



A Change in Cardiac Rehabilitation Referral Defaults from Opt-In to Opt-Out Increases Referral Rates Among Patients with Ischemic Heart Disease

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Introduction

- Cardiovascular disease is the leading cause of mortality and morbidity in the United States and worldwide
- Cardiac rehabilitation (CR) reduces rates of mortality, morbidity, and readmissions in ischemic heart disease (IHD) patients; however, it is widely underutilized, mainly due to lack of provider referral
- Although there is a large body of literature on gaps in and barriers to CR referral, there has been relatively little published on strategies to bridge those gaps
- We assessed the hypothesis that **changing our institution's referral defaults from opt-in to opt-out** would increase provider CR referral rates among patients with IHD. Additionally, we aimed to test the impact of supporting that process with staff able to complete the referral

Methods

- We began the project by surveying attending cardiologists, fellows, advanced practice providers, and residents about attitudes towards and barriers to CR referral
- Prior to this study, providers needed to opt-in to CR referral which required them to initiate and drive the process. We transitioned this to an opt-out process
- We used the electronic medical record to design intelligent alerts that identified patients post-acute myocardial infarction (AMI) and post-percutaneous coronary intervention (PCI) who qualified for CR referral
- Case managers were electronically notified of patient eligibility and, by default, initiated and completed the referral process, including selecting and notifying a patient-specific CR center based on patient ZIP code
- We also vetted a list of CR centers corresponding to ZIP codes in which our patients live

Results

- In the 12 months prior to implementing our intervention, our institution's average CR referral rate was 12% (n = 320)
- After the change in defaults from opt-in to opt-out referral (which occurred in **January 2017**), the CR referral rate significantly increased to 78% (n=129) in the **six months** post-intervention ($p < .0001$)
- This change was not seen at other hospitals in our health system where our process was not implemented

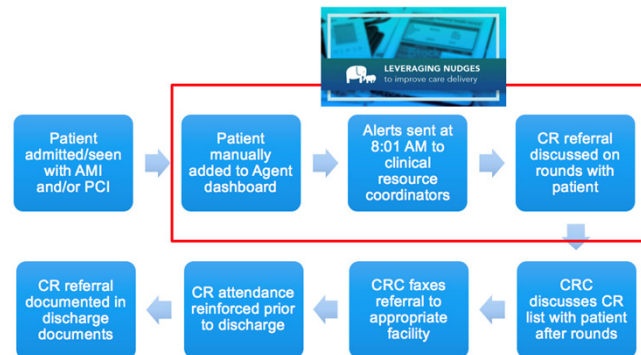


Figure 1: New process map for CR referrals

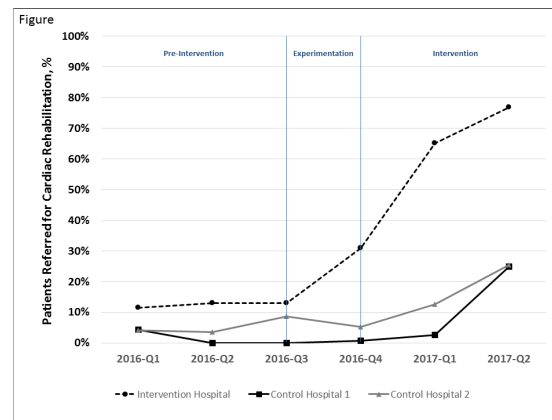


Figure 2: CR referral rates at our institution and sister institutions (control hospital 1 and 2) prior to our intervention and immediately following the implementation of intervention in January 2017

Discussion

- A change in CR referral defaults from opt-in to opt-out was effective in significantly increasing referral rates
- Moreover, the referrals that were placed were completed by internal staff members, meaning we were able to ensure patients were connected to appropriate CR facilities of their choosing
- A similar approach of leveraging default options, especially as they relate to the electronic medical record, could be applied to increase use of other underutilized evidence-based cardiovascular therapies.
- Further work is needed on bolstering downstream CR processes including encouraging patient attendance as well as increasing access to in-person and virtual CR facilities and services

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