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POST DISCHARGE FOLLOW-UP FOR PATIENTS INFECTED OR COLONIZED WITH MULTIDRUG-RESISTANT ORGANISMS

Roxanne Mora Taguas, Catu, Allan Mohideen, Juinarah Tana, Elma Lou Deyab, Ola Qudsi, Areej Yaseen, Muhammad AlAhmadi, Maher Al Saedi, Asim. *Infection Prevention and Control Department, King Abdulaziz Medical City, Jeddah*

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Background The spread of multidrug-resistant organisms (MDROs) among admitted patients is one of the major threats facing many hospitals in Saudi Arabia. These organisms include methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant enterococci (VRE), and certain gram-negative bacilli (GNB). There have been increasing challenges in providing and fully implementing specific infection control strategies for affected patients during their hospital stay. Current hospital infection control guidelines recommend single rooms for every MDRO colonized or infected patient. This should be continued while patients are in hospital and upon readmission unless patients are successfully cleared. Evidence of clearance from MDRO colonization is needed before patients are considered non-infectious. Although clearance of MDRO infected and colonized patients is successfully carried out during hospital stay, a major lack of such activity has been identified after patients are discharged from hospitals. The purpose of tracing patients post discharge is to ensure that they will be screened and re-swabbed during their outpatient appointments to assess whether they no longer require extra infection control measures, such as isolation precautions, during their subsequent admission, thereby reducing the need for single rooms.

Methods All patients discharged with MDROs were tracked by the assigned infection control practitioner (ICP). The ICP tracked the appointments of these patients. Notification and instruction for swabbing and rescreening were delivered to responsible nurses at the outpatient department (OPD) using the OPD notification forms.

Results Of 271 discharged patients with MDRO infection or colonization, 38 (14%) patients were successfully cleared and deflagged from MDROs; 40 (14.7%) were not given an OPD appointment; 19 (7%) were not swabbed; 61 (22.5%) have no doctor's order; 34 (12.5%) were readmitted; 10 (3.6%) were swabbed but still yielded positive results; 11 (4%) were given very long appointment; and 9 (3%) were transferred to another facility and/or home healthcare.

Conclusion This exercise proved to be very tasking for any ICP to undertake. In addition, multiple challenges have been identified which require administrative support, commitment, and participation of all healthcare workers to decrease demand on isolation beds and to reduce risk of MDRO transmission.

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MULTIFUNCTIONAL EVALUATION IN ELDERLY PATIENTS HOSPITALIZED FOR HEART DISEASE

Eltayyeb Alameen, Amjad M Ahmed, Iyad Farah, Mohammed Aziz. *Cardiac Sciences, King Abdulaziz Cardiac Center, King Abdulaziz Medical City*

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Background Frail patients with cardiovascular disease have much higher frequencies of adverse events and

complications, suggesting the need for more accurate functional stratification and careful evaluation of the risk/benefit ratio of invasive procedures. This project aimed to evaluate the prognostic impact of the Short Physical Performance Battery (SPPB) and handgrip test on the incidence of death and hospitalization for all causes in older patients hospitalized for heart disease.

Methods This prospective study included 283 patients aged 65 years or older, who between December 2015 and December 2017 were hospitalized for acute coronary syndrome, arrhythmias, or heart failure. Included patients were followed up after 1 year for the endpoint of all-cause mortality (ACM) and hospitalizations. All patients were evaluated for frailty using the handgrip test (using a dynamometer to measure the force of muscular contraction) and SPPB (to evaluate the functionality of the lower limbs). Chi-squared test and T-test were used to compare groups as appropriate. Univariate and multivariate logistic regression analysis was used to predict ACM.

Results Mean age was 72.8 ± 6.5 years, 70% of patients were male, and mean BMI was 29 ± 5.3 . Acute coronary syndrome 51.5%, length of stay 7.6 ± 7.3 days, diabetes 74%, hypertension 79%, and dyslipidemia 60.5%. The total number of deaths was 27 (9.5%) and total admissions 45%. Charlson index in deceased participants was significantly higher than in alive participants ($p=0.039$, CI 0.04–1.33). Deceased participants were significantly frailer than those alive (SPPB $p=0.006$, CI -3.18 to -0.54). Admitted participants had higher Charlson index ($p=0.000$, CI 0.36–1.11) and were frailer than non-admitted participants ($p=0.003$, CI -1.9 to -0.38) with statistical significance. Using univariate logistic regression only to predict ACM, Charlson index $p=0.42$, odds ratio (OR) 1.25 (95% CI 1.01–1.57); SPPB $p=0.008$, OR 0.854 (0.76–0.959). With multivariate analysis SPPB predicts ACM ($p=0.011$, CI 0.726–0.960).

Conclusion Among elderly patients (older than 65 years) hospitalized for heart disease (acute coronary syndrome, arrhythmia, heart failure) and after a year of follow up, the SPPB independently predicted all study outcomes (ACM, rehospitalization, and emergency room visit). Frailty evaluation can provide a valuable pre-discharge follow-up plan that might heavily impact patient care.

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INFECTION CONTROL MANAGEMENT OF CLOSTRIDIUM DIFFICILE INFECTION (CDI) IN AN INTENSIVE CARE SETTING AT KING ABDULAZIZ MEDICAL CITY/JEDDAH 2018

Areej Qudsi, Roxanne Taguas, Ang Seokgor, Javid Bhutta, Fahad Alhameed, Asim Alsaedi. *Infection Prevention and Control Department Ministry of National Guard Hospital Affairs*

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Background *Clostridium difficile* is a gram-positive, anaerobic, toxin-producing bacillus that mainly causes diarrhea and colitis. A recent meta-analysis reported an overall rate of 3.54 per 10,000 patient-days per year for *C. difficile* infection (CDI). The highest incidence was observed in intensive care units (ICUs). In the USA, *C. difficile* caused an estimated half a million infections and 29,000 deaths in 2012. More than 80% of these deaths occurred in individuals aged 65 years or older. The approximate cost of CDI treatment in the USA