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References: 29
Tables: 3
Figures: 2
Appendices: 1
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Abstract

Background
Coordination is critical to successful team-based healthcare. Most clinicians, however, are not trained in effective coordination or teamwork. Audit and feedback (A&F) could improve team coordination, if designed with teams in mind.

Aim
We tested effectiveness of a multifaceted, A&F-plus-debrief intervention at improving coordination in primary-care teams, compared to controls.

Design and Setting
Case-control trial within U.S. Veterans Health Administration Medical Centers.

Method
We compared 34 primary-care teams selected from 4 geospaced hospitals to 34 administratively matched control teams. Intervention-arm teams received monthly A&F reports about key coordination behaviors and structured debriefings over 7 months. Control teams were followed exclusively via their clinical records. Outcome measures included a coordination composite and its component indicators (appointments starting on time, timely recall scheduling, emergency department utilization, and electronic patient portal enrollment). Predictors included intervention arm, extent of exposure to intervention and degree of multiple-team membership.

Results
Intervention teams did not significantly improve over control teams, even after adjusting for multiple-team membership. Follow-up analyses indicated cross-team variability in intervention fidelity; although all intervention teams received feedback reports, not all teams attended all debriefings. Compared to their respective baselines, teams with high debriefing exposure
improved significantly. Teams with high debriefing exposure improved significantly more than teams with low exposure. Low exposure teams significantly increased patient portal enrollment.

**Conclusion**

Team-based A&F including adequate reflection time can improve coordination; however, the effect is dose dependent. Consistency of debriefing appears more critical than proportion of team members attending a debriefing for ensuring implementation fidelity and effectiveness.

**Keywords:** primary healthcare, audit and feedback, debriefs, team coordination, learning healthcare systems, embedded partnership research

**How this fits in:** A&F in healthcare has largely consisted of summaries or dashboards of clinical performance to individuals at varying levels of aggregation and little else. Our study demonstrates reflection is an important component in the design of effective A&F and that, with proper exposure and adherence, it can be effective for improving nonclinical processes impacting quality of care.
BACKGROUND

Primary care is the gateway for most patients into the healthcare system, and care coordination is one of its most essential functions. Consequently, primary teams require effective team coordination to deliver effective care coordination: for teams to produce successful outcomes, members must be able to effectively sequence and route interdependent clinical work so patients do not “fall through the cracks.” Effective teamwork is not part of most clinicians’ training. Thus, effective tools designed for teams are needed to improve team coordination and, in turn, coordination of care.

Multiple frameworks seek to codify best practices for health-care coordination. For example, the framework proposed by the Agency for Healthcare Research and Quality proposes specific coordination activities (e.g., assessing needs/goals, facilitating transitions, follow-up), and broader approaches (e.g., health information technology to facilitate coordination, a health-care home for patients) that should facilitate coordinated care. However, the framework omits the fundamental processes and mechanisms behind successful coordination. Without understanding the “how” of coordination, it is difficult to improve team coordination and, in turn, deliver higher-quality care. Gittel’s theory of relational coordination begins to address this shortcoming, by positing that shared goals, shared knowledge and mutual respect between groups or teams promote frequent, timely, accurate, problem-solving communication and vice versa, allowing them to effectively coordinate their work.

Based on 30 years of coordination research Okhuysen and Bechky’s integrated framework expands Gittel’s work to explain the underlying mechanisms of effective coordination, proposing three necessary, integrating conditions: predictability, (knowing what tasks are involved and when they happen), accountability (clarity over who is responsible for
what), and common understanding (a shared perspective on how each individual's work contributes to the whole). Together, they allow team members to collectively accomplish interdependent tasks, consistent with recent research. The framework also posits specific mechanisms such as plans and rules, roles, and routines, which research shows make these integrating conditions possible, and which are associated with better coordination and, subsequently, better task performance.

Using this framework, we could identify areas ripe for intervention and select appropriate tools. Healthcare is highly protocolized, with many explicit policies, rules and general routines in place. What is needed are tools that can help teams monitor their performance and adapt their processes flexibly to maintain predictability, accountability and common understanding within the team. From this perspective, audit and feedback (A&F) is viable; A&F is effective for changing clinician behavior, particularly when correct-solution information is presented. However, clinical work requiring more complex coordination is more difficult to improve. Thus, even when designed correctly, traditional feedback reports and dashboards may be insufficient to improve team-based outcomes dependent on coordination due to the interdependent nature of the underlying work. From this perspective, team-based A&F may require additional elements targeted at improving predictability, accountability and common understanding.

An important component of any audit and feedback, whether team- or individual-focused, is the opportunity for reflection in order to create the conditions for behavior change. Because team performance is driven by interactions amongst team members (team processes) in addition to individual member performance, more structured approaches to post-feedback reflection and correct-solution information are needed for teams than for individuals. Rudolph and colleagues
advocate for debriefing as a form of formative assessment that can help those who debrief “develop and integrate insights from direct experience into later action,” (p.1010) particularly if the participants investigate the conditions underlying a performance gap. Reflection and debriefing can be especially useful when the members of a team serve on multiple teams, and their cognitive resources are spread thin. Interactive feedback elements such as team debriefs encourage such reflection and self-discovery, and explicitly elicit team-based opportunities for improvement, thus amplifying individual-level effects of A&F to the team.

**Study Objective**

The objective of this study was to test effectiveness of a team-based A&F-plus-debrief intervention at improving coordination in primary-care teams. We hypothesized improved team coordination with the intervention compared to administrative controls.

**METHODS**

**Design**

This controlled trial of a team-based, multifaceted A&F intervention is part of a larger partnered research study. Details of this partnership project and its methods appear elsewhere; we follow guidelines of Hysong et al. for reporting partnered research.

**Partnership Approach**

This study was conducted in close partnership with the U.S. Department of Veterans Affairs (VA) Great Lakes Healthcare system (Network 12), which has eight medical centers (VAMCs) and 38 community-based outpatient clinics; and the South Central VA Healthcare Network (Network 16), consisting of 10 VAMCs and 54 outpatient clinics. Experts in industrial/organizational psychology, primary care, data management/programming, and statistics, along with operational leaders and primary-care clinicians, comprised our research
team. The research team has long-standing relationships with both networks; for this study, the research team contributed scientific and methodological expertise and protected research effort; operational partners contributed study sites, data and protected staff time for participation.

**Site and Team Selection**

Operational partners helped select intervention-arm sites, based on resource availability, resulting in 34 teams at four sites: one large VAMC from Network 12 and three smaller outpatient clinics from Network 16, selected based on driving distance from the research team. To be eligible, teams were required to be led by an attending primary-care provider; specialty and resident-led teams were excluded.

We applied the methodology of Byrne and colleagues, which matches peer groups for facilities based on site characteristics, to identify control sites. The final 34 control teams were selected from five sites; control and intervention teams were matched based on multiple-team membership (the average number of teams to which their members were assigned).

**Participants**

We invited via e-mail the members of 44 primary-care teams (n=83) at four VA primary care clinics from Networks 12 and 16, consisting of primary-care providers, registered nurse care managers, licensed vocational/practical nurses, and scheduling clerks. As the recommended core team size is 4 members, many team members are assigned to more than one team to ensure sufficient coverage. We followed-up as needed via email, instant messaging, phone calls and in person. For a given team to be enrolled into the study, at least two of a team’s core members (provider, care manager, clinical associate, and clerical associate), must have enrolled.
**Intervention**

Consistent with research and best practice, 10, 12, 20 our multifaceted, team-based intervention consisted of a one-time, 30-minute participant training followed by monthly feedback reports and debriefings over a 7-month period. Figure 1 details enrollment and participation timeline for the teams.

[Insert Figure 1 here]

**Training**

Participants received a 30-minute training webinar 21 explaining the fundamentals of coordination (predictability, accountability and common understanding), a step-by-step guide to interpreting their feedback report, and the mechanics of the team debriefs (described below).

**Web-based A&F Reports**

Participants received monthly feedback reports containing performance information on each measure of coordination and the composite (see Figure 2). The report format follows current recommendations for evidence-based feedback intervention design. 22 Though designed for an interactive, web-based experience, the report can be used in print (as done by some teams). In addition to traditional evidence-based components, 10, 23, 24 the report included novel, yet evidence-based features that distinguish it from currently available dashboards, such as functions that show incremental value gain per additional unit of performance improved, and prioritization of indicators (tailored for each team at each time point), based on value-gain maximization.
Team Debriefs

One week after sending feedback reports, the research team held 15- to 20-minute debriefings with teams to facilitate guided discussions about coordination and next steps for improvement. Team debrief structures were adapted from the Team Dimensional Training approach for guided self-correction,\(^{25,26}\) with which members diagnose and solve their team’s performance problems with guidance as to topics they should discuss (in this case the feedback report guided the discussion) and ways to do so constructively.\(^ {27}\) Facilitated by a research team member, clinical teams discussed the roles and needs of each team member to perform successfully on the feedback-report metrics as a set, facilitate coordination within the team and, ultimately, improve clinical performance. Importantly, by the end of each debrief, the team wrote two things to start, stop and continue doing to improve coordination, as measured by report indicators. All debriefing materials were available to teams postdebrief on the feedback-report website.

Intervention Fidelity

Dane and Schneider\(^ {28}\) propose five properties to characterize fidelity: exposure (the extent to which participants received the intervention), adherence (the extent to which participants complete all aspects of the intervention as intended), quality of delivery (the extent to which the intervention is delivered to standard), participant responsiveness (participant reactions and satisfaction with intervention components), and program differentiation (extent to which the intervention does not overlap or is confounded by similar initiatives). Under controlled research
conditions as is the case in this research study, most facets of fidelity can also be controlled, thereby mitigating any unintended impact on study results.

In our study we were able to control the quality of delivery (feedback reports were generated and delivered via automated computer code; trained members of the research team delivered debriefings to the designed standard, confirmed by quality control recordings); adherence (feedback reports were reviewed and discussed during debriefs, and debrief facilitators (members of the research team) ensured SSC forms were completed at the end of the brief) and program differentiation (the research team confirmed the selected sites and teams were not involved in similar initiatives during the duration of the study), and exposure to the feedback reports (reports were delivered to participants’ preferred email and printed copies were reviewed during debriefings). Though not controllable, we also assessed participant responsiveness through exit surveys at the end of the study, and exposure to the debrief component of the intervention by tracking attendance at team debriefs. Of all five facets, exposure to debriefs had the lowest extent of control and the highest potential for impacting findings. We therefore used attendance records to create measures of exposure to include in our analyses (see effect modifiers section, below).

Measures

Dependent Variable: Coordination

To identify a suitable measure reflective of team coordination in primary care we relied on an evidence-based methodology from industrial/organizational psychology called the Productivity Measurement and Enhancement System (ProMES). Designed to develop performance measures, ProMES relies on a team of subject-matter experts to determine the performance objectives of a unit (in this case coordination in primary care teams), generate new or identify existing performance measures that indicate the objectives are being accomplished,
and develop “contingencies”, i.e., prioritization curves to help prioritize the set of performance measures according to gain or value to the organization. Details of this process and the resulting objectives, indicators, and contingencies are published elsewhere. From seven measures identified by the experts as reflective of coordination in primary care teams, we employed those available from existing data sources for all participating teams: the percentage of (1) appointments that started on time, (2) recall appointments scheduled within 7 days of desired date (timely recall scheduling), (3) patients who used the Emergency Department (ED) for urgent or primary-care complaints (ED utilization) and (4) patients enrolled in secure messaging through the electronic patient portal (electronic patient portal utilization). These measures were then aggregated to calculate a composite measure of effectiveness.

**Effect Modifiers**

*Intervention Exposure (Fidelity)*

To assess the impact of intervention exposure on study findings we calculated three types of team-level exposure: 1) *total* and 2) *rate of exposure*, (number and percentage of intervention debriefings when at least one team member attended); and 3) *strength of exposure* (average percentage of team members attending debriefings per month). Conceptually, we expected that the coordination of intervention teams with greater exposure to the intervention would improve more than that of teams with lower exposure. However, as the evidence is mixed on the impact of exposure on program outcomes, we made no a priori hypotheses as to which operationalization of exposure (rate, strength, or total exposure) would yield stronger effects.
Multiple Team Membership

Most team research assumes each member of a given team is assigned to one and only one team. In cases where team members are assigned to more than one team, the team member’s cognitive resources can be spread thin, thus hindering performance for all the teams involved.\(^{19}\) Having learned during recruitment most clinicians indeed worked on multiple teams, we extracted data from the Team Assignments Report to calculate the average number of team memberships per person in each primary-care team and better assess the impact of our intervention on our dependent variables of interest.

Data Analysis

Between-arm Baseline Differences. To ensure the intervention and control arms were comparable, we conducted independent samples \(t\)-tests for continuous variables and Fisher’s exact test for categorical variables to detect between-arm differences in each coordination measure (including the composite) and two team characteristics: team-level multiple team membership, and clinical focus (primary care, infectious disease, or women’s health). Differences in multiple team membership could unfairly disadvantage teams with higher MTM scores at baseline, while differences in the number of teams of a given type at baseline could unduly skew results toward one type of coordination measure vs. another.

Tests of Hypotheses. To test intervention effectiveness, we employed five sets of linear growth-curve models examining between-arm differences in improvement on each coordination measure, including the composite. For each coordination measure, we examined a main-effects model with time and intervention group as predictors.

Subgroup (effect modifier) analyses. To test the impact that multiple team membership and the degree of exposure could have on the effect of our intervention on coordination, we
examined an interaction model for each measure that included the main effects and the arm-by-time interaction. We also conducted simple slope analyses examining the relationship between time and each coordination measure at high (+1 SD) and low (-1 SD) levels of each predictor (Table 3).

All models (both main effects and interaction) included random intercepts and an autoregressive (ar(1)) covariance structure type. Three levels were included in the analysis: teams (level 2) nested within site (level 3) over time (level 1). All models controlled for the respective baseline of the coordination measure. Analyses were conducted with SAS Version 9.4 (SAS Institute, Cary, NC).

RESULTS

Participant Enrollment

Fifty-seven members of 34 teams (54.8% of eligible teams) from four geographically distinct VA primary-care clinics enrolled in the study. The average within-team enrollment rate was 56.8%. The CONSORT diagram in Supplemental File 1 displays the recruitment flow and resulting participation.

Between-arm Baseline Differences

Multiple-team membership was significantly higher in the intervention arm than in the control arm, suggesting intervention members were spread more thinly than controls at baseline. Second, control teams exhibited significantly higher rates of electronic patient portal enrollment at baseline. No other characteristics significantly differed (see Table 1).

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Insert Table 1 Here

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Test of Hypothesis: Intervention Effectiveness

We observed no significant between arm differences in overall coordination ($b = -.02, p = .33$). Individual indicator analyses showed both control and intervention arms significantly improved ($b = .60, p = .04$) in appointments starting on time. No other dependent variables significantly improved (Table 2).

Insert Table 2 here

Subgroup (Effect Modifier) Analyses

Given initial results revealed few between-arm differences in improvement, we proceeded with our planned effect-modifier analyses to rule out any potential interactive effects. Table 3 presents descriptive frequencies of the number and percent of teams attending a given number of debriefings. Results of our simple slopes analyses are described below.

Insert Table 3 here

Rate of exposure. Rate of exposure significantly modified the effect of our intervention on overall coordination. Overall coordination significantly increased over time, yet only among teams with a greater (+1 SD) rate of exposure ($b = 0.01, p = 0.002$); teams with a lower (-1 SD) rate of exposure showed no change in overall coordination over time ($b = -0.0001, p = 0.78$).

Total exposure. Total exposure significantly modified the effect of our intervention on clinical reminder condition, ED utilization, and patient enrollment in electronic patient portal.
secure messaging. Specifically, clinical reminder completion significantly increased over time, yet only among teams with greater (+1 SD) total exposure ($b = 0.70, p < 0.0001$). Similarly, ED utilization significantly decreased over time, yet only among teams with higher (-1 SD) total exposure ($b = 0.28, p < 0.0001$). Conversely, secure messaging enrollment significantly increased over time, though only among teams with lower (-1SD) total exposure ($b = 0.13, p = 0.01$); secure messaging enrollment did not significantly change over time ($b = -0.04, p = 0.40$) in teams with greater (+1 SD) total exposure.

**Strength of exposure.** Strength of exposure had no significant modifying effect on any coordination measure, including the composite.

**Multiple team membership (MTM).** MTM significantly modified the effect of our intervention on clinical reminder condition and patient enrollment in electronic patient portal secure messaging. Specifically, clinical reminder completion significantly increased over time, yet only among teams with lower (-1 SD) multiple team membership ($b = 0.84, p < 0.0001$). Conversely, secure messaging enrollment significantly increased over time, though only among teams with higher (+1SD) multiple-team membership ($b = 0.20, p < 0.001$); in teams with lower (-1 SD) multiple-team membership, however, we observed significant enrollment decreases ($b = -0.12, p = 0.004$).

**DISCUSSION**

**Summary**

This partnered research study tested the effectiveness of an A&F intervention at improving team coordination in primary-care teams. Analyses indicated improvement in both control and intervention arms on two indicators (clinical reminder completion and ED utilization) but no significant between-arm differences. In post-hoc analyses within the
intervention arm we found increases in electronic patient portal enrollment for teams attending relatively few debriefings or having relatively high multiple team membership.

**Strengths and Limitations**

Strengths of our study include its partnership approach, which resulted in a more feasible and implementable intervention; and the use of electronic health record data for both A&F and study coordination measures, which meant more credible A&F and more reliable and valid coordination data. Further, our study also studies coordination from a process, rather than the traditional outcome perspective. That said, several limitations exist. First, three coordination measures required data unavailable administratively for control teams, precluding full comparison of all coordination indicators across arms. Second, team exposure to debriefings was inconsistent, despite protected time for participation. However, accounting for this statistically we observed that exposure modified the strength of our intervention’s impact on coordination, thus highlighting an important factor during implementation. Finally, we did not assess changes in team process, which may have helped better explain the observed improvements in coordination.

**Comparison with Existing Literature**

Our findings that a certain degree of fidelity and minimum dose of exposure our intervention is necessary for improvements to occur is consistent with the ProMES literature. For example, in their meta-analysis of studies employing ProMES to improve performance across numerous industries including health care, Pritchard and colleagues found that on average, 10 feedback periods were needed to materially improve and sustain performance. Although our study only employed seven feedback periods, we were able to observe significant improvements, compared to baseline, in four of the five indicators of coordination when the
number or percent of feedback periods to which teams were exposed was taken into account. In general, the greater the exposure, the better the teams performed. This pattern is also consistent with feedback literature suggesting that feedback given with greater frequency (as opposed to once, or very infrequently) is also more likely to be effective.10, 20, 23

The finding that secure messaging enrollment increased for teams with higher multiple-team membership is counterintuitive. Several possible explanations exist. First, Pritchard and colleagues found that teams improved less after ProMES in cases where there was a high degree of prior feedback before the intervention, which is also consistent with the Cochrane review on audit and feedback.20 As enrollment in secure messaging was a national priority for VHA, members of teams with high MTM would have had more opportunity to receive feedback than those with low MTM. Since the clerk, the role most commonly charged with helping patients enroll, is also the role in the team with the highest multiple-team membership (M = 3.2 teams, compared to providers M= 1.7 teams), then over time they will enroll more patients, thus explaining the unexpected direction of the moderation effect.

Pritchard and colleagues also found that the more closely the intervention followed the classic elements of ProMES (i.e., higher intervention fidelity), the better the results. One important difference in our study from classic ProMES was the group receiving the debriefings. ProMES was originally designed for individual teams. However, contrary to patient-centered medical home recommendations, teams at the primary site exhibited high levels of multiple-team membership, with groups of teams behaving as a single clinic rather than as individual teams. To accommodate this structure, debriefings were conducted at the clinic level at this site, so as not to overburden individuals belonging to multiple teams, though feedback reports were still delivered at the individual team level. Although this formed an important component of our partnership
approach, this deviation from classic ProMES may not be congruent with research suggesting that individualized feedback is more effective, thereby diluting results.

Finally, members of intervention-arm teams were assigned to more teams than members of control-arm teams, making it more difficult to coordinate successfully and biasing results toward the null.

Implications for Research/Practice

Multifaceted A&F can effectively improve selected aspects of coordination, but only if teams review their feedback and debrief consistently. Interestingly, the proportion of the team attending any given debriefing did not alter amount of improvement. As with any habit or learned behavior, our results suggest consistency of exposure to performance information and debriefing activity, even if the team is incomplete, is more critical to performance improvement than ensuring the entire team is present at a given debriefing.

A&F is often employed as an implementation strategy for other interventions. When A&F itself is the intervention, it requires implementation strategies of its own, especially in team settings. Future research should examine how traditional implementation strategies should be modified when (a) serving as interventions per se and (b) serving to help implement initiatives and interventions in teams.
LIST OF ABBREVIATIONS

ED – Emergency Department
F&A = feedback and audit
VA – Veterans Affairs
VHA – Veterans Health Administration

ACKNOWLEDGMENTS

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Ethics approval and consent to participate

This study was reviewed and approved by an appropriate and accredited Institutional Review Board (IRB) at Baylor College of Medicine, the IRB of record for the Michael E. DeBakey VA Medical Center where the study was conducted (protocol # H-36145).

Competing Interests

The authors of this study have no competing interests to declare.

Acknowledgement of Contributors

The authors have no additional contributors that they wish to report at this time.
FIGURE LEGENDS

Figure 1. Team Recruitment, Enrollment and Intervention Timeline

Figure 2. Sample Feedback Report
Reference List

Table 1. Team characteristics, overall and intervention group differences

<table>
<thead>
<tr>
<th>Clinical Focus, N (%)</th>
<th>Intervention (n= 34)</th>
<th>Control (n = 34)</th>
<th>P value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infectious Disease</td>
<td>1 (2.94)</td>
<td>0 (0.00)</td>
<td>.81</td>
</tr>
<tr>
<td>Primary Care Only</td>
<td>18 (52.94)</td>
<td>17 (50.00)</td>
<td></td>
</tr>
<tr>
<td>Women’s Health</td>
<td>15 (33.12)</td>
<td>17 (50.00)</td>
<td></td>
</tr>
<tr>
<td>Team-level multiple team membership, mean (SD)</td>
<td>5.20 (1.24)</td>
<td>4.16 (0.58)</td>
<td>&lt;.0001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Baseline Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of Appointments Starting on Time</td>
</tr>
<tr>
<td>Percentage of Timely Recall Scheduling</td>
</tr>
<tr>
<td>Percentage of ED Utilization</td>
</tr>
<tr>
<td>Percentage of Electronic Patient Portal enrollment</td>
</tr>
<tr>
<td>Coordination Composite**</td>
</tr>
</tbody>
</table>

*Independent samples t-tests for all except Team Focus, which was a Fisher’s Exact Test.

ED = Emergency Department

**Combination of the four indicators (Appointments starting on time, timely recall scheduling, ED utilization, and Electronic patient portal enrollment)
Table 2. Results of multilevel growth curve models for each coordination measure

<table>
<thead>
<tr>
<th>Individual Coordination Measures</th>
<th>Appointments Starting on Time</th>
<th>Timely Recall Scheduling</th>
<th>ED Utilization</th>
<th>Electronic Patient Portal Enrollment</th>
<th>Coordination Composite†</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b (SE)</td>
<td>p</td>
<td>b (SE)</td>
<td>p</td>
<td>b (SE)</td>
</tr>
<tr>
<td>Main-Effects Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>0.60 (0.30)</td>
<td>0.04</td>
<td>0.16 (0.71)</td>
<td>0.82</td>
<td>0.06 (0.08)</td>
</tr>
<tr>
<td>Study Arm</td>
<td>-1.95 (1.29)</td>
<td>0.17</td>
<td>-1.71 (2.88)</td>
<td>0.57</td>
<td>-0.21 (0.16)</td>
</tr>
<tr>
<td>Interaction Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>0.55 (0.48)</td>
<td>0.26</td>
<td>0.14 (1.18)</td>
<td>0.91</td>
<td>0.09 (0.12)</td>
</tr>
<tr>
<td>Study Arm</td>
<td>-1.97 (1.33)</td>
<td>0.18</td>
<td>-1.72 (3.30)</td>
<td>0.62</td>
<td>-0.18 (0.21)</td>
</tr>
<tr>
<td>Time x Study Arm Interaction</td>
<td>0.08 (0.66)</td>
<td>0.90</td>
<td>0.02 (1.59)</td>
<td>0.99</td>
<td>-0.04 (0.17)</td>
</tr>
</tbody>
</table>

*All models control for multiple team membership and respective baseline of the coordination measure

†Combination of the four indicators (Appointments starting on time, timely recall scheduling, ED utilization, and electronic patient portal enrollment)

ED = Emergency Department
Table 3. Number of team debriefings attended by one or more team members.

<table>
<thead>
<tr>
<th>Number of Debriefings</th>
<th>Number of Teams</th>
<th>Percent of Teams</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>17.65</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>8.82</td>
</tr>
<tr>
<td>3</td>
<td>17</td>
<td>50.00</td>
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<td>4</td>
<td>2</td>
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<td>2.94</td>
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<tr>
<td>7</td>
<td>2</td>
<td>5.88</td>
</tr>
</tbody>
</table>

Note: Total exposure ranged from one to seven debriefings attended, with an average of 3.12 (SD = 1.57) and a median of 3. The rate of exposure ranged from 14.29% to 100%, with an average of 66.79% (SD = 30.18). The strength of exposure ranged from 6.25% to 41.50%, with an average of 19.13% (SD = 9.91). Multiple-team membership in intervention teams ranged from 2.60 to 8.03 with an average of 5.20 (SD = 1.24).
New teams added to intervention arm (n = 13 teams)
Intervention period start (n=23 teams)
Baseline data collection (retrospective)
Recruitment and enrollment period
Study Month

Figure 1. Team Recruitment, enrollment and Intervention timeline.
Figure 2. Screenshot of feedback report dashboard