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Centre of Excellence for Clinical Management of COVID 19
All India Institute of Medical Sciences, Bhopal

COVID-19 CLINICAL MANAGEMENT PROTOCOLS

Guidance #7: Management of Moderately symptomatic person

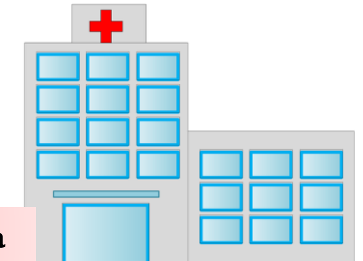
These individuals are at a Moderate or High risk of disease progression

Obtain Nasopharyngeal/Oropharyngeal swab for RT-PCR for COVID-19

Presence of Fever/Cough/Breathlessness.
SpO2 90-94% on Room air

POSITIVE

Careful transfer to COVID- Ward of a Designated COVID Hospital



While awaiting test results **Admit to COVID-Suspect Ward**

1. Initiate **Oxygen therapy**, maintain SpO2 >94% (Guidance #4)
2. Obtain **CXR** – Bilateral infiltrates Highly suggestive of COVID-Pneumonia (Guidance #5)
3. Evaluate for comorbidities* – Manage accordingly (Guidance #6)
4. Obtain Baseline CBC, CRP(Quantitative), S. Creatinine, ALT/AST, ECG in all patients
5. Identify any alternate diagnoses – Pulmonary Edema, Acute Coronary Syndrome, DKA, COPD etc.
6. Assess need for **IV Fluids.** Careful fluid administration as needed
7. Initiate **Antibiotics** for Community acquired Pneumonia (Azithromycin / Amoxy-Clav / Ceftriaxone)
8. Initiate **Anti-platelets** if previous CVD comorbidities, and high risk for Acute Coronary Syndrome
9. Low dose steroid **Inj Dexamethasone** 8mg IV Once Daily if high index of suspicion of COVID Pneumonia, *and requiring oxygen*
10. Supportive therapy: **Antipyretics, Anti-histaminics, Proton Pump Inhibitors**

NEGATIVE

If High index of suspicion (Acute History, Typical CXR findings, Oxygen dependence) Keep in COVID-Suspect Ward
Repeat RT-PCR for COVID-19

High Risk for worsening

- Age > 60 years, Presence of Co-morbidities*
- Oxygen requirement > 5 Lpm to maintain SpO2 >94%
- Extensive bilateral Infiltrates on Chest imaging
- CRP > 100mg/L

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- **Therapeutic Anti-coagulation** (Inj Enoxaparin 0.6mg SC BD)
- **Inj Remdesivir** (If available, and Normal Renal Function and within 7 days of symptom onset) 200mg IV on day 1, and 100mg IV)D x 4 days

Moderate risk for worsening

- Age< 60 years, Absence of Co-morbidities*
- Oxygen requirement < 5 Lpm to maintain SpO2 >94%
- Patchy / Minor infiltrates on Chest imaging
- CRP< 100mg/L

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- **Continue Oxygen therapy** (Maintain SpO2 > 94%)
- **Contonue Low dose Steroids** (Inj Dexamethasone 8mg IV OD)
- **Continue Anti-platelets** (Tab Aspirin 75mg once daily)
- **Continue Symptomatic therapy**

Monitor

- SpO2, Pulse, BP Preferably continuous, or every 2 hrly
- Daily I/O charting, CRP / Creatinine q48 hrs
- Coagulation Profile PT / aPTT q48hrs; Baseline D-dimer

Risk of Worsening

- Not able to maintain SpO2 >94% with oxygen therapy
- Persistent Bradycardia / Hypotension
- Rise in CRP or Less than 50% fall; Rise in INR; High D-Dimer

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Plan Transfer to ICU

- **High risk of Disease Worsening**

* Comorbidity includes Diabetes Mellitus, Hypertension, Obesity, Chronic Kidney Disease, Chronic Liver disease, Use of immunosuppressive drugs, HIV etc.

Guidance #8: Management of Significantly symptomatic person

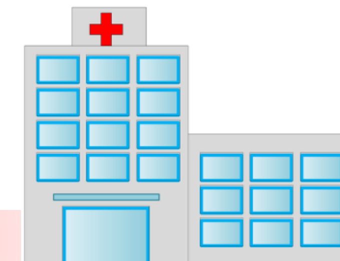
These individuals are at a High risk of disease progression and are likely in Cytokine Storm

Obtain Nasopharyngeal/Oropharyngeal swab for RT-PCR for COVID-19

Presence of Fever/Cough/Breathlessness.
SpO2 <90% on Room air

POSITIVE

Careful transfer to COVID- ICU of a Designated COVID Hospital



While awaiting test results **Admit to COVID-Suspect ICU** Initiate all actions as per Guidance #7, and in addition:

1. Consider **High Flow Oxygen / Non-Invasive Ventilation** to maintain SpO2 >94% (Guidance #4)
2. In addition to previous investigations, obtain PT/aPTT, D-Dimer in all patients
3. Aggressive management of alternate diagnoses / complications of comorbidities: Pulmonary Edema, Acute Coronary Syndrome, DKA, COPD etc.
4. Upscale **Antibiotics** for Severe Community acquired Pneumonia (Piperacillin-Tazobactum / Meropenam)
5. Assess and continue **IV Fluids, Anti-platelets, Antipyeretics, Anti-histaminics, Proton Pump Inhibitors.**

Initiate following therapies early

- **Therapeutic Anti-coagulation** (Inj Enoxaparin 0.6mg SC BD)
- **High dose Steroids** (Inj Dexamethasone 8mg IV BD or Inj Methyl-predisolone 500mg IV OD)

NEGATIVE

If High index of suspicion (Acute History, Typical CXR findings, Oxygen dependence) Keep in COVID-Suspect ICU
Repeat RT-PCR for COVID-19

High Risk for mortality

- Age > 60 years, Presence of Co-morbidities*
- Oxygen requirement > 10lpm, to maintain SpO2 > 94%
- CRP > 100mg/L; D-Dimer > 1.5mcg/mL; Ferritin > 900mcg/L

- **Consider Inj Tocilizumab** (8mg/kg, IV Infusion over 1hr)
- Relative contraindication: Secondary infections / Sepsis

Aggressive Management of a Critically ill Person

- Awake proning with High Flow Oxygen / Non-Invasive ventilation. Consider Mechanical Ventilation If FiO2 requirement rises more than 0.8, unable to maintain SpO2 > 94%, and getting fatigued
- **Follow ARDS-Net Guidelines:** Prone-position, Low Tidal Volumes, Permissive Hypercapnia
- **VAP Bundle, Sedation-Paralysis protocols, Stress Ulcer prophylaxis, Prevent / Treat secondary infections**
- **Careful fluid management**: Avoid volume overload
- **Hemodynamic monitoring:** Vasopressors to maintain MAP > 70mm Hg
- Monitor CBC, Creatinine, ALT/AST. **Renal dose modification as needed.** Aggressive management of Co-morbidities – Glycemic Control, Renal Support, Nursing care

- **Inj Remdesivir** (If available, and within 7 days of symptom onset, with normal renal function) 200mg IV on day 1, 100mg IV day x 4 days

Continue previous therapies

- High dose Steroids
- Therapeutic Anti-coagulation
- Anti-platelets
- Anti-pyretics
- Antibiotics
- Proton-Pump inhibitors

Care giver counselling and communication

* Comorbidity includes Diabetes Mellitus, Hypertension, Obesity, Chronic Kidney Disease, Chronic Liver disease, Use of immunosuppressive drugs, HIV etc.