Heartbeat: health literacy for improving cardiac outcomes

doi:10.1136/heartjnl-2021-320311

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The potential impact of patient education on improving outcomes in patients with cardiovascular disease (CVD) has received little attention. In a randomised clinical trial, McIntyre and colleagues¹ found that waiting room video-based education about CVD risk reduction resulted in more patients being motivated to implement heart healthy behaviours (29.6% vs 18.7%, relative risk 1.63, 95% CI 1.04 to 2.55) and higher levels of satisfaction with the clinic visit. Participants who were also randomised to receive education about cardio-pulmonary resuscitation (CPR) reported greater confidence in performing CPR. Overall, at baseline 16% of patients reported optimal CVD risk factors which increased to 25% at 30 days but there was no difference in improvement between the intervention group and usual care (figure 1).

In an editorial, White² comments that 'Health literacy is an underused resource for improving cardiac outcomes with patients being better able to understand their disease, understand modifications in their lifestyles required for prevention such as nutrition and exercise and understand the need for medications that may improve adherence. Patients may therefore be better able to maintain their own health and well-being. Waiting room computer tablets have the potential to improve outcomes.' Clearly, additional research is needed on the optimal educational materials and presentation formats to improve cardiovascular outcomes, hopefully with close collaboration between patients and healthcare providers.

Also in this issue of *Heart*, Imberti and colleagues³ present data from a systematic review and meta-analysis to support catheter ablation (CA) as first-line treatment in patients with paroxysmal atrial fibrillation (AF). In 1212 patients with paroxysmal AF combined from six studies, those treated with CA had a 36% relative risk reduction for recurrent arrhythmias compared with

While You're Waiting: A Randomised Clinical Trial

Patients with cardiovascular disease (CVD) can spend more time in clinic waiting rooms than with their doctor. We aimed to assess whether waiting time could be used to deliver education on CVD risk factors and cardio-pulmonary resuscitation (CPR).

After clinic, participants who had received the program were **more likely** to report:

- High motivation** to improve CVD lifestyle behaviours (RR 1.63 [95% CI 1.04, 2.55])
- High clinic satisfaction** (RR 2.19 [95% CI 1.45, 3.33])
- CPR intervention participants were **more likely** to report **high confidence** to perform CPR (RR 1.61 [95% CI 1.20, 2.16])
- Between 0 and 30 days, the overall cohort **improved their CVD risk factors** (OR 2.44 [95% CI 1.38, 4.49]), but there were no significant between-group differences

This concept is **feasible** and **scalable**. Future studies should examine the potential for impact on clinical outcomes

Figure 1 Informational graphic summary of the While You're Waiting study.

those treated with medications, with symptomatic recurrent arrhythmias in 20% vs 37% and lower rates of healthcare utilisation (figure 2).

Blaauw, Mulder and Rienstra⁴ concur with the conclusion that CA is more effective than anti-arrhythmic medication for reducing recurrent AF but urge caution in widespread adoption of this approach because 'questions remain regarding timing of CA, selection of patients, quality of life outcomes, balancing procedural complications and AAD side effects, and

instituting risk factor management as background therapy.' They urge 'Shared decision-making focusing on individualised timing and balancing benefits–risks is the preferred approach to assess first-line treatment with CA. As CA is rapidly evolving, with novel single-shot devices and promising energy sources (eg, pulsed field ablation), it is foreseen that CA keeps moving towards the frontline of AF management.'

In an elegant study using cardiac MRI combined with statistical machine

Figure 2 Forest plots showing the comparative efficacy and safety of catheter ablation vs antiarrhythmic drugs as first-line treatment of paroxysmal atrial fibrillation. (A) Risk of atrial arrhythmia recurrence. (B) Risk of serious adverse events. (C) Risk of symptomatic arrhythmia recurrence. (D) Risk of healthcare resources use. CI, confidence interval; Cryo, cryoballoon ablation; M-H, Mantel-Haenszel; RFA, radiofrequency ablation; RR, risk ratio.

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Figure 3 Schematic of (A) d-transposition of the great arteries, (B) d-TGA following ASR and (C) D-TGA following ASD. ASD, arterial switch operation; ASR, atrial switch repair.

learning methods, Schuwerk and colleagues⁵ demonstrate overall normal biventricular and biatrial function in patients with an arterial switch operation for transposition of the great arteries (TGA). Only right ventricular longitudinal strain and left atrial function were impaired at a median of 16 years after surgery.

Going forward, Ostenfeld and Carlsson⁶ suggest that 'Remaining questions in this patient group are if the ventricular and atrial function parameters have any prognostic information when all four chambers are examined. Furthermore, assessment of fibrosis and perfusion related to heart function in patients with TGA and arterial

switch operation would be of interest in the future.' A review article by Gaur and colleague⁷ discusses overall management consideration in adults with surgically modified TGA, including both those with an atrial and those with an arterial switch procedure (figure 3).

The *Education in Heart* article⁸ in this issue addresses management of ventricular tachycardia storm including diagnostic criteria, initial management and a multidisciplinary team approach to long-term care.

The *Cardiology in Focus* article⁹ in this issue provides information about the need for and training of cardiologists in global health. As Akhter and

colleagues note: 'In the ecosystem of global cardiovascular healthcare, cardiologists are a part of a multidisciplinary, multisector response in which global cooperation can support better health outcomes.' (figure 4).

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not applicable.

Provenance and peer review Commissioned; internally peer reviewed.

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To cite Otto CM. *Heart* 2021;**107**:1603–1604.

Heart 2021;**107**:1603–1604.

doi:10.1136/heartjnl-2021-320311

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Figure 4 Global cardiovascular healthcare. IT, information technology.