Cardiac Sonographer intravenous (IV) Cannulation Training – Workflow Innovation Pilot Study to Assess Safety and Drive Efficiency
M. James
Princess Alexandra Hospital Brisbane, Camp Hill, Australia

Background: Using echocardiography to thoroughly investigate clinical questions can involve the need for IV cannulation (e.g., administering saline or echo contrast agents). This can result in delays while seeking a suitably qualified nurse or doctor to cannulate. At our centre, a tertiary referral echocardiography laboratory we investigated if sonographers undertaking cannulation training as advanced practice would reduce procedure times.

Methods: Staff completed training through the Vascular Access Surveillance Team (part of infection control). The core component of this program is to provide support to clinical areas. The hospital’s procedure plan – Peripheral Intravenous Cannulation (PICC) – insertion and management, provided guidelines for the department.

General pilot project scope: Initially three staff members completed training to perform IV cannulation for procedures within the unit. Guidelines for the Cardiac Sonographer in the Performance of Contrast Echocardiography: A Focused Update from the American Society of Echocardiography reemphasizes the 2001 statement that the ASE supports IV cannulation (eg. administering saline or echo contrast agents).

Results: Sonographer performed IV cannulation resulted in a mean time (from last image to first image post IV) of 18 minutes vs 19 minutes, for Sonographers vs doctors respectively.

Conclusion: Following the initial twelve month trial period, IV cannulation performed by sonographers improved workflow with a marginal decrease in cannulation time with no adverse safety outcomes. Sonographer performed IV cannulation should be considered as an advance scope of practice, particular in facilities with reduced medical workforce capacity.

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Cardiovascular Risk Behaviour is an Emerging Health Issue in Developing Countries
L. Negesa, J. Magarey, P. Rasmussen, J. Hendriks∗
University Of Adelaide, Adelaide, Australia

Introduction: The global progress in CVD prevention is scarce particularly in developing countries, which are facing a high burden of CVD whilst there is limited availability of resources and evidence to educate and modify lifestyle behaviours in the population.

Method: A hospital based cross-sectional survey was conducted in two referral hospitals in Ethiopia. Outpatient unit patients who had a confirmed diagnosis of CVD were eligible for participation in the study. Data were collected through face-to-face interviews with patients using validated tools.

Result: All patients had inadequate consumption of fruit and vegetables, 20% were current khat chewers, 19% were current alcohol drinkers and only 1% were current smokers. The prevalence of low physical activity in the total population was 51.6% for both sexes. Approximately one-third (30%) of patients had only one of these risk behaviours, more than half (52%) had two, 18% had three or more risk behaviours.

Conclusion: Patients with CVD maintain unhealthy lifestyles even though attending follow up care with a specific focus on risk management. The findings of this study demonstrate a high prevalence of physical inactivity, alcohol consumption and inadequate fruit and vegetable consumption in developing countries. Moreover, this study shows the existing follow-up care is ineffective and provides evidence for policy makers that health services reform is required. Implementation of lifestyle support programmes should be considered for the disease prevention policy agenda in developing countries.

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Development of an Avatar-Based Education Application for Improving Knowledge and Self-Care behaviours in Heart Failure: A Feasibility Study
P. Wonggom1,∗, H. Du1, P. Nolan1, C. Burdeniuk2, S. Kelman3, T. Barry1, K. Nesbitt1, R. Clark1
1 College Of Nursing And Health Sciences, Flinders University, Adelaide, Australia
2 Cardiac Services, Flinders Medical Centre, Southern Adelaide Local Health Network, Adelaide, Australia
3 Community Heart Failure Service, Southern Adelaide Local Health Network, Adelaide, Australia

Background: Self-care is important in Heart Failure (HF) to prevent hospitalization and improve health outcomes. Interactive technology has been demonstrated to assist in improving HF knowledge and self-care.

Purpose: To develop and evaluate an interactive avatar-based application to improve HF knowledge and self-care.

Methods: Participatory action research and feasibility testing using pre-post test methods.

Result: Six HF patients, two HF family members and HF and information technology experts participated in the design and development an avatar-based application using two cycles on critical reflection. Based on the feedback in this co-design, avatar characteristics, images, concepts and quizzes of the application were updated for improving user experience.

Thirteen participants (66 ± 13 years, 76.9% male) were recruited to evaluate the application’s feasibility for improvements in HF knowledge, self-care behaviors, and satisfaction.