NARHC 2020
Virtual Fall Institute
Post-COVID Workflows in the RHC
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Aspirus

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Us & Our Communities

• We’re former Physician/Administration Dyad partners
• We’re from Michigan’s Upper Peninsula
• We love Rural, small communities and RHC’s!
Workflow Learnings

**What we will cover:**
- Screening
- COVID Triage/Hotline
- Visitor Restrictions
- Cleaning Protocols
- Sick/Well Space
- COVID Swabbing and Testing
- COVID & Community Schools
- Telehealth
- Staffing Levels/Staff with COVID-Like Symptoms
- Surge Planning
- Ancillary Studies

**What we will leave you with:**
- Our Learnings
- COVID Workflow Toolkit
Screening
EVERYONE / EVERY DAY

COVID-19 Call Center
Open:
Mon-Fri; 7am-7pm
Sat/Sun; 8am-5pm
Call (844) 568-0701
COVID-19 HOTLINE TRIAGING

Created Screening Points at limited entrances.

Unintended Consequences
• Created ”Traffic jams” with patients and employees.
• Staffing with non-clinical personnel removes point of care triage from screening table.
• Overloaded call center during outbreaks with different activities.

Workflow alterations:
• Patients redirected to cars and instructed to call hotline from there.
• May need to consider going back to nursing screeners.
• Increased nursing staff dedicated to the call center on a system level.
Cleaning Protocols

Waiting Room & Exam Room Turn Over

Created a Terminal Room & Equipment Cleaning Policy. *(in toolkit)*

**Unintended Consequences**
- Created “Traffic Jams”
- Slowed Throughput

**Workflow alterations:**
- Patient Scheduling (end of day back)
- Car “Waiting Rooms”
- Restaurant Buzzer System
- Diagnostic Imaging Done on Different Day
Sick/Well Space

Defined Sick/Well Space & COVID/Respiratory Clinic Space

Unintended Consequences:
- Waiting & exam room space became a premium
- Places to perform aerosolizing procedures became challenging.

Workflow Alterations:
- Zip wall initialization to separate areas
- Temporary and permanent new entrances/doors
- Air handling re-configured/negative pressure rooms
- Parking lot/Drivethrough COVID swabbing
Visitor Restrictions

Who should come into the Clinics? How do we keep our patients and staff safe?

Goal: Minimize disease transmission

Created Visitor Restrictions: *(in toolkit)*

- **Patients under 18**: Parent of legal guardian or a minor patient allowed.
- **OB Patients**: Birth mother and one support person allowed. *(Doula option based on BU)*
- **High Risk Procedures** *(those needing informed discussions about care/consent)*: On Adult Support Person
- **Adult Patient with Cognitive/Development Disabilities**: One legal guardian allowed.

Unintended Consequences:
- Loved ones couldn’t be with patients during treatments

Workflow Alterations:
- Use of tablets
COVID & Community Students

Our community schools (College and K-12) re-opened to in-person learning.

Unintended Consequences:
- Clinic/Call Center inundated with phone calls from parents and schools
- Closed schools or sick kids = drop in available staff and shortages

Workflow Alteration:
- Created a guidance document for parents and schools (in toolkit)
- Worked on day care options for employees/staff
Tele-Health

Expanding and refinement of Tele-health option. Wound Center Without Walls.

**Unintended Consequences**
- IT issues with patients; no computer, no phone
- Video quality issues with certain aspects of exam

**Workflow alterations:**
- Coordination of visit with home care nurse
- Pre-assessment of patient IT capability prior to scheduling
- Nursing team involvement
Staffing Levels

Staff with COVID-like Symptoms

Decreased patients through the doors meant we needed to care for our patients in different ways. Our communities saw community-wide spread of the virus.

**Unintended Consequences:**
- Patients coming in for preventative care decreased resulting in increased ED visits and hospitalizations.
- Staff had COVID-like symptoms and were out of clinic creating low staffing levels.

**Workflow Alterations:**
- Staff worked via telephone to outreach to patients.
- Created and Ill Employee protocol with return to work guidelines *(in toolkit)*
## COVID Swabbing and Testing

<table>
<thead>
<tr>
<th></th>
<th><strong>MOLECULAR TEST</strong></th>
<th><strong>ANTIGEN TEST</strong></th>
<th><strong>ANTIBODY TEST</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>Also known as...</strong></td>
<td>Diagnostic test, viral test, molecular test, nucleic acid amplification test [NAAT], RT-PCR test, LAMP test</td>
<td>Rapid diagnostic test (Some molecular tests are also rapid tests.)</td>
<td>Serological test, serology, blood test, serology test</td>
</tr>
<tr>
<td><strong>How the sample is taken...</strong></td>
<td>Nasal or throat swab (most tests) Saliva (a few tests)</td>
<td>Nasal or throat swab</td>
<td>Finger stick or blood draw</td>
</tr>
<tr>
<td><strong>How long it takes to get results...</strong></td>
<td>Same day (some locations) or up to a week</td>
<td>One hour or less</td>
<td>Same day (many locations) or 1-3 days</td>
</tr>
<tr>
<td><strong>Is another test needed...</strong></td>
<td>This test is typically highly accurate and usually does not need to be repeated.</td>
<td>Positive results are usually highly accurate but negative results may need to be confirmed with a molecular test.</td>
<td>Sometimes a second antibody test is needed for accurate results.</td>
</tr>
<tr>
<td><strong>What it shows...</strong></td>
<td>Diagnoses active coronavirus infection</td>
<td>Diagnoses active coronavirus infection</td>
<td>Shows if you’ve been infected by coronavirus in the past</td>
</tr>
<tr>
<td><strong>What it can’t do...</strong></td>
<td>Show if you ever had COVID-19 or were infected with the coronavirus in the past</td>
<td>Definitively rule out active coronavirus infection. Antigen tests are more likely to miss an active coronavirus infection compared to molecular tests. Your health care provider may order a molecular test if your antigen test shows a negative result but you have symptoms of COVID-19.</td>
<td>Diagnose active coronavirus infection at the time of the test or show that you do not have COVID-19</td>
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</tbody>
</table>
### Comparative accuracy of oropharyngeal and nasopharyngeal swabs

The only current COVID-19 spec come from two low quality, nor be viewed with caution. It is no sensitivity from the existing data diagnostic impact of combining

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**Evidence-covid/swabs #EvidenceCOVID**

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<tr>
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<th>RT-PCR</th>
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<tr>
<td>Detects</td>
<td>Viral RNA</td>
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<td>Specimen</td>
<td>Nasal/ Oral</td>
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<td>Time to Obtain</td>
<td>Virus RNA in sample, or</td>
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<tr>
<td>Positive Results</td>
<td>can be obtained within 1 week</td>
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<td>Precautions</td>
<td>Nasal/throat swab, reliable in 1</td>
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<table>
<thead>
<tr>
<th></th>
<th>Patients with Disease</th>
<th>Patients without Disease</th>
<th>All Patients</th>
<th>PPV</th>
<th>NPV</th>
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<tbody>
<tr>
<td><strong>Positive Test</strong></td>
<td>2.8</td>
<td>9.7</td>
<td>12.5</td>
<td>22.2%</td>
<td>99.8%</td>
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<tr>
<td><strong>Negative Test</strong></td>
<td>0.5</td>
<td>314</td>
<td>314.5</td>
<td>3%</td>
<td>97%</td>
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<td><strong>Total</strong></td>
<td>3.28</td>
<td>324.72</td>
<td>328.0</td>
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<table>
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<tr>
<th></th>
<th><strong>85% Sensitivity</strong></th>
<th><strong>97% Specificity</strong></th>
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</table>

A test is only as good as the population tested

*numbers in millions*
1. CDC guidelines identify NP and OP swabs as acceptable specimens for COVID.
2. NP sawbs may comparatively be a more sensitive specimen type for testing persons later in the illness course.
3. Regardless of test, signs and symptoms, epidemiological links, and other risk factors need to be considered to inform subsequent clinical management and public health interventions to prevent further transmission.

1st 7 Days of Illness:
• NP or OP likely ok in detecting COVID; depending on amount of virus present.

Over 7 Days of Illness:
• NP seems to show far more sensitivity in this time frame.
Ancillary Studies

Change in workflow for onboarding of elective and non-elective surgical cases as well as bed capacity issues.

**Unintended Consequences:**
- Lack of in-house testing capability
- Once testing equipment available; reagents unavailable
- Local Help with Testing by MTU but then removed at start of school
- Personal issues with patients and self-isolation time required for elective surgery
- Inability to cohort patients during COVID-19 effectively lowering our available bed census

**Workflow Alterations:**
- System help with obtaining testing equipment and supplies
- Government sequestration of supplies adjusted for by shipping samples
- MTU graciously helped in our time of need
- Local competitor also graciously helped with weekend and emergency testing
- Possible switch to Antigen testing for short turnaround for emergent and urgent surgery and census management
Wound Center Without Walls: The New Model of Providing Care During the COVID-19 Pandemic. Rogers, et al. WOUNDS; July 2020 Issue: Vol 32 - Issue 7; ISSN: 1044-7946

Figure 1. The setting and utilization shift of wound patients before and during the COVID-19 pandemic. ASC ambulatory surgery center; OBL: office-based laboratory

Figure 2. The shift in the standards of care before and during the COVID-19 pandemic. CTP: cellular- or tissue-based product; NPWT: negative pressure wound therapy
Rural Healthcare Center Preparation and Readiness Response to Threat of COVID-19

PLAN
- Implement screening process
- Conserve PPE
- Have a “surge” plan

ADAPT
- Suspend student rotations
- Manage workforce
- Expand telehealth and telecommuting
- Postpone elective procedures

COMMUNICATE
- Implement new treatment guidelines
- Daily system-wide briefings

journalacs.org

https://doi.org/10.1016/j.jamcollsurg.2020.04.006
Surge Planning

We partnered with our parent CAHs, the hospitals in the area, and the local health department to make a surge plan.

Unintended Consequences:
- We did not have enough staff with the skill sets required.
- We focused mainly on inpatient surge planning.

Workflow Alteration:
- We up-skilled staff both nursing and providers.
- Some of this included systematic closure of certain clinics to consolidate resources to a more limited footprint and option for utilizing staff in other areas. (Our clinic consolidation plan in toolkit)
- Detailed surge plan with movement of patients from one area to the next; implementation of zip walls, closure of different areas, etc.
Surge Planning

Surgical Case Types Stratified by Indication and Urgency

- Emergent (<1 hour)
- Urgent (<24 hours)
- Urgent-elective (<2 weeks)
- Essential elective (1-3 months)
- Discretionary elective (>3 months)

Source: Patient Safety In Surgery, editorial Blom&Central, March 2020

Surgical Case Triage Tool
Applicable to broad range of Hospital settings

- Identified 18 factors*, each scored 1-5 (18-90 points)
  - Procedure factors, disease factors and patient factors
  - Higher cumulative score is associated with poorer perioperative outcome, increased risk of Covid-19 transmission to the healthcare team, and/or increased hospital resource utilization
  - Thresholds can be dynamically adjusted to align with “Phases of Response”
  - Most likely to be applied to Essential Elective and Urgent-Elective cases to determine appropriate resource prioritization

*Paper quotes 21 factors, but Dr. Walters and myself could only identify 18.
Surgical Governance Committee

Cumulative MeNTS Score

- **System Committee**
  - Monitors and allocates PPE and tests across system
  - Works with system PPE committee
  - Ensures like-cases are being performed across the system and that it is based on phase of Covid-19 activity

- **Local BU Committee**
  - Monitors and allocates PPE and tests within BU
  - Has representation on the system PPE committee
  - Ensures cases performed within BU are consistent with phase of Covid-19 activity
### Resumption of Non-Urgent Surgical Procedures:

**Date of Evaluation:_____ / _____ / _____**

**Business Unit:_____ AKH _____ AHR _____ AWF**

**Current Phase:**

<table>
<thead>
<tr>
<th>Points Needed</th>
<th>Points Available</th>
<th>Phase Criteria for Ramp-Up of Surgical Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td></td>
<td>Review current data COVID-19 cases in Business Unit/community / Hospital Census</td>
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<tr>
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<td>□ Staff able to work at 100% capacity</td>
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<td>□ No staff on furlough/waiver</td>
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<td>□ No hospital staff able to take on support COVID-19 patients and manage unexpected admissions</td>
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<tr>
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<td>□ Institute tests in a percentage of total tests over 14-day period</td>
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<tr>
<td>1</td>
<td></td>
<td>Hospital readies for Social Distancing - Beds Available</td>
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<tr>
<td></td>
<td></td>
<td>□ ICU Bed Capacity at 50% of current capacity</td>
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<tr>
<td>1</td>
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<td>Adequate PPE to cover projected need over next 14 days</td>
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<td>Adequate medications to cover next 14 days</td>
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<td>□ 14-day supply of essential items</td>
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<td>□ 7-day supply of all other items</td>
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<td>□ 3-day supply of all other items</td>
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<td>□ 1-day supply of all other items</td>
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<td></td>
<td>□ Ongoing availability of all medical supplies</td>
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</tbody>
</table>

**Total Points Achieved:**

- **6-7 Points**
  - Continue with Current Phase/Level of Activity: If Score Achieved 7-10 days Proceed to Next Phase

- **4-5 Points**
  - Continue Current Phase ONLY with Surgical Governance Committee Approval
  - 2 Consecutive Days - Drop Back to Phase

- **3-3 Points**
  - RETURN TO PHASE 1
  - Level 3 surgeries/procedures may continue
  - Level 2 and Level 5 surgeries/procedures are NOT completed

**Surgery Types by Level**

<table>
<thead>
<tr>
<th>Level 3</th>
<th>Level 2</th>
<th>Level 1</th>
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</thead>
<tbody>
<tr>
<td>Emergent Surgery</td>
<td>Urgent Surgery</td>
<td>Elective Surgery</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>Do Not Proceed</td>
<td>Postpone Until Phase 1 Reopening Criteria Satisfied</td>
<td>Postpone Until Phase 2 Reopening Criteria Satisfied</td>
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</tbody>
</table>

**Level 3 Examples**

- Procedures to diagnose cancer (including diagnostic colonoscopy)
- Surgery to treat cancer
- Procedures to diagnose, correct, or treat cardiac or vascular disease
- Neurosurgery
- Transplants
- Trauma
- Unstable colorectal leaks
- Cancer with threatened organs
- Compartment syndrome
- Severe infection, rise of hospitalization and/or sequel
- Highly symptomatic patients
- Other procedures that may reasonably be considered to pose a threat to patient life or threat of permanent or significant impairment of an extremity or organ system
- Risk of metastasis or progression is rising or a diagnosis of a disease or condition
- Risk that patient’s condition will rapidly deteriorate, and that intervention will pose a threat to life, threat of permanent or significant impairment of an extremity/organ or disability
- Same day in out surgery (≤24 hours)
- Colonoscopy/Therapeutic Endoscopy
- Higher risk medical conditions (inflammatory bowel disease, history of polyposis, conditions requiring annual repeat exams, follow up for suspicious lesions, etc.)
- Prostate specific antigen screening
- No-vaginal ortho (including spine, hips, knees)
- Total joints if able to be discharged same day or within 24 hours
- Elective angioplasty
- Stable colorectal leaks
- TKA
- Hysterectomy
- Other procedures that, while not life-threatening, pose some risk of patient harm if postponed
- Other procedures that may be postponed without harm or risk to the patient or procedure outcome

**Level 2 Examples**

- Procedures requiring 24-hour inpatient stay or greater
- Total joints if unable to be discharged same day or within 24 hours
- Cosmetic surgery (e.g. liposuction)
- Endoscopic/GERD
- Bans surgery
- TKA Procedures

**Level 1 Examples**

- Procedures requiring admission
- Other procedures that may be postponed without harm or risk to the patient or procedure outcome

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**See Hospital Phased Ramp-up of Surgical Procedures document.**
<table>
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<th>Covid Census (includes PUI)</th>
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<td>Discretionary Elective</td>
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</table>

Business as usual
Services likely will be adjusted
Services closed
Service Not Offered
Thank you for spending time with us and NARHC today! We wish each of you in the RHC community well during these challenging times.

~ Dr. B & Mandy