CARDIAC STRESS TESTING: OPTIMIZING OUTCOMES THROUGH DUAL PHYSICIAN-PATIENT EDUCATION

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BACKGROUND

Even though cardiovascular (CV) tests, which are used to assess coronary artery disease (CAD), are included in different medical guidelines, cardiologists have limited ability to adequately perform appropriate testing modalities. In parallel, many patients have concerns or anxiety related to CV testing and are not proactively educated on how to prepare for their procedure.

METHODS

An online CME activity was developed as a 25-minute roundtable discussion with 5 leading experts on criteria for the appropriate use of stress testing and preparing physicians to communicate the risks and benefits of testing modalities to their patients to enable shared decision-making.

The activity included a transcript of the discussion and a downloadable slide deck to highlight and reinforce key recommendations.

Participant responses to questions were collected after the education (post-assessment) and compared with each user’s baseline data (pre-assessment) using a 2-tailed paired t-test to provide P-values for assessing the impact of education.

The CME activity also included a link to an interactive patient/caregiver education module, developed in parallel to educate patients and their caregivers about cardiac stress testing. The content of the patient/caregiver module was designed to mirror the shared decision-making concepts discussed in the CME activity.

Patient/caregiver responses post-education compared with pre-education were assessed to measure improvement in knowledge.

Both the CME and the patient/caregiver activities launched on December 16, 2016, and data were collected through October 7, 2017.

RESULTS

Participant Demographics

A total of 312 of cardiologists who participated in the CME activity and answered all pre- and post-assessment questions were included in the analysis (Figure 1).

In addition, 3458 patients preparing for a stress test, 640 family members, 116 caregivers, and 3299 other participants interested in the topic of CV testing who completed the patient/caregiver education module and the pre- and post-education questions were included in the assessment (N=7513).

The patient demographics were consistent with the type of patient undergoing a cardiac testing procedure (Figure 2).

Pre-/Post-Assessment Improvement: Cardiologists

- Post-assessment, 36% of cardiologists answered all 4 questions correctly, compared with 6 pre-assessment (N=312) (Figure 3).
- Significant improvements in post-assessment were observed in cardiologists’ ability to:
  - Select the correct imaging modality for a patient presenting with evidence of CAD and ischemia (45% vs 65%; P<.05) (Figure 4A).
  - Recommend the appropriate pharmacologic stress test to their patient (64% vs 55%; P<.05) (Figure 4B).
  - Order the appropriate imaging modality to detect myocardial perfusion (33% vs 12%; P<.05) (Figure 4C).

Pre-/Post-Assessment Improvement: Patients/Caregivers

- Overall, a 12% relative improvement in patient/caregiver knowledge related to information to share with the healthcare practitioner (HCP) before having a stress test (33% vs 23%) (Figure 5).
  - A 40% improvement among patients preparing for the procedure (34% vs 24%) (Figure 5).
  - A 65% improvement among family members (52% vs 21%) (Figure 5).
  - A 55% improvement among caregivers (38% vs 25%) (Figure 5).
  - A 43% improvement among participants interested in CV testing (32% vs 22%) (Figure 5).

GOALS

To determine if online parallel physician-patient education interventions could improve the performance of cardiologists related to CV stress testing and patient knowledge about the procedure.

METHODS

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This study demonstrated that both knowledge/competence of cardiologists on evidence-based practices and the understanding of patient/caregivers on CV testing can be improved using a dual approach to education.

Significant physician educational gaps remain, warranting additional education on:

- Use of appropriate cardiac testing modalities
- Appropriate imaging modalities to detect myocardial perfusion

Significant patient/caregiver educational gaps remain, warranting additional education on:

- Important medical information to share with the HCP before having a cardiac stress test
- Patient/caregiver-HCP communication tips

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REFERENCES