Promoting healthy lifestyles
Secondly, to prevent sedentary behaviour, regular exercise and healthy diets should be promoted. Public health messages should emphasize how regular exercise can improve respiratory capacity, protect mental health, and maintain a healthy weight. Obesity is a known risk factor for admission to critical care and mortality in patients with COVID-19. Knowing this might encourage some patients to lose weight or engage with weight management programmes which can be coordinated remotely through apps. For secondary prevention, a systematic review revealed no difference in effectiveness between home-based vs. supervised cardiac rehabilitation. Therefore, there is no rationale to restrict access to cardiac rehabilitation services by patients during the COVID-19 pandemic. If anything, provision must be maintained to protect against avoidable hospital readmissions.

Cardiovascular risk factor control
Thirdly, the screening and management of cardiovascular risk factors should continue during the COVID-19 pandemic. If not, this will only increase demand for healthcare services in the future. Both diabetes and hypertension have been associated with an increased risk of being diagnosed with COVID-19, and poor glycaemic and blood pressure control is known to affect immunity generally. Optimizing cardiovascular risk factors may therefore protect against more severe COVID-19 infections. To achieve this, technology needs to be used in innovative ways. In many countries, primary care and cardiology services are being delivered remotely through teleconsultations. In the face of prolonged disruption to services, pragmatic approaches to the screening of patients are needed. For example, certain medical devices and smartphone apps could be used to screen for arrhythmias. These changes could trigger a fundamental shift in how we practice. To ensure this feeds into wider digital health system development, ideally evaluation mechanisms must be embedded into routine practice.

Conclusions
It is clear that COVID-19 will have a substantial economic impact on healthcare systems. The acute pressure of managing the pandemic is already responsible for a significant financial burden. However, lost opportunities for the primary and secondary prevention of cardiovascular disease will only exacerbate this by increasing future demand for healthcare services. To mitigate against this risk, we argue that a comprehensive strategy to combat COVID-19 must include promoting public health messages which are co-beneficial for protecting against COVID-19 and the primary and secondary prevention of cardiovascular disease.

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References
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Acute coronary syndromes in developing countries during the COVID-19 pandemic
ACS management protocols of Kasr Al-Ainy University Hospital, one of the largest hospitals in Egypt and the Middle East, are presented

In the face of the quickly evolving coronavirus disease 2019 (COVID-19) pandemic, many healthcare systems around the globe have modified their routine protocols for the management of patients presenting with acute cardiovascular emergencies including patients with acute coronary syndromes (ACS). A unifying theme in these new protocols is the adoption of new restrictive measures to meet the challenges of increased risk of infection of healthcare workers, limited numbers of beds, shortage of personal protective equipment (PPE), inadequate number of protected catheterization rooms, and the clinical overlap between ACS and COVID-19 infection in some of the patients.

In developing countries, with an already strained health system due to economic problems, the situation is more challenging and needs the formulation of efficient protocols that can accommodate several medical and socioeconomic challenges.

Egypt, with an estimated population of 100 million, is facing exceptional challenges during the COVID-19 crisis. Because the large-scale use of the polymerase chain reaction (PCR) test for SARS-CoV-2 in a large population is a problem, the prevalence of COVID-19 infection in Egypt is unknown. Furthermore, the supply of PPE falls far short of demands with lack of professionally protected cardiac catheterization rooms. With progression of the pandemic in such a large population, care of COVID-19 patients is expected to rapidly overwhelm the supplies, beds, and staff available in Egyptian hospitals.
Kasr Al-Ainy University Hospital is one of the largest tertiary referral centres in Egypt. With >5200 beds in different departments, the hospital has become one of the major hot-spots for the COVID-19 pandemic. Still in the early phase of the epidemic, the cardiology service at the hospital is expected to face an unprecedented cutback in resources, with expected reduction of cardiac care unit (CCU) bed capacity and anticipated staff absences because of illness or self-isolation. Under these circumstances, the Cardiovascular Department in the hospital has revised the management protocols for ACS patients and implemented new management protocols for both patients with ST-segment elevation myocardial infarction (STEMI) and those with non-ST-segment elevation acute coronary syndromes (NSTE-ACS) (Figures 1 and 2).

Management protocols were developed based on the following three principles:

i. All patients presenting with ACS should be screened for possible COVID-19 infection. As outlined above, the prevalence of COVID-19 disease in Egypt remains unknown. Furthermore, COVID-19-infected patients may be asymptomatic or still in the incubation period with significant risk of transmission of the disease. Some patients, due to the media scare and fear of isolation, refrain from going to hospitals when they develop symptoms. For the same reasons, some patients may deny symptoms related to COVID-19 infection when they seek medical advice for other reasons.

In the emergency room, all patients are screened for the presence of fever, respiratory symptoms, or history of contact with a suspected or confirmed COVID-19 case. Patients are stratified into suspected COVID-19 and confirmed COVID-19 groups. The management protocol for suspected COVID-19 patients is summarized in Figure 1.
confirmed COVID-19 patient. Suspected patients are admitted into isolation beds in the CCU where additional work-up for COVID-19 infection is performed including a PCR test. Other patients without initial suspicion for COVID-19 infection are admitted to the CCU where they are subjected to systematic evaluation for COVID-19 infection: fever chart, differential blood count, and pulmonary imaging. Patients with confirmed COVID infection, diagnosed either in the emergency room or during hospitalization, are transferred to specialized isolation facilities.

ii. Invasive interventions for ACS are offered only for high-risk ACS patients. Primary percutaneous coronary intervention (PCI) is recommended for high-risk STEMI patients (e.g. large infarction) and for patients with contraindications for fibrinolytic therapy. Since the COVID-19 status of these patients is not known, primary PCI should be performed with maximum staff protection in the safest possible environment. In other STEMI patients, a pharmaco-invasive strategy with initial fibrinolysis followed by coronary angiography within 2–24 h is recommended. In fibrinolysis-eligible patients, therapy should be initiated within 30 min, and patients should be monitored for clinical and electrocardiographic features of successful reperfusion within 90 min after fibrinolysis and, in cases of failed reperfusion, rescue PCI is recommended.

It is acknowledged that primary PCI is the best reperfusion strategy for STEMI patients; however a pharmaco-invasive strategy may be the best compromise for our STEMI patients; this strategy would permit timely reperfusion for patients and allow time for a more systematic evaluation of COVID-19 status. Intracranial haemorrhage is a major safety concern in patients receiving fibrinolytic therapy; however, this risk is not expected to be significant because ACS tends to occur at a relatively young age among Egyptians.

Among NSTE-ACS patients, an invasive strategy is offered only to high-risk patients and after clearance of ongoing COVID-19 infection. Patients at intermediate risk would be admitted based on the availability of CCU beds and the potential risk of getting COVID-19 infection while

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**Figure 2** Management protocols for non-ST-segment elevation acute coronary syndromes (NSTE-ACS). CA, coronary angiography; CABG, coronary artery bypass surgery; CHF, congestive heart failure; CTr, cardiac troponin; DM, diabetes mellitus; EF, ejection fraction; GRACE, Global Registry of Acute Coronary Events; PCI, percutaneous coronary intervention; PCR, polymerase chain reaction.
iii. It is imperative to rule out conditions that can mimic ACS in patients with active COVID-19 infection such as myocarditis, coronary spasm, Takotsubo cardiomyopathy, and pulmonary embolism. Integration of data derived from clinical examination, electrocardiogram, temporal change in cardiac troponin levels, and transthoracic echocardiography should help in making the proper diagnosis.

In a group of critically ill patients presenting in shock or in severe respiratory distress or with electrical instability, the differentiation between an ischaemic aetiology for these conditions vs. COVID-related complication is challenging. These patients should be approached as presumptive COVID-19-positive patients with rapid simultaneous evaluation for COVID-19 infection and myocardial ischaemia. Patients with confirmed ACS should proceed immediately to coronary angiography.

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References
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The Austrian Society of Cardiology (ASC)

The ASC has 940 members today including healthcare professionals from cardiology, cardiovascular surgery, and cardiovascular nursing.

Founded in 1968 by Prof. Fritz Kaindl (1922–2015), the pioneer of cardiology in Austria, the ASC started as a small group of physicians interested in cardiology, which then gradually grew into a large National Society. Its Board consists of 10 members, including President, President-Elect, Past-President, Secretary, Treasurer, Councillors for Education and Training, the coordinator of the Working groups, the representative of the non-university cardiac centres, and the chairs of the Departments of Cardiology of the three large public Medical Universities (Graz, Innsbruck, Vienna) in Austria. It is supported by three staff persons at the ASC central office in the General Hospital of Vienna.

The ASC is a scientific community open to all other medical specialties for membership. The key aim of our society is to promote high-quality cardiovascular care through training, education, and scientific research at the highest possible level of excellence. The ASC has 15 Working Groups, whose chairpersons are appointed for 2 years. This community is the backbone of the society and reflects the increasing importance of subspecialization in cardiology. The Working Groups have gained a great deal of autonomy in organizing educational activities, scientific sessions at the annual ASC Congress, and writing expert statements.

The annual scientific congress usually takes place at the beginning of June in Salzburg, but due to the corona virus crisis had to be postponed to November 1–3 this year. This meeting has evolved into a large congress with over 800 participants from Austria, Europe, and other parts of the world. One yearly highlight of the congress is the ‘ESC guideline session’, where the latest ESC guidelines are reviewed and discussed by the principal authors. A keynote lecture is given by an internationally renowned scientist, who is rewarded the Lifelong Achievements Award of the ASC. This year’s recipient is Professor Salim Yusuf from Hamilton, Ontario, Canada. The congress topic is cardiovascular disease prevention, and that’s why we organize a public awareness event including a 5 km distance run from the congress centre through the city of Salzburg.

Since 2016, the annual congress is conducted in collaboration with the Austrian Society of Cardiac and Thoracic Vascular Surgery. This interdisciplinary approach underlines the growing importance of the heart team for treatment decisions in patients with cardiovascular disease. Accordingly, one of the most vivid sessions of the congress is entitled ‘heart team on the stage’ and includes intense interdisciplinary discussions of complex patient cases.

The official scientific journal of the society is the Cardiology edition of the Wiener Klinische Wochenschrift – The Middle European Journal of Medicine, which is chaired by Prof. Julia Marscherbauer, one of the current Councillors of the ESC Board.

The ASC was involved in the development of training curricula for the new education in Cardiology, which was introduced in 2015. It includes 3 years of training for Internal Medicine (common trunk) and 3 additional years for specialization in Cardiology. The new curriculum