

Implementation of a Post-Encounter Telephone Call at a Medical Student-Run Free Clinic



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Introduction

- The completion of specialty referrals, laboratory testing, and imaging studies are vital components to patient care^{1,2}.
- While there is no data to our knowledge of laboratory and imaging study complete rates, previous studies have shown that patient completion of specialty referrals is 80%³.
- In the Cooper Rowan Clinic (CRC), a free clinic that serves the uninsured, there is no information regarding the rate of patient order completion.
- There is also limited opportunity for 1st year medical students to participate in CRC patient care, which is shown to enhance communication skills, empathy, and medical professionalism⁴⁻⁶.

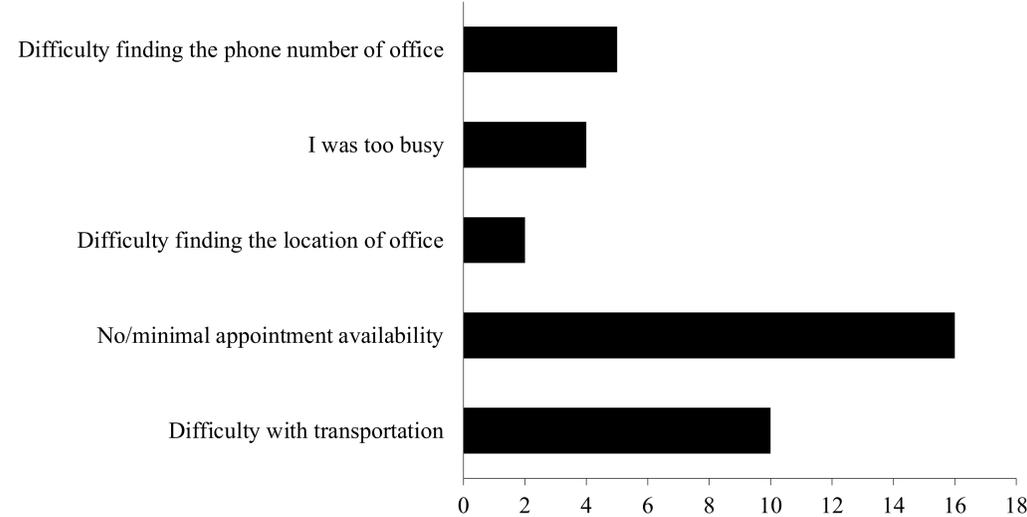
Study Aims

- Determine the completion rates of specialty referrals, imaging studies, and laboratory testing in the CRC and implement a post-patient encounter telephone call by 1st year medical students to improve patient order completion rates.
- Evaluate the impact of the post-encounter telephone call on the completion rate of specialty referrals, imaging studies, and laboratory testing.
- Increase early clinical medical education for 1st year medical students through direct contact with patients, using language interpreter services, and practicing EMR documentation.

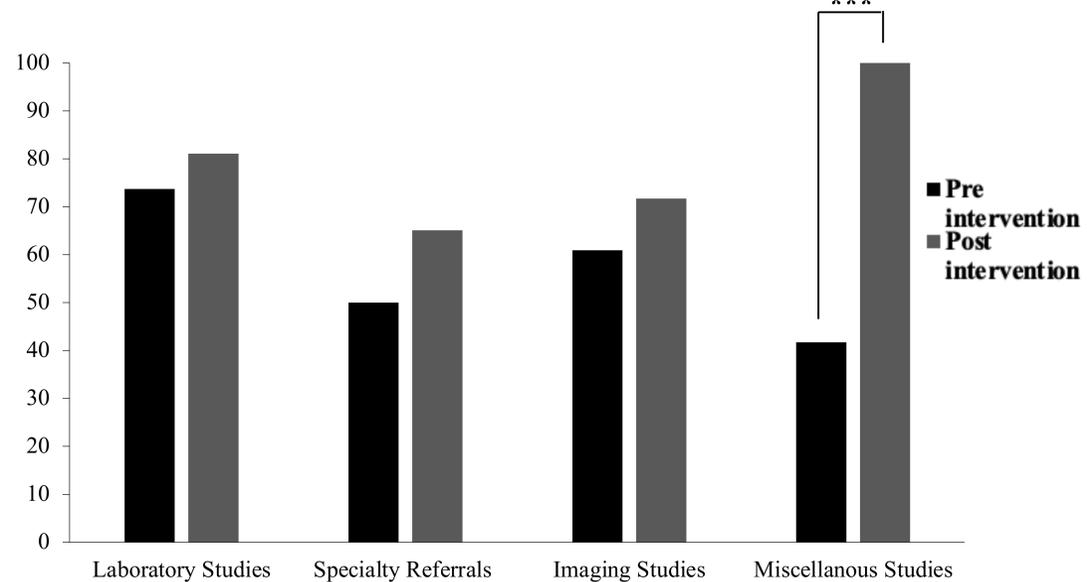
Methods

- A 12-item, one-page, anonymous, pre-intervention questionnaire was offered to CRC patients from September 2021 to December 2021 to evaluate completion rates of laboratory testing, imaging studies, specialty referrals and other miscellaneous studies. The survey also collected information on the different barriers patients faced.
- 1st year medical students were trained to perform patient phone calls, provide helpful information to aid completion of patient orders and document calls in the EPIC electronic medical record system.
- In January 2022, students began to call their patients one week after the visit provided the patient had received an order form. Students documented their phone calls and described how they aided their patients during the call.
- A 12-item, one-page, anonymous, post-intervention questionnaire was offered to CRC patients from February 2022 to May 2022 to evaluate completion rates of laboratory testing, imaging studies, specialty referrals and other miscellaneous studies following the post-encounter phone call.
- Statistical analysis was performed using the IBM Statistical Package for the Social Sciences (SPSS) statistics software version 28.0 (IBM Corp., 138 Armonk, NY). Chi-squared tests were used to compare the pre- and post-intervention completion rates of laboratory testing, specialty referrals, imaging studies and other miscellaneous studies

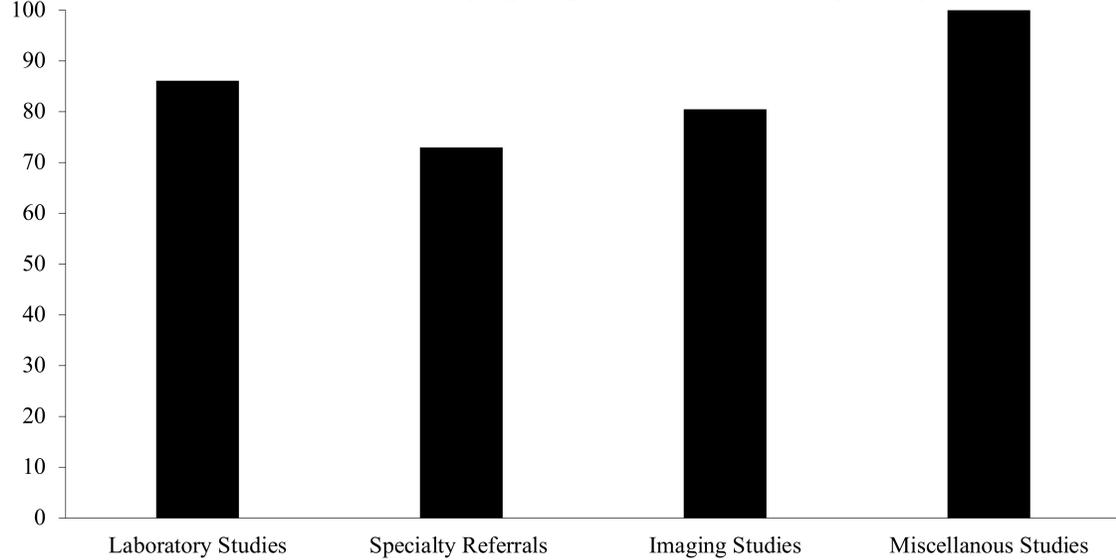
Graph 1. Reported patient barriers to completion of order forms



Graph 2. Pre vs post intervention completion rates for laboratory studies, medical referrals, imaging studies and miscellaneous studies



Graph 3. Completion rates for laboratory studies, medical referrals, imaging studies and miscellaneous studies after stratifying for post-intervention completed phone calls



Results

- 151 pre-intervention and 205 post-intervention surveys were answered and collected. 103 telephone calls were made during the 5-month student telephone call intervention period.
- Within the pre-intervention group, completion rates were determined to be 73.7% for laboratory studies, 50.0% for specialty referrals, 60.9% for imaging studies, and 41.7% for miscellaneous studies.
- In the pre-intervention group, 10 patients reported experiencing difficulties finding transportation, 16 reported a lack of or a minimal amount of appointment availability, 2 noted difficulty finding the location of the office, 4 stated that they were too busy to complete their order forms and 5 reported difficulties finding the phone number of the office (Graph 1).
- Within the post-intervention group, order completion rates were determined to be 81.1% for laboratory studies, 65.1% for specialty referrals, 71.7% for imaging studies and 100.0% for miscellaneous studies (Graph 2).
- There were no statistically significant differences in completion rates for laboratory studies, specialty referrals and imaging studies. However, the increase in order completion rates for miscellaneous studies between the pre- and post- intervention groups was statistically significant ($p < 0.005$).
- When stratifying the post-intervention surveys to only include patients who received a telephone call, order completion rates were 86.1% for laboratory studies, 73% for specialty referrals, 80.5% for imaging studies and 100.0% for miscellaneous studies (Graph 3).

Conclusion

- Although not statistically significant, the **completion rates of laboratory testing, specialty referrals, and imaging studies improved by at least 10%** following the implementation of a medical student post-encounter telephone call.
- The **implementation provides an opportunity to improve patient outcomes, patient-provider communication, early medical student clinical education** and potentially improve preventative medicine within the setting of a student-run free clinic.
- Our goal is to continue to improve the completion rates of specialty referrals and diagnostic studies with sustained implementation of the post-encounter telephone calls.**

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