Background
There seems to be a general consensus in the current published literature on postponing elective, non-urgent surgery on COVID-19-positive patients. But so far no recommendations have been published on when and how to start carrying out elective, non-urgent surgery on COVID-19-negative patients after the epidemic peak.

Objective:
To determine the best approach for reintroduction of elective procedures during COVID-19 based on their preoperative screening by the respiratory scoring system.

Methodology:
retrospective chart review of patients who underwent bariatric surgery between March to June in 2020, during the pandemic of Covid 19. The study was conducted in Riyadh, Saudi Arabia in two different health institutions.

Results:
The total number of patients were 90. The mean age of the patients was 32.73 ± 7.81 years. Moreover, (n=36; 40.0%) of the patients presented with comorbidities. Only (n=1; 1.1%) of the patient was tested for Covid19 by RT-PCR before surgery and tested negative. Majority of the patients (n=80; 88.9%) underwent Lap sleeve gasterecomy. Post surgery no patients developed any complications and none of them were admitted to the ICU. Post surgery only (n=2; 2.2%) of the patient were tested for Covid19 by RT-PCR and 100% tested negative.

Conclusion:
During COVID-19 pandemic before considering patients for elective surgery they should be screened. If their respiratory score is ≤ 3 indicating low risk of respiratory illness, elective procedures should continue. Strict precautionary measures should be followed and limited number of surgeries should be performed.
| Variables             | Frequency | Percent |
|----------------------|-----------|---------|
| Total                | 90        |         |
| Age (in years) Mean ± SD | 32.73 ± 7.81 |         |
| weight (in Kg) Mean ± SD | 119.16 ± 25.27 |         |
| Height (in metres) Mean ± SD | 166.94 ± 9.94 |         |
| BMI (kg/m2) Mean ± SD | 42.29 ± 7.40 |         |
| Gender               |           |         |
| Female               | 42        | 46.7    |
| Male                 | 48        | 56.5    |
| Previous surgery     |           |         |
| No                   | 53        | 58.9    |
| Yes*                 | 37        | 41.1    |
| Comorbidities        |           |         |
| No                   | 54        | 60      |
| Yes                  | 36        | 40      |
| Types of Comorbidities |   |       |
| Sleep apnea          | 3         | 6.8     |
| Hypothyroidism       | 12        | 27.3    |
| HTN                  | 8         | 18.2    |
| Diabetes             | 10        | 22.7    |
| Others**             | 11        | 25.0    |
| Total                | 44        | 100.0   |

*previous surgery include: varicocelectomy, uretheral dilatation, tonsillectomy, nasal surgery, ear surgery, myomectomy, hemorridectomy, gastric balloon, lap sleeve gastrectomy, Caesarean section, adenoidectomy

**other include polycystic ovarian syndrome, asthma, sinusitis, dislipidemia, hyperuricemia, varicose vein, allergic rhinitis, gout and depression

Table 1: Demographics factors and comorbidities among bariatric surgery patients with low risk of COVID 19
| Variables                        | Frequency | Percent |
|---------------------------------|-----------|---------|
| **Type of Surgery**             |           |         |
| Lap sleeve gastrectomy only     | 80        | 88.9    |
| Lap sleeve gastrectomy + Hiatal reinforcement | 3 | 3.3 |
| Lap sleeve gastrectomy + Hiatal reinforcement + Lap chole | 1 | 1.2 |
| Lap sleeve gastrectomy + lap chole | 1 | 1.2 |
| Minigastric bypass              | 3         | 3.3     |
| Others*                         | 2         | 2.2     |
| **Length of Surgery (in minutes)** | Median(IQR) | 50(17) |
| **Length of hospital stay (in hours)** | Median(IQR) | 36(24) |
| **RT-PCR tested before surgery** |         |         |
| No                              | 89        | 98.9    |
| Yes                             | 1         | 1.1     |
| **PCR Test result before surgery** |        |         |
| Negative                        | 1         | 100.0   |
| Positive                        | 0         | 0.0     |
| Total                           | 1         |         |
| **RT-PCR tested after surgery** |         |         |
| No                              | 88        | 97.8    |
| Yes                             | 2         | 2.2     |
| **PCR test result after surgery** |       |         |
| Negative                        | 2         | 100.0   |
| Positive                        | 0         | 0.0     |
| Total                           | 2         |         |

*others include Rsleeve and LapRoux en Y

Table 2: Type of Surgery and PCR testing among bariatric surgery patients with low risk of COVID 19
Abstract

Background

There seems to be a general consensus in the current published literature on postponing elective, non-urgent surgery on COVID-19-positive patients. But so far no recommendations have been published on when and how to start carrying out elective, non-urgent surgery on COVID-19-negative patients after the epidemic peak.

Objective:

The aims of the study are firstly to determine the best approach for reintroduction of elective procedures based on their preoperative screening by the respiratory scoring system. Secondly, to provide the scientific base for solid elective surgery protocols which may be implemented in the moment when a country or region meets the criteria to implement elective, non-urgent procedures.

Methodology:

It was a retrospective chart review of patients who underwent bariatric surgery between March to June in 2020, during the pandemic of Covid 19. The study was conducted in Riyadh, Saudi Arabia in two different health institutions. The study participants were male and females with BMI > 30 and with a respiratory score of ≤ 3. The data was analysed on SPSS version 22. Descriptive statistics for quantitative variable were reported as mean ± SD/ median (IQR). The qualitative variables were reported as frequency and percentage.

Results:

The total number of patients were 90. The mean age of the patients was 32.73 ± 7.81 years and a higher proportion (n=48; 56.5%) of the them were males. The mean BMI of the patients was 42.29 ± 7.40 kg/m². About (n=37; 41.1%) reported a previous history of surgery. Moreover, (n=36; 40.0%) of the patients presented with comorbidities. Only (n=1; 1.1%) of the patient was tested for Covid19 by RT-PCR before
surgery and tested negative. We observed that majority of the patients (n=80; 88.9%) underwent Lap sleeve gastrectomy. The median length of surgery was 50 (17) minutes and the median length of hospital stay was 36 (24) hours. Post surgery none of the patients developed any complications and none of them were admitted to the ICU. Post surgery only (n=2; 2.2%) of the patients were tested for Covid19 by RT-PCR and 100% tested negative.

**Conclusion:**

During COVID-19 pandemic before considering patients for elective surgery they should be screened. For patients who are obese or have underlying comorbidities, if on screening their respiratory score is \( \leq 3 \) indicating low risk of respiratory illness, elective procedures should continue. Strict precautionary measures should be followed and limited number of surgeries should be performed.

**Keywords:** COVID-19, Bariatric surgery, respiratory score, low risk, elective surgery
1. Introduction

On 31st December 2019, 27 cases of pneumonia of unknown etiology were identified in Wuhan City, Hubei province in China (1). Wuhan is the most populous city in central China with a population exceeding 11 million. These patients most notably presented with clinical symptoms of dry cough, dyspnea, fever, and bilateral lung infiltrates on imaging. The causative agent was identified from throat swab samples conducted by the Chinese Centre for Disease Control and Prevention (CCDC) on 7th January 2020, and was subsequently named Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). The disease was named COVID-19 by the World Health Organization (WHO).

Main transmission vectors were originally thought to be respiratory droplets and direct contact; however, recent publications suggest the possibility of aerosol propagation as well (2, 3). Symptoms may appear 2–14 days after exposure and period incubation ranges from 4 to 7 days, during which any infected patient may be asymptomatic and contagious (4). The most common symptoms are fever (98%), anosmia (80%), cough (76%), myalgia or fatigue (44%). About half of the patients present dyspnea. (The median time from onset to dyspnea was 8 days.) All have bilateral, interstitial pneumonia identifiable by their characteristic distribution patterns in chest computer tomography (CT) scans: ground glass opacification (GGO) (88.0%), bilateral involvement (87.5%), peripheral distribution (76.0%) and multilobar (more than one lobe) involvement (78.8%).

There seems to be a general consensus in the current published literature on postponing elective, non-urgent surgery on COVID-19-positive patients. But to our best knowledge, so far no recommendations have been published on when and how to start again carrying out elective, non-urgent surgery on COVID-19-negative patients after the epidemic peak has been reached in a given country or region and the pressure on healthcare facilities, healthcare workers and resources has been released by so far that elective surgery procedures can be safely and ethically programmed again.
Given the large and growing backlog of patients awaiting medically necessary elective surgery, there is now an urgent need to ramp up surgical activities across the country. How to safely restart surgical programs in the context of ongoing community spread and localized outbreaks of COVID-19 remains unknown.

The routine preoperative testing is to diagnose subclinical or preclinical conditions that could adversely affect patient outcomes unless the test is acted upon to modify the condition, surgery, or both. To be of value, screening tests should be actionable, accurate, and feasible. When examined according to these criteria, however, most preoperative screening tests perform poorly. Why, then, would preoperative testing for SARS-CoV-2 be any different?

It is very important for healthcare leaders to answer this question, “Is the test accurate enough to alter patient management and infection control precautions based on its results?” Nucleic-acid-based assays such as reverse transcriptase polymerase chain reaction have excellent sensitivity and specificity in laboratory validation studies but the sensitivity and specificity in diagnosing clinical infection with SARS-CoV-2 has yet to be determined. The sensitivity of the test is commonly cited to be around 60–70%, meaning that 30–40% of patients with the disease will be falsely reported as not having the disease. These results, however, were derived from the early experience with SARS-CoV-2 in small groups of patients, and testing accuracy varies based on time from exposure and testing methodology.

The article’s first goal is to make a recommendation on the best approach for reintroduction of elective procedures based on their preoperative screening by the respiratory scoring system. The second goal is to provide the scientific base for solid elective surgery protocols which may be implemented in the moment when a country or region meets the criteria to implement elective, non-urgent procedures.
2. Methodology

2.1: Study design and setting

This is retrospective chart review of patients who underwent bariatric surgery between March to June during the year of 2020, this particular date was chosen in relation to the peak of pandemic Covid 19 crisis in our region. The study was conducted in Riyadh, Saudi Arabia within two different health institutions for three different surgeons. Given the retrospective nature of this study and the use of anonymized patient data, requirements for informed consent were waived.

2.2: Study population

Male and female patients who underwent bariatric surgery, which includes laparoscopic sleeve gastrectomy, laparoscopic Reux -en –Y bypass, minigastric bypass and laparoscopic gastric band.

2.3: Data collection

The data was collected by data collection sheet with multiple variables, including demographics and surgery related information such as age, gender, height, weight, BMI, comorbidities, type of surgery, length of surgery, day of surgery, length of hospital stay, ICU admission, previous surgery, post-operative complications including respiratory, cardiac, Venus thromboembolism, leak. Furthermore, calculation of Respiratory scoring system. The data collection sheet including preoperative respiratory Scoring system results and 14 days post-operative respiratory Scoring system results during the patients visit to the clinic. The respiratory scoring system adopted from the ministry of health (MOH) Coronavirus Disease 19 (COVID-19) Guidelines (February 2020 V1.1) (appendix 1). A score ≤ 3 is labeled as low risk patient, A score ≥ 4, is moderate risk
and the patient should be placed in an isolation room and the physician will be informed for assessment. A score ≥ 6, is high risk patient, he should be placed in an isolation room and the physician will be informed for assessment.

2.4 Plan of Analysis

The data was analyzed using SPSS version software 22. Descriptive statistics for quantitative variable such as (age, weight, height and BMI) were reported as mean ± SD and for (length of surgery and length of hospital stay) as median (IQR). The qualitative variables such as (gender, co morbidities and its types, type of surgery and PCR testing) were reported as frequency and percentage.

3. Results

3.1 Demographics factors and comorbidities among bariatic surgery patients with low risk of COVID 19

The table 1 shows the demographics factors and comorbidities among bariatric surgery patients with low risk of COVID 19. The total number of patients were 90. The mean age of the patients was 32.73 ± 7.81 years and a higher proportion (n=48; 56.5%) of the them were males and (n=42; 46.7%) were females. The mean BMI of the patients was 42.29 ± 7.40 kg/m². About (n=37; 41.1%) reported a previous history of surgery that included (varicocelectomy, urethral dilatation, tonsillectomy, nasal surgery, ear surgery, myomectomy, hemorrhidectomy, gastric balloon, lap sleeve gastrectomy, caesarean section and adenoidectomy). Moreover, (n=36; 40.0%) of the patients presented with comorbidities. A higher proportion had hypothyroidism (n=12; 27.3%), diabetes (n=10; 22.7%), hypertension (n=8; 18.2%), sleep apnea (n=3; 6.8%) and 25% had other comorbid such as (polycystic ovarian syndrome, asthma, sinusitis, dislipidemia, hyperuricemia, varicose vein, allergic rhinitis, gout and depression).
3.2 Type of Surgery and PCR testing among bariatric surgery patients with low risk of COVID 19

The Table 2 indicates the type of surgery and PCR testing among bariatric surgery patients with low risk of COVID 19. All the patients (n=90) in our study had low risk of Covid 19 with a respiratory score of ≤ 3 indicating low risk of respiratory illness. Only (n=1; 1.1%) of the patient was tested for Covid19 by RT-PCR before surgery and tested negative. We observed that majority of the patients (n=80; 88.9% ) underwent Lap sleeve gasterecomy only, (n=3; 3.3%) underwent Lap sleeve gasterecomy with hiatal reinforcement, (n=3; 3.3%) underwent minigastric bypass surgery, (n=1; 1.2%) underwent Lap sleeve gasterecomy with lapchole and (n=1; 1.2%) underwent Lap sleeve gasterecomy with Hiatal reinforcement and Lap chole. However, about (n=2; 2.2%) underwent other types of surgery such as Rsleeve and LapRoux en Y. The median length of surgery was 50 (17) minutes and the median length of hospital stay was 36 (24) hours. Post surgery none of the patients developed any complications and none of them were admitted to the ICU. Post surgery only (n=2; 2.2%) of the patient were tested for Covid19 by RT-PCR and 100% tested negative.

4. Discussion

The current pandemic has interrupted healthcare provision by postponing elective surgeries to reduce the spread of infection to both patient and healthcare providers and efficiently utilize the limited resources which include hospital beds, personal protective equipment (PPE), and ventilators as COVID-19 outbreak has overburdened the healthcare system .(9-11) Bariatric surgeries are elective and postponing of these procedures have significant effect on the well-being of patients as well as financial impact on the hospital and surgeons.(12)

This study was aimed at recommending the preoperative screening of patients by the respiratory scoring system based on Middle East Respiratory Syndrome Coronavirus (MERS-CoV) (13) as the best approach
for reintroduction of elective procedures during this pandemic. This study also aims to provide the scientific base for elective surgery protocols which may be implemented when a country or region meets the criteria to reintroduce elective, non-urgent procedures. In this emerging situation as per directives of the Ministry of Health the healthcare workers of Kingdom of Saudi Arabia strictly adhere to the guidelines of MERS to combat COVID-19. (14) Saudia’s government learned from its 2015 MERS experience and were quick in implementing the guideline in these unprecedented times. Visual triage plays a significant role in early detection of acute respiratory infection by assessing each patient according to acute respiratory checklist score. A patient scoring 4 or more requires immediate isolation to prevent the spread of infection. (15, 16)

In our study there were 56.5% males and 46.7% females and the risk of respiratory illness was low in both genders. This finding is in agreement with Wang et al.(17) However, on the contrary Chen Z et al(18) reported that males are more likely to get infected. Previous studies suggest that males were infected more by MERS-CoV and SARS-CoV in comparison to females.(19, 20) The probable explanation for this can be attributed to X chromosome and sex hormones which play a protective role in regards to immunity. (21)

In the present study, after bariatric surgery there were no ICU admissions as none of the patients developed any complications. This is comparable to Lei S et al who reported that the prevalence of ICU admissions was higher among patients who underwent surgeries of moderate to high complexity, risks and technical difficulty in contrast to those who underwent surgeries that fall in low surgical difficulty category like bariatric surgery. (22) In our study the median length of surgery was 50 minutes and the median length of hospital stay was 36 hours. Bariatric surgery is a safe operation with low operative time and patients are generally discharged after a short hospital stay of 24 hours. (23, 24)
In our study the mean BMI of the patients was 42.3 kg/m² and as per the visual triage their acute respiratory score was ≤ 3 indicating low risk of respiratory infections. These results are in contrary to Wang D et al, Li B et al and Guan et al who reported that obese patients are at higher risk of COVID-19 infection and developing complications. (17, 25, 26) Probable reason for the poor prognosis might be the impact of abdominal obesity on pulmonary functions. BMI ≥40 kg/m² has been a risk factor for earlier pandemics (2009 H1N1) and flu complications. (27, 28)

In our study patients had underlying co-morbidities and the most common were hypothyroidism (27.3%), diabetes (22.7%) and hypertension (18.2%) and they were at low risk of COVID-19 as per visual triage. Studies suggest that COVID-19 is more likely to infect patients with comorbid conditions namely; hypertension, diabetes, cardiovascular disease, cerebrovascular disease. (19, 29) The possible reason for this is the weak immune system of these patients (30) which results in higher ICU admissions and fatality. (31). There were some limitations in the present study. Firstly the retrospective design of the study. Secondly small sample size. Moreover lack of comparison group.

5. Conclusion

During COVID-19 pandemic before considering patients for elective surgery they should be screened. For patients who are obese or have underlying comorbidities, if on screening their respiratory score is ≤ 3 indicating low risk of respiratory illness, elective procedures should continue. Strict precautionary measures should be followed and limited number of surgeries should be performed.
6. References

1. Lu H, Stratton CW, Tang YW. Outbreak of pneumonia of unknown etiology in Wuhan, China: The mystery and the miracle. Journal of medical virology. 2020;92(4):401-2.

2. Bai Y, Yao L, Wei T, Tian F, Jin D-Y, Chen L, et al. Presumed asymptomatic carrier transmission of COVID-19. Jama. 2020;323(14):1406-7.

3. Li Y-K, Peng S, Li L-Q, Wang Q, Ping W, Zhang N, et al. Clinical and transmission characteristics of Covid-19—a retrospective study of 25 cases from a single thoracic surgery department. Current medical science. 2020:1-6.

4. Chan JF-W, Yip CC-Y, To KK-W, Tang TH-C, Wong SC-Y, Leung K-H, et al. Improved molecular diagnosis of COVID-19 by the novel, highly sensitive and specific COVID-19-RdRp/Hel real-time reverse transcription-PCR assay validated in vitro and with clinical specimens. Journal of Clinical Microbiology. 2020;58(5).

5. Turnbull JM, Buck C. The value of preoperative screening investigations in otherwise healthy individuals. Archives of internal medicine. 1987;147(6):1101-5.

6. O’Neill F, Carter E, Pink N, Smith I. Routine preoperative tests for elective surgery: summary of updated NICE guidance. Bmj. 2016;354:i3292.

7. Wang W, Xu Y, Gao R, Lu R, Han K, Wu G, et al. Detection of SARS-CoV-2 in different types of clinical specimens. Jama. 2020;323(18):1843-4.

8. Yang Y, Yang M, Shen C, Wang F, Yuan J, Li J, et al. Laboratory Diagnosis and Monitoring the Viral Shedding of 2019-nCoV Infections. medRxiv, February 17, 2020. DOI.10(2020.02):11.20021493.

9. Brindle ME, Gawande A. Managing COVID-19 in surgical systems. Annals of surgery. 2020.

10. Stahel PF. How to risk-stratify elective surgery during the COVID-19 pandemic? : Springer; 2020.

11. Join A, Partner AI, Edge A. JOINT GI SOCIETY MESSAGE: COVID-19 Clinical Insights for Our Community of Gastroenterologists and Gastroenterology Care Providers.

12. Yang W, Wang C, Shikora S, Kow L. Recommendations for metabolic and bariatric surgery during the COVID-19 pandemic from IFSO. Springer; 2020.

13. Atique S, Bautista JR, Block LJ, Lee JJ, Lozada-Perezmitre E, Nibber R, et al. A nursing informatics response to COVID-19: perspectives from five regions of the world. Journal of Advanced Nursing. 2020.
14. Jazieh A-R, Al Hadab A, Al Olayan A, AlHejazi A, Al Safi F, Al Qarni A, et al. Managing oncology services during a major coronavirus outbreak: lessons from the Saudi Arabia experience. JCO Global Oncology. 2020;6:518-24.

15. Al Harbi IS, Gupta SK. Use of visual triage in the early identification and isolation of acute respiratory infection cases for the control of hospital outbreak/infection in reference to middle east respiratory syndrome-corona virus (MERS CoV). International Journal of Medicine and Public Health. 2019;9(1).

16. Madani TA. Case definition and management of patients with MERS coronavirus in Saudi Arabia. The Lancet Infectious Diseases. 2014;14(10):911-3.

17. Wang D, Hu B, Hu C, Zhu F, Liu X, Zhang J, et al. Clinical characteristics of 138 hospitalized patients with 2019 novel coronavirus–infected pneumonia in Wuhan, China. Jama. 2020;323(11):1061-9.

18. Chen N, Zhou M, Dong X, Qu J, Gong F, Han Y, et al. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. The Lancet. 2020;395(10223):507-13.

19. Badawi A, Ryoo SG. Prevalence of comorbidities in the Middle East respiratory syndrome coronavirus (MERS-CoV): a systematic review and meta-analysis. International Journal of Infectious Diseases. 2016;49:129-33.

20. Channappanavar R, Fett C, Mack M, Ten Eyck PP, Meyerholz DK, Perlman S. Sex-based differences in susceptibility to severe acute respiratory syndrome coronavirus infection. The Journal of Immunology. 2017;198(10):4046-53.

21. Jaillon S, Berthenet K, Garlanda C. Sexual dimorphism in innate immunity. Clinical reviews in allergy & immunology. 2019:1-14.

22. Lei S, Jiang F, Su W, Chen C, Chen J, Mei W, et al. Clinical characteristics and outcomes of patients undergoing surgeries during the incubation period of COVID-19 infection. EClinicalMedicine. 2020:100331.

23. Daigle CR, Brethauer SA, Tu C, Petrick AT, Morton JM, Schauer PR, et al. Which postoperative complications matter most after bariatric surgery? Prioritizing quality improvement efforts to improve national outcomes. Surgery for Obesity and Related Diseases. 2018;14(5):652-7.

24. Aminian A, Brethauer S, Kirwan J, Kashyap S, Burguera B, Schauer P. How safe is metabolic/diabetes surgery? Diabetes, Obesity and Metabolism. 2015;17(2):198-201.

25. Guan W-j, Ni Z-y, Hu Y, Liang W-h, Ou C-q, He J-x, et al. Clinical characteristics of coronavirus disease 2019 in China. New England journal of medicine. 2020;382(18):1708-20.
26. Li B, Yang J, Zhao F, Zhi L, Wang X, Liu L, et al. Prevalence and impact of cardiovascular metabolic diseases on COVID-19 in China. Clinical Research in Cardiology. 2020;109(5):531-8.

27. Control CfD, Prevention. People at high risk for flu complications. 2019.

28. Louie JK, Acosta M, Winter K, Jean C, Gavali S, Schechter R, et al. Factors associated with death or hospitalization due to pandemic 2009 influenza A (H1N1) infection in California. Jama. 2009;302(17):1896-902.

29. Yang J, Zheng Y, Gou X, Pu K, Chen Z, Guo Q, et al. Prevalence of comorbidities in the novel Wuhan coronavirus (COVID-19) infection: a systematic review and meta-analysis. International journal of infectious diseases. 2020.

30. Dryden M, Baguneid M, Eckmann C, Corman S, Stephens J, Solem C, et al. Pathophysiology and burden of infection in patients with diabetes mellitus and peripheral vascular disease: focus on skin and soft-tissue infections. Clinical Microbiology and Infection. 2015;21:S27-S32.

31. Ramesh N, Siddaiah A, Joseph B. Tackling corona virus disease 2019 (COVID 19) in workplaces. Indian Journal of Occupational and Environmental Medicine. 2020;24(1):16.
Click here to access/download
Cover Letter
cover letter.docx
## Visual Triage Checklist for Acute Respiratory Illnesses

### Date: ___________  Time: ___________  MRN: ___________

| Name: | ID#: | Hospital: |
|-------|-----|-----------|

Circle the number reflecting the patient’s condition (exposure and clinical picture) and calculate the final score:

### Risks for Acute Respiratory Illnesses

| A. Exposure Risks | Score |
|-------------------|-------|
| **(In the past 14 days prior to symptom onset)** | Any Patient (Adult or Pediatric) |
| 1. Had a history of travel to areas with presumed ongoing community transmission of COVID-19 (China, Iran, South Korea, Japan, Singapore, Hong Kong), or any updated information added on CCC website: moh.gov.sa/CCC/healthregulations/Documents/SuspectedCOVID19Supplement.pdf | 5 |
| OR A close physical contact in the past 14 days prior to symptom onset with a confirmed case of COVID-19 | |
| OR Working in or attended a healthcare facility where patients with confirmed COVID-19 were admitted. | |
| 2. Exposure to a confirmed MERS case in the last two weeks | 3 |
| 3. Exposure to camel or products (direct or indirect*) in the last two weeks | 2 |
| 4. Visit to a healthcare facility that had MERS case in the last two weeks | 1 |

### B. Clinical Signs and Symptoms

| Patient with Exposure Risk No. 1 | Patient with or without Exposure Risk No. 2, 3, or 4 |
|----------------------------------|---------------------------------------------|
| **Pediatric** | **Adult** |
| 1. Fever | 1 | 1 | 2 |
| 2. Cough (new or worsening) | 1 | 1 | 2 |
| 3. Shortness of breath (new or worsening) | 1 | 1 | 2 |
| 4. Sore throat and/or runny nose | 1 | - | 1 |
| 5. Nausea, vomiting, and/or diarrhea | - | - | 1 |
| 6. Chronic renal failure, CAD/heart failure | - | - | 1 |

### Total Score

*Patient or household

A score ≥ 4, place patient in an isolation room and inform MD for assessment. MERS-CoV testing should be done only according to case definition.

A score ≥ 6, place patient in an isolation room and inform MD for assessment. COVID-19 testing should be done only according to case definition.

Staff name: __________________  ID number: __________________

---

Appendix 1: Visual Triage Checklist for Acute Respiratory Illnesses
Safety of Bariatric Surgery during COVID-19 Pandemic, is there a need to screen low risk patients?

1-Emad A. Aljohani*
Assistant professor, Department of Surgery, College of Medicine, Prince Sattam Bin Abdulaziz University, Al-kharj, Saudi Arabia

2-Fahad A. Almadi
Associate consultant, Department of Surgery, king Saud medical city, Riyadh, Saudi Arabia

3-Rami A. Basardah
Bariatric surgery consultant, Department of Surgery, Riyadh Care Hospital, Riyadh, Saudi Arabia

4-Mohammad S. Banjar
Bariatric surgery Fellow, Department of Surgery, king Khaled university hospital, Riyadh Saudi Arabia

5-Khadeejah A. Almufawez
General surgery resident, Department of Surgery, king Saud medical city, Riyadh Saudi Arabia

6-Hamdi A. Tamimi
General surgery resident, Department of Surgery, Dr. Suliman Alhabib hospital, Riyadh, Saudi Arabia

Corresponding author:
Emad Aljohani*
Assistant professor, Department of Surgery, College of Medicine, Prince Sattam Bin Abdulaziz University, Al-kharj, Saudi Arabia
Email: dr.aljohani@hotmail.com
Phone number: 00966555597192

Bariatric surgery during COVID-19 pandemic