patients with positive HBsAg and HCV PCR were collected in 2018 using the hospital electronic record system. In addition to enhanced counseling and referral of infected patients, an annual viral hepatitis awareness campaign was done during the International Hepatitis Day to raise public awareness about vaccination and treatment for viral hepatitis.

**Results** Hepatitis B management initiation increased from 67% during 2013–2016 to 94% during 2018, and patients lost to follow-up decreased from 33% to 6%. Similarly, hepatitis C management initiation increased from 67% during 2013–2016 to 86% during 2018, and patients lost to follow up decreased from 33% to 14%.

**Conclusion** Enhanced counseling and referral of infected patients, and increasing public awareness were successful in improving the initiation of case management and reducing loss to follow-up for patients with hepatitis B and C. The intervention focused on engagement and use of the hospital electronic record system in improving the public health role of the IPC department. More efforts are still required to reduce the number of patients lost to follow-up.

---

**THE PREVALENCE OF OCCUPATIONAL INJURIES AMONG SAUDI RED CRESCENT PRE-HOSPITAL CARE PROVIDERS IN JedDAh, SAUDI ARABIA, 2018**

Yousef Arar Hamoud, Abdullah Abdulkhaleq, Abdulhamid Ayman Ayoub, Ahmed Almallki, Turki Alsubari, Fatis Bukhari. College of Applied Medical Science (Emergency Medical Services) King Saud bin Abdulaziz University for Health and Sciences

Background Pre-hospital care providers were at higher risk of occupational injuries than other medical care providers because of the workplaces and situations they usually deal with. Through observations and repetitive visits to the Saudi Red Crescent Authority (SRCA) stations, the issue was outlined and identified. The sample was collected from SRCA, which is the main emergency medical services authority providing care for patients outside the hospital environment. The pre-hospital care providers in SRCA are divided into three groups: physicians, paramedics, and emergency medical technicians (EMTs). In Saudi Arabia (SA), no studies had been done on pre-hospital occupational injuries; however, some studies on this topic have been done around the world.

**Methods** A cross-sectional study was done using an online questionnaire (Google Forms) to obtain demographic and occupational injuries-related information from 217 SRCA pre-hospital care providers. The sample was collected using a 95% confidence level and 5% margin of error, which was derived from the population number (n=495) of SRCA pre-hospital care providers in Jeddah, SA.

**Results** After the calculations, the study showed a high prevalence of occupational injuries of 52.5% among 137 EMTs, 51 paramedics, and 29 physicians. Participants had an average of 6.63 years’ experience. Back-related injuries were the most common type of injury, resulting in 60 cases among 114 injured participants. Work stress was considered the most common estimated risk factor based on the participants’ questionnaire, with 64 cases. Additionally, no significant difference was found using T-test and Chi-squared test to compare age and experience with different types of occupational injuries.

**Conclusion** Despite the study’s limitations, which affected its accuracy, the study showed a high prevalence of occupational injuries among SRCA pre-hospital care providers in Jeddah, SA. One of these limitations was a small sample size resulting from communication barriers with SRCA. Occupational injuries that affect pre-hospital care providers may reduce the effectiveness of a patient’s health and safety. Future studies should identify and evaluate prevention strategies to increase public health awareness in the pre-hospital setting by highlighting the relationship between healthcare occupational injuries and patients’ outcomes and safety.

---

**THE PRACTICE AND ATTITUDE OF HEALTHCARE WORKERS TOWARDS STETHOSCOPE CLEANING: A PATIENT SAFETY QUALITY IMPROVEMENT PROJECT**

Alsahafi Majid, Jamal Ragad, Nagadi Sarah, Arslahid Hussa, Abahbghi Lujain, Aldobie Lamees, Aldauig Badreyah, Hashem Anwar. Medicine and Microbiology King Abdulaziz University

Background Healthcare-associated infections constitute a major health concern for hospitalized patients. Contaminated stethoscopes may be a potential source for the spread of microorganisms. The aim of this study was to determine the current attitude and rate of stethoscope cleaning as well as the level of contamination of stethoscopes, followed by the implementation of a patient safety quality improvement project.

**Methods** A prospective study was performed at King Abdulaziz University Hospital. Our study ran through four main phases. In the first phase, healthcare workers (HCWs) were observed throughout the medical wards to determine their attitudes towards stethoscope cleaning. During the second phase, random stethoscope swabs were taken for culture to determine their contamination rate; afterwards, a questionnaire was distributed among the HCWs to identify stethoscope cleaning barriers. In the third phase, an awareness day was scheduled to demonstrate the importance of stethoscope cleaning, and cleaning materials were made accessible. In the fourth phase, we estimated the impact and effectiveness of the intervention by observation of HCWs. Descriptive statistics were applied. All data were analyzed using Microsoft Excel sheets.

**Results** In the observational phase, only 16.7% of 155 HCWs cleaned their stethoscopes between patient encounters. Among the 155 HCWs who participated in the survey, 25% reported that they never cleaned their stethoscopes, 33.5% had difficulty finding cleaning materials, 18.7% thought cleaning isn’t necessary, 93.4% reported that they would clean their stethoscopes if the wipes were accessible, and 21.3% cleaned their stethoscopes regularly. Among the 39 stethoscope sterile swabs taken, the mean growth on blood agar was 245 colony-forming units (CFUs; ±64). In the post-intervention observational phase, 65 HCWs were observed, of whom 70.1% cleaned their stethoscopes (p<0.01).

**Conclusion** Most HCWs do not clean their stethoscopes between patient encounters. Raising awareness and providing appropriate cleaning materials are effective interventions to increase the rate of stethoscope cleaning among HCWs.