. Wait in the designated waiting area by your number.
- Our nurses and registration staff will be in protective gear.
- A special nasal swab is used to take a sample of secretions from the back of your nose and throat.
- You will be asked to tilt your head back for the swab. The person doing the test will insert the swab into one of your nostrils as you remain still. The swab will be rotated gently for a few seconds before it is removed. This is to allow the swab to collect a large enough sample to be tested.
- A nurse will call you when your test results are available.

**While you wait for your test results, you must self-isolate\*. Seek help if your symptoms become severe.**

**Steps to Take Until You Receive Results**

- Self-isolate, see the next page for guidelines.
- Monitor your symptoms.
- Take temperature twice a day.
- Drink plenty of fluids.
- Rest.

**If Your Symptoms Become Severe**

- Seek help:
  - Call your doctor,
  - Call the Bryan Health COVID-19 Hotline: 402-481-0500 or
  - Seek care at Bryan Urgent Care with designated area for upper respiratory illness.

**Severe Symptoms**

- Continued fever over 100.4° F
- Painful breathing
- Shortness of breath
- Chest congestion
- Severe harsh cough

**Bryan Health**

**\*See next page for self-isolation guidelines**

### Self-Isolation

**You must self-isolate while you wait for your test results and/or continue to have symptoms.**

- Stay home**
  - Do not leave home except to seek urgent medical care.
  - If you need to seek care, call ahead before you go to your doctor's office, urgent care or emergency department.
- Separate yourself from other people/pets in your home**
  - Stay in a specific room and away from other people.
  - Use separate bathroom.
- Avoid sharing personal household items**
  - Do not share dishes, drinking glasses, utensils, towels or bedding.
  - Wash items thoroughly with soap and water.
- Clean your hands often**
  - Wash hands with soap and water for at least 20 seconds.
  - If soap and water are unavailable, use hand sanitizer with at least 60% alcohol.
- Cover your cough and sneezes**

**YOU CAN END SELF-ISOLATION AFTER:**

- At least 3 days (72 hours) with no fever without use of fever-reducing medications and improvement in respiratory symptoms (cough, shortness of breath) and
- At least 7 days have passed since symptoms first appeared.

## Attachment 4: Drive Thru Huddle Agenda



### Drive Thru Huddle Agenda

Date: \_\_\_\_\_

Facilitator: \_\_\_\_\_

1	<b>Connect-to-purpose bright spot</b> (e.g. Patient compliment or outcome, physician compliment, staff success story)				<1 Minute																																				
<div>Recent performance:</div> <table border="1"> <thead> <tr> <th>Metric</th> <th></th> <th colspan="2">Project Updates &amp; Discussion Questions (1-2 max.)</th> </tr> </thead> <tbody> <tr> <td>Staff Injuries (No names)</td> <td></td> <td colspan="2">(Debrief any recent events. How can we prevent these today?)</td> </tr> <tr> <td>Staff Near Misses</td> <td></td> <td colspan="2"></td> </tr> <tr> <td>Patient Experience Events</td> <td></td> <td colspan="2">(Debrief any recent events. How can we prevent these today?)</td> </tr> <tr> <td>Patient Near Misses</td> <td></td> <td colspan="2"></td> </tr> <tr> <td>Total Patients Tested</td> <td></td> <td colspan="2"></td> </tr> <tr> <td>Total Positive</td> <td></td> <td colspan="2"></td> </tr> <tr> <td>Total Negative</td> <td></td> <td colspan="2"></td> </tr> <tr> <td>Total Pending</td> <td></td> <td colspan="2"></td> </tr> </tbody> </table>					Metric		Project Updates & Discussion Questions (1-2 max.)		Staff Injuries (No names)		(Debrief any recent events. How can we prevent these today?)		Staff Near Misses				Patient Experience Events		(Debrief any recent events. How can we prevent these today?)		Patient Near Misses				Total Patients Tested				Total Positive				Total Negative				Total Pending				2 Minutes
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3	<b>Need-to-know before working</b> (e.g. Known open issues, recent process changes)				1 Minute																																				
4	<b>Plan for success</b> (What does the <u>entire team</u> need to know to be successful?)				2 Minutes																																				
	# Scheduled:	Bryan Only:	Retest:	Translator:	Peds:																																				
	How are we staffed today? Registration Tent: Tent 1 Staff: Tent 2 Staff:			Who are our high risk patients today and how will we minimize their risk?																																					
	Which staff member(s) will need help today?			What supplies or equipment are a concern today?																																					
5	<b>Ask: "What questions, improvement ideas or comments do you have?"</b> (Pause for at least 5 seconds.)				1 Minute																																				
6	<b>Acknowledgements</b> (e.g. Staff introductions, graduations, certifications, recognitions, birthdays, babies)				<1 Minute																																				
7	<b>Positive call to action</b> (What <u>specific behavior</u> do you want the staff to practice deliberately today, <u>and why</u> ? Motivate, appreciate!!!)				<1 Minute																																				
8	<b>Leader reflection</b> Huddle rating (1=Worst, 5=Best)? Huddle duration? How can we improve the huddle?	Attendees (including you)?		Full agenda covered? Yes No How many staff spoke up?																																					



# COVID-19 Testing: One Team, One Purpose

## Supportive Documents

### Attachment 5: Set-Up, Take Down Lists

#### Start of Day Set Up

##### Registration Tent

1. Roll metal registration tent cart to registration tent
2. Plug in power strip to yellow extension cord (power strip will already have 2 laptops and the label printer attached)
3. Place supplies in areas as marked on tables/fridge

##### Flu Tent

4. Replace supplies as marked on outside table
5. Move (1) hand sanitizer pole to north end of large tent
6. Move (1) hand sanitizer pole to south end of large tent, next to table
7. Place liners in all trash cans
8. Bring 3 boxes of influenza kits to POC tent with readers (2)
9. Line biohazard containers with red biohazard bags
10. Bring computer, walkie and daily staffing list to POC tent
11. Record temp of tent in black binder log (thermometer located on POC testing table, clipped to shield)

##### RPP Tent

1. Replace supplies as marked on outside table
2. Move (1) hand sanitizer pole and (1) grey shred bin to north end of large tent
3. Move (1) hand sanitizer pole to south end of large tent, next to table
4. Place liners in all trash cans
5. Bring computer, walkie and label printer to tent
6. Connect blue cord to label printer
7. Take "Refused RPP" log out of black lab binder and place on computer desk

#### End of Day Tear Down

##### Registration Tent

1. Place all supplies on metal cart to include:
  - a. Gloves
  - b. Education pamphlet
  - c. Ziplocks
  - d. Windshield cards
2. Unplug power strip from yellow extension cord and blue cable from label printer (leave computer and label printer plugged into power strip)
3. Set all items (2 computers, label printer and power strip) on metal cart

##### Flu Tent

1. Move supplies from table located outside tent to inside POC tent
2. Move north and south hand sanitizer poles into POC Tent
3. Unused cartridges and readers need to be walked into LifePointe
4. Tie all trash bags and give to facilities staff
5. Bag up biohazard trash and give to facilities staff
6. Unplug computer and take computer and walkie to LifePointe

##### RPP Tent

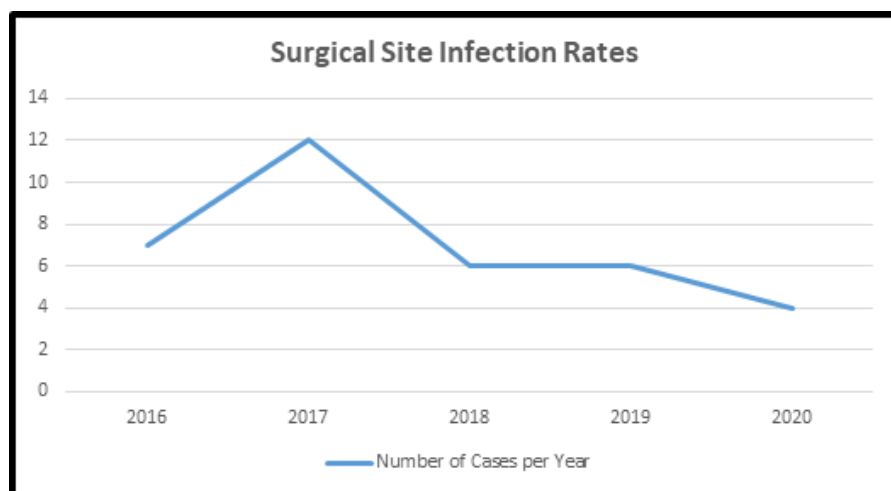
1. Move supplies from table located outside tent to inside POC tent
2. Move north and south hand sanitizer poles into POC Tent
3. Move HIPPA bin from north end of large tent to inside of computer tent
4. Tie all trash bags and give to facilities staff
5. Unplug computer and blue cord from label printer. Take the computer, label printer with any extra label paper and walkie to LifePointe
6. Place "Refused RPP" log into the lab binder

Early Recovery After Surgery: Enhancing Cesarean Care  
Supportive Documents

**Attachment 1:** Pre and Post ERAS Obstetric Outcomes (ERAS Implementation August 28<sup>th</sup> 2019)

	2018	January – August 27 <sup>th</sup> 2019	August 28 <sup>th</sup> – December 31 2019	January to June 2020
<b>Number of Cesarean Deliveries</b>	974	733	401	588
<b>Annual Cesarean Surgical Site Infections</b>	6 infections (0.5% of cesareans)	6 infections (0.6% of cesareans)	No infections	4 infections (0.5%)
<b>Average mobility hours post-cesarean</b>	Dangle at 5 hours Walk halls at 18 hours	Dangle at 5 hours Walk halls at 18 hours	Dangle at 3 hours Walk halls at 6 hours	Dangle at 3 hours Walk halls at 6 hours
<b>Pyxis dose dispense of opioids on the Mother/ Baby Unit</b>	1163- Oxycodone IR 5mg  11239- Oxycodone/Acet 5mg/325mg  8889- Hydrocodone/Acet 5mg/325mg	1173- Oxycodone IR 5mg  5348- Oxycodone/Acet 5mg/325mg  4804- Hydrocodone/Acet 5mg/325mg	1044- Oxycodone IR 5mg  143- Oxycodone/Acet 5mg/325mg  832- Hydrocodone/Acet 5mg/325mg	1442- Oxycodone IR 5mg  47- Oxycodone/Acet 5mg/325mg  783- Hydrocodone/Acet 5mg/325mg

**Attachment 2:** Cesarean Surgical Site Infection Rates



# Early Recovery After Surgery: Enhancing Cesarean Care

## Supportive Documents

### Attachment 3: Preparing for Your Cesarean Birth Patient Education Brochure

#### After Your Delivery

##### What should I expect?

- Skin-to-skin with your baby
- Once the procedure is complete, you will be transferred to the recovery room. Your baby and support person will be with you
- After about one-hour, you will be transferred to our mother/baby floor with your baby and support person
- You will have frequent checks to monitor your bleeding as well as monitoring of your vital signs
- Your c-section incision will be monitored by your nurse

##### What to expect for pain management?

- For the first 24 hours after surgery, you will be given Tylenol and Motrin on a schedule. A stronger medication will be given, if needed
- It's important we minimize your opioid use while you're recovering
- *The quicker you get out of bed and move, the less pain you will be in later on*
- Belly wraps are provided and recommended for activity

##### How do I care for my incision?

- Keep it clean and dry
- Use Hibiclens provided by the hospital after delivery for two weeks focusing on the abdomen and incision
- Monitor for signs and symptoms of infection
- *Fever, redness, tenderness, irritation, drainage of pus, increased pain*
- Follow your doctor's orders

For questions, call 402-481-7444.



#### Preparing for your Cesarean Birth (C-Section)

Your provider has scheduled your c-section for

at \_\_\_\_\_ ☐ a.m. ☐ p.m. at Bryan Family Birthplace.

For questions, call 402-481-7444.

**Bryan East Campus**  
Bryan Medical Plaza, Entrance B  
4th Floor Labor & Delivery  
1500 S. 48th St.  
Lincoln, NE 68506



Form 2027d (Rev. 06/19)

#### Preparing for Your C-section

##### Two Weeks Before

- ☐ If applicable, stop smoking completely or smoke few cigarettes to reduce potential for respiratory complications.

*Smoking will increase the chance of poor wound healing.*

##### Two Days Before

- ☐ Do not shave with a straight edge or wax pubic or abdominal hair two days before your operation. This can cause infections in the wound. Hair in the pubic area may be trimmed in the pre-operation room just before your c-section.

##### One Day Before

- ☐ Stop taking over the counter drugs, recreational (street) drugs or herbs.

##### Evening Before

- ☐ Shower the evening or morning before coming to the hospital with liquid soap.
  1. Wash your entire body with liquid soap
  2. Wash your hair
  3. Use Hibiclens on your stomach, legs and arms (see picture on next page)
- ☐ Use clean linens after showering and put on freshly laundered clothes.
- ☐ Do not allow your pets to sleep in or on your bed.
- ☐ You may eat a normal meal the evening before your c-section, but DO NOT eat after midnight (candies, breath mints, etc.). It is important that your stomach is empty prior to your c-section.

##### Morning Of

- ☐ You are encouraged to drink clear fluids up to two hours before your c-section, including Gatorade, Powerade or any other drinks with electrolytes.
- ☐ Wear minimal makeup.
- ☐ Remove all body piercings (tongue, eyebrow, ear, nose, genitalia and belly rings).
- ☐ Brush your teeth, but do not swallow any toothpaste.
- ☐ Take any medications you usually take unless your doctor has told you not to take them.

*If you take diabetes medication or use an insulin pump, ask your doctor for instructions on how to manage your diabetes medication before and after surgery. We will check your blood sugar before surgery and more often, if needed. High blood sugar can increase the risk of infection.*

#### The Day of Your C-section

##### What should I expect when I arrive at Bryan?

- Your nurse will ask questions about your health history and plan of care
- You will receive an oral pain medication, an antacid and antibiotics
- One support person is allowed in the operating room with you (unless going under general anesthesia). They will receive scrubs to wear and guidance for surgery
- Abdominal and pubic hair may be trimmed

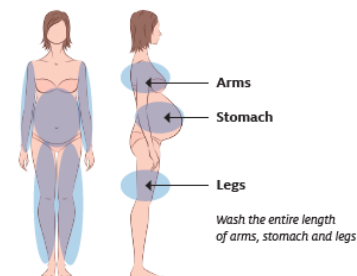
##### What should I expect for pain management during delivery?

- You will be prepped before your surgery on what to expect over the next 24 hours
- You will receive medication that is inserted similarly to an epidural. If your pain is not well controlled, there are further options that can go into your IV

##### What should I expect in the operating room?

- An anesthesia provider will give you an anesthetic
- A nurse will "paint" your abdomen with a liquid that prevents infection
- A surgical drape will be placed over your stomach
- *You will be given the option to have a clear drape*
- A urinary catheter will be placed
- Inflatable compression sleeves will be put around your legs to decrease blood clots
- Delivery of your baby!

#### Where to use Hibiclens

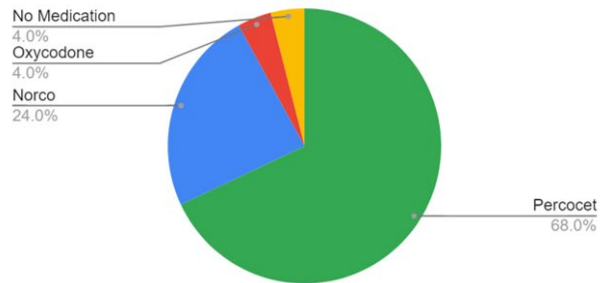


## Early Recovery After Surgery: Enhancing Cesarean Care Supportive Documents

### Attachment 4: Hospital Opioid Use with Cesareans Pre and Post ERAS Implementation

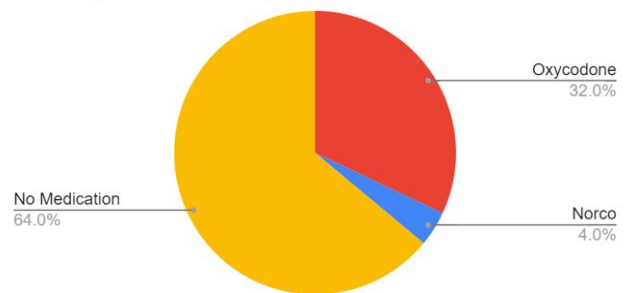
#### PRE-ERAS: Post-Operative Medications

Percentage of Patients Taking Specified Medication



#### POST-ERAS: Post-Operative Medications

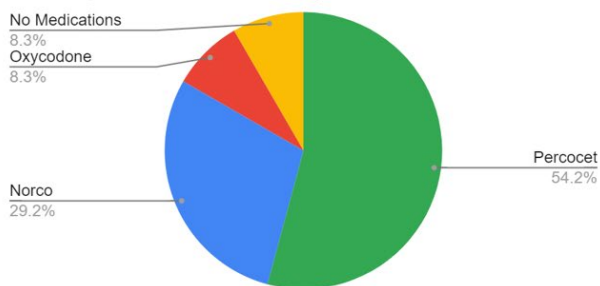
Percentage of Patients Taking Specified Medication



### Attachment 5: Discharge Prescriptions of Opioids with Cesareans Pre and Post ERAS Implementation

#### PRE-ERAS: Discharge Medications

Percentage of Patients Prescribed Specified Medication



#### POST-ERAS: Discharge Medication

Percentage of Patients Prescribed Specified Medication

