COVID-19 Update: What to Expect from the New Norm for GOM Operations

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ACOEM is a membership organization that provides leadership to promote optimal health and safety of workers, workplaces, and environments.
COVID-19

- 12/2019 – Wuhan China –
  - Severe Acute Respiratory Syndrome Coronavirus 2 - SARS-CoV-2
- US cases – beginning in January 2020
- Novel Coronavirus – No prior exposure / No Antibody / No Vaccine
- Myriad of Viral Symptoms
- Affects Multiple Organ Systems
- Issues with Testing for Virus / Antibodies to Virus
- May be some residual dysfunction post disease
- No Vaccine available YET

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COVID-19 Case Progression

- **COVID-19 – US (March 18, 2020)**
  - 6539 Cases
  - 116 Deaths - 1.8%
  - 106 Recovered

- **COVID-19 – Global – 18 March**
  - 204,700 Cases
  - 8270 Deaths - 4%
  - 82,868 Recovered - 40.5%

  - 1,528,568 Cases
  - 91,921 Deaths – 6%
  - 289,392 Recovered – 19%

- **COVID-19 – Global – 20 May**
  - 4,897,492 Cases
  - 314,215 Deaths – 6.4%
  - 1,688,619 Recovered – 34%
Symptoms

- Fever ( >100.4F )
- Cough (Usually Dry, May be Productive)
- May have Shortness of Breath / Difficulty Breathing
- May have Chest Pain
- May have GI Symptoms
- May have Loss of Smell / Change in Sense of Taste
- Onset 2-14 Days (Usually 4-5 Days Post Exposure)
If You Suspect that You Have COVID-19

- MASK UP – FACE MASK – NOT N95
- Keep up Physical Distancing – At Least 6 Feet
- Keep AWAY from Healthy Persons
- Call PMD for referral to appropriate screening location for evaluation
- May Quarantine in place

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If You Suspect an Employee has COVID-19

- Fever, Cough, Chest Pain, Temp >100.4F, GI Symptom
- Patient – Wear Surgical Mask (NOT N-95 Respirator)
- ISOLATE from Other Well Employees
- PPE for Responder –
  - Face Mask – Protects from Splashes & Sprays
  - Respirator (i.e. N-95) – Filters the air (if worn properly)
  - Eye Protection - Protects from Splashes & Sprays
  - Gowns - Protects from Splashes & Sprays / High Patient Contact Tasks
- Transport via appropriate means with PPE for Transporters

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Testing Issues - Antigen

- Active Disease – Testing for the COVID-19 Virus
  - Most Common – PCR
  - Nasopharyngeal Swab – Depends on Technician to get Adequate Sample
  - Results in Hours to Days
  - Some Antigen Tests with Significant Number of FALSE Negatives
    - May retest as POSITIVE several days later
    - May still shed virus up to several weeks post disease
  - Unable to Culture Viable (Infectious) Virus 9 Days from Onset
Testing Issues - Antibodies

- Testing for IgM / IgG Antibodies to COVID-19 – (Prior Exposure to COVID-19)
  - Immunoassay – Many Knockoffs (NOT FDA APPROVED)
    - Some < 50% Accuracy; Lots of False Negatives / Some False Positives
  - Blood Test – All FDA Approved Tests require VENIPUNCTURE (Not Fingerstick)
  - IgM usually appears end of 1st week of illness, may be gone by 4th week
    - May still be Infectious when IgM is present
  - IgG usually appears in 4th week, may persist for months to years
  - Positive denotes prior exposure, Unsure if IMMUNITY to COVID-19 yet
  - In areas with LOW Prevalence Rates, May have increased False Positives
Testing Issues - Decisions

- If ANY POSITIVE Result - Important to get a good History
  - Current / Recent Symptoms
  - Close Contacts
  - Chronology of Symptoms
  - Prior / Current Test Results

- Possible Result:
  - Current Disease / Infectious
  - Recent Disease / Possibly Infectious
  - Prior Disease / Not Infectious
Return to Work Options – Time Based

- Isolation - for at least 10 days after illness onset and at least 3 days (72 hours) after recovery.
  - Illness onset is defined as the date symptoms begin.
  - Recovery is defined as resolution of fever without the use of fever-reducing medications with progressive improvement or resolution of other symptoms.
  - Ideally, isolation should be maintained for this full period to the extent that it is practicable under rapidly changing circumstances.
Maintain home isolation until:

- Resolution of fever without the use of fever-reducing medications **AND**
- Improvement in respiratory symptoms (e.g., cough, shortness of breath) **AND**
- Negative results of an FDA Emergency Use Authorized molecular assay for COVID-19 from at least two consecutive upper respiratory swab specimens collected ≥24 hours apart (total of two negative specimens)[1]. See Interim Guidelines for Collecting, Handling, and Testing Clinical Specimens for 2019 Novel Coronavirus (2019-nCoV).
Return to Work Testing Options

- **PCR Testing**
  - Two Negatives Separated by >24 Hours
  - May Still be Positive for Several Weeks

- **Antibody Testing**
  - IgM Early - 7 days – 21 days
    - May Still be Contagious
  - IgG Later – 14 days on for months?
  - Immunity???

- **Combination of the Two Tests??**
  - Not Perfect Tests but May Help with Decision
Return to Work Options - Combination

- Use Time / Test Combination
  - Minimum 10 Days from Onset
  - Minimum 3 Days Post Symptoms
  - Repeat FDA Approved PCR
  - FDA Approved Antibody Testing?
  - Medical Review / Clearance

- May be Better Option for Offshore / Maritime / Diving to DECREASE Risk
Residual Issues Post COVID

- **Respiratory** –
  - If Moderate / Severe Disease –
    - PFT for Return to Offshore / Diving Positions
    - May need to Evaluate Aerobic Capacity
  - Minimal Symptoms / Asymptomatic
    - Many have still had Decreased Pulmonary Function Compared to Baseline

- **Cardiomyopathy**
  - Echocardiogram
  - Functional Exercise Stress Test
Current Research

- Average Person is Infectious for 10 Days and Infects 1 Person every 4 Days
- GOAL is to Decrease Spread to <1 person per case (R<1)
- Masking Decreases Non-Contact Transmission up to 80%
  - Only Need N95 / Respirator for YOUR Protection if Dealing with Infected Patients
  - Respirators with EXHAUST Valves Allow Infected Wearers to SPREAD Virus
  - “Wearing a Mask With Your Nose Out Over the Top is NOT PROTECTIVE”
  - “You Do Not Need to Wear a Mask When Driving Alone Down the Highway”
MASK UP

When you wear a mask, you protect others and when others wear a mask they protect you. You can buy or make masks. Remember, unless you are a healthcare worker you do not need to wear or purchase N95 or surgical masks.
**Current Research**

- **Medications** – Many studies ongoing
  - Hydroxychloroquine – May have more benefit EARLY in disease
  - Antivirals
- **Prevention**
  - Vitamin C
  - Zinc
  - Vitamin D3
- **Vaccine** – Multiple companies; Possible Late this year, more likely next year
Prevention

- Strict Compliance with Health Screening Questionnaire
- Add COVID-19 Update to DAILY Messaging
- Encourage:
  - Social Distancing – Greater than 6 Feet
  - Hand washing at least hourly and after touching any contaminated surface
  - Face Mask Whenever Around Others

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**Prevention**

- Clean / Disinfect at least twice daily – Work Areas, Living Areas, Door Knobs, Handrails, Tables, Desks, Phones, Keyboards, Faucets, Toilets, Light Switches
- Disinfect Chamber – Inside, Controls, Hatch, Coms
- Disinfect - Bibs, Hat – After each use
- EPA Disinfectants for COVID-19 – Updated May 14, 2020
  - [https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2](https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2)
Transmission

- NEJM - “Aerosol and Surface Stability of SARS-CoV-2…”
  - Aerosol – Up to Three Hours
  - Copper Surfaces – Up to Four Hours
  - Cardboard – Up to 24 Hours
  - Stainless Steel – Up to 2 to 3 DAYS
  - Plastic – Up to 2 to 3 DAYS
- Cleaning – Removal of dirt and impurities from surface (Soap / Water)
- Disinfecting – Using Chemical to kill germs on surface (70% Alcohol Solutions / EPA Listed Disinfectants / Bleach – 5 Tbsp / Gallon H2O)
COVID-19 Prevention Offshore

- Screening Questionnaires Prior to and During Hitch
- Pre-Mobilization Self-Quarantine
- Some Company Pre-Mobilization Physical Quarantine
- Pre-Mob Testing – PCR and/or Antibody Screening
- Second Wave should be coming soon with most States Reopening
- Not Much Herd Immunity Benefit YET
- Be Prepared

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COVID-19 Impact on Diving Operations

- Surface Dives with minimal Decompression – Not much of an Issue if NOT ILL same day
- Saturation Work – If ILL during Sat, could become a significant medical management issue.
  - Screening Questionnaire
  - Enhanced Personal Hygiene – Add Scheduled Hygiene Breaks
  - Enhanced Cleaning Schedule
  - NO ONE TOPSIDE SICK that could contaminate Chamber
Returning to “Normal” Activity

The New COVID Norm:
- Physical Distancing - 6 Feet Away
- Better Hand / Face Hygiene
- Face Coverings
- Increased Testing Rates
- Possible Supplements / Medications to Reduce Morbidity of COVID-19
- Vaccine “On the Horizon”
Resources

- American College of Occupational & Environmental Medicine (ACOEM)
  - www.acoem.org
  - https://acoem.org/COVID-19-Resource-Center
- EPA COVID-19 Disinfectants
  - https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2
- Prevention for those confined at home
  - https://files.constantcontact.com/dd5f31ef601/017414b5-669a-4861-8dcb-5b59466ac1a9.pdf
- Infection Control for Healthcare Facilities

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Resources

- Louisiana Dept of Health – COVID-19 Update
- Johns Hopkins Interactive COVID-19 Map
  - [https://coronavirus.jhu.edu/map.html](https://coronavirus.jhu.edu/map.html)
- CDC Maritime Guidance
  - [https://www.cdc.gov/quarantine/maritime/recommendations-for-ships.html#](https://www.cdc.gov/quarantine/maritime/recommendations-for-ships.html#)
- Traveler Health
- NEJM – Aerosol and Surface Stability of SARS-CoV-2
Safely Returning to Work: Virtual Symposium

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Preliminary Program Agenda
Subject to Change

- DAY 1: A comprehensive approach to wholesale Return to Work (RTW) during COVID-19
- DAY 2: Biological Science: Role of medical, safety and industrial hygiene professionals
- DAY 3: Industry-specific Return to Work guidance

Visit www.acoem.org/covid19 for additional information.
Questions

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