AMJ Australasian Medical Journal [AMJ 2022;15(1):321-323]

Cardiology reports from Australasian region during pandemic times

AMJ 2022 15(1)

SHORT COMMUNICATION

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Cardiovascular disease is leading causes of worldwide mortality and the situation is not very different in the Australasian region. There has been significant improvement in the treatment regimen and the necessary medical infrastructure in the Australasian region during the past few decades. However, there is much research to be done in the areas of disease prevention, treatment and management of cardiovascular diseases and the associated mortality and morbidity. A greater research emphasis has been laid on big data analysis systems, inclusion of administrative and health record datasets for efficient cardiac health care delivery. Readmissions after cardiovascular hospitalizations are common across the world. One of the recent studies from Australasian region summarized the risk factors associated with readmissions and interventions in order to reduce the readmissions in cardiovascular health care. This study was based on observational and interventional outcomes and included hospitalizations for heart failure, acute coronary syndrome, stroke, and acute myocardial infarction. It was observed that heart failure management programs reduced readmissions significantly. Successful interventions also reduced the rate of readmissions. The cardiovascular events and the associated mortality rates were observed to be higher during the cold December month in both the Northern and Southern hemispheres[1]. In a population-based case control study comprising of the mortality data of stroke and cardiovascular events in Australia, it was observed that coronary heart disease and stroke mortality has remained similar and did not show any increase during the Christmas time unlike the trend in the rest of the world. Another report from Australia presented the estimation of the cost associated with Cardio-vascular health care and productivity loss based on the hospital admission data. In this retrospective analysis the cost estimates were based on the societal perspectives[2]. It was observed that the lifetime health care cost for the entire Australian population was 60 billion Australian dollars and the indirect cost was higher than the direct cost. Therefore, the health care interventions cost budget should be higher than health service cost[3,4].

The Australian region was successful in suppression of the COVID-19 transmission when compared to Europe and North America with extremely low notification rate. This was achieved by closure of the international influx, greater emphasis on the National consensus on the COVID-19 policies on social distancing norms. Some of the empirical studies have suggested that the number of the cardiac perceptions in Australia have dropped by 30% during the pandemic times. One of the studies reported that there was nearly 30% reduction in the ST-segment myocardial infraction (STEMI) cardiac catheterization laboratory activations in the year 2020 where the COVID-19 norms were strictly followed compared to the previous year. In the same year the Australian Government cancelled non-emergency elective surgeries and the Cardiac Society of Australia and the New Zealand endorsed high threshold for acute cardiology admissions and outpatient management of the stable angina and troponin-negative chest pain. The government also introduced Tele-health scheme as a substitute for physical consultations. Minimization of both invasive and non-invasive procedures was done to divert the resources to COVID-19 care and for the protection of health care workers. These factors have significantly contributed to fear of seeking medical care, irrational avoidance to avail medical care leading to delayed reporting and presentation of the cardiac conditions causing significant health consequences[5].

Even though the cardiac related hospitalization was reduced there were adverse clinical outcomes and collateral damage during the pandemic. The number of cardiac patients who did not seek medical attention has increased significantly. This has increased the level of risk perception and could potentially lead to significantly higher cardiovascular diseases in the post - COVID-19 era. Delay in diagnosis and treatment could be observed since all the percutaneous coronary interventions were to be performed with PPE and N95 masks. Delays were also happening due to training involved in the COVID appropriate precautions. Consensus existed for consideration of thrombolysis for STEMI patients with confirmed or suspected COVID-19 without high-risk features of anterior ST elevation, cardiogenic shock, and or life-threatening arrhythmias[6]. The recommendations also

included consideration of thrombolysis in lytic-eligible patients with high exposure to COVID-19 and without indication for urgent cardiac catheterization, but with severe ischemia, electrocardiographic changes or hemodynamic instability. Therefore, it was concluded that disproportionate risk perception contributed to collateral damage, patient care was affected due to avoidance of hospital visits and it was suggested that the standard of care must not be compromised and timely access to percutaneous coronary interventions should be provided[7,8].

One of the Australian cardiovascular clinical practices is the use of coronary artery calcium score for estimating cardiovascular risk. Some of the main recommendations included that such calcium scoring should be conducted for selected people with moderate cardiovascular risk and follow contemporary treatment. Therefore, CAC scoring has significant impact on the classification of the absolute cardiovascular risk. There has been clinical uncertainty for prescribing statins for healthy subjects above 70 years of age. A randomized trial of community in Australia comprising of the aged persons above 65 years, free of cardiovascular disease, dementia and disability and comparing with the group, who took statins with those who did not, revealed that nearly one fourth people took statins at baseline and was not associated with disability free survival or with risk of mortality or dementia. Intake of statins was however associated with lower risk of physical disability and cardiovascular outcomes. Therefore, it may be concluded that statin usage may be beneficial for prevention of the physical disability and cardiovascular events but was however not beneficial for prolonging disability-free survival or avoiding mortality or dementia[9,10].

The year 2020 has been challenging and difficult for the entire world population and medical community. The nursing profession was more challenging during this unprecedented and uncertain time. Underserved and vulnerable populations had to face suffering. During the pandemic times cardiovascular nurses were trained to reduce the risk of virus transmission and various cardiovascular implications of COVID-19. Greater emphasis was laid on the rural and remote cardio health care and on the prevention of cardiovascular events and rehabilitation during the pandemic times[11].

Australasian nurses have demonstrated high quality of health care delivery evidence-based practice, innovations in practice, education of patents, ensuring psychosocial and physical well-being of the cardiovascular patients and helped development of policies. The inputs of nursing profession in recommending committees, policy making, and publication are highly valuable. Another study focused on the cardiovascular screening policies in the Australian region particularly in the sporting organizations. The screening components included physical health history, electrocardiogram of the players. It was found that among the athletes, more than eighty percent perform regular screening including ECG. International cyclists are having routine echocardiograms and stress testing. Most of the sports having sports physicians recommended screening. However, several athletes were required to pay for screening and follow-up tests. Especially International players were subjected to mandatory echocardiogram and stress test. It was suggested that promoting the ECG based screening and interpretations could reduce false positives and the cost associated with follow-up tests and treatments. The study recommended that future plans should include cardiac emergency plans, screening infrastructure and infrastructure for long term follow-up among athletes in Australia[12].

A recent study from Australasia focused on strategies for reduction of the cardiovascular disease burden. This study was based on Australian population aged over forty years and included acute and chronic cardiovascular events. The study included cardiovascular deaths and hospitalization and the net benefits from healthcare systems. These strategies included healthy lifestyle, access to preventive treatments and screening, improving the health care infrastructure and the preparedness of the system to acute cardiovascular disease. Among these improving the system response and preparedness reduced the acute cardiovascular related deaths significantly. However, they also raised hospitalizations due to readmissions. Therefore, addressing the cardiovascular risk is very essential while laying emphasis on a healthy lifestyle for reduced hospitalizations and cardiovascular mortality. Such strategies also result in economic health benefits.

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